Centre for Teaching Practice and Industrial Training

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The 1st International Teacher Education Conference on Teaching Practice (ITECTP 2016, Convention Hall, E-Learning Building UPSI)

Proceeding of the 1st International Teacher Education Conference on Teaching Practice 2016, 8-10 October 2016

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CONFERENCE BACKGROUND

The conference committee welcome you to ITECTP 2016 that provides platforms for sharing information and research findings on Teaching Practices. ITECTP 2016 sets a platform to scrutinize and consolidate issues and problems pertaining to educational policies, instructional leadership and classroom instructions and to consolidate new knowledge, ideas and innovations in these disciplines through a spectrum of research findings conducted widely over the years.

THEME & SUB-THEME

Models, Trends & Issues in Teaching Practice

Sub-Theme:

- Best practice for Teaching Practice.
- Integrating technology in Teaching Practice.
- Supervisory issues in Teaching Practice.
- Inter-institutional Partnership and Collaboration in Teaching Practice.
- Pedagogical issues in Teaching Practice.
- Policy issues in Teaching Practice.
- Psychological issues in Teaching Practice.
- Reflective practices in Teaching Practice.
- Assessment and evaluation in Teaching Practices.
- Models of Teaching Practice.
- Cultural & Religious Differences in Teaching Practices.
FOREWORD

Y.A.B Dato' Seri DiRaja Dr. Zambry bin Abd. Kadir

Chief Minister of Perak Darul Ridzuan

Assalamualaikum Warahmatullahi Wabarakatuh and Greetings

First and foremost, I would like to congratulate Universiti Pendidikan Sultan Idris, in particular The Centre for Teaching Practice and Industrial Training, in organizing the 1st International Teacher Education Conference on Teaching Practice 2016 (ITECTP 2016). Recent years have witnessed an increase interest in academic, technological, and organizational renewal in the teacher education system, and this has affected the education, social, and cultural reality. The interrelationship of teacher education and the social–cultural reality generates new knowledge in areas of life that exerts a broad influence on other systems as well. Thus, the teacher education system deals not only with imparting professional knowledge in extensive areas but also plays a highly significant role in the societal life experiences, particularly in an era in which both social difference and social gaps are acknowledged.

Theoretical and academic learning, as well as practical learning in the fields are interwoven in educational practice thus enable graduates from academic universities of education cope with a constantly changing reality. The practical experience, the theoretical and academic learning, the consolidation of perceptions of social and cultural ideas, and the building of a professional identity throughout their professional lives, all necessitate a re-examination of all components of teacher preparation and professional development on the continuum of the teacher’s career development.

It is hoped that the ideas presented by researchers will be reflected in this conference and enable us to generalize, conceptualize, and disseminate the professional knowledge and best educational practices.

I encourage all participants to contribute to the success of this conference and lead towards the improvement of community by sharing and reflecting processes; in the spirit of practitioner researcher.

I believe this conference will be a success since many experts will share their knowledge and expertise in teaching practice. Congratulations!

Y.A.B DATO' SERI DIRAJA DR. ZAMBRY BIN ABD. KADIR
CHIEF MINISTER OF PERAK DARUL RIDZUAN
FOREWORD

Professor Dato’ Dr. Zakaria Kasa
Vice Chancellor UPSI

BISMILLAHIR ROHMANIRRAHIM

Assalamualaikum Warahmatullahi Wabarakatuh and Good day to everyone.

First and foremost, thank to Allah for His blessings. I would like to thank the organizing committee for giving me this opportunity to share my thought in the 1st International Teacher Education Conference on Teaching Practice 2016 (ITECTP 2016).

ITECTP 2016 is a noble effort in recognizing the importance of teaching practice in spearheading the development of the country. In the era of globalization, changes in the education system are taking place at a very fast rate and this phenomenon also includes teaching practice. The theme is timely and in line with one of the objectives of the Malaysian Education Development Plan (PPPM) to enhance the quality of education in Malaysia. The three powerful areas, POLICY, PRACTICE, and RESEARCH, will aspire part of the initiative of the National Key Result Areas (NKRA) and to realize the education transformation plan towards a world class standard. ITECTP 2016 sets a platform to scrutinize and consolidate issues and problems about educational policies, instructional leadership, and classroom instructions and to consolidate new knowledge, ideas, and innovations in these disciplines through a spectrum of research findings conducted widely over the years.

I hope that this conference will be a knowledge sharing amongst scholars, in line with the ideas to provide platforms for sharing information and research findings on teaching practices.

Congratulations to the committee members of this conference for the success in organizing ITECTCP 2016. Hopefully this collaboration will sustain and ensure the paradigm shift of research and creativity especially in teaching practice that hopefully to beneficial for the future generation.

PROFESSOR DATO’ DR. ZAKARIA KASA
Vice Chancellor
UPSI
FOREWORD

Professor Dr. Mohd Sahandri Gani Bin Hamzah
Deputy Vice Chancellor (Academic and International) UPSI

Assalamualaikum Warahmatullahi Wabarakatuh and Greetings

Welcome to the 1st International Teacher Education Conference on Teaching Practice 2016 (ITECTP 2016), held in Universiti Pendidikan Sultan Idris and hosted by The Centre For Teaching Practice and Industrial Training.

ITECTP 2016 seeks to clarify the interrelationships between the knowledge, skills, and expertise exchange in teaching practice. It is particular exciting that the theme of ITECTP 2016 not only has attracted many participants but also has drawn in participants from several countries such as Malaysia, Indonesia, Hong Kong and Australia.

We are delighted to welcome the keynote speakers: Prof Dr Hue Ming Tak, from The Hong Kong Institute of Education; Dato’ Dr. Hj Muhammad Amin bin Zakaria, Perak State Education Exco; Dr. James Campbell from Deakin University Australia; Dr. Noriati Binti A. Rashid Institute of Teacher Education Malaysia; and workshop presenter, Dr. Bambang Indiatmoko from Universiti Negara Semarang, Indonesia. My gratitude to all the presenters that will share their experience in teaching improvement through papers and poster presentations.

On behalf of the committee members, I would like to extend my welcome to all delegates/participant and find it as a stimulating place to discuss new and innovative ways in teaching practice.

Finally, my appreciation to all the committee members that have been working hard to make this conference a success. Congratulations.

Thank you

Prof. Dr. Mohd Sahandri Ghani Bin Hamzah
Deputy Vice Chancellor Academic and International, UPSI
Advisor ITECTP2016
UPSI
FOREWORD

Associate Professor Dr. Nor’ashiqin Mohd Idrus
Chairperson, ITECTP 2016

Assalamualaikum Warahmatullahi Wabarakatuh and Greetings

First and foremost, my prayer to Allah towards His blessings in the success of the 1st International Teacher Education Conference on Teaching Practice (ITECTP2016) to be held as scheduled and planned.

ITECTP2016 is the first event organized by the Centre for Teaching Practice and Industrial Training (PuLAMI) in cooperation with the Ministry of Higher Education Malaysia (MoHE), State Government of Perak, Deakin University Australia and the Consortium of Asia Pacific Education Universities (CAPEU).

This conference is an excellent platform for intellectual discourse and dissemination of knowledge by scholars on the topics and issues related to teacher education and teaching practice. The theme “Models, Trends and Issues in Teaching Practice” is timely and in line with one of the objectives of the Malaysian Education Development Plan (PPPM) to enhance the quality of education in Malaysia. I do hope that this conference will be fruitful and beneficial to all participants.

Finally, on behalf of the committee members, I would like to express my heartfelt gratitude and appreciation to speakers, presenters, participants and sponsors. My special thanks to the Committee Members of ITECTP2016 who have been very dedicated in ensuring the success of the conference. May all the effort will be blessed by Allah.

Thank you.

Associate Professor Dr. Nor’ashiqin Binti Mohd Idrus
Chairperson
ITECTP2016
KEYNOTE SPEAKERS

Professor Hue Ming Tak
The Education University of Hong Kong

Keynote Title: Special Preparation for Students of Special Education

Professor Hue Ming-Tak is currently the Professor, Head of the Department of Special Education and Counselling and Director of Integrated Centre for Wellbeing. He obtained his PhD at the Institute of Education, the University of London, England. He has extensive experiences in teaching in secondary schools, with an active involvement in school counselling and discipline, and supporting both primary and secondary schools at the various levels of student support, consultancy and teacher professional development. He teaches graduate courses in school guidance and counselling, classroom management, behaviour management and inclusive education. He is interested in cultural influence on school counselling, cultural responsiveness, multicultural education, multicultural competency, classroom management and mindfulness.

Emeritus Professor Dato’ Dr. Aminah Ayob
Sultan Idris University of Education

Keynote Title: Preparing Teachers for STEM Education - The PERMATA Experience

Aminah Ayob is Emeritus Professor at Faculty of Education and Human Development of Universiti Pendidikan Sultan Idris (UPSI). She obtained her PhD in Science Education from Keele University, United Kingdom. She was a Deputy Vice-Chancellor (Academic and International) from 2005-2007 before becoming a Vice Chancellor of UPSI from 2007 – 2011. Prof Aminah’s areas of interest include Early Childhood Education (Cognitive Development) and Science Education, Psychology of Learning and Brain-Based Learning.
KEYNOTE SPEAKERS

Dr. James Campbell
Deakin University Australia

Keynote Title: Institutionalizing Adab/Paideia As A Basis For Teaching And The University

James Campbell is an academic at in the School of Education Deakin University Australia. He has two PhD’s the first in the field of education and the second in the field of politics. James Campbell has written and edited 4 books, numerous journal articles, chapters and is also a regular contributor to the New Straits Times in Malaysia. James Campbell’s areas of interest are in educational philosophy as it relates to broader political and social theoretical problems in society. He has a keen interest in political philosophy, social theory, educational thought and the interconnections between these realms.

Dr. Noriati Binti A.Rashid
Institute of Teacher Education Malaysia,
Ministry of Education Malaysia

Keynote Title: Empowering and Sustaining Teacher Quality Through Teacher Professional Practices; The IPGM/ITE Experience

Dr. Noriati obtained her Ph. D. from University of Malaya in 2004 with specialization in Malay Studies. She has vast experience in education both as a teacher and lecturer at the Institute of Teacher Education for more than 35 years. She has been instrumental in developing the teacher education curriculum prior to becoming the Deputy Rector. She has actively trained teachers both at national and international level in the field of Malay Studies, Sociology and related pedagogy. She has conducted research in the field of Malay Studies and teacher education at national, regional and international level. Currently she has written 10 books in professional studies for teachers, 3 book chapters, 21 journals, 5 research proceedings and 25 modules.
KEYNOTE SPEAKER

Professor Dr. Mohd Sahandri Gani Bin Hamzah
Sultan Idris University of Education

Keynote Title: Constructive Guidance: Training Teacher's Supervision

Professor Dr. Mohd Sahandri is a Deputy Vice Chancellor (Academic and International) and Professor in Faculty of Education and Human Development, Sultan Idris University of Education, Tanjung Malim, Perak Darul Ridzuan. Formally he was an Associate Professor of Fundamental Education Department, Faculty of Educational Studies, University Putra Malaysia (UPM) since September 2006. He obtained Bachelor of Education in Agriculture Science from UPM (1981), and Master of Education (Measurement, Evaluation and Supervision) in 1995. He completed PhD (Research and Evaluation of Educational Practices, 1998) from Universiti Kebangsaan Malaysia (UKM). He is a competent and experienced professional with extensive "hands on" expertise combined with wide knowledge and skill in the area of educational research, testing, measurement and evaluating planning, administration, supervision and teaching (schools, colleges and universities). He is also a Versatile researcher and active as educational consultant.

WORKSHOP SPEAKER

Dr. Bambang Indiatmoko
Universitas Negeri Semarang (UNNES), Indonesia.
LIST OF PAPERS
Empowering and sustaining teacher quality through Teacher Professional Practices: The IPG Experience

By
Dr. Noriati A. Rashid

Introduction

Malaysia aspires to become a developed nation by the year 2020. That is less than 4 years to go. Transforming Malaysia from a developing country to become a developed one requires multi-dimensional aspects namely politics, economy, social and technology. Education, which is one of the sub dimensions of social aspect, is believed to be the prime driver of the economic growth, national unity and social status development. In the recent years, the Malaysian Education System has come under increased public scrutiny and debate, as parents’ expectation rise and employers voice their concern regarding the system’s ability to adequately prepare young Malaysians for the challenges of the 21st century. Furthermore, Malaysia’s ranking in the Programme for International Student Assessment (PISA) in the year 2009 and 2012 were not encouraging. Taking into consideration of all the challenges in the education system, the Ministry of Education has come out with the Malaysia Education Blueprint 2013 – 2025 which deliberately illustrate initiatives that aims to achieve two main aspirations; system aspiration and student aspiration and gaining top one third positions in the PISA ranking by the year 2025.

Thus, the main agent of change in this context is none other than the teachers themselves. Teachers also includes school leaders as both emerged as key predictors to students’ achievement. International research has shown that when two averaged eight-year old student were given 2 different teachers; one high performing teacher and the other one, less passionate and low performing teacher, both students’ academic performances diverged by more than 50 percentile points within three years. Barber and Moursheh (2007) suggests that the quality of a school system cannot exceed the quality of its teachers thus, the Ministry of Education has put much emphasis on quality teachers by transforming teaching into the profession of choice.

Teacher quality

Most of the literature describe quality teacher as a teacher who has knowledge, skills and attitude. The definition that signifies a quality and good teacher frequently focus on qualifications of the teacher as a reflection of competence (for example degree, quality of college, exam scores, certification, subject-matter credential, teaching experience), the personal or psychological qualities of a teacher (such as love of children, honesty, compassion, fairness), the pedagogical standards that a teacher exhibits that is the use of certain teaching strategies, classroom management skills, establishment of a positive classroom climate, or the teacher’s demonstrated ability to raise students learning through
successful or effective teaching. The Malaysian Ministry of Education embraces quality teacher as a person who is competent to teach with the right knowledge, skills and attitude. This has been reflected in the efforts and initiatives to achieve system and student aspirations as mentioned in the roadmap of Malaysia Education Blueprint 2013 – 2025.

Quality education must start with quality teachers. Hence, it is crucial that teacher recruitment policies must be clear and dynamic. We must attract the best students to join this noble profession. Teaching is and will always be a noble job because we mould future generation. Currently, teacher training programmes in Malaysia are offered by the Higher Education Institutions (IPT) such as UPSI, faculties of education in other varsities and The Institute of Teacher Education (IPG). The Higher Education Institutions (IPT) trained teachers for secondary school and the Institute of Teacher Education (IPG) are specializing in primary school education. Apart from this, there are also some private universities and colleges that offer education courses especially in training teachers for international schools and private schools. However, the main teacher training provider in Malaysia, for more than a century is the teacher training colleges which were known as maktab perguruan back then, and are now known as IPGs. UPSI was once part of this history before being upgraded to a full teaching university. Thus, IPG and UPSI are now the main provider of teacher education and teacher training in Malaysia.

**Teacher recruitment**

In ensuring the quality of teachers in schools, the very beginning of the recruitment process is crucial. In line with international best practices, applicants are selected based on a range of factors including attitude and aptitude for teaching and personality. The ministry also sets academic requirement for entry into IPG. For example, the minimum requirement for the Bachelor of Education programme or Program Ijazah Sarjana Muda Perguruan (PISMP) is at least 5As in the national examination or SPM. There has been a steady increased of high-flyer applicants from 2010 to 2012. In 2010, only 1% of applicants had at least 5As compared to 9% in 2012. More importantly, the effort led to 65% of academic high-performers receiving offers in 2012 as compared to 3% in 2010. In 2014, 99.8% of new teachers in the institute obtained the minimum grade in the SPM. However, only 0.02% of the remaining candidates are given flexibility in terms of admission to the institute for a particular course that requires talent, skill and special background. Grade A in SPM English paper has also been used as the entry requirements for candidates aspiring to become an English teacher. 100% of the candidates admitted obtained grade A in the English subject in the Teaching of English as a Second Language (TESL) in 2014 at IPG. The intake of the applicants is based on yearly projection done by the Educational Planning Research and Development division.

In any successful Teacher Education (TE) programmes in the world, it generally involves 3 phases; the pre-service phase, the induction phase for beginning teachers and the
continuous professional development phase... which aims at keeping existing teachers abreast with current competencies and knowledge.

1. These 3 phases are designed to equip prospective teachers with the knowledge, attitudes, behaviour and skills they require to perform their roles and responsibilities effectively in the classroom, school and wider community.

2. With the new Malaysian Education Blueprint for 2015 – 2025, our vision in TE is to lead teacher education towards excellence. The first transformation took place in July 2005, where all 27 teacher training colleges in Malaysia were upgraded to Institute of Teacher Education (IPG). Their role has moved from not only awarding teaching certificates and diplomas but also provide quality pre- and in-service teacher education and professional development for primary school teachers. In 2008 all 27 campuses were brought under one central management to standardize quality. The curriculum and qualifications were upgraded to offer a five-year foundation and degree programme and a post-graduate diploma programme. The Ministry also provides incentives for non-graduates teachers to further their education in order to upgrade their qualification to degree level. As of 2015, 59% of primary school teachers had at least a Bachelor’s degree and 96% of secondary school teachers had at least first degree.

The Bachelor of Teaching programmes (PISMP) in IPG are accredited by the MQA throughout Malaysia. The first cohort of the PISMP programme graduated in the year 2011. We will continue to fulfill our MOE’s mission, that is, to produce competent and passionate teachers through dynamic teacher development programs to achieve world-class standard in education.

Because the world that teachers are preparing young people to enter is changing so rapidly, and because the teaching skills required for 21st century are evolving likewise, no initial course of teacher education can be sufficient to prepare a teacher for a career of 30 or 40 years. Even a significant portion of teachers think that professional development does not meet their needs and interests, in terms of quantity, quality and content. (Organisation for Economic Co-operation and Development, 2009).

According to the World Bank (2012), an education system is only as good as its teachers. Yet, despite growing demand for guidance on policies that raise teacher effectiveness, achieving the right teacher policies for a given education system remains a challenge.

Korthagen, Loughran & Lunenberg, 2005 suggests that the role of teacher educators is not limited to training trainee teachers. Their role is complex for they not only need to support learning but also role models and provide emotional support to trainee teachers (Walker, Gleaves & Grey, 2006). In producing passionate and high quality teachers, the curriculum of IPG is based on the framework that focusses on 5 fundamental principles; outcome-based, spiral & developmental (Student centred approach), coherent, practical & contextual and holistic.
**Outcome-based** principle is grounded within the guidelines specified by the Malaysian Qualifications Framework (MQF), Public Higher Learning Quality Assurance Code and Practices, Education Programme Standards (EPS) set by Malaysian Qualification Agency (MQA). **Spiral & Developmental** refers to the learning experiences designed with a spiral sequence of various student learning experiences, different levels of difficulty and context within the courses offered. **Coherent** is a principle that links theory to practice, whereby all the theories learnt in the classroom are put into action during teaching.

**Practicality and contextuality** are important aspect in designing our curriculum. The delivery of the teaching training curriculum emphasizes on hands-on activities based on the latest curriculum document such as KSSR, real classroom experience and best practices in learning to teach effectively.

The final principle of our curriculum framework is **Holistic**. Holistic means an integration and balance between knowledge, skills, dispositions and values in our training programme. This also encompasses hard and soft skills needed by teachers in the field. When we say curriculum, it also covers aspects such as co-curriculum and activities that promotes good morality, values and citizenship such as the **Bina Insan Guru (BIG)**. BIG is a trademark of IPG in instilling good values and community awareness among the student teachers through participating in various community based projects. What you see on the video just now is students doing outdoor activities are examples of this. In addition, these knowledge skills and values meet the global aspirations stipulated by UNESCO and international educational agencies such as the 4 pillars of education (learning to know, learning to do, learning to be, learning to live together which promotes unity) ;Education for All (EFA), Education for International Understanding (EIU) and Education For Sustainable Development (ESD).

In addition, IPG’s curriculum has been reviewed by external agencies such as UNESCO and Parthenon-EY. The finding by Parthenon-EY (2015) indicates that IPG’s curriculum is a balanced mix of theory and pedagogy with increased emphasis on content knowledge. IPG’s curriculum emphasizes content, subject specific pedagogy and general pedagogy in its teacher education program. In the teacher education program undertaken at IPG, character development courses are implemented intensively and rigorously. These include **Bina Insan Guru**, moral education, ethics and co-curricular activities. Further, IPG students spend more than 31 weeks on professional practice, which continues to be the highest across benchmark nations.

Thus, the role of teacher educators is not limited to training student teachers alone. Teacher educators or lecturers are ROLE MODELS to our future teachers-to-be. Teacher educators are expected to train the student teachers in becoming quality teachers, acquiring the intended knowledge and skills with good morality and values. Teacher educators become mentors, coaches and to a certain extent a critical friend to these trainees. As such, one of the key elements of the teaching programme in IPG is **Professional Practice** or known as **Amalan Profesional** in the Malay Language. This component of the
Teacher Training programme in IPG encompasses of 4 main areas: School-based Experience, Planning of Teaching & Learning, Practicum and Internship.

Professional Practice as an important component of learning

For your information, Professional Practice is an important part of the PISMP programme. It allows students to master and practice all the concepts, principles, theories, skills and values necessary to become a full-fledged teacher with a broad character. Professional practices also help to boost the developmental potential of student teachers or trainee teachers in having resilience to face the many challenges in school.

The first component of Professional Practice as mentioned earlier is School Based Experience (SBE). SBE provides an understanding of the school context from the perspective of a teacher and teacher-to-be. SBE also provides an opportunity for students to understand the school as an educational institution, the role of teachers in the classroom through observation, document research, reflection and interaction with teachers and the school community. It also exposes student teachers to the real situation in school, to understand the school management system, student behaviour, classroom management and the real roles and responsibilities of teachers in school. School Based Experience will enhance the theoretical topics learnt in the courses offered by IPG. As an illustration, student teachers are taught ‘Classroom Management’ course in semester 2. When these students go for school-based experience in the same semester, the input given in the course becomes valuable as they could easily see its actual practice in the classroom.

Next, the second important component of Professional Practice in IPG is the planning and design of Teaching and Learning. This facilitates student teachers in practice so that they can master the knowledge and skills in designing and implementing teaching and learning. This includes designing and planning of teaching and learning through micro and macro teaching sessions and support from professional learning community available within the school.

The third component to Professional Practice is the teaching Practicum equivalent to 12 credits offered in semester 5 for 12 weeks and another 12 weeks in semester 7. Teaching Practicum gives students the opportunity to practice knowledge, skills and values. It reflects the real situation of the classroom and school. Implementation of the program focuses on the process of learning with the coaching from supervisors and mentors through partnerships and collaboration between agencies in MOE. Student teachers are placed at different types of school for practicum; urban, semi-urban, rural and also at remote schools. Student teachers from IPG have proven themselves in helping to enhance the quality of teaching and learning, students’ attendance, motivating the young learners and these aspects were concurred by the school headmasters and the community chief.

Finally, the last component of professional practice is Internship which is implemented in semester 8. Internship is a field training programme that aims to linking knowledge, existing skills and experience with the actual practice of beginning teachers' duties. Internship is different from SBE and practicum which student teachers went through.
in earlier semesters because during internship the focus is to plan and carry out the tasks given by the school. Student teachers are required to design, implement and evaluate project / activity related to teaching and learning in and outside the classroom or activity that has become routine practice and part of the school culture. At this stage, students are to demonstrate leadership skills in managing school activities with the guidance of a teacher mentor. Internship also provides opportunities for students to increase their self-confidence, self-esteem, resilience and leadership qualities.

During the implementation of Professional Practice, attention is given to clinical supervision and guidance. This mechanism requires the cooperation and smart partnership between the institute and the school. It also focuses on the concept of coaching and mentoring involving the supervisors, cooperating teachers, school administrators and the student teachers. This relationship helps to foster teacher professionalism among the student teachers.

Mentoring in IPG is a structured mentorship based on teacher competency. It is a complex process and contains many dimensions in guiding, teaching, influencing and providing support for student teachers. Generally, a mentor’s role is to lead, guide, and advice student teachers based on sharing experiences and information between the experienced lecturers and inexperience student teachers. Mentoring provides opportunity for the experienced lecturer to lead, guide, advice and explain in matters of regulation, school administration, help solve problems in teaching and learning, providing support for personal and professional matters and a guide to the development of student teachers through reflection and collaboration. IPG practices the 3 stages model of structured mentoring; input, process and outcome. In the input stage, every mentor need to be able to have the following competencies: supervisory clinical skills, Thematic and Focused observation skills, Focused Coaching skills, reflective skills and skills to assess and giving feedback to trainee teachers in a positive and critical manner. Thus, the supervisor needs to attend training on supervision and mentoring.

Professional Practice also provides an opportunity for students to practise the knowledge, skills and theory in doing research, especially action research in discovering their own best practices. As a result of this experience, student teachers can build, acquire and strengthen their motivation in becoming effective novice or beginning teachers.

**ICT in teacher training**

With the advancement of ICT in education, IPG also has started the e-practicum initiatives in which student teachers and their respective supervisors can communicate via email facilities and social media such as Whatsapp messages, telegram, kakao talk and others. Supervisors also can now conduct their clinical supervision via integration of web-system and other online application which promote sustainable and continuous support for the student teachers. Currently, the IPG campuses use the online practicum system.
management which has been complemented as an innovative method by the Secretary General of the Ministry of Education. This system allows both the student teachers and lecturers to communicate with each other in aspects relating to practicum issues anytime and anywhere which is in line with the 21st century learning approaches.

While IPG acknowledges that the revised teacher education curriculum will pave the way in producing quality teachers and hence quality teaching and learning, numerous challenges need to be addressed. There is a need to address the effectiveness of school-based mentorship and greater exposure to... day to day school activities. Also, existing mechanisms must be further enhanced to allow for greater guidance from IPG lecturers on classroom observation and self-reflection. This could possibly be done by increasing the frequency of both graded and non-graded observation to provide more guidance and feedback to trainees.

Research in IPG

Besides teaching, we also engaged in doing our own research on the effectiveness of our product based on the postings date of our trainees as part of our client satisfaction survey. For example, The Institute of Teacher Education (IPG) developed an instrument to get feedbacks from schools where IPG graduates were posted. The Customer Feedback Survey has 4 main aspects namely Teacher Quality, Teaching and Learning Skills, Co-Curriculum Management and School Organization Skills. This survey is conducted annually.

In 2014, 1457 school administrators in primary schools across the country have responded to this survey. It was reported that 97.1% of the respondents agreed that the teachers posted to these primary schools are of quality teachers and could accommodate the needs and roles required of them in schools.

95.7% of these school administrators also believe that IPG teachers are excellent in their teaching and learning skills, highly equipped with the necessary pedagogical skills for classroom teaching. 96.7% of these school leaders also see that IPG teachers are able to handle and manage the co-curricular activities in schools with little supervision from them. This success can be attributed due to the rigorous selection procedure of student teachers as stipulated in the Malaysian Education Blueprint 2013-2025 that requires top 30% of the SPM leavers and graduates for the PISMP and DPLI programmes consecutively are recruited. It is hoped that these successes could partly contribute in making teaching, the profession of choice.

Another aspect that was asked in the survey was the school organization skills in which 97.6% of the respondents suggested that IPG teachers are good in school organization skills that require them to update students’ databases, assessment & academic achievements and documenting their daily teaching records and also looking at the students' welfare within their classroom. On the whole, this survey suggested that the teachers groomed and trained by IPG are of high standards, quality and highly qualified to
teach the primary schools that they were posted to. They are equipped with all the necessary skills and knowledge to be a primary school teacher.

Another research conducted by IPGM is the Tracer Study. This longitudinal study is designed to provide information on the progress of IPG graduates in terms of their school placement, the challenges as well as the career development within 5 years of their graduation. In other words, this study gives a snapshot of their professional progress upon graduation. For instance, the report of 2014 graduates showed that 1193 graduates (47.60%) were placed in rural schools, followed by 1010 graduates (40.30%) in the urban schools and 305 graduates (12.10%) in the remote schools. In terms of the teaching and learning aspect, data showed that 2186 (87.2%) graduates managed to carry out the task well while 322 (12.8%) of the graduates had some difficulties. Nevertheless, they were able to overcome the issues well.

Furthermore, this study showed that adapting to the new environments was among the major challenges that they faced at the beginning of their service as a teacher. However, the results showed that overall graduates had a positive attitude towards the profession. This was evident as data showed that 2238 (89.20%) of them intend to continue their studies to a higher level. In short, the findings of this study are significant in helping the policy makers and stakeholders to continue improving the services in the future.

And recently, a study conducted by Education Planning and Research Division, Ministry of Education on the implementation of Multigrade Teaching (Pelaksanaan Kelas Bercantum) in Under Enrolled School or Sekolah Kurang Murid reported that IPG student teachers majoring in the Remedial and Special Education were proven to be highly competent and creative in their teaching in these sample schools.

Over the next ten years (2016 – 2025), IPG aspires to transform itself into a world-class teacher training institution. To achieve this aspiration, IPG through the Ministry of Education Malaysia has undertaken reforms in seven categories namely strengthening the pipeline of teacher trainee recruits, enhancing the IPG curriculum, improving the leadership in IPG, raising lecturer quality, upgrading infrastructure, increasing research and innovation activities and raising the profile of the IPG.

One of the key reforms for the teacher training institution is IPG Transformation Program 2016-2025 which aims at transforming the Institute of Teacher Education or IPG in become an institution of higher learning dedicated to raising the standards of Malaysian education through teacher education and development. This stems from the 4th shift in Malaysian Education Blueprint 2013-2025, which states revamping of IPG to “world class standards by 2020” as part of its process.

The Road Map for this transformation program spans over 10 years which ultimately directs the journey towards developing IPG as a world class Institute of Teacher Education. Accordingly, this transformation is enabled and achieved through 5 key building blocks; i)

Through an external consultant engaged for this IPG Transformation Program, a solid implementation plan has been laid out spanning over the next 10 years until 2025. A total of 40 Transformation Initiatives will be strategically executed in 3 stages throughout the 10 years. At present, this transformation programme is at Stage 1 which focuses on Foundational Initiatives whereby this stage will strengthen the delivery of this overall transformation. In Stage 2, the implementation will gear up towards ‘Enhancing Performance’ of IPG thus enabling IPG to be recognised throughout Malaysia. The final stage will ensure that IPG, at the end of this transformation program, gains global recognition through its excellence as an Institute of Teacher Education.

It is ultimately hoped that this IPG Transformation Program will further upgrade IPG’s status and be known as a world class teacher training provider as well as elevate the teaching profession into a prestigious profession of choice. But in doing this, IPG cannot stand alone... we need to collaborate and extend our cooperation with other teacher education institutions such as UPSI, HKIED, Deakin University and other local and international institutions. IPG have long started working with other institutions such as our Bachelor of Education TESL Twinning programme with UK, New Zealand and Australian institutions which started back in 1992 up to the third cycle in 2014, Bachelor of Education in Mathematics & Science with New Zealand & Australia, Bachelor of Education in French Language with French Comte University & Teaching Mandarin with BFSU, China and many other countries.

Sustaining teachers’ quality is pertinent in developing and nurturing holistic students for the 21st century. This is a challenge for Malaysia. Leading education systems namely Singapore, Korea, Japan, Finland, Australia to name a few, put endless effort to sustain teachers’ quality in order to maintain its excellence and stay competitive. Similarly, The Ministry of Education Malaysia is in tandem with the international efforts in striving to sustain teachers’ quality. There are two main elements need to be taken into considerations in developing policy to sustain teachers’ quality specifically extrinsic and intrinsic demands.

The process of developing a good and quality teacher from teacher selection processes, recruitment of student teachers, upgrading teacher qualifications from diploma to a degree, pre service and in-service training, and fulfilling their extrinsic demands through remuneration and performance management are being implemented by the Ministry.

Apart from this, the performance of students in the major public examinations reflects teachers’ overall quality. Monitoring reports from performance delivery unit (PADU) and other divisions in the ministry of education revealed that there are still gaps towards achieving a higher standard of quality teaching and learning, and quality teachers. Perhaps
policy implementation should consistently focus and emphasize more on developing teachers through **professional development**.

The Ministry emphasizes that teachers need to keep abreast with the latest development of education and believes that they may need assistance in meeting the competencies expected of them. This is another role played by IPG. **Continuous professional development** is one of the initiatives that have been encouraged to enhance teacher’s quality. Besides that, the Malaysian community also plays a major role in shaping the future of our education through major reforms in teacher education system in recent years to improve teacher quality.

**Conclusion**

As we move into 21st century teaching and learning, it is timely for us to take a refreshed look and see how we can further improve and sustain teacher education around the world. Today’s world is rapidly changing with great technological breakthroughs and hence is full of opportunities for creativity, innovation and transformation. Teachers today needs a broad and sophisticated set of competencies with the ability to adapt to different learning environments in order to maintain high quality in teaching. It requires teacher educators to shift our mindsets and move away from over-emphasis of academic excellence to meeting global demands. Hence, as mentioned earlier, IPG need and will collaborate with other institutions such as UPSI and the rest, local and international to build Malaysia through education, through quality teacher education and making the Malaysia Education Blueprint 2013 – 2025 a success.

**Bibliography**


THE EVALUATION AND EFFECTIVENESS OF SCHOOL BASED ASSESSMENT AMONG SCIENCE TEACHERS IN MALAYSIA USING CIPP MODEL

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Abstract

The purpose of this study is to identify the effectiveness of School Based Assessment (SBA) in science subject among secondary science teachers using CIPP Model. It also investigates the evaluation of science teachers’ regarding the advantages and disadvantages of SBA. A total of 112 science teachers from 21 secondary schools in Batang Padang District, Perak, Malaysia were involved in this survey. The data from the questionnaires and survey were analysed using descriptive statistics and statistic al inference. Frequency distribution with mean scores and percentages and Pearson correlation analysis were used. Results showed that the dimensions of context, input and product are at a moderate level while the level of process dimension is high. Hypothesis is also accepted, there is no significant relationship between the level of dimensional context, input, process and product in the implementation of SBA with teaching experience. Analysis of the interviews showed that most respondents agree that there are advantages of SBA, thus is suitable with the aim of Malaysia to create a world-class human capital. In conclusion, this study provides new contributions to teachers in Malaysia to implement SBA effectively through training, courses, monitoring and ongoing support from Ministry Of Education.

Keywords: Evaluation, Effectiveness, CIPP Model, School Based Assessment(SBA), Science Teachers
1.0 INTRODUCTION

School-Based Assessment Program (SBA) is another transformation in the education assessment system in Malaysia. It is an alternative assessment system of government by reviewing the existing assessment and evaluation in order to make school not too exam-oriented. School-based assessment system, a fairly new innovation in assessment is an assessment which is conducted by subject teachers in classrooms following the procedures from the Malaysian Examination Syndicates in terms of planning, administration, scoring and reports (Malaysian Examinations Board, 2011). Ministry of Education (MOE), (2012) have focused on strengthening the system of assessment and evaluation in order to present a more holistic and authentic assessment. It assesses the process and product of teaching and learning. It is considered a holistic assessment because it assesses various aspects of students development such as their cognitive, affective and psychomotor. This means that the assessment is important because it can see the overall student achievement that meets the goals of the National Education Philosophy in an effort to establish and develop human capital excellence. Among the goals of SBA is to get an overview of the performance of students in their learning, assess the activities carried out during the process of teaching and learning takes place, get continuous information about the teaching and learning as well as planning and improve teaching and learning (Mohd Isha, 2011).

2.0 LITERATURE REVIEW

School Based Assessment (SBA) is premised upon the notion that regular, classroom-based assessment provides a reliable indicator of student learning, while also contributing feedback for future learning (Brown & Hirschfeld, 2008). Feedback is a ‘continuous, ongoing, and interactive’ process (Kouritzin & Vizard, 1999) which involves multiple sources (teachers, peers, friends, and so on) and a variety of forms (visual, written and oral).

In Hong Kong, SBA which covers both formative and summative functions of assessment formed part of a suite of comprehensive reforms that was introduced in recent years and that envisaged major changes to curricular content, pedagogy and assessment, with an emphasis on facilitating student progress in learning (Education Commission, 2003). The reforms were stimulated by the perceived need for Hong Kong to reposition itself as a global financial centre, which necessitated the provision of high quality education to ensure a supply of the requisite human capital. The reforms including furnishing more opportunities for tertiary education, improving the professional training of teachers, applying education theories that had international currency, and accommodating the specific needs of individual schools and students. Part of the movement involved decentralization of aspects of curriculum decision-making, including the School-Based Curriculum Projects Scheme introduced in 1988, the School-based Management Initiative in 1991, and School-Based Curriculum Development in 2000. These reforms were promoted as allowing schools greater autonomy in strategic and administrative decisions, bringing about more flexibility and differentiation in their implementation of government policies in education (Morris & Adamson, 2010).
According to the Malaysian Examinations Board (2012), SBA is a form of assessment in schools. It is planned and administered systematically. The scores are reported in planned activities in accordance with the procedures laid down by the Malaysian Examination Board. SBA is also a combination of school assessment undertaken by teachers as well as confirmation of the appraisers in the National Achievement Centre or the student report based on the competencies they have accessed, understood and skilled (Azhari, 2005). SBA was actually implemented in Malaysia in phases starting in 2003. It involves eleven subjects including science subjects in which students are assessed through practical work assessment (MOE, 2012). Now SBA was carried out across the board for all subjects in primary and lower secondary. SBA has also given recognition and autonomy to teachers to implement formative and summative assessment in schools. SBA was conducted at the school by teachers in accordance with the procedure and format Malaysian Examination Board (MEB) may prescribe. Teachers need to assess and implement SBA by administering, assessing, recording suspended and affective achievement of students at the school level (Zambri, 2010).

The success of reforms in education depends on teachers who conduct the assessment. The changes will not happen if teachers are not sure about the need for change and are willing to change the paradigm (Norazilawati, 2012). This is because the SBA is a more meaningful assessment, authentic (genuine) already robust (solid). It is hoped that this will result in the assessment of human capital is critical, creative, innovative, competitive and progressive as envisaged by the state (MEB, 2012).

3.0 PROBLEM STATEMENTS

SBA is responsible in testing and assessing students’ overall performance from every aspect. Assessment encompasses academic performance, co-curriculum and personality traits while students are undergoing teaching and learning processes. Teachers who are responsible and accountable in conducting SBA process have to adhere to all assessment steps and procedure. However, teachers’ lackadaisical attitude in assessment may jeopardize the whole assessment system. Assessment quality could be debated by everyone if there is no monitoring system in place. If this happens, concerns abound pertaining to biasness, transparency and standardization of students’ assessment when this practice is hailed as one of important elements in ensuring that students achieve deserving grades throughout teaching and learning. This issue was discussed in a study by Tan Ai Mei (2010) whereby lacking of monitoring will make teachers non-committed and lackadaisical in conducting assessment.

The inability of any school to standardize scores will more or less contribute to disputes amongst parents and teachers. This is due to comparison of scores that is still the tradition of parents to compare their children’s success with other people’s children. This problem had been discussed in a study by Moshe (2007). The schools and teachers frequently neglect a few important processes like monitoring, score validity and others to the extent that SBA implementation leaves an undesirable effect to students. Guidelines set by the MOE in ensuring the quality of SBA should be given emphasis before and during SBA implementation.
After four years of implementation of the SBA in school, the teachers began to complain will have to bear the burden of work and has been a hoax and hot news in the newspapers. Many teachers agree that if the SBA removed. This statement strengthened when the study online conducted by the MOE to see the approval of the teachers in the implementation of the SBA found that almost 75% of teachers agree that they are eliminated. It also proved again when there is a page on facebook, which would repeal the SBA. It is supported by more than 70 thousand teachers (https://www.facebook.com/WeWantSPPBSRepealed). Then a comprehensive assessment should be carried out to assess the implementation procedures, the implementation process and the level of achievement of its goals. This information is important as feedback to all parties involved in the school either SBA, PPD, AGC and KPM in planning and implementing improvements to enhance the effectiveness of SBA. According to Stufflebeam and Shinkfield (2007), rating is a discipline that is very important to ensure a successful program or project. A program or project can not be said to be successful after its strengths and weaknesses can be detected. Thus corrective measures can be taken and process improvements can be implemented in order for a program to achieve the desired goals.

Therefore, this study was conducted to evaluate the effectiveness of the implementation of the SBA science teachers in secondary schools conducted in terms of context, input, process and product. Ratings (1) The dimension of context (relevance of SBA with the National Education Philosophy, science teachers’ attitude and willingness to SBA); (2) The input dimension (knowledge, skills and confidence to run a PBS science teachers, equipment, laboratories, facilities, timetable, training and support principals); (3) the dimensions of the process (teaching and learning strategies for teachers and science teachers how to run SBA to evaluate the work of students); and (4) the dimensions of the product (revenue changes in student achievement and attitudes toward science subject). The second objective is to identify whether there is a correlation between the level of dimensional context, input, process and product implementation for SBA with teaching experience. The third objective is to identify the advantages, weaknesses, challenges and recommendations in realizing the SBA science teacher.

4.0 THEORITICAL FRAMEWORK

Looking at the few evaluation models, there are many possible theoretical frameworks that could be used in evaluating the system, of which in part depends on the questions and topics of interest. In the case of SBA, we are primarily interested in the effectiveness of the system implementation. This leads us to look at various dimensions of evaluation. For this reason, CIPP evaluation model was chosen as the framework of this study. The CIPP Evaluation Model was developed by Daniel Stufflebeam and his colleagues to evaluate any projects, personnel, products, institutions or systems from various disciplines such as education field, housing and community development, transportation safety and military personnel review systems (Stufflebeam, 2003a).
Various educational programmes have been conducted using this model, such as those related to science and mathematics education, rural education, educational research and development, school improvement, professional development schools and many more (Stufflebeam, 2002). A key characteristic of this model is its four dimensions of evaluation – context, input, process and product (Stufflebeam, 1971). This four dimensions of evaluation also serve planning, structuring, implementing and recycling decisions respectively. As such, context evaluation involves confirming the present objectives, to modify the existing objectives or develop a new ones. Input assesses the strategies, personnel, resources or procedures in achieving the programme’s objectives, process evaluation is looking at everything related to the implementation of already selected designs, strategies or action plan and product evaluation determines and examine the specific outcomes of the programme. Furthermore, it is based on the management-oriented approach which allows managerial decision-makers to get enough information from the evaluators (Hogan, 2007).

The CIPP Evaluation Model is a useful framework for analyzing the interrelationship between the four evaluation dimensions. It is consistent with the definition of operational assessment in this study the evaluation process is a draw, collect and provide useful information to choose an alternative decisions for improvement. The level of context, input, process and product can provide important and useful information to plan implementation strategies or action plans for the structuring of a more robust implementation of the SBA in order to achieve its goals.

i. Context evaluation: what are the needs and opportunities? What should be our goals?

SBA GOALS

ii. Input evaluation: what are our options? What approaches can we take? How do these approaches compare in terms of resources needed?

SBA PLANNING

iii. Process evaluation: how is program implementation going? Are we on track? Do we need to adjust?

SBA EVALUATION

iv. Product evaluation: what are our success or failures? What has changed as a result of our program?

SBA RESULTS
Based on the above rationale, the conceptual framework of this research was formed in Figure 1.

![Figure 1 Theoretical Framework]

5.0 OBJECTIVES

The research conducted to:

1) To evaluate the effectiveness of the implementation of the SBA among science teachers in secondary schools conducted in terms of context, input, process and product.

2) To identify whether there is a correlation between the level of dimensional context, input, process and product implementation for SBA with teaching experience.

3) To identify the advantages, weaknesses, challenges and recommendations in realizing the SBA science teacher.

6.0 HYPOTHESIS

Ho1: There is no significant relationship between context, input, process and products in the implementation of the SBA with teachers teaching experience.
7.0 RESEARCH METHODOLOGY

The study used combination of quantitative and qualitative approaches. The quantitative data used questionnaire as instrument consists of two parts. Part A of teacher demographics. Part B consists of 45 items to obtain information on the assessment of the context, input, process and product implementation in schools. Items that are formed in this questionnaire developed by the researchers based on operational definitions for each construct was used in this study and modify the questionnaire adopted by Norazilawati (2012) and Mazuien (2013). This questionnaire has been tested for reliability by running a pilot test to 20 teachers. Cronbach's alpha values obtained for each item is between 0.929 to 0.934. The overall reliability of this study is 0.932 items. This proves that Cronbach alpha reliability index for this study is high.

Qualitative data used interviews questions as an instrument. Interview questions were developed by the researchers to identify advantages, weaknesses, challenges and recommendations for science teachers in the realization of SBA.

Quantitative sample consisted of 112 science teachers form 1 and form 2 who taught at 21 secondary school in Batang Padang District, Perak, Malaysia. While for qualitative sample, only five science teachers interviewed from five schools which is involved in the study. Selection of study participants is intended (purposive sampling) so that the information obtained can give an answer to the research question.

8.0 FINDINGS AND DISCUSSION

The results were analyzed and discussed by the research objectives.

Research Objective 1: To evaluate the effectiveness of the implementation of the SBA amongst science teachers in secondary schools conducted in terms of context, input, process and product.

i) The findings showed that the level of context (relevance of SBA with the National Education Philosophy, science teachers' attitude and the readiness of teachers) in the implementation of the SBA is moderate with overall mean is 3.31 and the standard deviation is 0.885. (Table 1)

ii) The findings showed that the level of input (knowledge, skills and confidence to run a SBA, equipment, laboratories, facilities, timetable, training and support
principals) in the implementation of the SBA is moderate with a mean overall is 3.52 and the standard deviation is 0.900. (Table 2)

iii) The findings showed that the level of process (teaching and learning strategies as well as how to run a SBA among science teachers to evaluate student work) in the implementation of SBA is at a high level with the overall mean is 3.81 and the standard deviation is 0.732. (Table 3)

iv) The findings showed that the level of product (due to changes in performance and attitude of the students towards the science subjects) in the implementation of the SBA are at medium with mean overall is 3.20 and the standard deviation was 0.932. (Table 4)

Table 1 Level of context

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Implementation of relevant SBA the current education system in Malaysia.</td>
<td>3.29</td>
<td>1.053</td>
<td>Medium</td>
</tr>
<tr>
<td>2. I clear about the goals and SBA implementation objectives.</td>
<td>3.65</td>
<td>0.767</td>
<td>Medium</td>
</tr>
<tr>
<td>3. SBA reduce pressure on public examinations.</td>
<td>3.08</td>
<td>1.027</td>
<td>Medium</td>
</tr>
<tr>
<td>4. SBA does not charge me.</td>
<td>2.30</td>
<td>0.947</td>
<td>Low</td>
</tr>
<tr>
<td>5. I get information about SBA objective through the administrator, MOE and the current website attending courses in services.</td>
<td>4.05</td>
<td>0.655</td>
<td>High</td>
</tr>
<tr>
<td>6. SBA is an assessment system national education guaranteed quality in terms of legality and reliability, and act towards learning more effective.</td>
<td>3.07</td>
<td>0.927</td>
<td>Medium</td>
</tr>
<tr>
<td>7. SBA control, coordinate and conduct all examinations schools, public examination and no external examination contrary to government policy and national interest.</td>
<td>3.29</td>
<td>0.966</td>
<td>Medium</td>
</tr>
<tr>
<td>8. SBA help educational system attaining international standards in the field knowledge, skills and competencies as well as world class leading Assessment by 2020.</td>
<td>3.39</td>
<td>0.989</td>
<td>Medium</td>
</tr>
<tr>
<td>9. SBA be able to monitor the growth of the students and help to increase the potential individual.</td>
<td>3.56</td>
<td>0.814</td>
<td>Medium</td>
</tr>
<tr>
<td>10. SBA make meaningful reporting about individual learning</td>
<td>3.42</td>
<td>0.790</td>
<td>Medium</td>
</tr>
<tr>
<td><strong>Average Score</strong></td>
<td><strong>3.31</strong></td>
<td><strong>0.885</strong></td>
<td>Medium</td>
</tr>
</tbody>
</table>
Table 2 Level of input

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td>I have to sign a form The Official Secrets Act 1972 (Act 88) before implement SBA.</td>
<td>3.25</td>
<td>0.953</td>
<td>Medium</td>
</tr>
<tr>
<td>12.</td>
<td>I was following training/course to build instruments of SBA.</td>
<td>3.21</td>
<td>1.255</td>
<td>Medium</td>
</tr>
<tr>
<td>13.</td>
<td>I know how to build instruments for assessing students.</td>
<td>3.33</td>
<td>0.980</td>
<td>Medium</td>
</tr>
<tr>
<td>14.</td>
<td>I have adapted the instruments with teaching methods.</td>
<td>3.47</td>
<td>0.910</td>
<td>Medium</td>
</tr>
<tr>
<td>15.</td>
<td>I should have the current Quality Assurance Guidance Document SBA.</td>
<td>3.90</td>
<td>0.722</td>
<td>High</td>
</tr>
<tr>
<td>16.</td>
<td>I mastered On Scoring of SBA.</td>
<td>3.33</td>
<td>0.865</td>
<td>Medium</td>
</tr>
<tr>
<td>17.</td>
<td>I am skilled at assessing studentsevidence.</td>
<td>3.75</td>
<td>0.942</td>
<td>High</td>
</tr>
<tr>
<td>18.</td>
<td>I give the exact score, consistent and in accordance to the students.</td>
<td>3.47</td>
<td>0.827</td>
<td>Medium</td>
</tr>
<tr>
<td>19.</td>
<td>My scoring of verified and signed by the school administrators.</td>
<td>3.52</td>
<td>0.793</td>
<td>Medium</td>
</tr>
<tr>
<td>20.</td>
<td>I always talk to a friend about SBA.</td>
<td>3.97</td>
<td>0.728</td>
<td>High</td>
</tr>
<tr>
<td>21.</td>
<td>Main Committee SBA in my school give many provide exposure and training to increase the understanding of implement SBA.</td>
<td>3.62</td>
<td>0.891</td>
<td>Medium</td>
</tr>
<tr>
<td>22.</td>
<td>My school provides an environment supporting the implementation and SBA acculturation.</td>
<td>3.47</td>
<td>0.889</td>
<td>Medium</td>
</tr>
<tr>
<td>23.</td>
<td>Internet facilities can be accessed properly in school helps me in the implementation of the SBA.</td>
<td>2.84</td>
<td>1.116</td>
<td>Medium</td>
</tr>
<tr>
<td>24.</td>
<td>I prefer Private-owned internet access accessing the internet in school to facilitate my assessment of students.</td>
<td>3.89</td>
<td>0.961</td>
<td>High</td>
</tr>
<tr>
<td>25.</td>
<td>I set up a Daily Lesson Plan containing assessment activities.</td>
<td>3.83</td>
<td>0.678</td>
<td>High</td>
</tr>
<tr>
<td><strong>Average score</strong></td>
<td></td>
<td><strong>3.52</strong></td>
<td><strong>0.900</strong></td>
<td><strong>Medium</strong></td>
</tr>
</tbody>
</table>

Table 3 Level of Process

<table>
<thead>
<tr>
<th>Item</th>
<th>Item Description</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>26.</td>
<td>I have a manual guide as references in provides planning assessment.</td>
<td>3.77</td>
<td>0.845</td>
<td>High</td>
</tr>
<tr>
<td>27.</td>
<td>The content of the assessment instruments I use Standard Learning.</td>
<td>3.89</td>
<td>0.648</td>
<td>High</td>
</tr>
<tr>
<td>28.</td>
<td>Before undertaking the assessment, I make sure the instruments in accordance with the level intelligence of students.</td>
<td>3.83</td>
<td>0.708</td>
<td>High</td>
</tr>
<tr>
<td>29.</td>
<td>Assessment instrument that I use according to a study constructs.</td>
<td>3.83</td>
<td>0.642</td>
<td>High</td>
</tr>
<tr>
<td>30.</td>
<td>I use assessment methods range (observation, oral, and</td>
<td>4.09</td>
<td>0.643</td>
<td>High</td>
</tr>
</tbody>
</table>
written) whether formal or informal as appropriate.

31. I always evaluate the understanding of students in implementing its SBA.  
   Mean: 3.88  SD: 0.640  Interpretation: High

32. I implement the guidance to the students who have not mastered the standard of learning.  
   Mean: 3.89  SD: 0.751  Interpretation: High

33. I prepare the student assessment reporting with formative and summative.  
   Mean: 3.85  SD: 0.655  Interpretation: High

34. During the implementation of SBA I believe and confident the production of good instruments will measure the performance of students.  
   Mean: 3.72  SD: 0.807  Interpretation: High

35. I always inform the results of assessment to students and parents/guardians.  
   Mean: 3.39  SD: 0.989  Interpretation: Medium

Table 4: Level of product

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>36. I get along with the date and duration set by the MOE in implement SBA.</td>
<td>3.56</td>
<td>0.867</td>
<td>Medium</td>
</tr>
<tr>
<td>37. SBA can help improve student achievement.</td>
<td>3.30</td>
<td>0.918</td>
<td>Medium</td>
</tr>
<tr>
<td>38. SBA attract students to the contents of the lessons taught.</td>
<td>3.15</td>
<td>0.912</td>
<td>Medium</td>
</tr>
<tr>
<td>39. The implementation of the SBA to make students more responsible for their studies.</td>
<td>3.03</td>
<td>0.985</td>
<td>Medium</td>
</tr>
<tr>
<td>40. The implementation of the SBA reduces students absences.</td>
<td>2.66</td>
<td>0.873</td>
<td>Medium</td>
</tr>
<tr>
<td>41. SBA helps teachers in building a variety of new learning opportunities to students.</td>
<td>3.41</td>
<td>0.982</td>
<td>Medium</td>
</tr>
<tr>
<td>42. SBA helps teachers in increasing student assessment practices.</td>
<td>3.47</td>
<td>0.919</td>
<td>Medium</td>
</tr>
<tr>
<td>43. SBA helps teachers in developing teachers’ professionalism.</td>
<td>3.50</td>
<td>1.013</td>
<td>Medium</td>
</tr>
<tr>
<td>44. SBA helps teachers and students willing to discuss problems of learning in an atmosphere that is not stressed.</td>
<td>3.11</td>
<td>0.917</td>
<td>Medium</td>
</tr>
<tr>
<td>45. SBA improve implementation satisfaction, trust and confidence people to the school.</td>
<td>2.82</td>
<td>0.941</td>
<td>Medium</td>
</tr>
<tr>
<td>Average score</td>
<td>3.20</td>
<td>0.932</td>
<td>Medium</td>
</tr>
</tbody>
</table>

Research Objective 2: To identify whether there is a correlation between the level of dimensional context, input, process and product implementation for SBA with teaching experience.

Correlation between the level of context, input, process and product of the implementation of the SBA with experience in teaching science:
a) Pearson Correlation Analysis Results, in total there are 4 items that shows that there are significant relations and 6 items that show there is no significant relationship between the dimensions of the context of the implementation of the SBA with teaching experience teachers. So it can be concluded that there is no significant relationship in the context of the implementation of SBA. For item 1 results obtained from analysis is \[ r = 0.141 *, p = 0.137 > 0.05 \]. Item 2 is \[ r = 0.171 *, p = 0.072 > 0.05 \]. Item 4 is \[ r = 0.128 *, p = 0.05 > (s) \]. Correlation for items 1, 2, 4 and 8 is positive at the level of very low. This shows there is a significant relationship between the context of the implementation of the SBA with teachers teaching experience. While for item 3 is \[ r = -0.032 *, p = 0.736 > 0.05 \]. Item 5 is \[ r = 0.095, p = 0.318 > 0.05 \]. Item 6 is \[ r = -0.070 *, p = 0.461 > 0.05 \]. Item 7 is \[ r = 0.145 *, p = 0.128 > 0.05 \]. For item 24 in turn \[ r = 0.048 *, p = 0.613 > 0.05 \]. Correlation for 15, 20, 22 and 24 is positive at the level of very low. This shows there is a significant relationship between the input in the implementation of the SBA with teachers teaching experience with teachers teaching experience. While for item 11 is \[ r = -0.042 *, p = 0.661 > 0.05 \]. Item 12 is \[ r = -0.092 *, p = 0.333 > 0.05 \]. Item 13 is \[ r = -0.132 *, p = 0.167 > 0.05 \]. Item 14 is \[ r = -0.122 *, p = 0.200 > 0.05 \]. Item 16 is \[ r = -0.137, p = 0.149 > 0.05 \]. Item 17 is \[ r = -0.135 *, p = 0.157 > 0.05 \]. Item 18 is \[ r = -0.162 *, p = 0.088 > 0.05 \]. Item 19 is \[ r = -0.061 *, p = 0.520 > 0.05 \]. Item 21 is \[ r = -0.016, p = 0.867 > 0.05 \]. Item 23 is \[ r = -0.046, p = 0.631 > 0.05 \]. 25 items is \[ r = -0.040 *, p = 0.673 > 0.05 \]. Correlation of items 11, 12, 13, 14, 16, 17, 18, 19, 21, 23, and 25 shows there is no significant relationship between the context of the implementation of the SBA with teachers teaching experience.

b) Pearson Correlation Analysis Results, in total there are 4 items that shows that there are significant relations and 11 items that show there is no significant relationship between the input in the implementation of the SBA with teachers teaching experience. So it can be concluded that there is no significant relationship the input in the implementation of the SBA with teachers teaching experience. For item 15 results obtained from of analysis is \[ r = 0.126 *, p = 0.185 > 0.05 \]. Item 20 is \[ r = 0.036 *, p = 0.710 > 0.05 \]. Item 22 is \[ r = 0.145 *, p = 0.128 > 0.05 \]. For 24 items in turn \[ r = 0.048 *, p = 0.613 > 0.05 \]. Correlation for 15, 20, 22 and 24 is positive at the level of very low. This shows there is a significant relationship between the input in the implementation of the SBA with teachers teaching experience. While for item 11 is \[ r = -0.042 *, p = 0.661 > 0.05 \]. Item 12 is \[ r = -0.092 *, p = 0.333 > 0.05 \]. Item 13 is \[ r = -0.132 *, p = 0.167 > 0.05 \]. Item 14 is \[ r = -0.122 *, p = 0.200 > 0.05 \]. Item 16 is \[ r = -0.137, p = 0.149 > 0.05 \]. Item 17 is \[ r = -0.135 *, p = 0.157 > 0.05 \]. Item 18 is \[ r = -0.162 *, p = 0.088 > 0.05 \]. Item 19 is \[ r = -0.061 *, p = 0.520 > 0.05 \]. Item 21 is \[ r = -0.016, p = 0.867 > 0.05 \]. Item 23 is \[ r = -0.046, p = 0.631 > 0.05 \]. 25 items is \[ r = -0.040 *, p = 0.673 > 0.05 \]. Correlation for items 11, 12, 13, 14, 16, 17, 18, 19, 21, 23, and 25 shows there is no significant relationship between the input in the implementation of the SBA with teachers teaching experience.

c) Pearson Correlation analysis result, in total there are 3 items that shows that there are significant relations and 7 items that show there is no significant relationship between the process of the implementation of the SBA with teachers teaching experience. So it can be concluded that there is no significant relations in the process of the implementation of the SBA with teachers teaching experience. For item 32 results obtained from analysis is \[ r = 0.016 * p = 0.865 > 0.05 \]. Item 33 is \[ r = Peter *, p = 0.240 > 0.05 \]. Item 35 is \[ r = 0.070, p = 0.463 > 0.05 \]. Correlation for items 32, 33 and 35 is positive at low levels. This shows there is a significant relationship between the process of the implementation of the SBA with teachers teaching experience. While for 26 items is \[ r = -0.091 *, p = 0.338 > 0.05 \]. Item 27 is \[ r = -0.16, p = 0.864 > 0.05 \]. 28 item is \[ r = -0.005 *, p = 0.959 > 0.05 \]. 29 items is \[ r = -0.059 *, p = 0.538 > 0.05 \]. Item 30 is \[ r = 0.000, p = 0.997 > 0.05 \]. Item 31 is \[ r = -0.086 *, p = 0.366 > 0.05 \]. Item 34 is \[ r = -0.003, p = 0.973 > 0.05 \]. Correlation of item 26, 27, 28, 29, 30, 31 and 34 show that there is a significant relationship between the process of the implementation of the SBA teachers teaching experience.
d) Pearson Correlation analysis results, in total there are 2 items that shows that there are significant relations and 8 items that show there is no significant relationship between the product of the implementation of the SBA with teaching experience teachers. It can be concluded that there is no significant relations in the product of the implementation of the SBA with teachers teaching experience. For 37 results obtained from analysis is \[ r = 0.012 *, p = 0.900 > 0.05 \]. Item 42 is \[ r = 0.041 *, p = 0.671 > 0.05 \]. Correlation for items 37 and 42 is positive at low level. This shows there is a significant relationship between the product dimension in the implementation of the SBA with teachers teaching experience. While for item 36 is \[ r = 0.229 *, p = 0.015 > 0.05 \]. Item 38 is \[ r = -0.019, p = 0.318 > 0.05 \]. Item 39 is \[ r = -0.097 *, p = 0.310 > 0.05 \]. Item 40 is \[ r = -0.035 *, p = 0.712 > 0.05 \]. Item 41 is \[ r = -0.013, p = 0.893 > 0.05 \]. Item 43 is \[ r = -0.000 *, p = 1.000 > 0.05 \]. Item 44 is \[ r = 0.064 *, p = 0.501 > 0.05 \]. Item 45 is \[ r = -0.027, p = 0.779 > 0.05 \]. Correlation for items 36, 38, 39, 40, 41, 43, 44 and 45 show there is no significant relationship between the product of the implementation of the SBA with teachers teaching experience.

**Table 5** Relationship between the level of context, input, process and product of the implementation of the SBA with experience in teaching science

<table>
<thead>
<tr>
<th>Item</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Context</td>
<td>No (no relationship)</td>
</tr>
<tr>
<td>Input</td>
<td>No (no relationship)</td>
</tr>
<tr>
<td>Process</td>
<td>No (no relationship)</td>
</tr>
<tr>
<td>Product</td>
<td>No (no relationship)</td>
</tr>
</tbody>
</table>

In conclusion, table 5 show the findings indicate that there is no significant relationship between context, input, process and products in the implementation of the SBA with teachers teaching experience. This proves that the hypothesis of this study is accepted.

**Research Question 3:** To identify the advantages, weaknesses, challenges and recommendations in realizing the SBA science teacher.

The findings of research question 3 via the interview. Table 6 shows the profile of the respondents.
Table 6 The respondent's profile

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Sex</th>
<th>Race</th>
<th>Age</th>
<th>Teaching experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Female</td>
<td>Indian</td>
<td>40 year</td>
<td>17 years</td>
</tr>
<tr>
<td>B</td>
<td>Female</td>
<td>Chinese</td>
<td>25 year</td>
<td>3 year</td>
</tr>
<tr>
<td>C</td>
<td>Male</td>
<td>Indian</td>
<td>27 year</td>
<td>5 year</td>
</tr>
<tr>
<td>D</td>
<td>Female</td>
<td>Malay</td>
<td>45 year</td>
<td>20 year</td>
</tr>
<tr>
<td>E</td>
<td>Male</td>
<td>Malay</td>
<td>37 year</td>
<td>14 year</td>
</tr>
</tbody>
</table>

(a) What are the benefits of the implementation of the SBA in science?

Based on analysis of interviews with the five respondents can be deduced that SBA has its benefits. This is evident when all five of the respondents gave a positive answer to the implementation of the SBA in the subjects of science. They agree that SBA has advantages such as SBA with the nation's aspirations to produce world-class human capital, giving freedom and autonomy to teachers of science to evaluate and assessing pupils according to the readiness and ability of pupils as teachers learn more about students, save costs because there is no need to print the examination questions and SBA. SBA is also in line with the philosophy of science education in Malaysia to foster a culture of science and technology with a focus on individual development of a competitive, dynamic, agile and resilient and able to master the knowledge of science and high technology.

(b) What are the weaknesses or lack of implementation of SBA in the subjects of science?

Based on interviews with all five of the respondents, they in agreement states among the main drawback SBA is still many teachers who do not know about the implementation of SBA as a whole. Liquidity information related to SBA are not going well. This resulted in teachers being unjust in giving an assessment to each student. In addition, the time constraints because the pursuit of measurement science cause teachers hard to implement.
Respondents suggest some methods to improve the implementation of the SBA. Among the most important the MOE to provide committed in furtherance of the SBA so there is quality assurance. The parties are advised always to ensure the liquidity of information related to SBA get directly to the teacher. There needs to be training, courses, monitoring, ongoing support either in terms of planning and implementation process.

In conclusion, the results of analyses successfully answered all questions of the study that is, on the whole the level of dimensional context, input and the product is simple, while the dimensions of the process are high. The hypothesis of this study is also received in which pearson correlation analysis shows that there is no significant relations the dimension of context, input, process and products in the implementation of the SBA with teaching experience teachers. Based on analysis of interviews with five respondents found they agree that SBA has advantages such as SBA with the nation’s aspirations to produce world-class human capital, give freedom and autonomy to teachers of science to evaluate and assessing pupils according to the readiness and ability of pupils as teachers learn more about students, save costs because there is no need to print the examination questions and SBA does not give pressure on the school to maintain the performance of the school and compete with other schools. However, they in agreement States among the main drawback SBA is still many teachers who do not know about the implementation of SBA as a whole. Liquidity information related to SBA are not going well. This resulted in teachers being unjust in giving an assessment to each student. In addition, the time constraints due to the pursuit of science subject syllabus resulted in teachers of science are hard to implement the SBA. They suggest the MOE to provide committed in furtherance of SBA so that there is quality assurance. The parties are advised always to ensure the liquidity of information related to SBA get directly to the teacher. There needs to be training, courses, monitoring, ongoing support either in terms of planning and implementation process.

What is most important is that all teachers involved in this study were very committed and have taken a positive approach to this latest policy on assessment. This study found that for these science teachers, the benefits that outweighed problems were that the implementation of SBA helps to develop positive attitudes, encourages personal progress, enhances collaborative skills and promotes creative teaching and learning activities.

9.0 CONCLUSION

In conclusion, although this study shows that the level of context, inputs and products SBA is still moderate, however the process is high. This shows that the implementation of the SBA can still be established or improved. In view of the School-Based Assessment (SBA) is a form of assessment of future education is also a heartfelt goodbye to the orientation of the examinations have been inviting criticism upon another. A paradigm shift is happening and
this is in line with the orders of Sayidina Umar Al-Khatab who pointed out that the design of the children's education is required based on the needs of their future.

Acknowledgment

Sultan Idris Education University Research Grant

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KESESUIAN PERSONALITI KAUNSELOR PELATIH MENJALANI INTERNSHIP DI SEKOLAH

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Sekolah Menengah Kebangsaan Bandar Behrang 2020.

Abstrak


Kata Kunci: Kaunselor Pelatih, Personaliti, Internship

Pengenalan

Internship kaunseling dijalankan untuk melahirkan graduan yang berketrampilan dan mantap dari segi pengetahuan dan kemahiran asas dalam disiplin bimbingan dan kaunseling. Program ini bertujuan agar pelajar berupaya memberi sumbangan jangka pendek dan jangka panjang kepada usaha-usaha meningkatkan kualiti kehidupan dan kesejahteraan individu. Kaunselor pelatih diwajibkan menjalani 504 jam internship.
Semasa Internship kaunselor pelatih diharapkan dapat mengaplikasikan pengetahuan dan kemahiran bimbingan dan kaunseling secara praktikal dalam *setting* latihan, menjalankan internship kaunseling individu dan kelompok, dan bimbingan individu dan kelompok di setting latihan, menjalankan aktiviti pengurusan dan pentadbiran unit bimbingan dan kaunseling secara berkesan, bekerjasama dengan pihak pengurusan dalam perancangan pelaksanaan dan penilaian program-program bimbingan dan kaunseling, mampu menganalisis kajian-kajian kes kaunseling serta menulis laporan mengenainya mengikut format yang ditetapkan dan memperkembangkan sahsiah kaunselor pelatih dan mempertingkatkan profesionalisme sebagai seorang kaunselor pelatih yang berwibawa. (Manual Penilaian Internship Kaunseling, 2013).

Terdapat kajian yang menunjukkan internship kaunseling memberi peluang untuk mendapat pengalaman dalam menjalankan sesuatu aktiviti, mendapat bantuan dan sokongan penyelia (Nelson & Jackson,2003) dan untuk membina kaedah sendiri cara mengendalikan kaunseling (Coker & Schrader, 2004). Walau bagaimanapun kaunselor sekolah yang juga penyelia di sekolah perlu memantau perkembangan kaunselor pelatih yang sedang menjalani internship.

Kaunselor pelatih yang akan menjalani internship perlu memiliki personaliti yang sesuai dengan keperluan internship. Personaliti yang sesuai dengan keperluan internship membolehkan kaunselor pelatih menyesuaikan diri dengan *setting* sekolah dan menangani setiap masalah dan cabaran yang wujud ketika menjalani internship. Mengikut Pervin (1980) personaliti menggambarkan sifat (characteristics) seseorang atau manusia secara umumnya dalam menghasilkan corak tindak balas yang konsisten terhadap situasi. Oleh itu pelajar yang memiliki personaliti yang kurang sesuai dengan keperluan internship perlu dibantu dan mendapat sokongan uang lebih dari pensyarah penyelia dan kaunselor pembimbing. Ini kerana menjalani internship merupakan pengalaman kritikal kepada kaunselor pelatih, menyediakan peluang untuk perintegrasian pengetahuan, skil dan nilai yang dipelajari semasa menjalankan kerja kursus. Kaunselor pelatih menyedari yang pengalaman klinikal merupakan masa yang berharga untuk mengaplikasikan teori ketika latihan, bekerja dengan klien secara bersendirian dan membuat refleksi.

**Objektif Kajian**

Kajian ini dijalankan untuk mengenal pasti kesesuaian personaliti pelajar yang mengikuti program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) di Universiti Pendidikan Sultan Idris untuk menjalani Internship di sekolah.

**Metodologi**

Kajian ini merupakan kajian deskriptif iaitu untuk mengenal pasti profil pelajar Universiti Pendidikan Sultan Idris. Kajian ini dijalankan secara tinjauan iaitu maklumat diperolehi melalui soal selidik. Kajian ini dijalankan di Fakulti Pendidikan dan Pembangunan Manusia, Universiti Pendidikan Sultan Idris. Responden kajian merupakan pelajar yang sedang mengikuti pengajian di Jabatan Psikologi dan Kaunseling.Kajian ini melibatkan 91 orang pelajar orang pelajar program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) yang sedang mengikuti pengajian di Fakulti Pendidikan dan Pembangunan...

Dapatan Kajian

Analisis deskriptif dijalankan untuk mengenalpasti kesesuaian personaliti pelajar belumum mereka menjalani Internship di sekolah. Jadual 1 menunjukkan kebanyakan pelajar mendapat skor Neurotisisme, Ekstraversi, Keterbukaan dan Agreeableness di tahap sederhana. Seramai 7 orang (7.7%) mendapat skor Neurotisisme sangat rendah, 19 orang (20.9%) rendah, 36 orang (39.6%) sederhana, 22 orang (24.2%) tinggi dan 7 orang (7.7%) sangat tinggi. Seramai 4 orang (4.4%) mendapat skor Ekstraversi di tahap sangat rendah, 21 orang (23.1%) rendah, 42 orang (46.2) sederhana, 17 orang (18.2%) tinggi dan 8 orang (7.7%) sangat tinggi. Seramai 5 orang (5.5%) mendapat skor Keterbukaan di tahap sangat rendah, 12 orang (13.2%) rendah, 45 orang (49.5) sederhana, 15 orang (16.5%) tinggi dan 14 orang (15.4%) sangat tinggi. Seramai 3 orang (3.3%) mendapat skor Agreeableness ditahap sangat rendah, 20 orang (22.0%) rendah, 48 orang (52.7%) sederhana, 19 orang (20.9%) tinggi dan 1 orang (1.1%) sangat tinggi. Seramai 4 orang (4.4%) mendapat skor Conscientiousness di tahap sangat rendah, 30 orang (33.0%) rendah, 27 orang (29.7%) sederhana, 26 orang (28.6%) tinggi dan 4 orang (4.4%) sangat tinggi.

Jadual 1 Tahap Personaliti Pelajar Program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling)

<table>
<thead>
<tr>
<th>Tahap</th>
<th>Neurotisme</th>
<th>Ekstraversi</th>
<th>Keterbukaan</th>
<th>Agreeableness</th>
<th>Conscientiousness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sangat Rendah</td>
<td>7(7.7%)</td>
<td>4(4.4%)</td>
<td>5(5.5%)</td>
<td>3(3.3%)</td>
<td>4(4.4%)</td>
</tr>
<tr>
<td>Rendah</td>
<td>19(20.9%)</td>
<td>21(23.1%)</td>
<td>12(13.2%)</td>
<td>20(22.0%)</td>
<td>30(33.0%)</td>
</tr>
<tr>
<td>Sederhana</td>
<td>36(39.6%)</td>
<td>42(46.2%)</td>
<td>45(49.5%)</td>
<td>48(52.7%)</td>
<td>27(29.7%)</td>
</tr>
<tr>
<td>Tinggi</td>
<td>22(24.2%)</td>
<td>17(18.7%)</td>
<td>15(16.5%)</td>
<td>19(20.9%)</td>
<td>26(28.6%)</td>
</tr>
<tr>
<td>Sangat Tinggi</td>
<td>7(7.7%)</td>
<td>8(7.7%)</td>
<td>14(15.4%)</td>
<td>1(1.1%)</td>
<td>4(4.4%)</td>
</tr>
<tr>
<td>Jumlah</td>
<td>91 (100%)</td>
<td>91 (100%)</td>
<td>91(100%)</td>
<td>91 (100%)</td>
<td>91 (100%)</td>
</tr>
</tbody>
</table>
Jadual 1 menunjukkan kebanyakan pelajar mendapat skor Neurotisisme, Ekstraversi, Keterbukaan dan Agreeableness di tahap sederhana. Seramai 7 orang (7.7%) mendapat skor Neurotisisme sangat rendah, 19 orang (20.9%) rendah, 36 orang (39.6%) sederhana, 22 orang (24.2%) tinggi dan 7 orang (7.7%) sangat tinggi. Seramai 4 orang (4.4%) mendapat skor Ekstraversi di tahap sangat rendah, 21 orang (23.1%) rendah, 42 orang (46.2%) sederhana, 17 orang (18.2%) tinggi dan 8 orang (7.7%) sangat tinggi. Seramai 5 orang (5.5%) mendapat skor Keterbukaan di tahap sangat rendah, 12 orang (13.2%) rendah, 45 orang (49.5%) sederhana, 15 orang (16.5%) tinggi dan 14 orang (15.4%) sangat tinggi. Seramai 3 orang (3.3%) mendapat skor Agreeableness ditempat sangat rendah, 20 orang (22.0%) rendah, 48 orang (52.7%) sederhana, 19 orang (20.9%) tinggi dan 1 orang (1.1%) sangat tinggi. Seramai 4 orang (4.4%) mendapat skor Conscientiousness di tahap sangat rendah, 30 orang (33.0%) rendah, 27 orang (29.7%) sederhana, 26 orang (28.6%) tinggi dan 4 orang (4.4%) sangat tinggi.

Analisis statistik inferensi dijalankan untuk mengenal pasti perbezaan personaliti pelajar berdasarkan jantina. Analisis ANOVA sehala seperti mana yang terdapat dalam Jadual 2 menunjukkan tidak terdapat perbezaan yang signifikan personaliti Neurotisisme \[F(2,88) = 0.47, p > .05\], personaliti Ekstraversi\[F(2,88) = 1.76, p > .05\], Keterbukaan\[F(2,88) = 2.40, p > .05\], Agreeableness\[F(2,88) = 0.50, p > .05\] dan Conscientiousness \[F(2,88) = 0.05, p > .05\] berdasarkan tahun pengajian.

Jadual 2 Keputusan ANOVA Sehala Perbezaan Personaliti Berdasarkan Tahun Pengajian Pelajar Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling)

<table>
<thead>
<tr>
<th>Personaliti</th>
<th>Sumber</th>
<th>JKD</th>
<th>dk</th>
<th>MKD</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurotisisme</td>
<td>Antara Kumpulan</td>
<td>113.79</td>
<td>2</td>
<td>56.89</td>
<td>0.47</td>
<td>.629</td>
</tr>
<tr>
<td></td>
<td>Dalam Kumpulan</td>
<td>10745.04</td>
<td>88</td>
<td>122.10</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ekstraversi</td>
<td>Antara Kumpulan</td>
<td>345.10</td>
<td>2</td>
<td>172.50</td>
<td>1.76</td>
<td>.178</td>
</tr>
<tr>
<td></td>
<td>Dalam Kumpulan</td>
<td>8620.40</td>
<td>88</td>
<td>97.96</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Keterbukaan</td>
<td>Antara Kumpulan</td>
<td>640.52</td>
<td>2</td>
<td>320.26</td>
<td>2.40</td>
<td>.097</td>
</tr>
<tr>
<td></td>
<td>Dalam Kumpulan</td>
<td>11761.87</td>
<td>88</td>
<td>133.66</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agreeableness</td>
<td>Antara Kumpulan</td>
<td>61.18</td>
<td>2</td>
<td>30.60</td>
<td>0.50</td>
<td>.611</td>
</tr>
<tr>
<td></td>
<td>Dalam Kumpulan</td>
<td>5438.62</td>
<td>88</td>
<td>61.80</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>Antara Kumpulan</td>
<td>10.41</td>
<td>2</td>
<td>5.20</td>
<td>0.05</td>
<td>.952</td>
</tr>
</tbody>
</table>
Perbincangan

Keputusan kajian menunjukkan kebanyakan pelajar mendapat skor Neurotisme dan Ekstraversi, Keterbukaan dan Agreeablenessdi tahap sederhana. Ini menunjukkan mereka kurang mempunyai perasaan seperti ketakutan, kesedihan, memalukan, marah, kesalahan, benci yang amat sangat pada seseorang atau sesuatu, Skor Ekstraverseri menunjukan mereka agak suka bersosial, tetapi suka bersosial iaitu suka berjumpa orang lain atau menghadiri perhimpunan orang ramai. Seseorang yang ekstrovert juga seorang yang asertif, aktif dan suka bercakap. Mereka suka kepada kegembiraan, memberi dorongan dan ceria walaupun keadaan tidak menyenangkan. Mereka seorang yang riang, bertenaga dan optimistik

Skor keterbukaan menunjukan mereka juga bersifat terbuka iaitu ada keinginan untuk mengetahui apa yang berlaku di dalam dan di luar negara, dan kehidupannya kaya dengan pengetahuan. Mereka bersedia untuk menerima idea baru dan nilai yang tidak konvensional. Mereka mempunyai pengalaman dalam merasai kedua-dua emosi yang positif dan negatif serta lebih cepat memahami orang lain, berbanding dengan seseorang yang bersifat tertutup. Keterbukaan dikaitkan dengan beberapa aspek kepintaran seperti perbezaan pemikiran yang menghasilkan sesuatu yang kreatif.


Conscientiousness merupakan aspek yang dipanggil character, terdapat pelajar yang mendapat skor tinggi Conscientiousness menunjukkan individu itu tersangat teliti, menepati masa dan berterusan dari segi kualiti atau pencapaian. Namun ada sebilangan pelajar yang mendapat skor Conscientiousness sangat rendah dan rendah. Ini menunjukkan mereka kurang gigih berusaha untuk mengaplikasikannya, kurang tenaga dan keazaman untuk mencapai matlamat (Mc Crea, Costa & Busch 1986).

Kesimpulan

Keputusan kajian menunjukan kebanyakan pelajar memiliki personaliti yang stabil dan sesuai untuk menjalani internship di sekolah. Namun begitu terdapat sebilangan kecil pelajar yang memiliki personaliti Neurotisisme yang sangat tinggi dan ini menunjukkan mereka mudah mempunyai perasaan seperti ketakutan, kesedihan, memalukan, marah, kesalahan, benci yang amat sangat pada seseorang atau sesuatu. Oleh itu bimbingan dan sokongan dari pensyarah penyelida dan guru Bimbingan dan kaunseling di sekolah amat penting untuk membantu mereka menjalani internship dengan cemerlang. Keputusan kajian juga menunjukkan tidak terdapat perkembangan yang signifikan personaliti pelajar berdasarkan tahun pengajian. Ini menunjukkan personaliti seseorang itu adalah stabil dan internship yang akan dijalankan diharapkan akan dapat membentuk personaliti kaunselor pelatih sesuai dengan kerjaya mereka sebagai kaunselor apabila bergraduat kelak.
Rujukan


ABSTRAK


Kata Kunci : Keberkesanan, Penilaian Zoom-A, Matapelajaran Matematik, Sekolah Rendah

Pendahuluan

Mata pelajaran Matematik adalah satu bidang ilmu yang dapat membentuk sahsiah dan jati diri setiap orang murid. Minda dilatih untuk berfikir secara mantik dan bersistem dalam menyelesaikan sesuatu masalah atau membuat sesuatu keputusan. Matematik secara lahiriahnya mencabar pemikiran seterusnya menggalakkan pembelajaran yang bermakna.

Matematik pada dasarnya dapat membantu murid mengembangkan kemahiran numerasi, penaakulan, cara berfikir dan menyelesaikan masalah melalui pembelajaran dan aplikasi matematik. Pembelajaran Matematik menyediakan peluang untuk murid melaksanakan tugasan kreatif dan mengalami keseronokan dan teruja apabila mengetahui sesuatu yang baru. Pengalaman sedemikian meningkatkan minat dan menjadi daya
penggerak murid mempelajari Matematik di luar bilik darjah dan di peringkat pengajian yang lebih tinggi (Pusat Perkembangan Kurikulum, 2015).


Pernyataan Masalah


Kerangka Konsep


Kajian ini menggunakan strategi pembelajaran penilaian konvensional yang menggunakan konsep kertas pensel dan penilaian interaktif yang menggunakan perisian Zoom-A yang berasaskan internet. Kedua-dua kaedah penilaian ini akan dinilai keberkesanannya berdasarkan hasil yang diperolehi dalam mata pelajaran Matematik topik Peratus.
Persoalan Kajian

Persoalan kajian adalah seperti berikut:

a) Apakah pencapaian murid kumpulan eksperimen (penilaian Zoom-A) dan kumpulan kawalan (penilaian konvensional) dalam ujian pra dan pasca?

b) Adakah terdapat perbezaan pencapaian dalam ujian pra dan ujian pasca antara murid kumpulan eksperimen (penilaian Zoom-A) dan kumpulan kawalan (penilaian konvensional)?

c) Apakah kelebihan dan kelemahan kaedah penilaian Zoom-A?

Hipotesis Kajian

Dalam kajian ini hipotesis nul yang dikaji adalah:

\[ H_0 : \text{Tidak terdapat perbezaan yang signifikan di antara pencapaian murid yang menggunakan kaedah penilaian konvensional berbanding kaedah penilaian Zoom-A melalui ujian pra dan pasca.} \]
Metodologi Kajian

Reka Bentuk Kajian


Populasi dan Sampel Kajian

Jadual 1: Sampel bagi kajian kes

<table>
<thead>
<tr>
<th>Tahun</th>
<th>Kelas</th>
<th>Lelaki</th>
<th>Perempuan</th>
<th>Jumlah</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Delima</td>
<td>14</td>
<td>16</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Nilam</td>
<td>17</td>
<td>13</td>
<td>30</td>
</tr>
<tr>
<td>Jumlah</td>
<td></td>
<td>31</td>
<td>29</td>
<td>60</td>
</tr>
</tbody>
</table>

**Instrumen Kajian**

Kajian ini menggunakan instrumen soalan ujian pra dan ujian pasca untuk memperolehi data atau maklumat yang diperlukan untuk melengkapkan kajian yang telah dijalankan ini.


Analisis Kajian


<table>
<thead>
<tr>
<th>Bil</th>
<th>Persoalan Kajian</th>
<th>Instrumen</th>
<th>Cara Analisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Apakah pencapaian murid kumpulan eksperimen (penilaian Zoom-A) dan kumpulan kawalan (penilaian konvensional) dalam ujian pra dan pasca?</td>
<td>Ujian pra dan ujian pasca</td>
<td>Min dan peratus</td>
</tr>
<tr>
<td>2</td>
<td>Adakah terdapat perbezaan pencapaian dalam ujian pra dan ujian pasca antara murid kumpulan eksperimen (penilaian Zoom-A) dan kumpulan kawalan (penilaian konvensional)</td>
<td>Ujian pra dan ujian pasca</td>
<td>Min dan peratus</td>
</tr>
<tr>
<td>3</td>
<td>Apakah kelebihan dan kelemahan kaedah penilaian Zoom-A?</td>
<td>Temubual</td>
<td>Transkripsi</td>
</tr>
</tbody>
</table>

Jadual 2 : Jadual tatacara penganalisisan data
Dapatan Kajian


Analisis Dapatan Kajian Secara Deskriptif

Dapatan ini akan memperihalkan analisis pencapaian antara kaedah penilaian menggunakan Portal Zoom-A kumpulan eksperimen dan penilaian berbentuk konvensional kumpulan kawalan. Pencapaian yang dapat dihuraikan adalah seperti berikut :

i. Min skor pencapaian murid melalui penilaian secara konvensional melalui ujian pra dan pasca
ii. Min skor pencapaian murid melalui penilaian secara Portal Zoom-A melalui ujian pra dan pasca
iii. Perbezaan min skor pencapaian penilaian secara konvensional dan penilaian secara Portal Zoom-A.

Skor Pencapaian Ujian Penilaian Secara Konvensional Kumpulan Kawalan

<table>
<thead>
<tr>
<th></th>
<th>PRA</th>
<th></th>
<th>PASCA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bil</td>
<td>Peratus</td>
<td>Bil</td>
</tr>
<tr>
<td>A</td>
<td>1</td>
<td>3.33</td>
<td>5</td>
</tr>
<tr>
<td>B</td>
<td>9</td>
<td>30.00</td>
<td>9</td>
</tr>
<tr>
<td>C</td>
<td>10</td>
<td>33.33</td>
<td>8</td>
</tr>
<tr>
<td>D</td>
<td>9</td>
<td>30.00</td>
<td>8</td>
</tr>
<tr>
<td>E</td>
<td>1</td>
<td>3.33</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>30.00</td>
<td>100.00</td>
<td>30.00</td>
</tr>
</tbody>
</table>

Jadual 3 : Skor Pencapaian Gred dan Min Skor Ujian Penilaian Konvensional

Hasil dapatan kajian mengikut gred berdasarkan jadual 3, di dapat pencapaian responden berada di tahap sederhana. Ini kerana hanya 1 orang responden iaitu 3.33% lulus
dengan memperolehi Gred A. Seramai 9 orang responden pula iaitu 30% memperolehi Gred B. Manakala 10 orang murid iaitu 33.33% memperolehi Gred C. Selain itu, 9 orang murid memperolehi gred D iaitu 30% dan 1 orang dapat gred E juga mencatatkan 3.33%. Skor min pencapaian pula adalah 57.57.

Ujian Pasca menunjukkan sedikit peningkatan bagi kumpulan ini. Ini kerana 5 orang responden iaitu 16.67% lulus dengan memperolehi Gred A. Jumlah responden memperolehi Gred B iaitu 30% kekal seramai 9 orang. Manakala 8 orang murid iaitu 26.67% memperolehi Gred C iaitu sama dengan bilangan murid mendapat gred D. Skor min pencapaian pula adalah 62.23.

<table>
<thead>
<tr>
<th>Penilaian</th>
<th>Faktor</th>
<th>N</th>
<th>Min</th>
<th>s.p</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tradisional</td>
<td>Pra Ujian</td>
<td>30</td>
<td>3.0</td>
<td>0.94686</td>
<td>4.097</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Pasca Ujian</td>
<td>30</td>
<td>2.633</td>
<td>1.06620</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Jadual 4 : Ukuran Kecenderungan Memusat Ujian Pra dan Pasca bagi Penilaian Konvensional

Ujian t sampel bersandar telah dijalankan untuk mengukur impak intervensi skor pencapaian murid kumpulan kawalan sebelum dan selepas penggunaan kaedah konvensional Dapatan menunjukkan terdapat penurunan yang signifikan pada skor dari ujian pra ( min = 3.0, s.p = 0.94686) ke ujian pasca ( min = 2.6333, s.p=1.0662, t (df) = 4.097(29), p = .000 ).

Skor Pencapaian Ujian Penilaian Melalui Portal Zoom-A Kumpulan Eksperimen

<table>
<thead>
<tr>
<th></th>
<th>PRA</th>
<th></th>
<th>PASCA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bil</td>
<td>Peratus</td>
<td>Bil</td>
<td>Peratus</td>
</tr>
<tr>
<td>A</td>
<td>0</td>
<td>0.00</td>
<td>7</td>
<td>23.33</td>
</tr>
<tr>
<td>B</td>
<td>9</td>
<td>30.00</td>
<td>13</td>
<td>43.33</td>
</tr>
<tr>
<td>C</td>
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<td>D</td>
<td>6</td>
<td>20.00</td>
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<td>10.00</td>
</tr>
<tr>
<td>E</td>
<td>3</td>
<td>10.00</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>30.00</td>
<td>100.00</td>
<td>30.00</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Jadual 5 : Skor Pencapaian Gred dan Min Skor Ujian Penilaian Zoom-A
Hasil dapatan kajian mengikut gred berdasarkan jadual 5, di dapati pencapaian responden berada di tahap lemah. Ini kerana tiada responden lulus dengan memperolehi Gred A. Seramai 9 orang responden pula iaitu 30% memperolehi Gred B. Manakala 12 orang murid iaitu 33.33% memperolehi Gred C. Selain itu, 6 orang murid memperoleh gred D iaitu 30% dan 3 orang dapat gred E juga mencatatkan 3.33%. Skor min pencapaian pula ialah 58.86.

Ujian Pasca menunjukkan peningkatan yang tinggi bagi kumpulan ini. Ini kerana 7 orang responden iaitu 23.33% lulus dengan memperolehi Gred A. Jumlah responden memperoleh Gred B naik kepada 43.33% iaitu seramai 13 orang. Manakala 7 orang murid iaitu 23.33% memperolehi Gred C. 3 orang responden atau 10% memperolehi Gred D. Bilangan murid mendapat Gred E turun 100% peratus kepada 0%. Skor min pencapaian pula ialah 66.97.

<table>
<thead>
<tr>
<th>Penilaian</th>
<th>Faktor</th>
<th>N</th>
<th>Min</th>
<th>s.p</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eksperimen</td>
<td>Pra Ujian</td>
<td>30</td>
<td>3.1</td>
<td>0.95953</td>
<td>4.097</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td>Pasca Ujian</td>
<td>30</td>
<td>2.2</td>
<td>0.92476</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Jadual 6 : Ukuran Kecenderungan Memusat Ujian Pra dan Pasca bagi Penilaian Zoom-A**

Ujian t sampel bersandar telah dijalankan untuk mengukur impak intervensi skor pencapaian murid kumpulan kawalan sebelum dan selepas penggunaan kaedah konvensional. Dapatan menunjukkan terdapat penurunan yang signifikan pada skor dari ujian pra ( min = 3.1, s.p = 0.95953) ke ujian pasca ( min = 2.2, s.p = 0.92476, t (df) = 16.155(29), p = .000 ).

**Perbezaan Pencapaian Ujian Penilaian Melalui Portal Zoom-A (kumpulan eksperimen) dan Penilaian Konvensional (kumpulan kawalan)**

Bagi mengesan perbezaan pencapaian kedua-dua jenis penilaian ini, statistik kaedah kuantitatif digunakan. Taburan markah dicari menggunakan min iaitu ukuran kecenderungan memusat.

<table>
<thead>
<tr>
<th>Ukuran</th>
<th>Ujian Pra</th>
<th>Ujian Pasca</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>57.57</td>
<td>62.23</td>
</tr>
<tr>
<td>Median</td>
<td>58.5</td>
<td>63</td>
</tr>
<tr>
<td>Mod</td>
<td>43</td>
<td>48</td>
</tr>
</tbody>
</table>

**Jadual 7 : Ukuran kecenderungan memusat ujian pra dan ujian pasca bagi kaedah penilaian tradisional.**

Min markah bagi ujian pra telah meningkat dari 57.57 kepada 62.23. Mod ujian pra pula telah berubah kepada mod baru di ujian pasca iaitu 43 kepada 48. Medium meningkat sebanyak 4.5 markah iaitu dari 58.5 kepada 63. Jadual 8 menunjukkan ukuran...
kecenderungan memusat bagi ujian pra dan pasca bagi kumpulan eksperimen yang menggunakan kaedah penilaian Zoom-A.

<table>
<thead>
<tr>
<th>Ukuran</th>
<th>Ujian Pra</th>
<th>Ujian Pasca</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>58.86</td>
<td>66.97</td>
</tr>
<tr>
<td>Median</td>
<td>60</td>
<td>68</td>
</tr>
<tr>
<td>Mod</td>
<td>60</td>
<td>80</td>
</tr>
</tbody>
</table>

**Jadual 8**: Ukuran kecenderungan memusat ujian pra dan ujian pasca bagi kaedah penilaian Zoom-A

Min markah meningkat dengan begitu tinggi iaitu dari 58.86 kepada 66.97. Begitu juga dengan mod markah yang diperolehi oleh murid iaitu dari 60 kepada 80. Medium markah juga meningkat dengan begitu tinggi dari 60 kepada 68. Ini menunjukkan peningkatan yang tinggi di dalam ujian pasca bagi kumpulan yang menggunakan kaedah penilaian menggunakan Portal Zoom-A. Nilai min, mod dan medium yang hampir sama ini juga menunjukkan peratus ketepatan kajian yang dijalankan adalah tinggi. Jadual 9 di bawah pula menunjukkan perbezaan dan perbandingan antara ujian pasca bagi kumpulan kawalan dan kumpulan rawatan.

<table>
<thead>
<tr>
<th>Ukuran</th>
<th>Penilaian Tradisional</th>
<th>Penilaian Zoom-A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>62.23</td>
<td>66.97</td>
</tr>
<tr>
<td>Median</td>
<td>63</td>
<td>68</td>
</tr>
<tr>
<td>Mod</td>
<td>48</td>
<td>80</td>
</tr>
</tbody>
</table>

**Jadual 9**: Ukuran kecenderungan memusat ujian pasca bagi kaedah Penilaian tradisional dan Penilaian Zoom-A


Berdasarkan perbezaan skor min ini, pelajar yang mempunyai kebolehan menggunakan komputer dan mahir dalam penggunaan internet sedikit sebanyak dapat mempengaruhi hasil pencapaian melalui internet. Perbezaan ini adalah disebabkan penilaian interaktif internet meningkatkan minat murid dalam menjawab soalan yang dikemukakan.

**Kesimpulan Analisis Dapatan Kajian Secara Deskriptif**

Kesimpulan yang dapat dibuat daripada analisis dapatan yang dilakukan secara deskriptif ini, menunjukkan terdapat peningkatan pencapaian daripada ujian penilaian secara konvensional (skor min = 58.87) kepada penilaian melalui Portal Zoom-A (skor min = 66.97). Perbandingan kedua-dua kaedah ini menunjukkan perbezaan min markah sebanyak 8.1. Maka, dapat dipastikan bahawa kaedah penilaian menggunakan Portal Zoom-A dilihat...
dapat meningkatkan pencapaian murid dalam mata pelajaran Matematik dalam topik Peratus.

Dapatan Inferensi

Dapatan inferensi yang dibincangkan pula adalah untuk mendapatkan perbezaan antara kumpulan kawalan dan kumpulan rawatan. Analisis yang digunakan adalah ujian-t dengan aras keyakinan 0.05 yang dibuat menggunakan perisian SPSS. Jadual 10 menunjukkan keputusan ujian-t tersebut.

Pengujian Hipotesis

H_0 : Tidak terdapat perbezaan yang signifikan di antara pencapaian murid yang menggunakan kaedah penilaian konvensional berbanding kaedah penilaian Zoom-A melalui ujian pra dan pasca.

<table>
<thead>
<tr>
<th>Ujian-t</th>
<th>Sisihan Piawai</th>
<th>Ralat Min</th>
<th>95% Selang Keyakinan Perbezaan</th>
<th>T</th>
<th>Df</th>
</tr>
</thead>
<tbody>
<tr>
<td>UjianPra-UjianPasca</td>
<td>0.9000</td>
<td>.30513</td>
<td>.05571</td>
<td>.78606</td>
<td>1.01394</td>
</tr>
</tbody>
</table>

Jadual 10 : Keputusan Ujian-t Penilaian Konvensional dan Penilaian Melalui Portal Zoom-A

Merujuk jadual 4.3.1, hasil ujian-t menunjukkan t = 16.155 berada dalam selang keyakinan iaitu antara 0.7860 dan 1.01394. Oleh kerana nilai p = 0.78606, maka H_0 tidak dapat diterima secara signifikan. Ini kerana terdapat perbezaan yang ketara antara kedua-dua kaedah penilaian yang dilakukan. Kesimpulannya, terdapat perbezaan yang signifikan min skor pencapaian penilaian secara konvensional dan ujian penilaian melalui Portal Zoom-A.

Dapatan Temubual

Berdasarkan temu bual dengan dua orang guru dan lima orang murid, dapatan menunjukkan bahawa semua guru dan murid yang ditemu bual bersetuju tentang kelebihan penggunaan internet khusus dalam aspek penilaian dan dijangka boleh membantu meningkatkan pencapaian murid jika diguna secara sistematik. Walau bagaimanapun terdapat beberapa kekangan yang dihadapi oleh guru dan murid dalam pelaksanaan kaedah penilaian melalui Portal Zoom-A berbanding penilaian secara konvensional. Berikut adalah transkripsi dialog temu bual yang telah dijalankan antara pengkaji dengan 2 orang guru dan
lima orang murid Sekolah Kebangsaan Rapat Jaya Ipoh, Perak bertujuan mendapatkan maklum balas tentang kelebihan serta kelemahan kaedah penilaian melalui Portal Zoom-A bagi guru berbanding penilaian secara konvensional.

Temu bual yang dilakukan telah berjaya mendapat maklum balas yang baik dari responden. Hasil temu bual yang dijalankan ini, pengkaji telah mengenal pasti beberapa kebaikan dan keburukan hasil dari penggunaan Portal Zoom-A sebagai penilaian.


Kesimpulan


Rumusan

Kajian yang dijalankan ini memberikan implikasi yang besar terhadap proses penilaian sebagai suatu proses pengajaran dan pembelajaran. Jika sebelum ini kaedah konvensional sering digunakan dalam melaksanakan penilaian, kini terdapat kaedah penilaian yang baharu iaitu penilaian berasaskan Zoom-A. Dapatan menunjukkan penilaian Zoom-A berpotensi digunakan sebagai alat latih tubi dan pembelajaran akses kendiri kerana mempunyai daya penarik minat murid-murid dengan elemen multimedia yang dimilikinya.
RUJUKAN


ABSTRAK


PENGENALAN

Abdul Halim Tamuri et.al., (2004), dalam kajianannya tentang keberkesanan kaedah pengajaran dan pembelajaran Pendidikan Islam ke atas pembangunan diri pelajar mendapati bahawa tahap penguasaan tulisan jawi murid adalah sederhana (67.8%). Ini membuktikan bahawa tahap penguasaan jawi dalam kalangan murid-murid adalah masih ditahap yang lemah.

Justeru itu, bagi memastikan tulisan jawi ini tidak terkubur, suatu usaha yang bersepadu secara berterusan harus dilakukan oleh guru bagi memastikan murid-murid benar-benar bersedia dan tertarik dengan tulisan jawi ini dan juga agar tulisan ini kembali semula menjadi medium komunikasi ke seluruh pelukis nusantara seperti zaman dahulu. Oleh itu, penulis akan menjalankan kajian tindakan untuk memastikan murid boleh membaca dan menulis dalam tulisan jawi.
Senario kini melihat bahawa penguasaan tulisan jawi dalam kalangan murid sekolah amat kurang menggalakkan. Di dalam sistem KBSR, tulisan jawi merupakan salah satu bidang di dalam mata pelajaran Pendidikan Islam. Ianya diajar hanya selama 30 minit seminggu. Maka dengan itu penggunaan tulisan jawi hanya terhad didalam institusi pendidikan sahaja seperti sekolah dan institusi pengajian tinggi.

Namun penggunaannya hanya di bilik darjah bagi matapelajaran yang tertentu sahaja. Dengan mengambil kira sistem pendidikan yang telah ditemui dan perubahan kepada KSSR, maka penggabungan elemen Sains dan Teknologi akan memainkan peranan bagi menangani permasalahan lemah jawi dalam kalangan murid-murid khususnya.

Untuk menerapkan penggunaan tulisan jawi dalam kalangan murid bukanlah suatu perkara yang mudah. Pelbagai faktor perlu diambil kira seperti faktor ibu bapa, guru dan masyarakat. Tulisan Jawi yang berasaskan huruf-huruf al-Qur'an menekankan konsep keseragaman dalam sebutannya. Ia perlu disanjung tinggi dan dipelajari oleh murid-murid Melayu, kerana ia bukanlah suatu perkara yang sukar dan baru dalam masyarakat Melayu.

PERNYATAAN MASALAH


Asmawati Suhid et.al., (2008), mendapati tahap penguasaan murid membaca dan menulis perkataan mudah daripada suku kata tertutup adalah 49.2%, membaca dan menulis perkataan mudah daripada suku kata tertutup adalah 57.9% dalam jawi. Ini membuktikan bahawa murid-murid merasakan pelajaran jawi tidak lagi penting dan hanya merasakan ianya suatu bebanan khususnya bagi murid-murid yang lemah jawi.

Sabariah (2011), mengetengahkan tentang prestasi menulis jawi 265 orang pelajar yang mengambil mata pelajaran jawi (dalam pelajaran Bahasa Melayu dan Pendidikan Islam) di IPG Kampus Kent adalah sebanyak 57.2% memperolehi gred C dan D. Ini membuktikan bahawa mata pelajaran jawi mula dipinggirkan dan terlalu rendah arasnya dalam kalangan murid-murid. Maka atas sebab yang demikian, kajian mengenai penggabungan dalam elemen sains dan teknologi dalam pelajaran jawi wajar dilaksanakan.


Pandangan masyarakat Melayu sekarang kurang meminati tulisan jawi dapat dibuktikan dengan terhentinya pengeluaran akhbar jawi Utusan Melayu Mingguan. Kelemahan dalam penguasaan ejaan ini turut membelenggu para guru yang menggunakan tulisan jawi. Kajian yang telah dijalankan sebelum ini, mendapati tahap penguasaan ejaan
jawi bakal guru adalah sederhana (Sabariah 2011; Asyraf Ridwan 2011 dan 2012; Niswa 2014).

Terhentinya penerbitan akhbar Utusan Melayu Mingguan bertulisan jawi pada tanggal 29 Januari 2006 telah memperlihatkan sikap tidak ambil peduli dan kurang minat yang mendalam dalam kalangan bangsa melayu sendiri terhadap seni warisan bangsa ini (Asyraf Ridwan & Berhanundin 2014)

Menurut Rashdi Ramlan (2001), satu anjakan paradigma harus dilakukan bagi menjadikan matapelajaran Sejarah lebih menarik dan menggembirakan dengan penggunaan multimedia dalam pengajaran dan pembelajaran. Ini bermaksud bahawa penerokaan sumber digital seperti menerapkan elemen Sains dan Teknologi akan menjadikan proses pengajaran dan pembelajaran itu lebih menarik dan berkesan.

KERANGKA KONSEPTUAL

Penilaian adalah satu proses dalam menentukan masalah, menyatakan maklumat yang berkaitan, mengumpul dan menganalisa data dan dilaporkan kepada penilai. Ia merupakan satu aspek yang penting bagi guru dalam memastikan keberkesanan pengajaran dan pembelajaran. Pelbagai kaedah penilaian yang boleh digunakan untuk mendapatkan sesuatu data ataupun maklumat.

Kerangka Konsep Kajian Berdasarkan Model Input CIPP
Rajah 1.1

Tujuan utama penilaian ini adalah untuk membuat perkaitan di antara konteks, input, proses dan juga produk atau hasil penilaian. Penilaian yang dibuat bertujuan untuk memperbaiki sesuatu program bukan untuk membuktikan sesuatu kebenaran (Azizi et al., 2010). Peringkat-peringkat dalam penilaian ini dapat membantu penilai program mendapatkan keputusan yang lebih berfokus dan tepat kerana aktiviti penilaian telah dirancang dengan teliti secara berperingkat mengikut keperluan sesuatu program.

Penilaian dapat dilakukan terus pada aspek atau peringkat yang tertentu tanpa perlu mengikut proses pada peringkat yang seterusnya (Yahya et al., 2006). Penilaian model ini dijalankan semasa sesuatu program sedang berjalan dan lebih menekankan aspek keberkesanan dan pengawalan kualiti (Azizi et al., 2010).

Penilaian dalam model CIPP boleh diringkaskan melalui jadual 1.

**Jadual 1** Penilaian CIPP Sumber: (Azizi et al., 2010)

<table>
<thead>
<tr>
<th>Penilaian Konteks</th>
<th>Menilai syarat-syarat awal dan keperluan yang dalam situasi program. Menimbulkan isu-isu, mendedahkan masalah-masalah dan menentukan had-had untuk membuat program. Tujuan utama penilaian ini ialah untuk mengukur, menterjemahkan dan mengesahkan perjalanan sesuatu program.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Penilaian Input</td>
<td>Penilaian ini mengukur tahap keupayaan sistem dan input-input dari segi strategi dan sumber. Digunakan untuk membuat penyusunan keputusan dan menjadi panduan untuk memilih strategi program dan perubahan yang hendak dibuat.</td>
</tr>
<tr>
<td>Penilaian Proses</td>
<td>Peringkat mengurus sesuah program. Penyelidik menyemak proses-proses yang terlibat semasa program sedang berjalan. Tujuan penilaian dibuat untuk mencapai Matlamat dan objektif program. Penilaian ini bertindak sebagai melaksanakan keputusan yang difikirkan sesuai.</td>
</tr>
</tbody>
</table>
Penilaian Hasil Atau Produk

Penilaian ini ialah untuk mengaitkan matlamat, konteks, input dan proses dengan hasil program yang dirancang. Menilai setakat mana perubahan dalam sesuatu program itu berjaya. Aktiviti penilaian seterusnya ialah melaporkan maklumat yang telah dianalisis kepada pihak yang terlibat supaya dapat membuat keputusan.

PERSOALAN KAJIAN

Persoalan kajian ini adalah:
1. Apakah tahap penerimaan guru terhadap penggabungjalinan mata pelajaran Jawi terhadap elemen Sains dan Teknologi?
2. Apakah tahap kesediaan guru terhadap penggabungjalinan mata pelajaran Jawi terhadap elemen Sains dan Teknologi?
3. Apakah tahap kefahaman guru terhadap penggabungjalinan mata pelajaran Jawi terhadap elemen Sains dan Teknologi?

METODOLOGI KAJIAN

1. Reka Bentuk Kajian


2. Populasi Dan Sampel Kajian

daerah Kinta Utara sebagai sampel kajian. Terdapat 139 guru di Zon D daerah Kinta Utara yang terlibat secara langsung dalam mata pelajaran Pendidikan Islam.

Persampelan ialah satu proses di mana sebilangan kecil daripada keseluruhan populasi dipilih dan dikaji bagi membolehkan kita membuat satu generalisasi berkaitan populasi itu (Rohana Yusof, 2004).

Kaedah persampelan rawak mudah (PRM) dipilih dimana ia adalah satu proses pemilihan sampel di mana semua individu dalam populasi tertentu mempunyai peluang yang sama untuk dipilih sebagai sampel. Persampelan rawak mudah merupakan kaedah terbaik untuk mendapatkan sampel yang mewakili populasi.


Guru Pendidikan Islam yang mengajar di sekolah rendah dipilih untuk mendapatkan maklumat yang menyeluruh dan lengkap. Daripada 139 responden yang dipilih, hanya 113 responden telah memberi maklumbalas. Oleh yang demikian, responden untuk kajian ini hanya melibatkan 113 responden sahaja.

3. Instrumen Kajian

Instrumen kajian yang digunakan dalam kajian ini ialah soal selidik. Pembinaan instrumen adalah hasil pengubahsuaian instrumen penyelidik lepas dan penambahbaikan daripada pengkaji sendiri berdasarkan objektif yang hendak dicapai.

Pengkaji menggunakan soal selidik kerana soal selidik boleh membuat responden lebih rela memberi maklum balas yang benar, bebas dan dapat mengurangkan kesilapan yang disebabkan oleh catatan pengkaji (Burns, 2000). Responden dikehendaki menjawab setiap soalan yang telah disediakan berdasarkan pilihan jawapan yang diberi.

Bahagian A

Bahagian ini terdiri daripada item-item soalan yang berkaitan dengan demografi responden yang terlibat. Antara aspek yang dikaji pada bahagian 1 ini ialah jantina, umur, kelulusan akademik, lokasi tempat kerja dan juga pengalaman bekerja. Item soalan bersifat tertutup. Responden dikehendaki memilih jawapan yang telah disediakan.

Bahagian B

Bahagian B terdiri daripada soalan yang berfokuskan kepada objektif kajian yang hendak dijalankan. Item soalan bagi bahagian B ini meliputi 3 aspek yang hendak dikaji iaitu:
1. Mengenal pasti tahap penerimaan guru terhadap penggabungjalinan mata pelajaran Jawi dengan elemen Sains dan Teknologi.


3. Mengenal pasti tahap kefahaman guru terhadap penggabungjalinan mata pelajaran Jawi dengan elemen Sains dan Teknologi.

Soal selidik ini menggunakan skala Likert 5 mata iaitu responden hanya perlu memilih salah satu skala bagi menjawab setiap item soalan. Responden hanya perlu menanda salah satu jawapan. Skala likert 5 mata yang digunakan adalah seperti jadual 2 berikut;

**Jadual 2: Skala Likert 5 Mata**

<table>
<thead>
<tr>
<th>No</th>
<th>Skala Likert 5 Mata</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SANGAT TIDAK SETUJU (STS)</td>
</tr>
<tr>
<td>2</td>
<td>TIDAK SETUJU (TS)</td>
</tr>
<tr>
<td>3</td>
<td>TIDAK PASTI (TP)</td>
</tr>
<tr>
<td>4</td>
<td>SETUJU (S)</td>
</tr>
<tr>
<td>5</td>
<td>SANGAT SETUJU (SS)</td>
</tr>
</tbody>
</table>

4. Analisis Data

Data dianalisis berdasarkan kepada latarbelakang responden dari segi jantina, umur, kelulusan akademik, pengalaman bekerja dan lokasi tempat kerja. Tiga bahagian analisis data yang dibincangkan disini iaitu analisis tahap penerimaan guru dalam melaksanakan penggabungjalinan. Bahagian kedua ialah analisis tahap kesediaan guru dalam melaksanakan penggabungjalinan, manakala yang ketiga ialah analisis tahap kefahaman guru dalam melaksanakan penggabungjalinan.


Bagi tujuan menjawab soalan kajian 1, 2 dan 2, analisis data menggunakan statistik deskriptif perbandingan min secara mata kasar (Zaidatun Taisir & Mohd Salleh Abu, 2003) untuk melihat perbandingan perbezaan min antara pemboleh ubah bersandar.

**DAPATAN KAJIAN**

Berdasarkan kepada hasil dapatan tahap penerimaan guru dalam melaksanakan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi, menunjukkan skor min pada aras sederhana. Dari pada 10 item soal selidik yang disediakan, 8 item menunjukkan tahap penerimaan guru berada pada aras sederhana.
Secara keseluruhannya jadual 3 menunjukkan tahap penerimaan guru terhadap konsep penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi berada pada aras yang sederhana. Kemungkinan mereka lebih selesa dengan konsep pengajaran tradisional yang lebih kepada pengajaran sehalah, berkumpulan ataupun latihtubi yang tidak memerlukan kepada elemen Sains dan Teknologi.

**Jadual 3** Analisis Tahap Penerimaan Guru Dalam Melaksanakan Penggabungjalinan

<table>
<thead>
<tr>
<th>Item</th>
<th>Skor Min</th>
<th>Min</th>
<th>Sisihan Piawai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Konsep Penggabungjalinan amat mudah untuk difahami</td>
<td>Sederhana</td>
<td>3.50</td>
<td>.927</td>
</tr>
<tr>
<td>Pendedahan yang diberikan kepada saya sudah mencukupi.</td>
<td>Sederhana</td>
<td>3.47</td>
<td>.992</td>
</tr>
<tr>
<td>Saya yakin untuk menjalankan kursus dan latihan kepada pihak lain mengenai penggabungjalinan.</td>
<td>Sederhana</td>
<td>3.39</td>
<td>.986</td>
</tr>
<tr>
<td>Saya dapat menguasai penggabungjalinan dengan mudah dan cepat.</td>
<td>Sederhana</td>
<td>3.48</td>
<td>.955</td>
</tr>
<tr>
<td>Contoh RPH penggabungjalinan membantu saya dalam mempelajari sistem tersebut</td>
<td>Sederhana</td>
<td>3.38</td>
<td>.994</td>
</tr>
<tr>
<td>Bahan rujukan mengenai penggabungjalinan perlu diedar ke setiap sekolah.</td>
<td>Sederhana</td>
<td>3.57</td>
<td>.953</td>
</tr>
<tr>
<td>Masih banyak yang perlu saya pelajari mengenai penggabungjalinan.</td>
<td>Sederhana</td>
<td>3.27</td>
<td>1.044</td>
</tr>
<tr>
<td>Saya tahu cara mengajar murid menggunakan penggabungjalinan.</td>
<td>Tinggi</td>
<td>3.98</td>
<td>.876</td>
</tr>
<tr>
<td>Penambahbaikan sedia ada memudahkan saya untuk mengajar secara penggabungjalinan.</td>
<td>Tinggi</td>
<td>4.13</td>
<td>.796</td>
</tr>
<tr>
<td>Rancangan Pengajaran Harian penggabungjalinan mudah dibuat.</td>
<td>Sederhana</td>
<td>3.32</td>
<td>.919</td>
</tr>
</tbody>
</table>

**SEDERHANA 3.54**

Jadual 4 menunjukkan menunjukkan bahawa tahap kesediaan guru matapelajaran Jawi untuk melaksanakan penggabungjalinan dengan elemen Sains dan Teknologi berada pada aras yang sederhana. Kajian memperolehi min M=3.35 dengan sisihan piawai 0.834. Dari segi kesediaan memkul tangungjawab mentaksir murid dalam bidang akademik menggunakan elemen Sains dan Teknologi juga berada pada aras yang sederhana.
Secara keseluruhan, tahap kesediaan guru untuk melaksanakan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi berada pada skor yang sederhana sahaja. Responden bersedia untuk melaksanakan penggabungjalinan ini kerana melihat kaedah ini memberi ruang kepada mereka untuk lebih bertanggungjawab dalam pentaksiran. Di samping itu juga, responden akan berasa lebih bermotivasi untuk melaksanakan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi.

**Jadual 4** Analisis Tahap Kesediaan Guru Dalam Melaksanakan Penggabungjalinan

<table>
<thead>
<tr>
<th>Item</th>
<th>Skor Min</th>
<th>Min</th>
<th>Sisihan Piawai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saya bersedia untuk melaksanakan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi Sederhana dengan di sekolah</td>
<td>3.35</td>
<td>.834</td>
<td></td>
</tr>
<tr>
<td>Saya menyokong perlaksanaan penggabungjalinan di sekolah</td>
<td>3.46</td>
<td>.887</td>
<td></td>
</tr>
<tr>
<td>Saya yakin penggunaan penggabungjalinan dapat meningkatkan motivasi saya untuk mentaksir murid Sederhana dengan lebih berkesan.</td>
<td>3.08</td>
<td>1.036</td>
<td></td>
</tr>
<tr>
<td>Saya bersedia untuk memikul tanggungjawab mentaksir murid dalam bidang akademik.</td>
<td>3.35</td>
<td>.801</td>
<td></td>
</tr>
<tr>
<td>Saya selesa mentaksir murid menggunakan elemen Sains dan Teknologi</td>
<td>3.42</td>
<td>.810</td>
<td></td>
</tr>
<tr>
<td>Penggabungjalinan lebih baik dan berkesan berbanding dengan kaedah tradisional sebelumnya</td>
<td>3.87</td>
<td>.750</td>
<td></td>
</tr>
<tr>
<td>Penggabungjalinan perlu diteruskan.</td>
<td>3.97</td>
<td>.700</td>
<td></td>
</tr>
<tr>
<td>Penggabungjalinan meningkatkan beban kerja saya.</td>
<td>3.27</td>
<td>.936</td>
<td></td>
</tr>
<tr>
<td>Saya perlu bekerja lebih masa untuk melaksanakan penggabungjalinan</td>
<td>3.55</td>
<td>.824</td>
<td></td>
</tr>
<tr>
<td>Saya bersedia dan mampu melaksanakan penggabungjalinan sepanjang tahun.</td>
<td>3.33</td>
<td>.881</td>
<td></td>
</tr>
</tbody>
</table>

Sederhana 3.46
**Jadual 5 Analisis Tahap Kefahaman Guru Dalam Melaksanakan Penggabungjalinan**

<table>
<thead>
<tr>
<th>Item</th>
<th>Skor Min</th>
<th>Min</th>
<th>Sisihan Piawai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Saya yakin untuk melaksanakan Penggabungjalinan secara berkesan dengan kefahaman yang saya ada.</td>
<td>Sederhana</td>
<td>3.35</td>
<td>.834</td>
</tr>
<tr>
<td>Saya bersetuju sekiranya latihan dalam perkhidmatan mengenai Penggabungjalinan dilaksanakan secara Sederhana berterusan di sekolah.</td>
<td>Sederhana</td>
<td>3.46</td>
<td>.887</td>
</tr>
<tr>
<td>Pada pendapat saya, Penggabungjalinan amat mudah untuk dilaksanakan.</td>
<td>Sederhana</td>
<td>3.08</td>
<td>1.036</td>
</tr>
<tr>
<td>Saya mudah mengajar murid menggunakan kaedah Penggabungjalinan</td>
<td>Sederhana</td>
<td>3.35</td>
<td>.801</td>
</tr>
<tr>
<td>Kursus dan latihan perlu dilaksanakan untuk meningkatkan kefahaman saya mengenai kaedah Sederhana Penggabungjalinan.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saya boleh membimbing rakan sejawat untuk melaksanakan kaedah Penggabungjalinan.</td>
<td>Tinggi</td>
<td>3.87</td>
<td>.750</td>
</tr>
<tr>
<td>Penambahbaikan perlu dilakukan lagi dalam kaedah Penggabungjalinan untuk meningkatkan kefahaman Tinggi saya.</td>
<td></td>
<td>3.97</td>
<td>.700</td>
</tr>
<tr>
<td>Penggabungjalinan membantu meningkatkan mutu kerja saya.</td>
<td>Sederhana</td>
<td>3.27</td>
<td>.936</td>
</tr>
<tr>
<td>Saya tahu mengaplikasikan kaedah Penggabungjalinan dalam Rancangan Pengajaran Harian di sekolah.</td>
<td>Sederhana</td>
<td>3.55</td>
<td>.824</td>
</tr>
<tr>
<td>Melalui Penggabungjalinan, saya dapat mentaksir penglibatan murid lebih menyeluruh.</td>
<td>Sederhana</td>
<td>3.33</td>
<td>.881</td>
</tr>
</tbody>
</table>

Analisis seterusnya melihat kepada kefahaman guru dalam pelaksanaan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi. Tahap kefahaman mereka dalam pelaksanaan penggabungjalinan berada pada aras yang sederhana (M=3.35). Namun, mereka yakin melalui kursus dan latihan dapat meningkatkan lagi kefahaman mereka didalam konsep penggabungjalinan, disamping mampu membimbing rakan sejawat untuk melaksanakan kaedah penggabungjalinan.
Secara keseluruhannya jadual 5 menunjukkan tahap kefahaman guru di dalam melaksanakan penggabungjalinan matapelajaran Jawi dengan elemen Sains dan Teknologi berada dalam skor yang sederhana, mewakili nilai min M=3.46. Bagi memantapkan kefahaman responden didalam aspek ini, mereka memerlukan sedikit latihan, bimbingan dan kursus supaya mutu kerja guru-guru dapat dipertingkatkan, disamping membantu rakan-rakan untuk lebih memahami konsep penggabungjalinan ini.

RUMUSAN


Sikap segelintir guru Pendidikan Islam yang memandang negaif terhadap perubahan diarus pendidikan dilihat sebagai satu senario yang tidak sihat. Hal seumpama ini perlu dipandang serius oleh pihak tertentu supaya elemen-elemen dalam sistem KSSR akan terus dapat diaplikasikan dan dinikmati kewujudannya oleh murid-murid sekolah rendah khususnya.

KSSR yang diperkenalkan oleh KPM mampu mendorong meningkatkan kreativiti guru dan murid melalui pendekatan pengajaran dan pembelajaran seperti didik hibur dan elemen nilai tambah merentas kurikulum. Atas dasar itulah pengkaji memikirkan perlunya matapelajaran Jawi digabungjalinkan dengan elemen Sains dan Teknologi dengan tujuan meningkat kreativiti guru dan murid. Dengan ini murid akan lebih terangsang untuk terus belajar secara kendiri.
RUJUKAN

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Kementerian Pelajaran Malaysia. (2004). Ke arah memperkasakan pendidikan Islam j-QAF,


EXPLORING SCIENCE TEACHERS’ SELF EFFICACY VIA THE TPACK FRAMEWORK IN THE IMPLEMENTATION OF HIGHER ORDER THINKING IN THE CLASSROOM

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Faculty Of Education and Human Development, Sultan Idris Education University

ABSTRACT

The purpose of this descriptive study is to explore and find out the level of a Science teachers’ self efficacy following the TPACK framework in infusing the Higher Order Thinking Skills in their respective classrooms. Higher order thinking skills has become increasingly important in our nation but we still find that children and young adults are not always competent thinkers. A teachers’ self efficacy, performance and students’ achievement is clearly related. Hence, this study was carried out to investigate how well are our Science teachers prepared to implement Higher Order Thinking in their Science lessons, via the TPACK framework. The TPACK framework used in this research will not include the Technological element of the framework. The study will also look into the knowledge and skills and the teachers’ attitude towards in inculcating Higher Order Thinking Skills in the Science subject in the classroom. The research design used in this study was a quantitative. And the research method was survey method by collecting data using a set of questionnaire. A questionnaire with 5 point Likert scale was used in this study. The Cronbach Alpha, α = 0.779. The questionnaire was analyzed using the Statistical Package For Social Science (SPSS) Version 15.0 to find out the frequency, percentage and mean value of the study. Findings from the study illustrate the changing nature of the complex relationship between knowledge and self-efficacy beliefs and highlight the potential areas of knowledge in TPACK domains that influence teachers’ beliefs about technology Higher Order Thinking Skills.

Key words: Self Efficacy, TPACK Framework, Higher Order Thinking Skills

INTRODUCTION

Malaysian science educators recognise the need for the Science curriculum to keep in line with the international trends if Malaysia were to achieve the vision of becoming a developed country by the year 2020.

Recently our attention have been drawn to the lack of interest among our students in Science subjects in school. As already reported, compared to experiences in other subjects, students see learning Science as involving mainly the transmission of facts and contents of little relevance to life as well as Science being more difficult than most other subjects. Instead of learning more about the scientific procedures through which Scientific knowledge is obtained, Science education is perceived more often as over emphasizing the memorization of established scientific knowledge.
The paradigm of education is changing towards Higher Order Thinking Skills (HOTS). As many countries have embedded it in their curriculum, Malaysia also made positive move to implement it in current curriculum. Therefore, Higher Order Thinking Skills (HOTS) has been given more emphasis as a part of government effort to meet the need of future nation.

The relationship between teacher-efficacy and teaching HOTS in the classroom, and how teacher-efficacy is reflective of overall teaching performance, is highly important when evaluating how our students utilize such skills and evaluate their own thinking processes in the classroom. Specifically for this study, it is important to know how levels of teacher-efficacy in promoting higher-order thinking skills may impact how students utilize and evaluate their own thinking in the classroom.

Therefore, the main purpose of this research is to identify the response and the feedback from the primary school science teachers especially in Manjung District on their understanding and skills in teaching Higher Order Thinking Skills in their respective classrooms.

**PROBLEM STATEMENT**

Now, it seems like our students do not understand and are not able to apply what they have learned. Our Science lessons are no more focusing on hand’s on scientific investigations. There is a gap between the aspired curriculum, implemented curriculum and examined curriculum. The report from TIMSS showed that students did not regularly engage in conducting experiments. Science lessons were mostly teacher centered, 78 percent which is higher than in international average of Malaysian students reported watching teachers demonstrate experiment and instigation, rather than doing it themselves (TIMSS 2007).

In Malaysia, Lower Order Thinking, instead of HOT, still dominates teaching methods and learning outcomes. Teachers themselves are confused over the definitions of thinking skills and they sometimes find it difficult to differentiate levels in thinking (Beyer., 1984, Marzano., 1993; Rajendran., 2000). This lack of knowledge of HOT may eventually lead to teachers’ inability to assess students’ HOT. The major issue of today’s education is that many studies have begun to reveal symptoms of decline in students’ ability to think well, especially when schools begun to focus on the mastery of subject content rather than the processes of deriving the products. So the aim of this paper is to find out how the teachers’ self efficacy will help them to implement the higher order thinking skills in their respective Science classroom.

**THEORETICAL FRAMEWORK**

This research decided to use the TPACK module to actually identify the influence of self efficacy beliefs, in the integration of knowledge and pedagogical beliefs by stating that even though a teacher needs the knowledge of teaching higher order thinking skills in the Science subject it will not be enough if teachers do not feel confident using that knowledge.
to facilitate student learning the higher order thinking. The model talks about the teachers’ knowledge, skills and attitudes that will help them to teach Science effectively along with their self efficacy that also needed in the teaching of Higher Order Thinking.

The core of this study are two theories: (a) technological, pedagogical and content knowledge (TPACK) and (b) self-efficacy (SE). Researcher modify the the TPACK module to suit the teaching of Higher Order Thinking in the Science subject and later measure the teachers’ level of TPACK and their level of SE with regards to higher order thinking and then look for a possible relationship between the components (see Figure 1).

![Figure 1 A graphical representation of the theoretical framework in the study depicting the core components (TPACK and SE) of the study and their possible relationship with regards to teacher preparedness.](image)

**Research Objectives**

The objective of this research is

1. To investigate the teachers’ self efficacy in their teaching of Higher Order Thinking Skills in the teaching of Science subject.
2. To study about the knowledge and skills needed by the teachers in inculcating Higher Order Thinking Skills in the Science subject in the classroom.
3. To study about the teachers’ attitude towards teaching of Higher Order Thinking Skills in the Science subject.

**Research Questions**

The research questions are

1. What is the teachers’ level of self efficacy in helping them to teach Higher Order Thinking Skills in the Science subject in their respective classroom?
2. Do the teachers have enough knowledge and skills to inculcate Higher Order Thinking in the Science subject?
3. How is the teachers’ attitude towards teaching Higher Order Thinking in their Science lesson?

**METHODOLOGY**
Research Design

Here in this study, a quantitative research design is used to collect the data needed. The research method used here is the survey method. And here a set of questionnaires has been used. This study was conducted in the district of Manjung and was focused mainly in the primary school. The questionnaire is given to the Science teachers in that particular 82 primary schools in the Manjung district.

Sample

The population is the total 2254 teachers that have been identified in the Manjung District. Purposive sampling has been administered to identify and focus only on the Science teachers in the district. Purposive sampling represents a group of different non-probability sampling techniques.

The sample identified in this research are the Science teachers to identify the self-efficacy, the knowledge and skills of the teachers. So the sample here is around 122 teachers. All these 122 teachers will be given a set of questionnaire. Out of 122 teachers only 115 teachers responded to the instruments.

INSTRUMENT

In order to collect detailed data, structured and standard, a set of questionnaire was used in this study. This set of questionnaire was adapted from a modified and structured instrument that was prepared earlier. The instrument contains two parts Part A which explore the demographic detail of the respondent. Part A consist of 5 questions.

Table 1: Item distribution according to the respondents demographic background.

<table>
<thead>
<tr>
<th>ITEM NUMBER</th>
<th>DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Gender</td>
</tr>
<tr>
<td>2</td>
<td>Age</td>
</tr>
<tr>
<td>3</td>
<td>Ethnic</td>
</tr>
<tr>
<td>4</td>
<td>Education</td>
</tr>
<tr>
<td>5</td>
<td>Years Of Experience</td>
</tr>
</tbody>
</table>

The instrument was modified from three different instruments. They are Teacher Efficacy For Using Higher Order Thinking Skills Pedagogy In The Classroom (Lindsey., 2013), Science Teaching Efficacy Belief Instrument - STEBI-A (Riggs and Enochs.,1989,1990) and Survey Of Preservice Teachers’ Knowledge of Teaching And Technology (Schmidt et al.,2009). It is a five-point Likert type instrument ranging from 1 meaning “strongly agree” to 5meaning “strongly disagree”. The scales include some negative items, so they must be reversed.
To identify the self-efficacy of the teachers 10 instruments were used and it is been adapted from the original instrument of the Teacher Efficacy For Using HOTS Pedagogy in the Classroom instruments (Lindsey, Le., 2013) and also Science teaching Efficacy Belief Instrument - FORM A.

In the original instrument of the Teacher Efficacy For Using HOTS Pedagogy in the Classroom instruments (Lindsey, Le., 2013), there are total of 28 items. But for this research only 5 items were taken to identify the level of self-efficacy of the teachers. They are items no 2, 7,11,18 and 20. The items are:

**Table 3: Items derived from Teacher Efficacy For Using HOTS Pedagogy in the Classroom Original Instruments**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>I can put students in groups to demonstrate how to solve problems, discuss answers to relevant questions and how to apply information to situations with which they are familiar</td>
</tr>
<tr>
<td>7</td>
<td>I can prompt students to ask me questions about their reflective thoughts</td>
</tr>
<tr>
<td>11</td>
<td>I can create ‘problem based learning environments’ in the classroom by providing students with an ill-defined problem, allowing them to explore the problem, find solutions and share their conclusions.</td>
</tr>
<tr>
<td>18</td>
<td>I can ask questions of varying difficulties from simple factual recall to more analysis and synthesis.</td>
</tr>
<tr>
<td>20</td>
<td>I can evaluate student learning by allowing students to provide real-life examples that are relevant to the content material.</td>
</tr>
</tbody>
</table>

The remainder of 5 items were adapted from the Science teaching Efficacy Belief Instrument - FORM A. There are a total of 25 items in this instrument but only 4 were adapted from it. They are items no 5,12,14 and 18.

**Table 4: Items derived from Science teaching Efficacy Belief Instrument - FORM A**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Score</td>
<td>1</td>
</tr>
</tbody>
</table>
I know the steps necessary to teach science concepts effectively.

I understand science concepts well enough to be effective in teaching primary Science.

I am typically able to answer students’ questions in Science

The teacher is generally responsible for the achievement of students in Science

The instruments to identify the teachers’ knowledge and skills via TPACK framework is the Survey of Preservice Teachers; Knowledge of Teaching and Technology (Schmidt et al, 2009) was adapted and modified. In this original statement there are 58 items but only 9 items were used in this research instrument. The items that was chosen here are more closely related to the Science subjects and also Higher Order Thinking Skills.

They are item no 14, 15, 16, 21, 22, 23, 24, 25 and 29. The items are.

Table 5 : Items derived from Survey of Preservice Teachers; Knowledge of Teaching and Technology.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>I have sufficient knowledge about Science.</td>
</tr>
<tr>
<td>15</td>
<td>I can use a scientific way of thinking.</td>
</tr>
<tr>
<td>16</td>
<td>I have various ways and strategies of developing my understanding of Science.</td>
</tr>
<tr>
<td>21</td>
<td>I can adapt my teaching based upon what students currently understand or do not understand</td>
</tr>
<tr>
<td>22</td>
<td>I can adapt my teaching style to different learners.</td>
</tr>
<tr>
<td>23</td>
<td>I can assess student learning in multiple ways.</td>
</tr>
<tr>
<td>24</td>
<td>I can use a wide range of teaching approaches in a classroom setting. (collaborative learning, direct instruction, inquiry learning, problem/project based learning etc..)</td>
</tr>
<tr>
<td>25</td>
<td>I am familiar with common students understandings and misconceptions.</td>
</tr>
<tr>
<td>29</td>
<td>I know how to select effective teaching approaches to guide student thinking and learning in Science.</td>
</tr>
</tbody>
</table>

As in to assess the teachers’ attitude towards the teaching of Higher Order Thinking Skills in the Science subject, the Teacher Attitude Survey was administered and the instrument is the modification of the Science Teaching Efficacy Belief Instrument - FORM B.(Enochs &Riggs.,1990). From this instrument only 9 items was used to assess the teachers’ attitude. They are items number 1, 4, 9,10, 12, 14, 17, 21, 22.
Table 6: Items derived from Teacher Attitude Survey

<table>
<thead>
<tr>
<th></th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When a student does better than usual in Science, it is often because the teacher exerted.</td>
</tr>
<tr>
<td>4</td>
<td>When the Science grades of students improve, it is often due to their teachers having found a more effective teaching approach.</td>
</tr>
<tr>
<td>9</td>
<td>The inadequacy of a students’ Science background can be overcome by good teaching.</td>
</tr>
<tr>
<td>10</td>
<td>The low Science achievement of students cannot generally be blamed on their teachers.</td>
</tr>
<tr>
<td>12</td>
<td>I understand Science concepts well enough to be effective in teaching primary Science.</td>
</tr>
<tr>
<td>14</td>
<td>I will find it difficult to explain to students why Science experiments work.</td>
</tr>
<tr>
<td>17</td>
<td>When a student has difficulty understanding a Science concept, I will usually be at loss as to how to help student understand.</td>
</tr>
<tr>
<td>21</td>
<td>The teacher is generally responsible for the achievement of students in Science.</td>
</tr>
<tr>
<td>22</td>
<td>When teaching Science, I will usually welcome student questions.</td>
</tr>
</tbody>
</table>

ANALYSIS

Analysis of Research Question 1

“What is the teachers’ level of self efficacy in teaching Higher Order Thinking Skills in the Science subject in their respective classroom?”

Table 7 showed the level of self efficacy in teaching Higher Order Thinking Skills in the Science subject in their respective classroom were average, mean 3.057.

Table 7: level of self efficacy

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I can put students in groups to demonstrate how to solve problems, discuss answers to relevant questions and how to apply information to</td>
<td>28</td>
<td>37</td>
<td>50</td>
<td>3.1913</td>
</tr>
</tbody>
</table>
situations with which they are familiar.

2 I can prompt students to ask me questions about their reflective thoughts.

3 I can create a ‘problem based learning environments’ in the classroom by providing students with an ill-defined problem, allowing them to explore the problem, find solutions and share their conclusions.

4 I know the steps necessary to teach science concepts effectively.

5 I understand science concepts well enough to be effective in teaching primary Science.

6 I am able to answer students’ questions in Science.

7 I am responsible for the achievement of students in Science

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>I can prompt students to ask me questions about their reflective thoughts.</td>
<td>36</td>
<td>31.3</td>
<td>51</td>
<td>44.3</td>
</tr>
<tr>
<td>3</td>
<td>I can create a ‘problem based learning environments’ in the classroom by providing students with an ill-defined problem, allowing them to explore the problem, find solutions and share their conclusions.</td>
<td>42</td>
<td>36.5</td>
<td>36</td>
<td>31.3</td>
</tr>
<tr>
<td>4</td>
<td>I know the steps necessary to teach science concepts effectively.</td>
<td>28</td>
<td>24.3</td>
<td>41</td>
<td>35.7</td>
</tr>
<tr>
<td>5</td>
<td>I understand science concepts well enough to be effective in teaching primary Science.</td>
<td>22</td>
<td>19.1</td>
<td>34</td>
<td>29.6</td>
</tr>
<tr>
<td>6</td>
<td>I am able to answer students’ questions in Science.</td>
<td>39</td>
<td>33.9</td>
<td>31</td>
<td>27.0</td>
</tr>
<tr>
<td>7</td>
<td>I am responsible for the achievement of students in Science</td>
<td>38</td>
<td>33.0</td>
<td>63</td>
<td>54.8</td>
</tr>
</tbody>
</table>

**AVERAGE MEAN VALUE**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.057</td>
</tr>
</tbody>
</table>

**Analysis of Research Question 2**

“What is the teachers’ level of knowledge to inculcate Higher Order Thinking in the Science subject?”

Table 8 showed the level of knowledge to inculcate Higher Order Thinking in the Science subject were average, mean 3.047.

**Table 8 : level of knowledge**

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>f (%)</td>
<td>f (%)</td>
<td>f (%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Analysis of Research Question 3

“What is the teachers’ level of attitude towards teaching Higher Order Thinking in their Science lesson?”

Table 9 showed the level of attitude towards teaching Higher Order Thinking in their Science lesson were average, mean 2.630.

Table 9 : level of attitude

<table>
<thead>
<tr>
<th>Item</th>
<th>Statement</th>
<th>Disagree</th>
<th>Uncertain</th>
<th>Agree</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>When a student does better than usual in Science, it is often because the teacher exerted.</td>
<td>19</td>
<td>15</td>
<td>41</td>
<td>16.5</td>
</tr>
<tr>
<td>2</td>
<td>The inadequacy of a students’ Science background can be overcome by good</td>
<td>80</td>
<td>33</td>
<td>2</td>
<td>1.7</td>
</tr>
</tbody>
</table>
The low Science achievement of students cannot generally be blamed on their teachers.

I wonder if I have the necessary skills to teach Science.

I will find it difficult to explain to students why Science experiments work.

When a student has difficulty understanding a Science concept, I will usually be at loss as to how to help student understand.

Table 10 showed the summary of data analysis.

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Mean Average</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 “What is the teachers’ level of self efficacy in teaching Higher Order Thinking Skills in the Science subject in their respective classroom?”</td>
<td>3.057</td>
<td>Average</td>
</tr>
<tr>
<td>2 “What is the teachers’ level of knowledge to inculcate Higher Order Thinking in the Science subject?”</td>
<td>3.047</td>
<td>Average</td>
</tr>
<tr>
<td>3 “What is the teachers’ level of attitude towards teaching Higher Order Thinking in their Science lesson?”</td>
<td>2.632</td>
<td>Average</td>
</tr>
</tbody>
</table>

CONCLUSION

Based on the data analysis that has been carried out, there are few things that can be concluded. They are the respondents are mostly female and comes from 20-30 years of age. The respondents have a high level of self-efficacy in teaching Science and using the Higher Order Thinking Skills in their teaching and learning activities. This is based on the
highest mean average that has been obtained from the instruments which is 3.057.

The respondents’ attitude and perception achieved the lowest mean average which is 2.632. This means that it is the teachers’ attitude that comes in the way of implementing Higher Order Thinking Skills in their teaching and learning activities.

It is also clear that, the teachers don’t have the correct attitude and perception towards the teaching of Science in their classroom. The teachers are still finding it difficult to infuse Higher Order Thinking in their lessons. It is very important that the teachers have the right attitudes that are positive towards the promotion of good science teaching-learning situations. Even though in this research, the teachers’ self efficacy is high but the attitude of the teachers is not helping in the developing the cognitive skills of the students in the Science subject. It is clear that the teachers’ self-efficacy is not related to the teachers attitude in implementing the higher order thinking in the Science subject.

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ABSTRAK


Kata Kunci: Imbuhan meN-, Linguistik Kognitif, Teori Prototaip, Data Korpus.

Pengenalan

Bahasa Melayu dikategorikan sebagai bahasa aglunatif dan salah satu ciri utama bahasa aglunatif ini ialah pembentukan katanya melalui proses pengimbuhan pada kata dasarnya. Hal ini bermakna kata dasar berupaya menerima apa-apa imbuhan untuk membentuk kata terbitan dan secara tidak langsung memberi pengertian yang baharu kepada kata terbitan yang terbentuk itu.
Proses pengimbuhan juga menyebabkan perubahan kepada penggolongan perkataan. Misalnya dengan pengimbuhan meN- kepada kata nama – *batu* misalnya, telah menyebabkan penggolongan asal leksikal tersebut daripada kata nama kepada kata kerja – *membatu*.

Kemampuan menggunakan imbuhan yang betul dalam bahasa Melayu merupakan satu kemahiran yang perlu dikuasai. Hal ini demikian kerana kesilapan penggunaan imbuhan boleh merencut makna yang diujarkan seterusnya boleh mengundang impak yang negatif. Koh (1978) menjelaskan, sekiranya seseorang individu ingin menghargai sepenuhnya ujaran dalam bahasa Melayu, individu itu dikehendaki memahami pola dan bentuk pantun yang mempersonakan sebaliknya sekiranya seseorang berhajat untuk memahirkan diri dalam Bahasa Melayu, individu itu hendaklah menguasai struktur dan fungsi imbuhan dalam bahasa Melayu.


Sementara Maso (2005) pula menyatakan, selain kebolehan seseorang guru untuk memilih prosedur mengajar yang paling berkesan bagi membolehkan murid-murid menguasai bahan bahasa yang akan diajarnya, guru bahasa juga perlu mempunyai pengetahuan tentang bahan bahasa yang hendak diajarkan kepada murid-murid.

Menurut Sarifah Hassan dan Rosnita Hamid (2014), pengajaran imbuhan agak menunjukkan guru jika pemilihan kaedah yang digunakan di dalam kelas kurang berkesan dan tidak menunjukkan kemajuan dalam pembinaan ayat dalam kalangan murid-murid. Tambahan lagi, guru-guru menghadapi kesulitan menyemak hasil kerja murid disebabkan terdapatnya banyak kesilapan bahasa dari segi struktur ayat dan penggunaan imbuhan yang salah. Hal ini menjejaskan mutu penulisan mereka dari aspek kejelasan idea dan makna ayat yang ditulis.

Atas faktor-faktor ini, pengkaji berpendapat, isu penguasaan imbuhan dalam bahasa Melayu tidak boleh dianggap remeh. Pengajaran imbuhan misalnya, memerlukan pemahaman yang jelas berhubung makna imbuhan yang berkenaan. Hal ini demikian kerana kesilapan menggunakan imbuhan yang tepat, boleh menjejaskan maksud yang ingin disampaikan oleh pihak yang berkenaan.

**Permasalahan**

Dalam usaha menjelaskan makna imbuhan awalan meN-, Nik Safiah et. al. (2015) bahawa sama ada kata kerja transitif atau kata kerja tak transitif yang terbentuk daripada awalan meN-, kedua-duanya membawa maksud – *melakukan sesuatu*. Dalam hal ini, kata kerja dengan awalan meN- tersebut boleh menerbitkan dua makna iaitu pertama *melakukan sesuatu* dan kedua membawa makna *menyatakan keadaan*. 
Seterusnya aspek makna *melakukan sesuatu* tersebut diperincikan lagi kepada beberapa bahagian yang khusus seperti berikut;

i. melakukan sesuatu (menggoreng, menggarang, memproses)

ii. mengeluarkan suara (mengaum, mencicit, mengiau)

iii. membuang, mencari atau mengumpulkan sesuatu (merumput, merotan, mendamar)

iv. menuju sasaran (melaut, mendarat)

v. berlaku seperti atau menyerupai (mengekor, membusut, membukit)

Manakala dalam menjelaskan maksud – *menyatakan keadaan* pula makna imbuhan meN- tersebut telah dipecahkan kepada dua bentuk iaitu, pertama *hidup sebagai* dan yang keduanya membawa maksud *jadi*.

Pengkaji berpendapat, masalah utama definisi di atas ialah makna yang diberikan bersifat umum dan pengimbuhan meN- kepada kata dasar pula, sudah sedia mendukung maksud *melakukan sesuatu*. Selain itu, pengkategorian untuk makna *melakukan sesuatu* kelihatan terdapat pertindihan makna antara perincian-perincian yang telah dijelaskan di atas. Hal ini boleh dijelaskan dengan lebih berkesan menerusi contoh-contoh (Nik Safiah et. al., 2015) yang dipetik daripada berikut;

62. Penulis itu telah *mengarang* sepuluh buah buku.

63. Pak Mat sedang *menggoreng* pisang di warungnya.


2. mereka atau menulis (cerita, cerpen, novel, dll), mencipta (sajak dll), menggubah (lagu): tuan itulah yg ~ kitab loghat bahasa Melayu; ~ novel dan cerpen; 3. mengadakan, mereka-reka: kalau sudah kehabisan bahan, mereka gemar pula ~ berita yg bukan-bukan; karang-mengarang perihal mengarang (cerita dll), perbuatan (pekerjaan) mengarang; mengarangkan mengarang utk seseeorang; terkarang (sudah) dikarang: sebuah senarai Melayu-Cina yg dikatakkan ~ sebelum kurun ke-15;

Huraian tersebut menjelaskan bahawa kata dasar *karang* bermaksud melakukan kerja-kerja seperti menulis cerita atau cerpen. *Karang* juga bermaksud mencipta sajak dan menggubah lagu. Berdasarkan penjelasan tersebut, pengkaji berpendapat kata dasar karang, sudah sedemikian maksud melakukan sesuatu.

Hal yang sama dapat diperhatikan untuk contoh ayat ke-63. Kata dasar untuk *menggoreng* ialah *goreng*. Dalam KDEK, penjelasan untuk leksikal *goreng* adalah seperti berikut:

*(goreng)* 1. yg dipanggang (dipanaskan) dlm kuali kering, yg dimasak dgn minyak: kacang ~; mi ~; nasi ~; pisang ~; minyak ~ = minyak penggoreng minyak utk menggoreng; 2. bp kecekapan memetik gitar mengikut tempo rancak; menggoreng 1. memasak dgn minyak: “ikan; ~ pisang; 2. memasak (beras, tepup, dsb) dlm kuali dgn tidak menggunakan minyak, merendang; 3. bp memperolok-olokkan, memborak; menggorengkan menggoreng utk: Emak, gorengkan saya sebiji telur; gorengan sesuatu yg digoreng; penggorengan bekas (spt kuali dll) tempat menggoreng:
kutekan ikan itu pd ~ supaya lekas masak; penggoreng 1. orang yg menggoreng: ~ mi; 2. alat yg digunakan utk menggoreng: kuali ~ ikan.


Kajian Perbandingan


Za’ba misalnya, menjelaskan imbuhan men- digunakan untuk kata kerja transitif. Makna pertama yang dikemukakan oleh Za’ba sama ada kata dasar tersebut tergolong di dalam Kata Nama atau Kata Kerja, ianya membawa maksud membuat atau melakukan sesuatu. Misalnya di dalam ayat, Saya menulis surat, perbuatan yang dilakukan ialah tulis.

Makna kedua yang didukung oleh imbuhan men- ialah penekanan pihak yang melakukan perbuatan yang berkenaan. Dalam ayat, Sudahkah engkau menulis surat itu? Za’ba menerangkan imbuhan men- tersebut memfokuskan engkau sebagai pelaku perbuatan tulis dan bukan sebaliknya. Dalam ayat yang memfokuskan kepada perbuatan, Za’ba mengemukakan contoh ayat berikut. Saya jual rumah itu. Menurut Za’ba perbuatan jual merupakan fokus ayat berkenaan sekali gus membezakan ayat tersebut daripada perbuatan lain seperti Saya bakar rumah itu atau Saya runtuhkan rumah itu.

Sementara Asmah (1980), pula menyatakan, pengimbuhan men- kepada kata kerja membawa makna membuat atau melakukan dan menghasilkan dua jenis kata kerja iaitu kata kerja transitif dan kata kerja tak transitif. Manakala pengimbuhan men- kepada kata sifat pula menghasilkan kata kerja terbitan yang membawa makna menjadi. Dalam hal ini, kata sifat mengalami peralihan dari satu keadaan kepada satu keadaan lain dan kata kerja jenis ini ialah kata kerja tak transitif.

Pengimbuhan men- dengan kata nama pula menghasilkan makna yang pelbagai dan bergantung kepada makna kata dasar tersebut. Asmah menurunkan tujuh makna hasil daripada pengimbuhan men- dengan golongan kata nama iaitu, menjadi seperti, menjadikan sebagai, menggunakan sebagai alat, mencari atau mengumpul, pergi ke, mengeluarkan bunyi dan memberikan atau mengenakan.
Secara ringkasnya, para pengkaji bersepakat dalam menjelaskan makna prototaip untuk imbuhan meN- iaitu *melakukan sesuatu*.

**Dapatan Kajian**


Pengkaji berpendapat sekurang-kurangnya terdapat tiga elemen penting yang perlu diberi perhatian sebelum memberikan takrif makna imbuhan meN-. Tiga aspek tersebut ialah pertama, aspek pengimbuhan meN- kepada kata dasar itu sendiri dan aspek kedua ialah peranan pelaku dalam ayat-ayat berkenaan didapati mempunyai kedudukan yang ekksklusif dengan pengimbuhan tersebut. Aspek ketiga yang akan pengkaji ketengahkan ialah perbezaan dari aspek fokus kepada Kata Kerja Dasar dan Kata Kerja Terbitan. Ketigata perkara ini akan dijelaskan dalam usaha menilai makna imbuhan meN- ini semula.

BH0164 ... apabila spekulator terus *menguji* Bank Negara selepas berjaya memaksa Bank Thailand mengapungkan baht dalam pasaran. Pada hari berikutnya sel

Berdasarkan data BH0164, leksikal *menguji* merupakan hasil pengimbuhan awalan meN- kepada kata kerja *uji*. Uji bermaksud percubaan untuk menentukan buruk baiknya atau betul tidaknya, murni tidaknya dan lain-lain yang munasabah. Pelaku dalam data ini ialah spekulator dan sasaran pelaku ialah Bank Negara. Dalam hal ini, pelaku akan berusaha untuk melakukan spekulasi-spekulasi tertentu dengan harapan mereka akan mendapat keuntungan. Risiko yang menanti pelaku ini ialah kemungkinan mereka akan mengalami kerugian. Oleh hal yang demikian, spekulator akan melakukan pelbagai ujian terhadap sasaran mereka iaitu Bank Negara untuk mencapai hasrat mereka.

BH0169 Gergasi industri rokok AS terpaksa *membayar* AS$368 bilion (RM920 bilion) dalam masa 25 tahun bagi melindungi mereka ...

Dalam data berikut (BH0169), kita sedia maklum bahawa *membayar* ialah kata terbitan yang terhasil daripada pengimbuhan meN- dan *bayar*. Kata kerja *bayar* merupakan tindakan yang dilakukan oleh pelaku dengan menyerahkan sejumlah nilai untuk mendapat tukaran barangan atau sesuatu perkhidmatan. Lazimnya pelaku dalam konteks ini terlebih dahulu akan akur dengan nilai yang ditetapkan dan melakukan transaksi untuk mendapatkan hasilnya. Pelaku dalam data ini ialah gergasi industri rokok AS berkemungkinan merupakan syarikat atau rangkaian syarikat rokok melakukan pembayaran berjumlah $368 dolar Amerika untuk mendapatkan perlindungan daripada pihak tertentu.

BH1406 Kementerian Pembangunan Usahawan sendiri *menggesa* pengusaha tempatan agar lebih ramai yang mengambil peluang dan mengeksploit ...
Kata kerja terbitan menggesa dalam data BH1406 ialah pengimbuhan awalan meN- kepada kata kerja gesa. Gesa bermaksud perlakuan yang menyuruh atau mendesak suatu pihak untuk bertindak balas kepada sesuatu pandangan atau cadangan. Dalam konteks data ini ialah pelaku merupakan Kementerian Pembangunan Usahawan dan pihak yang diminta melakukan tindak balas ialah pengusaha tempatan.

BH0385 Syarikat Nur Ain Zubaidah sedang mencari penyanyi wanita utama untuk menerajui sebuah kumpulan nasyid kontemporari ...


Ringkasnya, kesemua leksikal uji, bayar, gesa dan cari dalam data-data yang dinyatakan di atas didapati memprolikan aktiviti berdasarkan kata kerja yang berkenaan. Ini bermaksud bahawa pengimbuhan awalan meN- kepada kata kerja tersebut sebenarnya melengkapkan pemprolikan maksud iaitu melakukan perbuatan yang diterangkan oleh kata kerja.

\[ \text{[meN-]} + \text{[bayar]} = \text{[membayar]} \]

melakukan KK melakukan kata kerja [bayar]

Di samping itu, kajian prototaip makna imbuhan meN- juga menunjukkan bahawa pelaku dalam data-data yang diperoleh mempunyai hubungan yang ekslusif dengan imbuhan awalan meN-. Dalam keempat-empat data yang di atas pelaku seperti spekulator dan gergasi industri rokok AS misalnya merupakan pihak yang melakukan perbuatan tersebut dan elemen tersebut merupakan elemen yang berkait rapat dengan imbuhan tersebut. Malah sekarinya pelaku dalam data tersebut digugurkan, ayat tersebut akan bukan sahaja tidak akan sempurna malah akan menimbulkan tanda tanya kepada pembaca.

Linguistik Kognitif menawarkan beberapa konsep yang perlu dipertimbangkan dalam menjelaskan hubungan dalam antara pemikiran, makna dan struktur linguistik. Antara Antara konsep tersebut termasuklah pentafsiran (construal), sudut pandangan (perspective), latar fokus (foregrounding), metafora (metaphor) dan ranah (frame) (David L, 2001). Dalam usaha menjelaskan makna imbuhan meN-, pengkaji hanya akan menyinggung aspek ialah pentafsiran, sudut pandangan dan latar fokus untuk KKD dan KKT sahaja.

BH0169 Gergasi industri rokok AS terpaksa membayar AS$368 bilion (RM920 bilion) dalam masa 25 tahun bagi melindungi mereka ...

BH0169a Gergasi industri rokok AS terpaksa bayar AS$368 bilion (RM920 bilion) dalam masa 25 tahun bagi melindungi mereka ...
Data BH0169a merupakan data yang telah dimanipulasi untuk menjelaskan KKD, KKT serta peranan imbuhan meN- dalam ayat berkenaan. Sekilas pandang, kedua-dua data di atas menunjukkan banyak persamaan sama ada dari aspek pelaku mahupun dari aspek objek yang diambil oleh KK berkenaan. Bagaimanapun, perbezaan utama pada ayat tersebut ialah KK iaitu dalam data asal, KK tersebut menerima imbuhan meN- manakala dalam data yang telah dimanipulasi pula, imbuhan meN- telah digugurkan.

Kajian ini menunjukkan latar fokus untuk bayar adalah merujuk kepada aktiviti yang didukung oleh KKD tersebut. Sehubungan dengan itu, latar yang difokuskan dalam rajah (i) ialah aktiviti menyerahkan sejumlah nilai untuk mendapatkan tukaran barangan atau sesuatu perkhidmatan.

![Rajah i: Latar fokus KKD – bayar](image1)

![Rajah ii: Latar fokus KKT – membayar](image2)

Sementara itu, dalam rajah (ii) misalnya, latar fokus yang disorot adalah dari sudut pandangan yang lebih jauh dan luas sehingga pelaku perbuatan tersebut juga termasuk dalam sudut pandangan tersebut. Dalam rajah ini, pelakunya iaitu orang yang bertanggungjawab melaksanakan aktiviti tersebut turut disorot bersama aktiviti yang dilakukan.

Kedua-dua KKD dan KKT tersebut kelihatan mempunyai latar yang hampir sama. Bagaimanapun, perbezaan antara kedua-dua kata kerja ialah latar fokusnya. Latar fokus dalam KKD ialah latar aktiviti yang didukung oleh kata kerja berkenaan manakala dalam KKT pula, latar fokusnya ialah penglibatan pelaku (yang melakukan kata kerja tersebut).
Sehubungan dengan itu, proses pengimbuhan misalnya telah mengalihkan latar fokus dari skop yang kecil kepada skop yang lebih besar.

Secara ringkasnya, pengkaji mendapati bahawa makna prototaip imbuhan meN-dapatlah diringkaskan sebagai *melakukan aktiviti yang didukung oleh KK dengan penekanan kepada aspek pelaku*. Hal ini sebenarnya bukan sesuatu yang baru, sebaliknya pengkaji berpendapat definisi yang diketengahkan oleh Za’ba (1964) iaitu membawa maksud *membuat pekerjaan atau mengerjakannya perbuatan* di samping *penekanan kepada pihak yang melakukan perbuatan yang berkenaan* merupakan satu definisi yang tepat dan menyeluruh.

**Kesimpulan**

Kajian makna prototaip imbuhan meN- ini berjaya memberikan satu perspektif baharu berhubung definisi imbuhan meN- dan peranan imbuhan tersebut kepada Kata kerja Dasar. Huraian berdasarkan kerangka Linguistik Kognitif bukan sekadar memberi makna prototaip imbuhan malahan menjelaskan peranan imbuhan tersebut. Pengkaji percaya perspektif baharu tersebut berupaya meningkatkan pemahaman pelajar-pelajar dalam pengajaran dan pembelajaran mata pelajaran bahasa Melayu di peringkat sekolah.

**Rujukan**


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MATHEMATICS PRE-SERVICE TEACHERS’ EXPECTATIONS ON THE ROLE OF PRACTICUM SUPERVISING LECTURERS

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Abstract

This paper reports on a qualitative study that investigated the experiences of a group of Mathematics pre-service teachers during teaching practicum in Malaysia. A contribution of this study was to use the lens of pre-service teachers to identify and to understand their expectation of the role of a supervising lecturer. Forty one pre-service teachers from a teacher training institute were asked “If you are the practicum supervising lecturer, how will you supervise the pre-service teacher assigned to you? This is to understand their expectation of a supervising lecturers’ role. This study reveals thirty six critical perspectives of pre-service teachers’ on their practicum experiences. The results need to be revealed to help overcome the threatening antagonistic relations between supervising lecturers and Mathematics pre-service teachers. This endorses a call to rethink the types of support that might be offered and its impact to Mathematics pre-service teachers, whereby each perception is an implication for an implicit investigation.

Keywords: pre-service teacher, practicum, supervising lecturer

Introduction

Latifah (2014) says that the teaching practicum program is a medium for giving teaching learning skills and knowledge training to pre-service teachers in order to form them to become professionals. As such, practicum is a mandatory component in the Malaysian teacher education program for Bachelor of Education in Primary Education (IPG, 2012). According to Kosnik (2009) there are many different models for the practicum: extended blocks of time during the academic year (6 weeks placements); frequent short placements (3 weeks); long placement at the end of the academic program (example 3 months). In the Malaysian Teacher Education Institute, practicum is one component of the Professional Practice Course which is exercised for 24 weeks with 12 credits and divided into three phases. The first phase of practicum consisting of 2 credits, is carried out for 4 weeks when the trainees are in their fifth semester. This is followed by a second phase that lasts for 6 weeks during the trainees’ sixth semester with the number of credits of 4. The third
phase of practicum is carried out in semester 7 for 8 weeks and the number of credits allocated is 6 credits.

Grudnoff (2011) said that teachers and policy makers often view the practicum as being the critical component of initial teacher education (ITE) programmes. It is because practicum provides an opportunity for pre-service teachers to apply knowledge and skills in actual classroom settings (Koc, 2012). In conjunction, in Malaysian Teacher Education Institutes, the purpose of practicum is to provide an opportunity for pre-service teachers to put into practice the knowledge, teaching and learning theories and pedagogical skills in real classroom settings (Bahagian Pendidikan Guru, 2010).

In Malaysian Teacher Education Institutes, the roles and responsibilities of supervision is to provide guidance in terms of inter and intra personal, subject content knowledge, teaching and learning, reflection practice, communication, classroom management, evaluation, co-curriculum, and administration aspects (Bahagian Pendidikan Guru, 2010). During practicum supervision each pre-service teacher is supervised by one supervising lecturer and one supervising teacher. Latifah says that one of the functions of supervision is to strengthen the teaching competence of pre-service teachers in order to achieve the balance between hard skill and soft skill (Latifah, 2014). Sim views supervision as bringing a change to teaching that impacts on teachers’ identities and argued that it is critical that the interpersonal demands of supervision become an important focus because tensions can emerge when teachers are required to act concurrently as teacher and supervisor (Sim, 2011). Therefore, such mentoring relationship can be characterised as one of mutual respect, with both identifying to a high degree that their knowledge and skills were valued by the other partner (Rawlins and Starkey, 2011). As such, better pre-service teachers can be produced through properly understanding their respective roles and putting aside any sense of egoism.

Even though, supervising lecturers had been given proper guidelines on practicum observation, the review of the literature shows that reflecting on the practicum is considered as an important aspect in enhancing observation of practicum. Grudnoff (2011) contended that although numerous studies have investigated the practicum in ITE, less attention has been given to the role practicum plays in the transition from preparation to teaching. The lecturers and pre-service teachers need to realize the importance of their roles during practicum and its consequences. Therefore, a comprehensive practicum curriculum is essential in preparing our pre-service teachers for practicum. However, according to Rawlins and Starkey (2011), how and what student teachers learn while on practicum is an area of limited research. As such, the feedback received from conducting studies on practicum will play an important role in shaping and restructuring our Malaysian Teacher Education Institutes practicum curriculum. This can only be achieved through proper research in the respective areas involving pre-service teachers and supervising lecturers. Therefore, this paper explored the Mathematics pre-service teachers’ expectations on the role of supervising lecturers during practicum.
Literature review

According to Grudnoff (2011), teachers and policy makers often view the practicum as being the critical component of initial teacher education (ITE) programmes. While numerous studies have investigated the practicum in ITE, less attention has been given to the role practicum plays in the transition from preparation to teaching. This study investigated 12 New Zealand first-year primary teachers’ perceptions of how their practicum experiences prepared them for starting teaching. The data for this qualitative study were gathered over a 15-month period using semi-structured individual interviews. The study showed that, while the beginning teachers consistently viewed the practicum as being a key part of their ITE, their practicum experiences were not always helpful in supporting their move into teaching. While acknowledging that the practicum cannot replicate the conditions of full-time teaching, the findings suggest that the practicum should be reconsidered in order to more effectively prepare student teachers for the complexities and demands of beginning teaching.

Koc (2012), focused on the views of 16 pre-service science teachers on their practicum experiences. Individual interviews were made to construct a picture of practicum as experienced by the pre-service science teachers. Group seminar sessions, and written reflections were also utilised to confirm and support data from the interviews. The findings based on data gathered indicate that pre-service science teachers were not exposed to an environment that reflected their expectations toward learning outcomes. It is essential to provide conditions of a quality experience to pre-service science teachers during their teacher education programmes in order to prepare pre-service teachers to teach science effectively.

According to Sim (2011), the school-based experiences of pre-service teachers are much reported in research with school placement often presented as a ‘high stakes’ endeavour. However, there is limited research on the impact of their presence on supervising teachers. This paper highlights supervision as bringing a change to teaching that impacts on teachers’ identities. Tensions can emerge when teachers are required to act concurrently as teacher and supervisor. The paper argues that it is critical that the interpersonal demands of supervision become an important focus of the partnership between universities and schools if practicums are to be beneficial to all stakeholders.

According to Spooner-Lane et al (2009), increasing numbers of Asian international students are choosing to undertake their tertiary studies in English-speaking countries. For universities, international students are an important source of revenue. However, Asian international students face multiple challenges in adapting to a foreign culture, understanding the expectations of their role, and adjusting to language, communication and cultural differences. These challenges are manifested, in particular, during practicum or field experience. This paper investigated the concerns of twenty Asian pre-service teachers before and after their practicum in Australian schools by drawing upon data from focus group interviews. Although language barriers and cultural differences were identified concerns before the practicum, concerns about their relationship with their supervising teachers and the limited time in which they had to learn also emerged after the practicum.
Whilst the findings are limited to the present study, implications for supporting Asian international pre-service teachers during practicum are discussed.

Trent (2013), reported on a qualitative study that investigated the lived experiences of a group of preservice English language teachers during a teaching practicum in Hong Kong. Multiple, in-depth interviews with student teachers were conducted during a 6-week practicum to understand the students’ experiences of becoming teachers. A contribution of this study is to use the analytic lens of teacher identity to understand the challenges, one group of preservice teachers confronted as they positioned themselves, and were positioned by others, as particular types of teachers during their practicum. The results of this study suggest that a critical perspective, grounded in an identity-theoretic understanding of preservice teachers’ practicum experiences, is needed to reveal and then overcome antagonistic relations that might threaten the identity work of trainee teachers. Endorsing calls to rethink the practicum, the types of support that might be offered to preservice teachers are critically examined and suggestions for the ways in which stakeholders, such as teacher educators and school-based supporting teachers, can best facilitate the identity work of preservice teachers undertaking a teaching practicum are offered. Implications for future research are also discussed.

According to Yaman (2013), supervisors are considered as vital and collaborative parties/mediators for preservice teachers within the practicum period; however, a certain level of fuzziness seems to exist in terms of the definition of the concept of supervision and the roles attributed to supervisors both theoretically and practically in the context of preservice Teacher Education in Turkey. Hence, the present study reviews and redefines the concept of supervision and the roles attributed to supervisors from two perspectives: a) the definitions regarding supervision and supervisors’ roles specified by official institutions’ reports and documents implemented and imposed by Higher Education Institution (HEI) in Turkey; b) views of both supervisors and preservice teachers on supervision and supervisors’ roles in the practicum period.

Latifah (2014), analyzed the role of in-service teacher in supervising the pre-service teachers during the Teaching Practicum Program and in building the pre-service teachers’ character to be competent music teachers in the future. This study implements narrative inquiry as the method of research which explains the variety of cases during the process of supervision by the in-service teacher. In addition, the research was held in Pasundan 8 Senior High School Bandung and was analyzed further by using qualitative methods with interactive analysis as it is formulated in the research question of this study. Results show that the supervision by an in-service teacher has successfully enhanced the ability of pre-service teachers in teaching art and culture, particularly music lesson. The competence of pre-service teachers can be achieved by giving them examples, model, and music experience from in-service teacher supervisors of the pre-service teachers.

Rawlins and Starkey (2011) conducted a research to examine the learning experience of student teachers and their mentors during practicum to enable the development of models for practicum appropriate for 21st century New Zealand teacher education programmes. Their research included early childhood, primary and secondary graduate
diploma programmes being offered at Massey University and Victoria University of Wellington during 2010. Data were collected through an online survey of students ($N=164$), their associate teachers ($N=138$) and visiting lecturers ($N=32$). To explore key learning experiences during a practicum experience, a cross-section of student teachers ($N=11$) completed a weekly reflection on their key learning moments, links made to academic study, mentoring, and support. This was followed by open-ended semi-structured interviews of the student teachers and their associate teachers at the conclusion of the practicum. These case studies gave rich data to explore the learning moments from the perspective of student teachers and their associates. The first developed findings emerging from the context-based interviews, the second orientation focused on the surveys, and the third orientation was from the review of literature. The three orientations were drawn together to summarise the identified critical factors which contributed to student teachers’ successful learning on practicum and to develop recommendations which may guide those designing teacher education programmes who are seeking to enhance student teachers’ learning during practicum experiences. The data from this study are a starting point for considering the mentoring and support of student teachers within the context of practicum experience. Some recommendations have emerged through analysis of the data that may be of use to those involved in teacher practicum experiences.

Practicum experience of pre-service teachers was the main concern in the study conducted by Spooner-Lane et al (2009), Grudnoff (2011), Koc (2012) and Trent (2013). Whereas, Yaman (2013) and Sim (2011) focused on supervision aspects during practicum. Meanwhile, Latifah (2011) focused on the role of supervising teacher in supervising pre-service teachers. Rawlins and Starkey (2011) examined the mentoring and the learning that occurs during a practicum experience from a student teacher perspective. Even though, the focus of study varies but it revealed the importance of pre-service teacher supervision during practicum. These literature reviews had brought a space of research to look into in the eyes and minds of the researchers. Therefore, the researchers in this study opted to look into the supervising lecturer’s role through the lens of pre-service teachers in the quest to identify how and what can be improved or enhanced for our practicum practice.

**Research methodology**

The research question of this study was “If you are the practicum supervising lecturer, how will you supervise the pre-service teacher assigned to you? Elaborate. There were 41 pre-service teachers involved in this study. They were final year Mathematics major pre-service teachers from a teacher education institute in Malaysia who have completed their practicum period. Data in the form of written reflections were collected at the end of their final practicum phase. Document analysis method was used to identify the types of supervision they perceived. The information from this data was then used to give the researchers some feedback on the expectation of pre-service teachers of supervising lecturers’ roles during practicum. From this data, the researchers hope to develop types of support that might be offered to pre-service teachers during their practicum.
Research findings

Table 1 Perceptions of Mathematics Pre-service Teachers assuming the role of Supervising Lecturer

<table>
<thead>
<tr>
<th>No</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>1.</td>
<td>not just telling what you expect from preservice teachers but giving proper examples of how to handle problems in the actual classroom</td>
</tr>
<tr>
<td>2.</td>
<td>demonstrating how to carry out the various theories and teaching techniques taught during lectures</td>
</tr>
<tr>
<td>3.</td>
<td>provide guidance without being cruel and torturing them psychologically</td>
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<tr>
<td>4.</td>
<td>during the post observation session, the supervising lecturer should first provide positive reinforcement, then only reprimand and advise them so that the preservice teacher does not become demotivated and to make them feel that their effort is appreciated</td>
</tr>
<tr>
<td>5.</td>
<td>not compare abilities of preservice teachers assigned to them</td>
</tr>
<tr>
<td>6.</td>
<td>encourage preservice teachers not to be too engrossed with the practicum grades but to be more concerned about their pupil’s achievement</td>
</tr>
<tr>
<td>7.</td>
<td>not to force preservice teachers to use the supervising lecturer’s ideas but to allow them freedom and the opportunity to try new approaches, methods or ideas to see to what extent they are able to progress in their teaching</td>
</tr>
<tr>
<td>8.</td>
<td>to give useful criticism and advice with the purpose of guiding and not to demotivate or dampen their spirits</td>
</tr>
<tr>
<td>9.</td>
<td>to reduce negative remarks because too much of negative remarks without suggestions for enhancement can demotivate preservice teachers</td>
</tr>
<tr>
<td>10.</td>
<td>not to be too demanding in insisting particular styles of lesson plan writing or approaches to teaching and learning</td>
</tr>
<tr>
<td>11.</td>
<td>show examples of effective teaching videos</td>
</tr>
<tr>
<td>12.</td>
<td>lecturers emphasized the use of ICT in teaching and learning, so preservice teachers should also use ICT in teaching and learning</td>
</tr>
<tr>
<td>13.</td>
<td>do not give &quot;bombastic&quot; comments that cause preservice teachers to lose motivation instead give ideas on what needs to be done by preservice teachers</td>
</tr>
<tr>
<td>14.</td>
<td>do not denigrate preservice teachers</td>
</tr>
<tr>
<td>15.</td>
<td>ensure that preservice teachers are using the correct technique to control the class</td>
</tr>
<tr>
<td>16.</td>
<td>guiding preservice teachers in terms of whiteboard management.</td>
</tr>
</tbody>
</table>
17. ensure that preservice teachers use student-centered teaching methods
18. give ideas to build motivation and refrain from giving sharp criticism
19. get to know preservice teachers before practicum starts and tell them the "do's and don’ts”
20. help trainees understand the concepts being taught
21. inform pre-service teachers of the strengths and weaknesses of their teaching objectively and provide recommendations for improvement.
22. provide guidance on the proper format for daily lesson plan.
23. reprimand preservice teachers if they fail to show appropriate behaviour and appearance as a teacher
24. assist preservice teachers in the writing of reflection
25. focusing on aspects of guidance and not solely evaluation
26. share experience and provide knowledge about teaching innovation
27. encourage student teachers to meet with supervisors as often as possible for advice and suggestions, especially for critical topics
28. do not inform preservice teachers of your scheduled visit so that they are always ready and doing the best P & P every day
29. request preservice teachers to send in their record books every week so that improvements can be made continuously throughout the practicum.
30. create strong collaboration with supervising teachers, so that if they report a problem, I have time to help preservice teachers. Also to understand the constraints of school activities and events that will be experienced by trainees
31. comment transparently and truthfully supplied with examples and suggestions of improvements
32. share examples of interesting activities
33. discuss with preservice teachers how to solve problems that arise
34. make regular supervision to identify weaknesses, flaws, strengths and potentials that can be guided to enhance teaching practices
35. Suggestions for improvement should be given as it coincides with the role of the lecturer as a mentor
36. reprove in a good way by treating preservice teachers as adults rather than as students who have to be scolded
Table 1 shows 36 characteristics of pre-service teachers assuming the role of supervising lecturer. They are the characteristics of the supervising lecturers during practicum as expected by pre-service teachers by putting themselves in the role of supervising lecturers. Each characteristic presented are the unique view of preservice teachers and should be addressed respectfully.

Discussion

A total of 36 characteristics of supervising lecturers have been shared in this study. These characteristics as perceived by Mathematics pre-service teachers constitutes their expectation of the role of supervising lecturers during practicum. This phenomena can be explained as the emotional toll on pre-service teachers as they struggle to achieve expectations that are often unrealistic or try to interpret mixed messages (Kosnik 2009). Each characteristic is the behaviour that has been observed or experienced by pre-service teachers themselves during their practicum period. It is inevitable that each of the characteristics given provides an impression that supervising lecturers still hold on to those supervision techniques.

The pre-service teachers’ practicum is straggled into three phases. During the three phases, each pre-service teacher is supervised by different supervisors. Pre-service teachers are rarely supervised by the same supervising lecturer for all three phases of practicum. Thus, the characteristics specified by pre-service teachers might not reflect the method or characteristics of supervision of all the lecturers involved.

Although, supervising lecturers have experience in supervising pre-service teachers, when such research is conducted, it can tell us that there is still significant room for improvement and enhancement. If every characteristic that resulted from this study is scrutinized, the supervising lecturers would find that to be irrelevant, and justify that supervision should be implemented as such. Nevertheless, such conflicting goals and uncertainty can make the practicum a difficult time for all and such phenomena is not surprising (Kosnik, 2009).

Conclusion

Despite the complaints and desires in the hearts of each pre-service teacher, the intriguing determination they showed during practicum was amazing. This is not a blow to supervising lecturers but should be seen as an opportunity for improvement or enhancement of supervision in the future. Without such a study, one may not be able to see these characteristics and create a room for discussion and self-reflection. It is hoped that the results of this study will provide valuable feedback for all lecturers in teacher education institutes in Malaysia to rethink their roles as a supervising lecturer. In addition, the list of characteristics can be transformed into a questionnaire to study the notion of future or other college pre-service teachers. Also, some of the characteristic can be transformed into a construct for in-depth investigation.
References


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Tsunesaburo Makiguchi’s Philosophy of Education, His Ideas and Values for a New Learner-Centered Humanistic Educational Approach: A Conceptual Paper

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Abstract

Education is a fundamental human right and it promotes individual freedom and empowerment and yields important development benefits. Nonetheless, according to Aristotle, “Educating the mind without educating the heart is no education at all.” Hence, in the field of education, teachers play a vital role in cultivating the minds of the students. Teachers follow students through each pivotal stage of development. At six to eight hours a day, five days a week, a teacher are poised to become one of the most influential people in the students’ life. Hence, it is essential for the teachers to have the correct philosophy towards ‘What truly is Education?’ and ‘What truly is their role and mission?’ Therefore, Tsunesaburo Makiguchi’s humanistic education philosophy will be introduced in this paper as a new learner-centered humanistic educational approach. His value-creating pedagogy focused on happiness as the aim of human life and the purpose of education will be discussed. Mr Makiguchi argues that every individual has the unlimited potential to create value and the purpose of education is not just to transfer knowledge, but it’s a learning process to cultivate students’ capacity to create value in life, which is the source of happiness. An overview of Makiguchi’s background and his educational philosophy with regards to the best practice for teaching will be discussed in this paper.

Keywords: Humanistic Education, Teachers, Best Teaching Practices, Value-Creation
Introduction

Education is a fundamental human right and it promotes individual freedom, empowerment and yields important development benefits (UNESCO, n.d.). In recent trends, technology has greatly expanded access to education and massive amount of information can be obtained by anyone and everyone with just a click on a button. This development is indeed a great advancement in the 21st century that should be highly applauded. The development of technology in education has also infused classrooms with digital learning tools, expands course offerings, learning materials; supports learning 24 hours a day, 7 days a week; increases students’ engagements, students’ experiences and accelerates learning.

With the advent of digitized communication and networking in education in the mid-1980s, educational institutions began to take advantage of the new medium by offering distance learning courses. In the 1990s, the World Wide Web was born and ever since, technologies were used to employ multi-object oriented sites, which are text-based online virtual reality systems, to create course websites along with simple sets of instructions for its students (Graziadei, 1997). Through such learning platforms, more open educational resources are available as well as learning flexibility. There were more opportunities for more people to learn and to obtain degrees through any available online degree programs without having to be in a university campus and needn’t to meet the teachers face to face. Hence, education became more accessible and with lesser teachers’ intervention. Major high-tech companies such as Google, Verizon and Microsoft have funded schools to provide them the ability to teach their students through technology, in the hope that this would also lead to improved student performance.

Thus, technology has changed the face of education especially the role of teachers in the current times. Traditionally, teachers are treated as the ‘sage of the stage’ where the teacher is the primary source of information for the students (Khan, 1997). However, technology today has provided easy access to information and educational opportunity, thus the teachers’ role has changed. Although in most cases, technology did not replace the role of the teachers in its entirety, teachers are no longer the only source of information for the students and students are no longer dependent on the teachers to learn. So, what is the role of a teacher in education in the current era of technological development? What are the critical elements that are required in a teacher to enable a significant learning process to take place between the teachers and the students that can never be replaced by any technological advancement?

Despite the great development and promises of technology in enabling information and education to be more accessible and far reaching, it has not made this world a better place to live in. The United Nations was formed in 1945 in replacement of the ineffective League of Nations to preserve world peace. Since the formation of the United Nations, the headlines of the newspapers around the world are still presented with unprecedented tragedy and human sufferings, marked by appalling and ceaseless violence, war and conflict till this day. In Dr. Daisaku Ikeda’s 2001 Peace Proposal, he observed that,
“The advances and progress made in the twentieth century were virtually all material and physical. With regard to the inner realm of the human spirit, it seems undeniable that the era was marked by regression rather than advance. Moreover, the progress of modern science has been premised on a mechanistic view of nature as the object of manipulation and control, essentially separate from humanity. The ties among people and between people and the cosmos are being severed, trapping humanity in a state of spiritual isolation.”

Dr. Ikeda (2001) also suggested that the profound transformation in the orientation of people’s interests towards negativity is perhaps being spurred by globalization and the information technology revolution, development that, despite their great promise, also entail serious problems that we must address: issues about identity, our relationship with each other and with the world around us in the face of ever-expanding virtual reality. Hence, the online virtual education without meeting a teacher face to face, which is gaining momentum, did not proof to be more effective than the traditional classroom education where teachers are present. Although technological advancement has change the face of education today, especially the teaching and learning processes, the aim of education and the reason higher degrees were pursued have not changed. Up till now, education was mainly designed to produce workers, filling in the labour markets to feed both national and global economic development. Higher degrees were pursued to satisfy self-economic interest and self-image benefits. Looking at the current violence, conflicts, imbalance economic development, environmental hazards and human sufferings across the globe, it is then clear that what the world needs today are not just new technologies, or workers with paper qualifications but people enriched with the spirit in humanism. Therefore, in the current technological era, there is an urgent need to relook into the purpose of education and the role of the teachers, whom have significant roles in developing the spirit of humanism in the students, which can never be replaced by any technological devices.

Humanistic Education

According to Aristotle, “Educating the mind without educating the heart is no education at all”. Hence, in the field of education, teachers play a vital role in cultivating the minds of the students and poised to become one of the most influential people in the students’ life. Teachers follow students through each pivotal stage of development. At six to eight hours a day, five days a week, a teacher poised to become one of the most influential people in the students’ life. Hence, it is essential for the teachers to have the correct philosophy towards ‘What truly is education?’ and ‘What truly is their role and mission as a teacher?’

The founder of the Value-Creating Pedagogy, Tsunesaburo Makiguchi (1871-1944) is considered to be one of the pioneers of humanistic education (Nakayama, 2009). He argues that education is not just about transferring and accepting knowledge from teachers to students, but should instead help individuals to actualize their full potentials. The humanistic education approach proposed by Tsunesaburo Makiguchi, a Japanese teacher, school principal, educational philosopher, author, activist, and war resister will be very
significant in this discussion. Makiguchi’s humanistic education approach is based on the theory and philosophy of value creation.

“The aim of education is not to transfer knowledge; it is to guide the learning process, to equip the learner with the methods of research. It is not the piecemeal merchandizing of information; it is to enable the acquisition of the methods for learning on one’s own; it is the provision of keys to unlock the vault of knowledge. Rather than encouraging students to appropriate the intellectual treasures uncovered by others, we should enable them to undertake on their own the process of discovery and invention.”

Makiguchi suggests that every individual has the unlimited potential to create value and education is a learning process to cultivate students’ capacity to create value in life, which is the source of happiness. In addition, in his treatise on education, Mr. Makiguchi also mentioned that, “Educational efforts built on a clear understanding and with a defined sense of purpose have the power to overcome the contradictions and doubts that plague human kind and bring eternal victory for humanity” (Kumar, 1998).

The purpose of humanistic education is to provide a foundation for personal growth and development so that learning will continue throughout life in a self-directed manner (DeCarvalho, 1991). The humanistic education characteristics are grounded in a 2500-year humanistic legacy since Aristotle presented the ideal of humanity (Gilad and Millet, 2015). The characteristic encompasses harmony, honesty, critical reflection, enhanced education, strong character, social involvement, personal and democratic sensitivity, emphatic sensitivity, self-actualisation and meaningful existence (Gilad and Millet, 2015). Humanistic education is examined as a mean of nurturing individuals who are capable of free-thought, creativity, and can contribute to a culture which is sustainable rather than destructive (Strand, 2006).

The aims of humanistic education are not only developing the intellectual of the students but also the formation of students’ personalities (Nakayama, 2009). Nakayama (2009) cited Daisaku Ikeda, a Japanese humanistic educator on his view of education, stated that “Education is a process of becoming fully human”. Dr Ikeda believes that education in the broadest sense is amount to the creation value where the aim is about bettering the self by interacting with others in order to improve the whole (Strand, 2006). Furthermore, humanistic education is not just relying on a few subjects in the education curriculum, but the whole campus culture education (Xiao, 2016). Thus, humanistic education can help the society in a direction to be more sustainable.

**Tsunesaburo Makiguchi**

The study of humanistic education will be incomplete without including Makiguchi’s education philosophy on value creation. But who really is Makiguchi? Tsunesaburo Makiguchi lived around the turn of the 20th century in Japan. He developed the principle of humanistic education based on his “Theory of Value-Creation” during the era of
industrialization and militarization in Japan which later evolved to be known as Soka Education (Goulah and Gebert, 2009). Through his 30 years of teaching career and based on observation and analyses of classroom and society, he developed his educational pedagogy, *Soka Kyoikugaku* which call ‘Value-Creating Pedagogy’ (Shiohara, 2008). This pedagogy advocates for learner-centred education that focused on happiness of each and every individual student. In addition, Makiguchi also argued that a happy life is a value creating life and therefore, the purpose of education is to cultivate students’ capacity to create value that is the source of happiness.

Makiguchi lived during the Meiji Government period, which was an era of militarization in Japan. The nationalistic education then was educating and preparing the children as a tool for war and the main focused was the success and victory of the war (Kumagai, 2000). The policies and administration of education were controlled by the government for military purpose. The education focused on memorization and uniformity through teacher-centred approaches and not emphasizing the students’ autonomy and creativity (Kumagai, 2009). Therefore, Makiguchi took tremendous consideration and conviction in education and draw a very different lessons from the national education based on his reading and experience (Goulah and Gebert, 2009). Goulah and Gebert (2009) quote from Saito (1989) notes:

“...while most normal school graduates learned and took to heart on the three essentials of “obedience, friendship and respect for authority” instilled by militarist training, the young Tsunesaburo Makiguchi ...learned something completely different – the principle of development, reason, economy and happiness.”

Thus, Makiguchi wrote his theory of humanistic education in response to the problems in education at that time which contradicted with the government goals and objective. This theory was then translated into a practical approach, the ‘Value Creating Pedagogy.’ The ‘Value Creating Pedagogy’ does not create a separate environment from reality but encourage the learners to create an upmost value within the circumstances and environment (Goulah, 2009).

**The System of Value-Creating Pedagogy**

Makiguchi believed that problems in education must be solved for the sake of the happiness of children and the younger generation, and these humanistic ideals spurred him to publish his first volume of *The System of Value-Creating Pedagogy* (Kumagai, 2000). Unfortunately, his book did not receive the attention at that time. However, he did not give up and continue to published the second volume in the following year, the third volume published in 1932 and the fourth volume in 1934 (Kumagai, 2000). His philosophy becomes the most enduring contribution to the field of education (Goulah and Gebert, 2009).

According to Kumagai (2000), Makiguchi’s ideas on education were based on value creation and happiness and these were rooted in humanistic thought. His value creation philosophy was influenced by the ideas of Kant, the father of German idealism. He was introduced to
the value of the neo-Kantians through the writings of Kiichiro Sodo, a Japanese economic philosopher (Kumagai, 2000). Makiguchi gathered ideas of value such as truth, good, beauty, holiness, and economic value from Sodo’s writing; and discussed values from two aspects which are universally applicable standards and as something created by human beings. In addition, utilitarianism of Britain which stressed happiness as the goal of life and the ultimate aim of human behaviour was the second influence on Makiguchi’s theory of value creation (Kumagai, 2000).

Makiguchi’s theory of value combined the idea of happiness as the goal of life with that of value as something that can be created. He asserted that if we were to distil what everyone wants in our lives and express it succinctly, the goal of life would be happiness. How then may we attain happiness? What do we have to do to reach a state of happiness? Makiguchi’s answer to these questions: By creating value. To achieve happiness, we must create value. Everyone alive on this earth must work to create value with the aim of achieving happiness – this was the idea forming the basis of Makiguchi’s System of Value-Creating Pedagogy (Kumagai, 2000). Makiguchi’s further explains:

“Creation of value is part and parcel of what it means to be a human being. Human beings do not have the ability to create material; but they can create value and it’s in the creation of value that the unique meaning of human life lies (Bethel, 1994: 49).”

Makiguchi adopted the neo-Kantian value system of truth, goodness and beauty and adapted to beauty, gain and goodness (Gebert, 2009; Ikeda, 2012). Makiguchi defined the value of beauty is that which brings fulfilment to the aesthetic sensibility of the individual; the value of gain as which advances the life of the individual in a holistic manner; while the value of goodness as which contributes to the well-being of the large human society (Ikeda, 2012, Goulah, 2012). He stresses on the purpose of education to cultivate learners’ ability to create value within human character based on the value of beauty, gain and good which arise from the interaction between humans and their surroundings (Goulah and Gebert, 2009; Kumagai, 2000).

Value is generated subjectively, so it can be communicated and shared, especially to cultivate social awareness which could create a sense of community that underlay morality (Miyata, 2000). Makiguchi stressed that the aim of education is not just transfer knowledge but it is a learning process, to create value in life and to attain absolute happiness. Makiguchi further elaborated his philosophy in term of human happiness (Bethel, 1994: 49):

“The highest and ultimate object of life is “happiness” and the goal of life is none but the attainment and creation of value, which is in itself happiness...a happy life signifies nothing but the state of existence in which one can gain and create value in full.”

Aristotle also stated that happiness is the meaning and the purpose of life, the whole aim and end of human existence (Susniene and Jurkaukas, 2009). However, Makiguchi understands happiness as the fully developed capacity to create value in the face to life’s
inevitable trials (Goulah and Gebert, 2009). From this idea of value creation as the precondition for happiness in life, Makiguchi declared that the purpose of education was for living life and defined value-creating pedagogy as “a knowledge system for teaching people to create the value that is the goal of life”. Based on this definition, the goal of education must be derived from the goal of life, which is, ultimately, the achievement of happiness in life.

In summary, transfer of knowledge, according to Makiguchi is not and can never be the purpose of education. The aim of education is not to provide knowledge but to teach the students how to learn, help them find values in the environment and should make students self-reliant (Gebert and Joffee, 2007). Hence, the purpose of education is rather to guide the learning process and to put the responsibility for learning into the students’ own hands. Students learn better through self-discovery, self-analysis and drawing conclusion based on their hands on learning experiences. It is only through such experiences, students are able to create values. Thus, a true humanistic education requires teachers to act as guides and partners of discovery in the entire learning process. The process of guiding student learning is the bedrock of Makiguchi’s pedagogy.

Unfortunately, in today’s education, this basic principle of human learning had never been put into real practice and the biggest issue centres on the teachers (Bethel, 1989). Are teacher effective guides for the students to learn how to create values in the learning process or simply transmitters of bits of dead knowledge? Teacher must decide if they are to be organizers of information or arousers of students’ natural interest and curiosity (Bethel, 1989). Therefore, Makiguchi concluded that teachers must leave fact finding to books and assume supporting role to the student’s own learning experience. How teachers decide about this, Makiguchi believed would be the single most important factor in reforming the education system and in achieving the real purpose of education. It is Makiguchi’s abiding conviction that it is the teachers’ dedication in serving students, and not the inanimate facility, that makes a school.

Role of teachers

Makiguchi’s value-creating pedagogy based on the philosophy of value is a call for teachers to cultivate in individuals the ability to create value towards the greatest good for self and society; and develop a harmonious balance between individual and social value (Bethel, 1994). Therefore, Ikeda (2012) said the teacher is the most important element of the educational environment because they are able to draw forth the creative energy within the students and change their lives because students’ lives are not change by lectures but by people, namely teachers.

As mentioned in the earlier paragraph, Makiguchi’s philosophy of education lies in the belief that the purpose of education is to achieve happiness for the children. Hence, it is important to put "the best interests of the child" central to the theory and practice of education. One of the greatest problems in modern education lies in its tendency to lose
sight of students' happiness as its fundamental purpose. Teachers ought to believe in every child's potential and care about their happiness as human beings. Teachers must recognize the good points of each student and wholeheartedly praise any efforts the student makes in order to further bring forth his or her potential. This is the meaning of having the happiness of the children as its fundamental purpose. Therefore, educators whom earnestly seek for their students' happiness will naturally come to treat them with unconditional trust and warm respect, instead of giving them instruction from up high. As Ralph Waldo Emerson writes, "The secret of education lies in respecting the pupil."

Another key element discussed in Makiguchi’s philosophy of education is the morality of the teachers. According to Makiguchi, morality is the principle element at the root of educational theory, which in turn provides the guiding directives behind educational practice (Bethel, 1989). Makiguchi emphasized that,

“Unless teacher candidates fully awaken to this most central moral vision underlying social consciousness, educational theory and finally teaching practice, they can only dole out hollow and ineffectual rote lessons.”

The morality of the teachers is very important because many social problems though not all; stems from poor education, the wrong roles learned from bad models (Bethel, 1989). Teachers have always been regarded as role models in the eyes of the students and teachers themselves need to realise this. Teacher's attitude and character have a decisive impact on the growth and development of the students (Ikeda, 2010). Besides teaching young people how to live in society and encouraging them to think independently, teachers need to be aware that they are role model in personal character. This is because the essence of education is character formation; a process where one person's character inspires another. Humans learn from other humans and it is for this reason that the humanity of the teacher represents the core of the educational experience (Ikeda, 2010). Therefore, the relationship between teacher and pupil is a vital link through which new horizons are opened up and life develops. When the students feel that their teachers are genuinely concerned for their individual welfare, they will begin to trust them and open up to them (Ikeda, 2010). On the other hand, teachers who do not understand and care for their students, merely parroting stereotyped answers, cannot possibly satisfy children's curious and sensitive minds (Ikeda, 2010). Therefore, it is easy to encounter a teacher who imparts knowledge, but hard to encounter one who can be role model; who teaches you how to live.

In a discussion on the evolution of the teacher’s role in education, Makiguchi defined teacher as an “Educational Technician” (Bethel, 1989). He described,

“Teachers no longer exist as pipelines for information but have become catalysts to the informing process; they stand no longer between teaching materials and students but to the side as conductors, seeing that attention is aroused, maintained and compounded through proper pacing and additional explanations. The basic intent is to get students to experience the validity of the lessons in their
own lives... Teachers can never learn for their students; students must be allowed to learn for themselves...”

Makiguchi further emphasized that teachers need to realize that no matter what teachers do, all will be to no avail unless they can get students to experience things for themselves (Bethel, 1989). In this undertaking, Makiguchi’s philosophy of education put great emphasis on the teacher’s qualities; patience, courage, creativity and affection. To cultivate others, an educator must have a glowing and appealing personality just as Socrates’ power to move others was compared to the shock of a stingray (Ikeda, 2010). When told this, Socrates said that the ray stings others because he is himself stung (Ikeda, 2010).

Similarly, in Makiguchi’s System of Value-Creating Pedagogy, teachers need to be constantly creative and passionate if they are to evoke creativity from their students. The heart of education lies in the process of teacher and pupil learning together, the teacher drawing forth the pupil’s potential and raising the pupil to surpass the teacher’s ability. Teachers need to be diligent in their efforts to deepen their understanding of how learning occurs and this requires continuous learning and personal growth on the part of themselves. Such efforts will call forth the creative powers latent in their students. This is because education is much more than simply absorbing knowledge and memorizing; because these abilities are nothing compared to the wisdom, emotional richness and creativity that reside within every human being.

It is then clear that despite the advancement of technological uses in changing the face of education, the humanistic role and responsibility of a teacher can never be replaced by technologies. A human can develop technologies but technologies cannot develop a real human being. If the true purpose of education is to cultivate and unveil the humanistic potentials inherent in every human being, then it is no doubt that teachers are indispensable. Teachers imbued with humanistic values and attitude will be vital in the current era of education.

Conclusion

This conceptual paper centres on Makiguchi’s humanistic education philosophy, and the role of teachers in applying this Value Creating Pedagogy in the current times. Although after more than 80 years have passed since his publication of The System of Value-Creating Pedagogy in 1930, Makiguchi’s educational philosophy is still relevant today (Rita, 2014) and it is even more relevant in the new face of education where technologies are used to facilitate the entire process of teaching and learning. Although the current information technology revolution and development have given humankind many great promises, it has also entail many serious problems that we must address.

The origin of Makiguchi’s philosophy of education was based on his own strong desire to make all of the children at his elementary school happy. Hence, Makiguchi advocated for learner-centred education which focused on what he believed to be the aim of human happiness (Nagashima, 2012). In his work, the System of Value-Creating Pedagogy suggests
that value-creation is not something distant and removed from our lives. The ultimate goal of education is to foster people who are capable of creating value under even the most difficult circumstances and to foster people of character who will continuously strive for the greatest good, that of peace and who are committed to protecting the sanctity of life. This educational philosophy and pedagogy which infused with the spirit of humanism will fill the gap in identifying the true purpose of education today.

This Value Creating Pedagogy also highlights the critical role of the teachers in education. This is because teachers are able to draw forth the creative energy within the students and change their lives. Hence it is vital for teachers to possess these qualities such as; always having the best interests of the child in whatever they does, believing in every child's potential, be role models with good morality, have patience, be courageous, be creative, have affection and continuously learn and work towards personal growth. These are essential qualities for a teacher because Makiguchi believed the single most important factor in reforming the education system and in achieving the real purpose of education is to have good quality teachers. This is because only a human being can foster another human being. Therefore, it takes a true humanistic person to raise another truly humanistic person.

Despite the advancement of technology, none can replace the passion and heart of a teacher who is affection enough to evoke the same passion and affection in the lives of the students. The roles of a teacher in the current era and the critical elements in a teacher which can never be replaced by any technological advancement to enable a significant learning process to take place have been discussed in this paper. Teachers dedicated to developing students are carrying out a task of immeasurable value which the effects of this task will last forever. True education is what remains long after the content of each specific lesson taught has been forgotten. This is because the essence of education is character formation; teaching young people how to live in society and create values in life most difficult circumstances and not merely the transferring of knowledge.

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THE APPLICATION OF EDUCATIONAL SOFTWARE INTEACHING AND LEARNING FOR LIVING SKILLS IN SECONDARY SCHOOLS

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Abstract: Today’s students and classrooms are becoming more diverse and unique each day. The emergence of information and communication technology (ICT) has made it possible for teacher and students to collaborate with other in diverse ways. This paper represents the application of educational software in teaching and learning for living skills subject of secondary schools. This study uses the Livewire Software and its can be free access via online. This study aims to provide exposure to teachers who teach living skills subject in secondary schools. The software can also help other subjects such as science, technology, engineering, electrical and electronics at secondary school. Using this educational software as teaching tools provides continuous feedback and enhances the teaching and learning processes. This will cause increments of the interest and understanding among students in science and technology.

Key words: educational software, livewire software, teaching and learning process.

1. INTRODUCTION

Malaysia has long recognized the transformational ability of Information Communication and Technology (ICT) that would propel the country from p-economy. The National ICT Council (NITC) was formed in under the 6th Malaysia Plan (1990-1995) to ensure ICT would be well integrated into the fabric of the Malaysia society. To further the agenda of the NITC, National ICT Agenda (NITA) was formulated in the 7th Malaysia plan (1996-2000) as a catalyst to transform Malaysia economy into value-based economy with development human capital, infrastructure and application. It was during this period that the Multimedia Super Corridor (MSC) was lunched. In an effort to move towards a knowledge-based economic nation, an effective utilization of ICT as tools as well as enabling access to all levels of the population to ICT are the fundamentals that must be laid out very soundly. Policies that will move Malaysia in that direction must be put in place. To drive the transformation, MSC was established in 1996. The particular important is the vision 2020 policy that sees Malaysia as a fully developed nation in 2020 in her own would. Modelled to be a world-class hub for development and nurturing of the Nation’s ICT industry, the MSC provides first-world knowledge and infrastructure at developing nation costs. In line with the country’s ICT master plan which envisages its longer term development, Malaysia
recognizes that the transformation of its education system is fundamental to achieving its objectives [1].

The main goal in an active and interactive teaching-learning process must be to help the students to discover the pleasure of inquiry and learning, which leads to increase confidence in their forces. The usage of modern technologies and educational software is a must of the modern educational process. There is considerable evidence to suggest that a move towards pedagogical involving full interaction, collective reflection and the development of consensual knowledge would lead to improved learning and attainment. However, imposed external guidance is leading teachers to focus on superficial features of interactive teaching such as pace and structure rather than deeper aspects of the pedagogy.

The broad use of digital technology during the last decades has changed the ways of learning [2]. It is well established that Information Communication Technology (ICT) has a vast impact at all educational levels[3]. Teaching and learning create a dynamic system, including teacher, student, environmental and teaching method. New approaches on ICT use and educational reforms improve the ways that knowledge can be passed over to the today's active and communicational learners. Teaching and learning department commonly use traditional methods that often do not use ICT.

2. THE ADVANTAGES OF EDUCATIONAL SOFTWARE USAGE

There are a number of benefits or advantages in using educational software in teaching and learning process. These benefits are of paramount important in maintaining a good momentum of reading interest among students in ICT. Use of computers and software ICT tools in classrooms and laboratories, provide much more effective and efficient environments in teaching and learning, making living skills easier to understand. The advantages of using simulation software in conjunction with classroom teaching are well known. It is generally acceptable that the use of interactive teaching tools, which provide instant feedback to the student’s inputs, improve and accelerate the learning process[3].

The use of simulation and ICT tools secondary education is not a new concept [4]. However, the traditional teaching methodology used in secondary education is based mainly on oral speech and use of blackboard. In line with a number of researchers in ICT education [4], teaching approaches that are based on the understanding of software principles for problem solving involve three major components. It is important to generate understanding using situated examples, visualizations, and dialogues. By using situated examples, the teacher should enable the students to understand the software problem. The principles of the software are then explained through visualizations. Finally, the teacher gives the right sequence of software instructions showing the main implementation steps of the problem solving process. Students use software principles to construct solutions to the problem through involvement in realistic task-based activities. The goal is for students to construct their knowledge and to work at their own pace from their prerequisites.

The teacher works as a mentor and guide of learning rather than as a transmitter of knowledge. Students get the opportunity to raise questions regarding the specific problem solving process or more general problems related to software use. Students might for
example discuss how the software could be used in similar situations. The teacher can then provide supplementary information. The advantages offered by the educational software include unconventional tests allowing for an optimal feedback, user-friendly working environments, individual or team work, stimulation of the creativity and of the competition spirit by pursue of different modules, visual support which gives rapid understanding of even the most subtle and complex scientific themes. For a more intense involvement of each student into the learning process, the educational software provides animation and the possibility to replay. This kind of activities allow the student to learn by playing, by varying different parameters and quantities in a rigorous, mathematical way, because mathematics, creativity, logic, and originality are all needed to improve technology [5],[6],[7].

3. LIVEWIRE EDUCATIONAL SOFTWARE

Livewire is a sophisticated software package for designing and simulating electronic circuits. Switches, transistors, diodes, integrated circuits and hundreds of other components can all be connected together to investigate the behaviour of a circuit. There are no limits to what can be designed and no loose connections or faulty components to worry about. Livewire also direct user interface helps you to build circuits quickly and easily. Just grab the components you need and connect them together using Livewire intelligent wiring tool. Make any final adjustments to your circuit by moving components. Figure 1, shown a screenshot of getting started of Livewire Software[8],[9].

![Fig. 1 –A screenshot from the live ware educational software.](image)

4. SIMULATION USING LIVEWIRE SOFTWARE

The computer’s graphic capabilities make them useful in designing devices and in simulating complicated processes. This educational software is entirely interactive. It’s main plus is the quality which included the actual devices, component and measurement equipment's [10]. Figure 2(a) and 2(b) shown the timer555 circuit’s which to design using this software. The students can see the process that occurs by using an oscilloscope available in the library. After click button “Run” this circuit, will be appear the output and the output signal. For a better understanding of the phenomenon, the simulation can be paused at any moment. Figure 3 shown the input signal, while the Figure 4 shown the output signal of Timer 555 Circuit’s.
5. CONCLUSIONS

By using educational software, the student is provided with sequences, which can be lesson stages, tests, and so on. Through these sequences, there can access information (libraries, internet), can receive a mark, or can contact other students who work in the same environment. The teacher who has access to educational software can choose certain lesson stages which are in accordance with topics from the school curriculum, but there can also create sequences based on the feedback received from a certain group of students, or on the strategies that there uses[10],[11],[12]

The greatest advantage is represented by the opportunity to receive feedback from all the students in the class who, in their turn, can work independently according to their level or abilities; thus, the educational process can be shaped directly on the group of students the teacher is working with, the flexibility and adaptability of the educational teaching content being a necessary conditions in order to improve the learning results.

We propose this type of lesson based on interactive conveyance of information, and developing motivation and interactive learning skills. The student will learn by reading, discovering and solving numerous reasoning exercises which make reference to theoretical living skillsconcepts. Navigating through lessons is easy and intuitive. Each lesson contains a help section specific to that particular lesson.

The main teaching advantage of these lessons is represented by the fact that they implement a well-thought teaching methodology resorting to an interactive working
strategy, the taught subject being presented in a varied way with the help of specific programming techniques. These techniques appeal to and trigger specific skills of the student, which enable him/her to learn more easily. Among these skills one can mention discovering, exploratory observation, demonstration, modeling, thus the students had to deal with a variety of questions and tasks for those who are learning[13].

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KESAN INTERVensi MODUL RAKAN MENTOR TERHADAP PENCAPAIAN AKADEMIK PELAJAR PROGRAM ASAS DI SEBUAH UNIVERSITI SWASTA

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Abstrak

Intervensi rakan mentor adalah satu pendekatan dilaksanakan dalam amalan pengajaran bagi membantu pencapaian akademik pelajar. Tujuan kajian ialah untuk melihat kesan intervensi terhadap gred keputusan trimester antara Kumpulan Rawatan Modul Rakan Mentor (MRM) dengan Kumpulan Kawalan. Juga, melihat kesan intervensi terhadap gred keputusan trimester antara Kumpulan Rawatan Modul Rakan Mentor yang diberikan secara individu dengan Kumpulan Rawatan Modul Rakan Mentor yang diberikan secara kelompok. Reka bentuk menggunakan kajian eksperimen kuasi. Terdapat dua kumpulan iaitu Kumpulan Rawatan (atau kumpulan yang menerima intervensi MRM) dan Kumpulan Kawalan (atau kumpulan yang menerima intervensi secara konvensional) sebelum intervensi atau praujian dan selepos intervensi atau pascaujian. Seramai 90 sampel subjek yang terdiri daripada pelajar Program Asas Kejuruteraan yang memperolehi Purata Nilai Gred (PNG) 2.00 mata dan ke bawah, dan gagal subjek Matematik pada Trimester 1, telah dipilih. Sejumlah 60 subjek kajian dalam kumpulan rawatan (secara individu dan kelompok) dan 30 subjek kajian dalam kumpulan kawalan. Ujian Mann Whitney U digunakan untuk melihat kesan intervensi gred keputusan trimester antara dua kumpulan ini, dan antara kumpulan MRM individu dengan kumpulan MRM kelompok. Dapatan menunjukkan bahawa intervensi MRM telah menghasilkan nilai min lebih tinggi bagi Kumpulan Rawatan MRM daripada Kumpulan...
Kawalan dalam pascaujian. Kajian ini juga mendapati intervensi MRM Kelompok adalah lebih tinggi nilai min dari Kumpulan Rawatan MRM individu. Kesimpulannya dalam pengajaran kaedah pementoran menggunakan Modul Rakan Mentor mampu memberi kesan positif terhadap gred akademik pelajar rendah pencapaian dan kaedah MRM kelompok lebih berjaya berbanding MRM individu dalam menaikkan gred pencapaian.

Keywords: Intervensi, Modul Rakan Mentor, Pencapaian Akademik, Program Asas, Universiti Swasta

Pengenalan

Proses pementoran di universiti dicirikan oleh hubungan yang mesra dan beretika antara menti atau pelajar rendah pencapaian akademik, dengan mentor yang berpengalaman, prihatin, dan mampu menunjukkan contoh peranan positif dengan tujuan menyumbang kepada perkembangan positif menti tersebut (Selwa, 2003). Terdapat perasaan saling mempercayai, saling menghargai, dan keyakinan diri yang tinggi dalam organisasi bila mana pementoran berlaku dengan baik. Menurut Young dan Perrewe (2000), pementoran memberi manfaat kepada organisasi pendidikan kerana terujudnya proses sosialisasi yang sihat, maklumat dapat disampaikan dengan lebih berkesan, serta peningkatan produktiviti.

Pendekatan pementoran dilihat banyak memberi faedah terutamanya di Institusi Pengajian Tinggi (IPT). Menurut Hall dan Sandler (1983), antara faedah yang diperolehi adalah seperti berikut iaitu meningkatkan produktiviti dan komitmen khususnya dalam kalangan pelajar dan pensyarah, menggalakkan kerjasama dan kejelekitan bagi mereka yang terlibat dengan hubungan pementoran dan meningkatkan rasa seronok dalam kalangan pelajar kerana mereka telah diberi beberapa kemahiran untuk lebih berjaya di mana sahaja mereka berada.

Anderson dan Shannon (1988), mendefinisikan pementoran sebagai proses pemupukan di mana individu yang lebih mahir dan berpengalaman, berfungsi sebagai contoh ikutan, mengajar, menaja, menggalak, memberi kaunseling, dan menjadi sahabat kepada individu yang kurang berkemahiran dan berpengalaman, serta mempromosi usaha untuk meningkatkan perkembangan individu. Fungsi pementoran dijalankan dalam konteks hubungan yang berterusan dan prihatin antara mentor dan menti. Kekuatan sebenar dalam pementoran datang daripada perkaitan hubungan sosial, memberi fokus terhadap hasil yang dikehendaki, serta memenuhi keperluan mentor dan menti.

Modul Rakan Mentor (MRM) dalam konteks kajian ini adalah satu pendekatan modul latihan yang digunakan untuk memberi beberapa kemahiran menolong kepada rakan mentor. Dalam program pementoran akademik seperti ini, rakan mentor terlatih akan membimbing menti, yang melibatkan kelompok pelajar rendah pencapaian akademik melalui subjek teras iaitu Matematik, yang merupakan subjek wajib dalam ketiga-tiga trimester melalui satu tahun pengajian Program Asas Kejuruteraan.
Kandungan modul MRM dimuatkan dengan aktiviti-aktiviti yang menjurus kepada beberapa kemahiran berteraskan Model of Youth Mentoring, Model Bimbingan Teori Rogers (learner-centred education), Model Integrasi Sosial Tinto, dan Model Pembelajaran Melalui Pengalaman Kolb. Tujuan Modul MRM dalam kumpulan rawatan adalah untuk melatih rakan mentor mempunyai beberapa kemahiran dalam membimbing menti menggunakan kemahiran sedia ada, di samping memberi bimbingan akademik bagi subjek teras yang terpilih. Latihan kemahiran dalam MRM yang digunakan dalam kajian ini adalah seperti kemahiran membina hubungan, kemahiran membina motivasi, kemahiran membina komunikasi, kemahiran membina empati dan kemahiran membina emosi positif.

**Metodologi**

Pendekatan yang digunakan dalam kajian eksperimen ini adalah sesuai memandangkan terdapatnya dua kumpulan, iaitu Kumpulan Rawatan dan Kumpulan Kawalan. Selain itu, kajian eksperimen merupakan metodologi kajian yang paling berkesan untuk melihat hubungan kesan akibat antara pemboleh ubah. Skor praujian (O1) dan pascaujian (O2), diambil untuk mengukur pemboleh ubah bersandar, iaitu gred keputusan trimester subjek kajian. Ujian tersebut dijalankan ke atas kedua-dua kategori kumpulan iaitu, Kumpulan Rawatan (atau kumpulan yang menerima intervensi MRM) dan Kumpulan Kawalan (atau kumpulan yang menerima intervensi secara konvensional) sebelum intervensi atau praujian, dan selepas intervensi atau pascaujian.

Terdapat dua Kumpulan Rawatan (Rawatan MRM Individu dan Rawatan MRM Kelompok), dan satu Kumpulan Kawalan dalam kajian ini. Oleh itu, tiga kumpulan dipilih secara padanan dalam kajian ini seperti yang digambarkan pada Jadual 1. Dapat dirumuskan bahawa kajian yang dijalankan merupakan kajian eksperimen kuasi praujian dan pascaujian dengan kumpulan kawalan (pretest posttest control group) dan reka bentuk ini merupakan reka bentuk kajian yang terbaik untuk melihat kesan intervensi terhadap diri subjek.

**Jadwal 1**

Reka Bentuk Kajian

<table>
<thead>
<tr>
<th>Kumpulan</th>
<th>Praujian</th>
<th>Rawatan</th>
<th>Pascaujian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rawatan MRM Kelompok</td>
<td>O1</td>
<td>X2</td>
<td>O2</td>
</tr>
<tr>
<td>Kawalan</td>
<td>O1</td>
<td>X3</td>
<td>O2</td>
</tr>
</tbody>
</table>

Petunjuk:
O1 Praujian
X1 Intervensi Modul Rakan Mentor yang diberikan secara individu
X2 Intervensi Modul Rakan Mentor yang diberikan secara berkumpulan
X3 Menjalani kehidupan secara konvensional di kampus
O2 Pascaujian
Melalui kajian ini, seramai 90 sampel subjek yang terdiri daripada pelajar Program Asas Kejuruteraan, Universiti Tenaga Nasional (UNITEN), yang memperolehi Purata Nilai Gred (PNG) 2.00 mata dan ke bawah, dan gagal subjek Matematik pada Trimester 1, telah dipilih oleh pengkaji. Sejumlah 60 subjek kajian dalam kumpulan rawatan (secara individu dan kelompok) telah mengikuti program pementoran akademik bersama rakan mentor yang terdiri daripada pelajar Program Ijazah Kejuruteraan (tahun 1) daripada Kolej Kejuruteraan yang memperoleh Purata Nilai Gred Kumulatif (PNGK) 3.00 mata dan ke atas, dan 30 subjek kajian dalam kumpulan kawalan. Antara ciri-ciri demografi sampel subjek adalah jantina (lelaki dan perempuan), latar belakang pendidikan (Program Asas), tahun pengajian (Program Asas; trimester 2), bidang pengkhususan (Program Asas Kejuruteraan), tahap umur (18 tahun), bangsa (Melayu, Cina dan India) dan agama (Islam, Buddha, Hindu, Kristian, dan lain-lain). Jadual 2 dan Jadual 3 di bawah menunjukkan pembahagian kumpulan rawatan (secara individu dan kelompok) dan kumpulan kawalan mengikut bilangan rakan mentor dan menti.

**Jadual 2**

Pembahagian Kumpulan Rawatan dan Kumpulan Kawalan Mengikut Bilangan Mentor dan Menti

<table>
<thead>
<tr>
<th>Kumpulan</th>
<th>Menti (N=90)</th>
<th>Mentor</th>
<th>Jumlah</th>
</tr>
</thead>
<tbody>
<tr>
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<td>-</td>
<td>30</td>
</tr>
<tr>
<td>Rawatan individu</td>
<td>30</td>
<td>30</td>
<td>60</td>
</tr>
<tr>
<td>Rawatan kelompok</td>
<td>30</td>
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<td>35</td>
</tr>
<tr>
<td>Jumlah</td>
<td>90</td>
<td>35</td>
<td>125</td>
</tr>
</tbody>
</table>

**Jadual 3**

Pembahagian Kumpulan Mentor dan Menti Mengikut Ciri-ciri Demografi Pelajar

<table>
<thead>
<tr>
<th>Kump</th>
<th>Jantina</th>
<th>Bangsa</th>
<th>Agama</th>
<th>Program</th>
<th>Tahun</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentor</td>
<td>Lelaki &amp; Perempuan</td>
<td>Melayu, Cina, India</td>
<td>Islam, Hindu, Buddha, dll</td>
<td>Ijazah Kejuruteraan</td>
<td>1</td>
</tr>
</tbody>
</table>
Pengukuran gred keputusan trimester adalah berpandukan kepada tahap skor yang telah ditentukan oleh pihak UNITEN. Perincian skor dalam kajian ini adalah seperti yang dinyatakan dalam Jadual 4 di bawah:

Jadual 4
Tahap Skor bagi Gred Keputusan Trimester

<table>
<thead>
<tr>
<th>Bil.</th>
<th>Markah</th>
<th>Gred</th>
</tr>
</thead>
<tbody>
<tr>
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<td>100</td>
<td>A+</td>
</tr>
<tr>
<td>2.</td>
<td>89</td>
<td>A</td>
</tr>
<tr>
<td>3.</td>
<td>79</td>
<td>A-</td>
</tr>
<tr>
<td>4.</td>
<td>74</td>
<td>B+</td>
</tr>
<tr>
<td>5.</td>
<td>69</td>
<td>B</td>
</tr>
<tr>
<td>6.</td>
<td>64</td>
<td>B-</td>
</tr>
<tr>
<td>7.</td>
<td>59</td>
<td>C+</td>
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<tr>
<td>8.</td>
<td>54</td>
<td>C</td>
</tr>
<tr>
<td>9.</td>
<td>49</td>
<td>C-</td>
</tr>
<tr>
<td>10.</td>
<td>44</td>
<td>D+</td>
</tr>
<tr>
<td>11.</td>
<td>42</td>
<td>D</td>
</tr>
<tr>
<td>12.</td>
<td>39</td>
<td>E</td>
</tr>
</tbody>
</table>

Bagi gred mata pelajaran Matematik pula, keputusan yang diperolehi dalam kalangan subjek terhadap mata pelajaran ini pada trimester 1 telah dicatatkan. Kedua-dua kelompok subjek dalam kumpulan rawatan dan kumpulan kawalan telah gagal dalam kedua-dua mata pelajaran tersebut dengan mendapat E (0 – 39 markah). Ini bermakna mereka adalah dalam kelompok homogenous. Enam puluh subjek yang sah dalam kumpulan rawatan telah digunakan dalam analisis ini.

Seterusnya, bagi melihat pencapaian gred keputusan trimester, peperiksaan akhir trimester 2, menjadi kayu ukur kepada pemboleh ubah bersandar ini. Pelajar atau menti yang mengikuti program pementoran akademik bersama rakan mentor merupakan pelajar yang gagal subjek Matematik pada trimester 1 dan memperoleh PNG mereka di bawah paras 2.00 mata. Di akhir trimester 2, selepas menghadiri program pementoran akademik,
kajian ini mengandakan bahawa subjek kajian dapat meningkatkan pencapaian akademik mereka dengan memperoleh sekurang-kurangnya gred C dan ke atas dalam Matematik.

Dapatan Kajian

Jadual 5 menunjukkan kekerapan dan peratus subjek mengikut Kumpulan Rawatan MRM Individu, Kumpulan Rawatan MRM Kelompok, dan Kumpulan Kawalan berdasarkan program. Program Asas Kejuruteraan dibahagikan kepada 4 program iaitu Asas Kejuruteraan Elektrik (AE), Asas Kejuruteraan Mekanik (AM), Asas Kejuruteraan Tenaga (AP), dan Asas Kejuruteraan Sivil (AS). Kumpulan Rawatan MRM Individu dianggotai oleh 30 orang subjek yang terdiri daripada 8 orang subjek program AE (26%), 6 orang subjek program AM (22%), 8 orang subjek program AP (26%), dan 8 orang subjek program AS (26%). Kumpulan Rawatan MRM Kelompok pula dianggotai oleh 30 orang subjek yang terdiri daripada 9 orang subjek program AE (31%), 7 orang subjek program AM (23%), 7 orang subjek program AP (23%), dan 7 orang subjek program AS (23%). Manakala, Kumpulan Kawalan dianggotai oleh 30 orang subjek yang terdiri daripada 7 orang subjek program AE (23%), 10 orang subjek program AM (33%), 7 orang subjek program AP (23%), dan 6 orang subjek program AS (21%).

Jadual 5

Taburan Subjek Mengikut Program dan Kumpulan (N = 90)

<table>
<thead>
<tr>
<th>Kumpulan</th>
<th>Program</th>
<th>Jumlah</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AE</td>
<td>AM</td>
</tr>
<tr>
<td>Rawatan Individu</td>
<td>MRM</td>
<td>8 (26%)</td>
</tr>
<tr>
<td>Rawatan Kelompok</td>
<td>MRM</td>
<td>9 (31%)</td>
</tr>
<tr>
<td>Kawalan</td>
<td></td>
<td>7 (23%)</td>
</tr>
<tr>
<td>Jumlah</td>
<td>24 (27%)</td>
<td>23 (26%)</td>
</tr>
</tbody>
</table>
Data bagi gred keputusan trimester pelajar dibandingkan antara Kumpulan Rawatan MRM dengan Kumpulan Kawalan. Menurut Robert Ho (2006), ujian Mann-Whitney U ialah ujian bukan parametrik untuk data yang tidak bertaburan normal, perbandingan dibuat antara dua kumpulan, dan skor diukur berdasarkan skor ordinal. Memandangkan ciri yang digariskan juga ada dalam data gred keputusan trimester kajian ini, maka ujian Mann-Whitney U digunakan untuk menganalisis data gred keputusan trimester kajian ini. Jadual 6 memerihalkan data deskriptif berdasarkan skor min dan sisihan piawai gred keputusan trimester Matematik dalam praujian dan pascaujian. Skor min praujian Matematik untuk Kumpulan Rawatan MRM (M = 39.000, SD = .000) dan Kumpulan Kawalan (M = 39.000, SD = .000). Skor min Matematik untuk Kumpulan Rawatan MRM dan Kumpulan Kawalan menunjukkan bahawa wujud peningkatan dalam bacaan pascaujian.

**Jadual 6**

Skor Min dan Sisihan Piawai (SD) Gred Keputusan Trimester Matematik dalam Praujian dan Pascaujian antara Kumpulan Rawatan MRM dengan Kumpulan Kawalan (N=90)

<table>
<thead>
<tr>
<th>Kumpulan</th>
<th>Min/SD</th>
<th>Praujian (A)</th>
<th>Pascaujian (B)</th>
<th>Perbezaan (B) – (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rawatan MRM (60)</td>
<td>Min</td>
<td>39.000</td>
<td>58.817</td>
<td>19.817</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.000</td>
<td>10.055</td>
<td></td>
</tr>
<tr>
<td>Kawalan (30)</td>
<td>Min</td>
<td>39.000</td>
<td>45.433</td>
<td>6.433</td>
</tr>
<tr>
<td></td>
<td>SD</td>
<td>.000</td>
<td>5.110</td>
<td></td>
</tr>
</tbody>
</table>

Skor min Matematik untuk pascaujian Kumpulan Rawatan MRM ialah (M = 58.817, SD = 10.055) dengan perbezaan skor ialah 19.817. Kumpulan Kawalan turut menunjukkan peningkatan skor dalam pascaujian (M = 45.433, SD = 5.110) dengan perbezaan skor sebanyak 6.433. Terdapat peningkatan yang lebih ketara dalam Kumpulan Rawatan MRM berbanding dengan Kumpulan Kawalan. Dapat di menunjukkan bahawa perubahan skor yang lebih tinggi diperoleh oleh kumpulan yang menerima rawatan MRM. Dengan ini gred keputusan trimester bagi Matematik untuk Kumpulan Rawatan bertambah menjadi lebih baik selepas menerima rawatan MRM berbanding Kumpulan Kawalan.

Manakala, bagi keputusan ujian Mann-Whitney U dalam Jadual 7 menunjukkan bahawa terdapat perbezaan yang signifikan antara Kumpulan Rawatan MRM dengan Kumpulan Kawalan (z = -5.998, p = .000) pada aras p < .05 bagi Matematik.
Jadual 7

Keputusan Ujian Mann-Whitney *U* untuk Gred Keputusan Trimester Matematik dalam Pascaujian antara Kumpulan Rawatan MRM dengan Kumpulan Kawalan (*N* = 90)

<table>
<thead>
<tr>
<th>Ujian</th>
<th>Pascaujian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney <em>U</em></td>
<td>206.000</td>
</tr>
<tr>
<td>Wilcoxon <em>W</em></td>
<td>671.000</td>
</tr>
<tr>
<td><em>Z</em></td>
<td>-5.998</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.000</td>
</tr>
</tbody>
</table>


Jadual 8

Skor Min dan Sisihan Piawai (SD) Gred Keputusan Trimester dalam Praujian dan Pascaujian antara Kumpulan Rawatan MRM Individu dengan Kumpulan Rawatan Kelompok (*N* = 60)

<table>
<thead>
<tr>
<th>Kumpulan</th>
<th>Min/SD</th>
<th>Praujian (A)</th>
<th>Pascaujian (B)</th>
<th>Perbezaan (B) – (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matematik</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rawatan MRM</td>
<td>Min</td>
<td>39.000</td>
<td>57.033</td>
<td>18.033</td>
</tr>
<tr>
<td>Individu (30)</td>
<td><em>SD</em></td>
<td>.000</td>
<td>9.353</td>
<td></td>
</tr>
<tr>
<td>Rawatan MRM</td>
<td>Min</td>
<td>39.000</td>
<td>60.600</td>
<td>21.600</td>
</tr>
</tbody>
</table>

Bagi keputusan ujian Mann-Whitney $U$ dalam Jadual 9 menunjukkan bahawa terdapat perbezaan yang tidak signifikan antara Kumpulan Rawatan MRM Individu dengan Kumpulan Rawatan MRM Kelompok [$U (n1 = 30, n2 = 30, p = > .05]$ bagi Matematik. Keputusan ini menunjukkan bahawa kedua-dua cara yang digunakan dalam intervensi MRM, sama ada secara individu ataupun kelompok dapat meningkatkan gred keputusan trimester pelajar rendah pencapaian akademik.

**Jadual 9**

Keputusan Ujian Mann-Whitney $U$ untuk Gred Keputusan Trimester Matematik dalam Pascaujian antara Kumpulan Rawatan MRM Individu dengan Kumpulan Rawatan MRM Kelompok (N = 60)

<table>
<thead>
<tr>
<th>Ujian</th>
<th>Pascaujian</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mann-Whitney $U$</td>
<td>369.500</td>
</tr>
<tr>
<td>Wilcoxon W</td>
<td>834.500</td>
</tr>
<tr>
<td>Z</td>
<td>-1.211</td>
</tr>
<tr>
<td>Asymp. Sig. (2-tailed)</td>
<td>.226</td>
</tr>
</tbody>
</table>

Jadual 10 yang berikut jelas menggukahkan dapatan kajian yang menunjukkan bahawa tidak terdapat perbezaan yang signifikan antara Kumpulan Rawatan MRM Individu dengan Kumpulan Rawatan MRM Kelompok terhadap gred keputusan trimester. Perbandingan ini dibuat berdasarkan data deskriptif skor min pangkatan dalam pascaujian untuk Kumpulan Rawatan MRM Individu dengan Kumpulan Rawatan MRM Kelompok. Nilai min pangkatan
Jumlah kesajahan subjek untuk Matematik bagi Kumpulan Rawatan MRM Individu ialah \( M = 27.820 \) dan bagi Kumpulan Rawatan MRM Kelompok \( M = 33.180 \).

**Jadual 10**

Jadual Deskriptif Min Pangkatan Gred Keputusan Trimester Kumpulan Rawatan MRM Individu dan Kumpulan Rawatan MRM Kelompok dalam Pascaujian \( N = 60 \)

<table>
<thead>
<tr>
<th>Pemboleh ubah bersandar</th>
<th>Kumpulan N</th>
<th>Mean Rank</th>
<th>Sum of Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gred Keputusan Trimester atematik Rawatan MRM Individu</td>
<td>30</td>
<td>27.820</td>
<td>834.500</td>
</tr>
<tr>
<td>Gred Keputusan Trimester atematik Rawatan MRM Kelompok</td>
<td>30</td>
<td>33.180</td>
<td>995.500</td>
</tr>
</tbody>
</table>

**Kesimpulan**

Gred keputusan trimester bagi subjek wajib Program Asas Kejuruteraan iaitu, Matematik telah mencapai kelulusan seratus peratus bagi Kumpulan Rawatan MRM, walaupun terdapat sejumlah pelajar yang tidak mencapai gred C bagi kedua-dua subjek, namun jumlahnya adalah sedikit. Terdapat peningkatan yang lebih ketara dalam Kumpulan Rawatan MRM berbanding dengan Kumpulan Kawalan. Dapatian ini menunjukkan bahawa perubahan skor yang lebih tinggi diperoleh oleh kumpulan yang menerima rawatan MRM. Dengan ini gred keputusan trimester bagi Matematik untuk Kumpulan Rawatan bertambah menjadi lebih baik selepas menerima rawatan MRM berbanding Kumpulan Kawalan. Selaras dengan kajian yang dilakukan oleh Rodger dan Tremblay (2003), mendapati bahawa daripada 983 pelajar tahun satu di University of Western Ontario, 537 pelajar dipilih secara rawak untuk mengikuti program pementoran rakan sebaya dan selebihnya dijadikan sebagai kumpulan kawalan. Hasil kajian menunjukkan bahawa gred keputusan semester pelajar bersama rakan mentor telah meningkatkan secara signifikan berbanding pelajar dalam kumpulan kawalan.

Kesimpulannya, intervensi Modul Rakan Mentor dapat membantu subjek pelajar rendah pencapaian akademik bagi meningkatkan gred keputusan trimester. Lantaran itu, intervensi Modul Rakan Mentor ini boleh dimanafaatkan dengan memperluas kajian di universiti tempatan lain dan lebih banyak rakan mentor dilibatkan agar generalisasi diperoleh dan rumusan dapat dikemukakan dengan lebih berkesan lagi.
Rujukan


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A REVIEW ON STUDENT TEACHER SUPERVISION MODELS DURING TEACHING PRACTICE.

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Abstract

Teaching practice is considered a crucial stage for student teachers. A lot of mechanisms are specially created or designed to make sure the teaching practice process will give the maximum beneficial to produce a quality future teacher. Student teacher supervision is one of the most important supportive mechanisms in teaching practice. Thus, this paper studies on supervision models that can be utilized to achieve the targeted goal in education, especially to assists and supports student teacher dealing with the real school context. Selected models were used to highlight the important components and implementation of particular supervision. The research methodology that used for this study is library research on existed or existing supervision models in education. The paper began with the definitions of supervision. The aims of supervision were clearly identified. This study comprised the main components of all supervision models for further research. The evolution in supervision models also been highlighted to give more space for researchers to develop more comprehensive and contemporary supervision models.

Keywords: student teacher, supervision, supervision models

Introduction

To fulfill the vision of Malaysia to become a developed country, the main priority should be focus on the human capital development. Eleventh Malaysia Plan, 2016-2020 emphasizes that Malaysia will requires human capital who equipped with knowledge and skills, as well as ethics and morality to sustain the economic growth (Economic Planning Unit, 2015). Human capital development are widely depend on the quality of the teachers who convey knowledge, sculpting attitude and fostering positive values among students, our future leader. Thus, quality teachers are desperately needed in order to make the vision become reality.
Generally, Darling-Hammond (2006); Clark & Collin, (2007); Farrell, (2008) as cited in Ochieng’Ong’ondo & Borg (2011) agreed that the teaching practice also known as practicum is one of the most important aspect on student teacher’s education. Therefore, to ensure that the teaching practice brings out the maximum beneficial to produce more quality future teachers, supervision for student teacher plays an undeniable significant role.

Stock-ward & Javorek (2003) stated that supervision plays an important component of the work of most student affairs professionals. Winston and Creamer (1997) defined supervision as a helping process designed to promote organizational goals, enhance personal and professional development as they work. In fact, supervision can be the ultimate answer to the production of more quality future teachers. Somehow, Winston & Creamer (1997); Creamer & Winston (2002); Stock-Ward & Javorek (2003); Barham & Winston (2006); as cited in Petroc (2012) sadly to identify that supervision has warranted limited attention in the literature of the profession.

Thus, this study aims to discuss the supervision models and comprised its essential elements to draw researcher’s attention to develop a comprehensive and contemporary supervision model which suites to Malaysia context. The purposes of this study are to understand the definitions and aims of supervision, and to determine the essential elements of each supervision model. It would help us to gain further understanding by study the evolution and reformation of supervision models.

The significance of this research is to highlight the essential elements of each supervision model. By indentified these essential elements, researcher will have a clearer vision about the purposes of supervision whilst might adapt or adopt these findings to develop a new supervision model that Malaysia needed.

**Definition of Supervision**

Winston & Creamer (1997) identified supervision as a management function anticipated to encourage the success of institutional targets and at the same time to enhance the performance of staff, professional and personal capabilities. From the perspective of organization and management, supervision is a helping process to support staff. The supervision is deliberately designed to encourage collaboration between the supervisee and the supervisor. When the collaborative supervisory achieved, the organization’s targets are accomplished whilst the supervisee matures professionally and personally.

Goldhammer, Anderson, and Krajewski (1980) acknowledges that supervision play a supportive roles for teacher development. Supervision is the task assigned to certain employees, to stimulate staff growth and development, to influence teacher behaviours in the classroom, and to foster the selection, development, use, and evaluation of good instructional approaches and materials.

Knoll (1987) implies supervision as the supervisor who plays a leadership role to diagnoses a teacher needs and then give the teacher assists, directs, guides, supports,
suggests, and consults. According to Stock-ward & Javorek (2003), supervision is identify as overseeing their works, directing, or inspection one’s performance to ensure they provide quality services.

According to Eye, Netzer, and Krey (1971), supervision function as a subsystem of management which consists of two parts: program and people. The supervisor plays a very important role to give direction to the process of merging program and people. While performing the function of supervision, the supervisor takes the responsibility to initiates activities such as training. Supervision plays a managerial function that includes accountability for the teachers’ professional development to support instructional programs and the assessment of teachers to make employment judgments.

In education setting, Goldhammer, Anderson, and Krajewski (1980) also defines instructional supervision as those actions specially conduct by school personnel for the instructional improvement through changing of teacher’s behaviour. According Hoy and Forsyth (1986) identified instructional supervision as any set of activities which involves a cycle of systematic planning, observation and analysis of the teaching and learning process to enhance instructional process.

Shupp, M.R., & Arminio, J.L. (2012) emphasize that supervision is a process that specially formulated to support employees (student teachers) to actualize the organization goals and enhance their leadership development while Eya & Leonard (2012) define supervision as any activity which helps teachers accomplish both qualitative and quantitative instructional delivery.

As a conclusion, supervision can be defined as a supportive system for student teachers to receive sufficient guidance, assistants, supports and consultation from a supervisor which will augment their professional development, enhance the teaching and learning process and fostering positive instructional values.

**Aims of Supervision**

The aims or purposes of supervision are widely discussed by pro-supervision scholars and researchers. Tanner & Tanner (1987) stated the purpose of the supervision is to improves the quality of the education which provided by the schools (educators) for children (students). According to McQuarrie & Wood (1991) as cited in Payne (2010), the vital role of supervision is to assist and support teachers in their instructional function which enable them to make changes or improvement in the education or classroom environment.

Winston & Creamer (1997) highlighted 6 components or aims of supervision. Firstly, supervision expressing unit’s needs and mission. Secondly, supervision aims to managing and monitoring unit’s climate. Besides purposes mentioned above, supervision also functions to fostering individual development and aspiring teamwork capabilities. The fifth purpose states that supervision aims to synchronizing works. Lastly, supervision encourage active problem solving attitude.
Additionally, Zepeda (2003) identify the purposes of supervision are to promote fault-free problem solving, communication, development, growth, and acts as a platform to construct the capacities in teachers. Sergiovanni & Starratt (2007), acknowledge supervision aim to improve the prospect and competence of school to functions effectively to increase academic success of students.

Eya & Leonard (2012) highlighted two main purposes of instructional supervision in schools which are teacher improvement purposes and nonteacher improvement purposes. Ani (2007) identified teacher improvement purposes included ensuring teachers perform their assigned responsibilities, receive assistance, guiding, technical facilitate to improve the instructional functions while nonteacher improvement purposes including ensuring proper supply of teaching materials and quality of instruction are maintained.

Basically, every researcher believed that supervision contributes positive added values to educational function. The main purpose of supervision can be concluded as helping and supporting student teachers to flourish their personal and professional development instructionally.

Research Method

The research method of this paper is library research. George (2008) defines library research as a research method which “involves identifying and locating sources that provide factual information or personal/expert opinion on a research question; necessary component of every other research method at some point”. Related information and data were extracted from various documents, mainly books, government report, thesis and journals. These existing literature that produce by experts mainly pro-supervision researchers have been reviewed to identify the gap of analysis. These documents are crucially important as the proof and evidence of existed and existing supervision models. This study is a result of document analysis and literature review.

Table 1 Evolution and Reformation of Supervision Models

<table>
<thead>
<tr>
<th>No.</th>
<th>Supervision Models</th>
<th>Author (Year)</th>
<th>Findings/ Important Implementation and components</th>
<th>Period of Implementation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Inspection Supervision</td>
<td>Tanner &amp; Tanner (1987)</td>
<td>• Aims to find out whether school children received instructions which required by law.</td>
<td>1642 -1875 in United States of America</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Anderson (1993)</td>
<td>• Make judgements about the teacher</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Did not evaluate the teaching or pupil learning.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Did not provide professional development</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Supervision Type</td>
<td>Author(s) (Year)</td>
<td>Details</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>-----------------</td>
<td>------------------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Scientific Supervision</td>
<td>Taylor Frederick (1911)</td>
<td>• School’s administrative emphasized on accountability and efficiency.</td>
<td></td>
</tr>
</tbody>
</table>
|   |                  | Sergiovanni & Starratt (2007) | • Accentuated efficiency, control, and accountability.  
• Teachers supervised by superiors based on teaching protocols and instructions.  
• Face-to-face supervised  
• Superiors believed that there was only one particularly way to teach |
|   |                  | Boyce (1915) | • Publications promote quantitative measurement toward every schooling aspects including evaluate teachers. |
|   |                  | Pajak (2000) | • Supervision was separated from administration. |
|   |                  | Anderson (1993) | • Established The Association for Supervision and Curriculum Development (ASCD) |
• Did not increase productivity. |
|-------------|----------------|---------------------------------------------------------------------------------|-----------------------------------|
• Evaluation based on classroom management and classroom environment. | |
| 6. Clinical Supervision | Cogan (1973) | • A set of procedure to improve classroom instruction.  
• Aims to improve classroom behaviour of teacher.  
• Emphasized on in-class supervision  
• Developed eight phases supervision cycle  
• Enhanced professional development, teacher who is analytical of his own performance, open to help from others, and self-directing. | 1973 - today in United States of America, (Many countries such as Malaysia and Australia are using this method until now) |
|             | Acheson and Gall (1997) | • aim to improve teachers’ classroom performance. | |
|             | Goldhammer (1969) | • identified 5 stages of supervision cycle. | |
|             | Acheson and Gall (1997) | • supervision provide objective feedback on teacher’s teaching, using instructional strategies to enhance skills, evaluates teacher’s performance and promotes positive attitude. | |
| 7. Divergent Approaches Supervision | Eye, Netzer, and Krey (1971) | • new era of supervision  
• emphasized on system analysis | |
|             | Sergiovanni & | • building professional | |
|   |   | communities among teachers and enhancing teacher development rather than evaluating teachers.  
  
  • emphasized on teachers quality. | 1993 - today in United States of America |
|---|---|---|---|
| 8. | Differentiated Supervision | Glatthorn (1997) | Three options in this system: intensive development (for teachers with serious problems or non-tenured teachers); self-directed development (for teachers who prefer to work independently); and cooperative development (for small collaborative teachers group).  
  
  • Two evaluative options which are standard evaluation and intensive evaluation.  
  
  • Aims to fostering professionalizing teaching, cooperation and collegiality.  
  
  • Solution for administrators to perform effective supervision. | 1993 - today in United States of America |
  
  • Scoring system which use standardized testing method and publication as indicators to control teacher’s performance. | 2007 - today in United States of America |
  
  • Five election of tasks or assistance which can improve instructional skills, such as: professional development, group development, direct assistance, curriculum | 2007 - today in United States of America |
Based on the table 1, supervision started as early as in the year 1642. Somehow, the concept was more toward making judgement about the teacher not professional development. Since 1876, administrative started to supervised teachers based on teaching protocols and instructions. Between 1937-1950, cooperative and human relation supervision emphasized on cooperation and human relations in teaching profession. From 1960, evaluation was based on classroom management and environment. In year 1973, clinical supervision introduced a more complete idea in supervision which emphasizes on in-class supervision and a cycle of supervision procedures. Since 1993, new era of supervision was announced where supervision aimed to enhance teacher development rather than evaluating teachers. From 2007, neoscientific management are more focus on publication and standard teaching method while developmental supervision aims to improve instructional skills.
Main Components of Supervision Models

(1642-1875) Inspection Supervision
Tanner & Tanner (1987); Anderson (1993)

(1876-1936) Scientific Supervision
Taylor Frederick (1911); Sergiovanni & Starratt (2007); Boyce (1915); Pajak (2000);

(1937-1959) Cooperative/Democratic Supervision
Sullivan & Glanz (2005); Eye, Netzer & Krey (1971); Pajak & Arrington (2004)

(1959-now) Human Relations Supervision
Pajak and Arrington (2004)

(1960-now) Research Orientation Supervision
Pajak (2000); Marzano (2003); Aseltine, Faryniarz, & Rigazio-DiGillo

(1973-now) Clinical Supervision
Cogan (1973); Pajak and Arrington (2004); Acheson and Gall (1997); Goldhammer (1960)

(1973-now) Divergent Approaches Supervision
Eye, Netzer, and Krey (1971); Sergiovanni &

(1973-now) Differentiated Supervision
Glatthorn (1997)

(1973-now) Neoscientific Management Supervision
Sergiovanni & Starratt (2007)

(1973-now) Developmental Supervision
Glickman, Gordon, and Ross Gordon (2007)

Figure 1: Focus of supervision Models

- Inspection, judgement towards teachers
- Efficiency, control, and accountability, quantitative
- Procedures to improve classroom instruction, problem solving and reflective
- Building professional communities and enhancing teacher quality development
- Fostering professional -izing teaching, cooperation and collegiality.
- Focus on impersonal manner, standardized testing method and publication.
- Professional development, group development, direct assistance, curriculum development, and action research.
- Create job satisfaction and enhance morale
- Evaluation on classroom environment and management
- Focus on impersonal manner, control, and accountability, quantitative
- Creating job satisfaction and enhance morale
- Evaluation on classroom environment and management
- Focus on impersonal manner, control, and accountability, quantitative
- Creating job satisfaction and enhance morale
- Evaluation on classroom environment and management
- Focus on impersonal manner, control, and accountability, quantitative
- Creating job satisfaction and enhance morale
- Evaluation on classroom environment and management

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Based on the figure 1, the focus or essential elements of each supervision model are clearly included inside the hemisphere.

**Conclusion**

Based on the analyzed and literature reviewed in this study, four conclusions can be highlighted. First, supervision is a crucial supportive system for student teachers to receive sufficient guidance, assistants, supports and consultation from a supervisor during teaching practice. Second, the main purpose of supervision can be concluded as helping and supporting student teachers to enhance their personal and professional development instructionally. Third, the analysis through the timeline in table 1 clearly highlighted the evolution and reformation of the supervision models from time to time. Fourth, the hemisphere in the figure 1 clearly identified essential elements of each supervision model, which should gain attention from researchers whether to adapt or adopt the findings to create a new supervision model for Malaysia.

**Recommendations**

Based on this study, three recommendations can be made. First, supervision should received greater attention not only from the researchers and educators, but others stakeholders such as parents, members of society and even policy makers to achieve the ultimate goal in education system. Second, supervisor and supervisee need to understand their role and responsibilities in order to create effective supervisory relationship. Universities play an important role to give sufficient guideline and information as well as training to actualize effective supervision. Lastly, the third recommendation is researchers are urged to develop a more comprehensive and contemporary supervision models which suitable for Malaysia context.

**References**


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A study on components in beginning teacher induction models

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Abstract

Beginning teacher induction is receiving more attention than ever before and perceived to be an important tool in supporting beginning teacher transition from a student teacher to teacher of students. This paper studies on the components used in beginning teacher induction model in selected countries. Method used for this study is library research method on current practices in beginning teacher induction programmes. Data comes from an examination of relevant studies of national and international induction practices. The paper begins with brief history and definition of beginning teacher induction before exploring the components in induction models of most exemplary teacher induction programmes from Malaysia, Australia (New South Wales), Canada (Ontario), Singapore, China (Shanghai), New Zealand and the United States (California). Beginning teacher induction models come in all shapes, this study examines common components of beginning teacher induction model among these countries. The necessity of this research is to develop best practice in beginning teacher induction models.

Keywords: beginning teacher, beginning teacher induction programmes, teacher induction models

Introduction

From the information available, formal and systematic beginning teacher induction programmes are relatively recent development dating back some forty years. Since, a plethora of research were done over time on beginning teacher induction from many perspectives. As of the 1980s, some countries such as United States and England, have acknowledged that support programmes need to be devised in order to assist beginning teachers to start their career with more favourable circumstances. There are extensive international literature reviews on beginning teacher induction. These reviews reveal that
many countries, are taking beginning teacher induction seriously by introducing comprehensive induction programmes for their beginning teachers. Many countries have moulded their own induction models by adapting induction components and strategies according to their cultural and philosophical context.

In the 21st century, the need of induction programme for beginning teachers has never been greater and supporting beginning teachers represent a huge challenge in many countries. Research of literature on beginning teachers, describes the world of beginning teachers as a world of struggle and survival. It has long been recognized that the first year of teaching is the most difficult and it is the most critical year in beginning teachers’ career (McDonald, 1980). Upon entrance to school, beginning teachers face immediate challenges from a variety of sources. Veenman (1984) in his study describes the transition period from a student teacher to teacher of students as a type of “reality shock” because missionary ideals formed during teacher training is contradict to the harsh and rude reality of classroom life. Teachers are not “finished products” when they complete a teacher preparation programme and are not prepared to teach unassisted in a classroom. If the practical realities of teaching fail to live up to their expectations for their professional lives, beginning teachers may experience “praxis shock” (Ballantyne & Mills, 2008).

Unlike other beginning professionals such as architects, lawyers, doctors or accountants, who start working in a team and given easier tasks or easier client. Beginning teachers often face the uncertainties in teaching career alone (Calderhead, 1992). Moir & Gless (2001) noted that beginning teachers frequently receive the most difficult teaching assignments yet they are expected to perform as expertly as experienced teachers. Regrettably, in some cases, beginning teachers are given more challenging assignments than more experienced teachers (Sweeny, 2008). Indeed, teaching has long been viewed by scholars as a profession that is very challenging and in which the beginning teachers’ journey is similar to a “sink or swim”, “make or break”, “baptism by fire” or “boot camp” experience.

The gap between idealism and theoretical learned in preservice teacher training programme and real school life can be rather stressful and traumatic for beginning teachers. To cope with the gap, beginning teacher induction programme was introduced to assist them. The programme is seen as a mean to support and guide beginning teachers in bridging the gap between preservice teacher preparation and assuming the role as a professional educator. Even though beginning teachers have completed quality teacher education programmes, they need additional knowledge and skills to be successful in their own classrooms (Santoli & Vitulli, 2014). Mastering the art of teaching is a process that takes time and even beginning teachers with the best preparation require quality support. The classroom reality can differ greatly from the preservice years and therefore many beginning teachers find the transition from being student teacher to beginning teacher overwhelming (Jarvis & Algozzine, 2006).

The theory behind induction holds that teaching is a complex work and preservice teacher preparation rarely adequate to provide all of the knowledge and skill necessary for a
successful teaching career (Feiman-Nemser 2001; Gold, 1996). Teaching profession is deemed to be a complex profession because teachers need to cater the need of relatively large group of students with different individual characteristics and backgrounds (Grinberg, 2002). The logic of beginning teacher induction programmes is that beginning teachers viewed to be less effective than teachers with many years of experience. The nature of teaching is that beginning teacher are expected to be teaching on par as of teachers with many years of experience thus beginning teachers require systematic support to perform their duties. Jackson & Davis (2000) purport that effective beginning teacher induction is as important as an effective preservice teacher education programme.

The purpose of this study is to examine reliable research that addresses beginning teacher induction programmes. The study will first, review beginning teacher induction history and definition. Secondly, the study explores beginning teacher induction models from selected countries. Finally, the study identifies common components in beginning teacher induction model among these countries.

**Method**

For the study, library research method was used. George (2008) describes library research method as identifying and locating sources that provide factual information and expert opinion on a research question. Data come from an examination of relevant studies of national and international beginning teacher induction programmes. Descriptions of beginning teacher induction programmes in electronic article, hand-search studies, reports from major education database and teacher education journals such as ERIC, Scopus, ProQuest, Sage, Emerald and Taylor Francis was searched. Titles and abstracts were screened for relevance to the study. The criteria for including in the study depend on the variables addressed. We used comparative analysis to identify key components of beginning teacher induction models.

**A Brief History of Beginning Teacher Induction and Definition**

As early as the 1960s the concept of induction for beginning teacher was in existence. The initial conception of induction suggested the first school experience or entry into the teaching profession as a linear socialization process with few contextual influences (Lawson, 1992). The 1970s and 80s saw innovative and more complex notion of induction that was informed by the effort to codify effectiveness correlates of teaching and also by the initiation of externally mandated reforms (Lawson, 1992). Induction programmes rose to prominence in the 1980’s as a result of the school reform movement (Ingersoll & Strong, 2011). This era yielded a rapid increase in studies and research addressing beginning teacher induction. Historically, little attention has been paid to beginning teacher induction (Moir & Gless, 2001). In the 21st century of ever changing world, teaching profession has become more and more complex requiring beginning teacher to be given sufficient support. Beginning teachers’ transitions from preservice education programme into professional practice is often unsettling. Educational researchers view the transition of beginning teachers from preservice training into their first teaching job as a period of induction (Wang,
Odell & Clift (2010). Ingersoll & Strong (2011) stated that induction programmes are intended for those who have already completed their preservice teacher education and training. These programmes are often conceived as a “bridge” from being students of teaching to teacher of students.

In order to better understand the literature and study surrounding beginning teacher induction programme, a look at broad overview of definition of beginning teacher induction is vital. Many scholars had define beginning teacher induction programmeas a planned programme of professional support for beginning teachers. Sprinthall, Reiman & Theis-Sprinthall (1992) describe an induction programme as an interactive model of professional development. Wong (2004) describes induction programme as a comprehensive, coherent and sustained professional development process aimed to train, support and retain new teachers and represents the first part of a lifelong professional development programme. Induction is a highly organized and comprehensive form of staff development, involving many people and components, that typically continues as a sustained process for the first two to five years of a teacher’s career (Wong, Britton & Ganser, 2005). Feiman-Nemser (2010) describes induction as a phase of learning to teach, a process for enculturation and a programme of support and development. Beginning teacher induction programme is a support structure that assist beginning teachers in integrating into the professional culture of teaching (Smithet al., 2012).

**Beginning teacher induction programmes**

Beginning teacher induction programmes take many forms. Two main differences across all beginning teacher induction programmes are the level of formality of the programmes and the types of strategies employed. Feiman-Nemser (2001) argues that induction happens with or without a formal programme. Beginning teacher induction programmes vary across countries and within countries (Wong, Britton & Ganser, 2005). This variation occurs in programme components, duration, funding, implementation and comprehensiveness. Various beginning teacher induction models have been developed around globe with the goal of progression of beginning teachers towards full competence. Some countries have established formal induction programmes for all beginning teachers, such as the one to two-year programme in England, Malaysia, France, Australia, Finland, Israel, Switzerland, Singapore, United State of America, Japan, Korea, Northern Ireland and China.

In order to help beginning teachers during their induction at school, various support system is employed. There are many models for the induction of beginning teachers (Wong, Britton & Ganser, 2005). Glazerman, Senesky, Seflor & Johnson (2006) stated that there is no “one size fits all” beginning teacher induction model either in theory or in practice, with different programmes emphasizing on different goals. However, they found that many programmes stress on components such as orientation, assessment, professional development workshops, mentoring, peer coaching, small group activities and classroom observations. Davis & Higdon (2008) reported that induction programmes vary as to their purpose and that translates to various type of support beginning teachers receive in their
induction programmes. According to Howe (2006), regardless of differences among programmes, all induction programmes share a common goal of providing beginning teachers with assistance, guidance and support to ease their gradual transition into the teaching profession.

Induction programmes come in a variety of models and employs a variety of strategies. Gilad & Alkalay (2014) reported that teacher induction models come in numerous shapes. Every induction programme is unique as it addresses the specific context of the school or district and the particular needs of the teachers and students. While mentoring tends to be the most common component of induction programmes, research findings have indicated that successful programmes include more than one component (Ingersoll, 2007; Wong, 2004). Other components identified from international research in beginning teacher induction programmes around the world are orientation, professional development, evaluations and observations, team teaching, peer probation, peer observation, talk lessons, forum, counselling and courses workshop, model-classroom observations, internships, teaching competitions, class visitations, teacher meetings, seminars and practice groups, inservice training and outside training.

Beginning teacher induction programmes around globe vary in their structure, component, duration and levels of formality. Comprehensive and powerful beginning teacher induction programmes for beginning teacher are found in several countries such as Malaysia, Australia (New South Wales), Canada (Ontario), Singapore, China (Shanghai), New Zealand and United States (California). These countries were identified as have implemented successful and effective induction programmes in their country. There are many different components deployed in their induction programmes. Components deployed in the models are combination of some of this components such as orientation, mentoring, peer probation, model classroom observation, team teaching, courses, seminars and meetings, internships, talk lessons, forum, teaching competitions, professional development and evaluation.

Literature review revealed that beginning teacher induction programmes are predominately composed of multiple component. Wong, Britton & Ganser (2005) stated that beginning teacher induction is an intensive and structured support for beginning teachers that includes orientation, weekly meetings with mentors and professional development opportunities. Comprehensive beginning teacher induction programme contains orientation sessions, professional development, classroom observations and feedback to the beginning teachers (Glazermanet al., 2010). Beginning teacher induction programme generally includes orientation, mentoring, professional development activities, seminars, workshops, observation and feedback from expert teachers or administrators (Smith et al., 2012)
Malaysia

The Education Ministry of Malaysia started to implement a comprehensive beginning teacher induction programme to address the problems faced by the beginning teachers in Malaysia as of late year 2010. A comprehensive beginning teacher induction programme was designed by the Education Ministry of Malaysia to support beginning teachers throughout the induction period. Beginning teachers will undergo beginning teacher induction programme with the objective of inducing beginning teachers with excellent work culture and gearing them towards performing tasks and responsibilities more systematically. The programme is designed for a year and it focuses on Continuous Professional Development (CPD). This programme is mandated for all beginning teachers in Malaysia. This programme is hoped to ease beginning teachers transition from their teacher education programme to become professional teachers.

Beginning teacher induction in Malaysia is responsibility of the Ministry of Education, State Department of Education, District Department of Education and school. The Education Ministry of Malaysia has made policy that schools need to run the beginning teacher induction programme using national guidelines. Schools are required to form beginning teacher induction committee under the leadership of principal to systematically organise the programme. The programme includes components such as orientation, mentoring, professional development and, evaluation and assessment. Orientation programme will be conducted for the first three months upon the beginning teacher reporting for duty while mentoring and professional activities will occur throughout the first year. The orientation phase is designed to assist beginning teachers to adapt to the environment and culture of the school community. The phase is viewed as a strategy to formally launch a beginning teacher’s career in teaching profession.

Malaysian beginning teacher is mentored by an experienced teacher teaching the same subject in school. Two periods in their teaching timetable is allocated for formal mentoring. Mentoring is also done informally outside allocated time according to the beginning teacher’s need. Mentor teachers are selected by school administration and the main task of mentor teacher is to coach and guide beginning teacher on professional conduct and teacher competency. The professional development phase promotes activities that contribute towards beginning teacher professional learning. Evaluation and assessment is viewed as an important mechanism in measuring beginning teacher’s career progression. Formative evaluations and assessments are conducted periodically based on evidence gathered in teacher’s portfolio. Upon successful completion of the induction programme, beginning teachers will be certified as qualified teacher with permanent job.

Australia (New South Wales)

The call for effective beginning teacher induction in Australia rose to prominent in the 1990s (Ramsey, 2000). Throughout Australia there are wide variation in the quality of programmes and support systems for beginning teachers. The beginning teacher induction in Australia is responsibility of the specific jurisdictions. New South Wales Institute of
Teachersmandates that all beginning teachers in New South Wales to undergo an induction process. The key components of New South Wales induction programme are orientation, mentoring, classroom observation, collaborative teaching opportunities, collegial support, feedback and professional learning opportunities. Induction in New South Wales is school-based with jurisdiction’s support and guidelines.

Beginning teachers in New South Wales will undergo induction programme for a year. The induction programme begins with orientation to the New South Wales Department of Education and to the school. Throughout the programme, beginning teachers are supported with structured mentoring, collegial support and professional learning opportunities. They will be assessed based on elements in The Professional Teaching Standards Framework, established by New South Wales Institute of Teachers during their induction year. Reduced workload is assigned to beginning teachers as they work their way towards accreditation at Proficient Teacher Level with the Board of Studies, Teaching and Educational Standards (BOSTES). New South Wales views the success of beginning teacher as everyone’s best interest and it is the responsibility of all school staff to support the beginning teacher.

Canada (Ontario)

In Canada, education is the responsibility of each province or territory. Ontario is the largest and most diverse province in Canada. Ontario’s educationalists had begun to move in the direction of purposeful support for beginning teachers in the late 1980s. Ontario beginning teacher induction programme is known as New Teacher Induction Program (NTIP), and it was introduced by Ontario Ministry of Education in 2006. Cherubini (2009) points out that the New Teacher Induction Program (NTIP) in the province of Ontario is an exemplary teacher induction programme. The programme had been designed to emphasize on professional development of beginning teachers (Clark, 2012). Ontario’s New Teacher Induction Program (NTIP) employs a systematic process of induction that will accelerate the beginning teachers’ progress towards the level of experienced classroom teacher (Kane & Francis, 2013).

The province of Ontario has instituted a comprehensive induction programme for beginning teachers which includes professional development and appraisal programme for all teachers with focus on development and growth (Darling-Hammond & Rothman, 2011). In Ontario, beginning teachers were given induction in the first twelve months after they join teaching profession and it is mandatory for beginning teachers employed in Ontario’s public school system. Since 2010, the New Teacher Induction Program (NTIP) has included orientation, mentoring, professional development and two performance appraisals in the programme (Pervin & Campbell, 2011). The orientation can be divided into phases, preservice school orientation and in-service orientation. These orientation activities include information on the board’s mission, policies, structure, priorities, professional development programmes and culture. Mentor teachers are selected by the induction programme coordinators in school accordance with specific criteria underlined by Ontario Ministry of Education. Mentors are generally experienced teachers from the same school teaching the same
subject and grade level (Kane & Francis, 2013). Release time is provided for both mentors and protégé to facilitate regular meeting sessions.

Ontario recognises the importance of comprehensive professional development. The professional development provided to beginning teachers is appropriately targeted to the development needs of beginning teachers in areas such as classroom management, communication with parents, and assessment and evaluation. Principals will conduct two performance appraisals on beginning teachers during the first twelve months. The performance appraisal process for beginning teachers has been designed to support and promote growth of beginning teacher with aim to increase the level of student achievement. Beginning teachers will complete the New Teacher Induction Program (NTIP) when they receive two “Satisfactory” ratings in their performance appraisals and given teaching certificate indicating successful completion of the programme.

Singapore

Singapore is well known for its quality and comprehensive beginning teacher induction programme. Singapore view their beginning teacher induction seriously because Singapore has one of the youngest teaching force across the globe. The Academy of Singapore Teachers (AST) provides Beginning Teacher Induction Program (BTIP) to beginning teachers to establish high standards of professional expertise across the fraternity. In Singapore, formal induction programme are mandated for all beginning teachers with aims to help beginning teachers experience success and strengthen their beliefs in teaching career. Beginning Teacher Induction Program (BTIP) for beginning teachers in Singapore is a two-year programme. The components in Beginning Teacher Induction Program (BTIP) are orientation, mentoring, in-service courses, heritage centre visit and symposium. There is a wide range of professional development courses and conferences/seminars included in the Beginning Teacher Induction Program (BTIP).

In Singapore, beginning teachers will go through a three-day Beginning Teachers’ Orientation Program (BTOP) on the teaching service. They are also given two years of mentoring from expert senior teachers. These mentor teachers will be provided with released time to assist beginners to learn their craft. During the structured mentoring period, beginning teachers teach a reduced load and attend courses in classroom management, reflective practices, counselling and assessment offered by National Institute of Education and Ministry of Education (Choo & Darling-Hammond, 2011). Ministry of Education also established the Beginning Teacher’s network to provide a platform for professional sharing among beginning teachers with the aim of deepening the knowledge base of the profession.

China (Shanghai)

Since 1994, beginning teachers in China have profited from induction initiatives outlined by the State Education Commission (Lee & Feng, 2007). Jensen (2012) points out that Shanghai has a world-class teaching force and a gold standard beginning teacher
induction. Schools in China provide induction support for their beginning teachers through a culture of teachers working collectively (Han, 2013). In 2012, Shanghai implemented one-year induction programme and beginning teachers only attain “qualified” status after successfully undergoing the induction programme. It’s induction programme involves orientation, mentoring, lesson preparation, workshop and frequent classroom observation with constructive feedback.

School-based orientation is provided to beginning teacher and they are required to attend district-based workshops and seminars. Shanghai’s most important component of beginning teacher induction is mentoring. Beginning teachers are mentored by a number of specialist mentors and they learn from senior teachers through research and lesson groups. They are also provided with significant amount of non-teaching time to engage in activities such as preparing for lessons, teacher collaboration, classroom observation and giving feedback. In Shanghai, lesson observation is critical component in the induction programme. Mentees and mentors regularly observe each other’s lessons and beginning teachers are given chance to observe exemplary teachers in the school and at district level. Beginning teachers periodically are asked to teach a best possible lesson while being observed by many experienced teachers. The highlight of this support system are teaching competitions organised for beginning teachers. The induction programme comprises professional standards and ethics, teaching practice and classroom experience, classroom management and moral education, and teaching research and professional development. Only after completing the four parts of training, beginning teachers are considered as certified teachers.

New Zealand

In New Zealand, the beginning teacher induction programme is known as the Advice and Guidance (AG) programme (Wong, Britton & Ganser, 2005). This programme is centralised and mandated to all beginning New Zealand teachers who undergo a two-year induction period. Beginning teacher induction is viewed seriously in New Zealand because beginning teachers have to undergo Advice and Guidance (AG) programme successfully in order to secure a permanent teaching certificate and eligible to become a fully registered teacher. Education system in New Zealand is designed to support beginning teacher throughout their induction phase and the Advice and Guidance programme is seen as the initial phase of the lifelong professional development of beginning teachers.

Beginning teachers in New Zealand undergo a structured programme of mentoring, professional development, observation, targeted feedback on their teaching and regular assessments (Piggot-Irvine et al., 2009). Schools in New Zealand are obligatory to appoint a mentor teacher with responsibility to design an advice and guidance programme fitting to the needs of a beginning teacher. New Zealand’s induction programme provides 20% reduction in teaching for beginning teacher to participate in the programme (Wong, Britton & Ganser, 2005). They will have no more than 15 hours of teaching and will be allocated five hours to attend advice and guidance group meetings and five hours of non-contact time for beginning teacher workshops.
New Zealander beginning teacher are supported with initiatives like reflective writing, observations of colleagues’ teaching, networking with beginning teachers in the school and targeted professional development opportunities (Haigh & Anthony, 2012). Facilitated peer support or “buddy teachers” is an important induction strategy in school level induction program. In this strategy, beginning teachers work closely with buddy teachers and take turns to observe each other. At the end of Advice and Guidance period, the beginning teacher will attest whether or not they meet the council’s Satisfactory Teacher Dimensions. Beginning teacher who satisfy all conditions will be granted full registration to become a qualified teacher.

**United States (California)**

In United States, education is operated at the state level and the first state-level teacher induction programme in the United States was established by Florida in 1980. Policymakers in California became interested in supporting beginning teachers in 1988 and initiated a pilot effort to support beginning teachers as they entered the teaching profession (Olebe, 2001). The California Beginning Teacher Support and Assessment Program (BTSA) was established in 1992 and it is a state-funded programme, co-sponsored by the Commission on Teacher Credentialing (CTC) and the California Department of Education (CDE). Bullough (2012) stated that California offers an exemplary beginning teacher induction programme and is often the place where teacher induction the search begins and ends. In California, beginning teacher induction programme is mandatory and Californian beginning teacher are mandated to undergo Beginning Teacher Support and Assessment Program (BTSA) for two-year (Achinstein & Davis, 2014).

The objective of California Beginning Teacher Support and Assessment Program (BTSA) is to support the transition of beginning teachers from preservice teacher programme to professional teaching by providing extensive induction programme. The programme includes intensive individualized support and assistance for beginning teachers and mentoring initiative which pairs beginning teachers with expert teachers. The components of Beginning Teacher Support and Assessment Program (BTSA) are orientation, mentoring, workshops, professional development and formative assessment system. The two-year programme in California allows greater time for learning and targeted professional development. During the two-year induction period beginning teachers are supported with an Individualized Induction Plan (IIP) based on the beginning teacher’s emerging needs. An IIP includes a beginning teacher’s growth goals, specific strategies for achieving those goals and documentation of progress in meeting those goals (Britton, Raizen, Paine & Huntley, 2000). Beginning Californian teachers must complete the two-year induction programme in order to earn a Professional Clear Credential and become a full-fledged qualified teacher.

**Common components in beginning teacher induction models**

Beginning teacher induction programme is characterised by a number of components imbedded in the programme. Although none of the countries had induction programmes that were alike, it is found that all had several similarities and basic features.
Research data suggest that there are various types of components in an induction model (Ingersoll, 2012). School usually include a combination of components in their beginning teacher induction programme (Ingersoll, 2012). Numerous types of beginning teacher induction programmes are used by school systems to support, assist and guide beginning teachers through the difficult and stressful first years of teaching until they have established a successful professional practice (Waterman & He, 2011).

Key components of an induction model are namely orientation, mentoring and professional development. Glazerman et al. (2008) highlighted that many beginning teacher induction programmes often include orientation sessions, professional development, mentoring, observations and assessment. A comprehensive induction may include high-quality mentoring, ongoing professional development, an external network of teachers and administrator and a standards-based evaluation (Wiebke & Bardin, 2009). Kane & Francis (2013) stated that many school systems internationally favour and include orientation, mentoring and opportunities for professional development in their beginning teacher induction programme. Ingersoll & Strong (2011) reported a variety component such orientation, mentoring, professional development, release time and professional learning communities may be offered to beginning teachers by the school administrators.

Orientation

One leading component of a successful induction programme is orientation. The first experience of beginning teachers in the induction programme is attending an orientation. An orientation programme formally launches a comprehensive induction programme for beginning teachers. Generally, orientation programmes have two phases, preservice orientation and in-service orientation. Preservice orientation should occur prior to officially joining school and in-service orientation during the first few months of joining school. Orientation generally occurs prior to the beginning of school over a period of two to three days and continues in the beginning of service (Wong, 2004). An orientation programme is a form of employee training designed to introduce new employees to their roles and responsibilities, co-workers and organizations (Klein & Weaver, 2000). Beginning teacher orientation is one of the ways to help beginning teachers to be familiar and feel comfortable with the culture and environment of the school. The purpose of an orientation is to acclimate beginning teachers to the school (Wood & Stanulis, 2009).

Orientation occurs during a time of high stress related to the beginning teacher’s entry and transition into teaching profession, whereas other induction component occurs throughout the beginning teacher’s tenure in the organization (Wanous & Reichers, 2000). Orientation is designed to help beginning teachers to make a smooth transition into the classroom and seen as information gathering phase (Robinson, 1998). It provides an opportunity for them to learn about the students, community, district and school as well as introduces the structure and components of the induction programme. The ultimate goal of orientation is to welcome beginning teacher to the school, promote positive attitudes about teaching profession and to acquaint beginning teachers with school’s history, philosophy, vision, mission, policies, structure, values, goals and procedures. By the end of the
orientation, the beginning teachers should feel that they had made the right choice in choosing a career in teaching.

**Mentoring**

The term mentor roots back to Homer’s poem “The Odyssey”. In the poem Odysseus entrusts an old and wise man named Mentor to nurture and educate his son, Telemachus before he goes to fight Trojan War. Mentoring came into prominence in beginning teacher induction in the early 1980s and has continued evolved to be one of the most critical component to support beginning teachers. Over the past decades mentoring has become one of the main focal point of induction programmes with nearly 80% of induction programmes around the globe have some element of mentoring as part of the induction programme (Ingersoll, 2012).

Mentoring is the most frequently discussed component among many components of beginning teacher induction programme. Anthony, Haig & Kane (2011) stated that mentoring by experienced teachers to be central of most induction programmes and it assist beginning teachers with socialisation into the school culture, enhance their self-confidence and sense of belonging. Mentoring is widely regarded as one of the most vital component of a comprehensive beginning teacher induction programme around the globe. In Malaysia, Australia, Canada, Singapore, China, New Zealand and the United States, mentoring is viewed as the most vital support system within the induction process. Hudson (2012) points out that mentoring programmes have been successfully used for beginning teacher induction in many countries.

The first few years of a beginning teacher’s journey are tough and experienced mentors are the perfect candidates to render support and guidance to them (Ingersoll & Strong, 2011). Researchers have come to recognize the important role played by mentors in ensuring that beginning teachers grow and excel in teaching profession (David, 2000). All successful beginning teacher programmes had some type of mentoring system which consisted of pairing an experienced teacher with a beginning teacher. It involves personal guidance provided by seasoned mentors to beginning teachers in schools. Mentor commonly define as a facilitator of change, initiator and manager (Huling-Austin, 1990). The mentors will meet beginning teachers weekly or fortnightly to observe, provide feedback, support, counselling and ideas for best practice. Mentoring programme also creates platform for beginning teachers to observe seasoned teachers and this practice able to help beginning teachers to develop better teaching skills. Typically, the mentoring programme lasts through the beginning teachers first year and in some programmes continues to second year. Mentoring for beginning teachers can be an effective support when used in a combination with other components of the induction process (Smith & Ingersoll, 2004; Wong, 2004).

**Professional Development**

One of the most widely discussed component in beginning teacher induction programme is the professional development. Many countries cater to career-long continuum
of professional development in their beginning teacher induction programmes. Professional development has become a vital component of numerous induction programmes to prepare and cultivate beginning teachers to rewarding educational careers (Anderson & Olsen, 2006). In a study by Wong (2004), he outlines professional development as an important component in a successful induction programme and schools should provide ongoing professional development over a period of two to three years. Lambeth & Lashley (2012) reported that beginning teachers perceived professional development as an important component in their school-based induction support system.

Professional development is designed to train beginning teachers in various areas of teaching and learning (Goldrick, Osta, Barlin & Burn, 2012). Clarke & Hollingsworth (2002) stated that beginning teachers need to view themselves as “learner teachers” to ensure professional learning during the induction phase. Professional development helps beginning teachers to reinforce their practice skills and make an impact on students. Vonk (1996) detailed that professional development of a beginning teacher comprises of pedagogical content knowledge, teaching skills and classroom management skills. Borko (2004) indicated that a systematic professional development plan can improve beginning teachers’ subject matter knowledge, instructional practices and understanding of student thinking. Professional development provides beginning teachers with greater instructional strategies and novel views on teaching while putting best practices at their disposal (Ashbrook, 2010).

Professional development provides opportunities for beginning teachers to try innovative practices within the class through collaboration with other teachers (Bagno, Levy, & Eylon, 2006). School leaders must provide teachers with time to share curriculum contexts, compare notes about particular lessons and problems with colleagues, develop and implement demonstration lessons for one another and discuss how their students respond to specific tasks (Darling-Hammond, 2005). Professional development is embedded in high-quality induction programmes with the aim of improving teacher practice and student achievements. Darling-Hammond et al. (2009) argue that professional development is most effective when it addresses the everyday challenges of beginning teacher in teaching and learning specific academic subject matter rather than focusing on abstract educational principles or teaching methods. Goh & Wong (2014) noted that any professional development programmes should be designed to improve teaching quality and be relevant to the real problems of classroom practices.

Conclusion

The countries of Malaysia, Australia, Canada, Singapore, China, New Zealand and the United States deployed comprehensive induction programmes in which all beginning teachers take part for at least one to two years. These countries use orientation, mentoring and professional development as primary beginning teacher induction component. Ingersoll & Kralik (2004) argued that the literature provides minimal guidance on which components of an induction programme are most significant in influencing particular outcomes. However, well-organized and systematic induction programmes can assist beginning teachers to make a successful transition into teaching profession and led a fruitful career.
Ministry of Education and policymakers can optimize the experience of beginning teachers by setting vivid and clear goals for beginning teacher induction programme.

No two induction models are exactly alike with each model catering to the specific need of a country or state. Malaysia, Australia (New South Wales), Canada (Ontario), Singapore, China (Shanghai), New Zealand and the United States (California) have their own unique components that underlie their successful induction programme. Mentoring in Malaysia is done formally within allocated time and informally outside allocated time. This allows flexibility for beginning teacher and mentor teacher in planning collaboration activities and provides ample support for beginning teacher. Collegial support is a unique component in New South Wales beginning teacher induction is collegial support. New South Wales collegial support establishes professional relationship for sharing knowledge between beginning teacher and their colleagues as well as links to professional associations and tertiary institutions. The component focuses on teacher professionalism, quality teaching and ethical practice. Ontario’s high-performing induction model’s unique component is its professional development of beginning teachers. The professional development programme is designed to meet the needs of diverse learners in school. The professional development programme consist of communication with parents, classroom management, and assessment and evaluation. Singapore’s unique component in its induction model is the Beginning Teachers’ network programme. The networking platform allows professional knowledge sharing among beginning teachers through collaboration and self-mastery. The key features of Beginning Teachers’ Network are ICARE (Individual Counselling and Advisory Resource for Educators), Teach and Share, Teachers Forum and Teacher On-Line. Shanghai induction model’s unique component is lesson observation and the highlight of this component is the teaching competition organised for beginning teachers. Facilitated peer support or “buddy teachers” is unique in New Zealand’s induction model. This component allows beginning teachers to work closely with their buddy teachers and provides opportunity for beginning teacher to share knowledge and experience. California’s unique component in their successful induction model is the implementation of Individualized Induction Plan (IIP) based on the beginning teacher’s emerging needs. This detailed plan enables beginning teacher’s specific need to be addressed.

It is clear that beginning teachers face difficulty in the myriad of tasks involved in teaching (Ingersoll & Strong, 2011). Beginning teacher induction programme is regarded as one of the most useful practice to ease the transition of preservice teacher into first teaching job and prevent problems faced by beginning teacher (Gujarati, 2012; Kang & Berliner, 2012). Sink or swim phenomenon endured by beginning teachers in teaching profession can be avoided through systematic implementation of induction programme. It is vital to implement induction model with the right combination of induction component to achieve the intended goals. A quality and comprehensive beginning teacher induction programme able to produce world class teachers, who will have a greater impact on student achievement.
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Title: Study on Expectation and Perceived Value among Hospitality Student on Internship Placement: A Case Study: At Selected Private College in Penang

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Abstract

Hospitality is a very wide industry which offers a large range of job opportunity for their employees. However for fresh graduate, intention to stay in the industry was influenced by their internship experience. The aim of current study is to assess the relationship between students’ expectation and perceived value through internship experiences towards their training program. Students graduated from three different programme from selected private college were chosen for the study by using judgment sampling. The duration of internship placement of the respondent was 3 to 6 months. The results shows students have high expectation on superior supervision, peer relationship and job task that employer may assign to them during their training duration. While, the perceived value result shows that students obtain their satisfaction from team work spirit that they found at working place, autonomy of superior and help from superior in their learning process throughout their internship program. Therefore, students’ expectation that they have before pursuing their training was unmet and also perceived value was different from their expectation. Thus, their intention to stay in the industry will be influence by their perceived value from their internship program.

Key Words: Internship Experience, Perception, Expectation

Introduction

Hospitality and tourism industry in Malaysia has experienced a remarkable economic growth. The industry is recognized as one of the major industries in providing foreign exchange earnings and generating employment to the people. According to the World Travel and Tourism Council 2015, in 2014, the total contribution of Travel & Tourism to employment in Malaysia, including jobs indirectly supported by the industry, was 13.0% of total employment (1,770,000 jobs). This is expected to rise by 3.1% in 2015 to 1,824,000 jobs and rise by 3.2% pa to 2,489,000 jobs in 2025 (14.4% of total). Therefore, the need for training in tourism and hospitality in upgrading the competencies level of workforce to participate in the industry is very important.
Hospitality education plays a vital role in ensuring a continual supply of qualified graduates in response to the increasing demand from the industry. In today’s competitive working world, graduates must meet the expectations of the companies as well as recruiters’ expectations. This expectation could be fulfilled through internship. A successful work or internship experiences can foster the development of positive and realistic expectations, leading to successful industry retention (Dickerson & Kline, 2008). Furthermore, these early experiences can influence future career progress and the desire to continue in the hospitality industry (Kim, McCleary, & Kaufman, 2010).

Internship in hospitality industry is an ongoing collaboration within the students, educators and employers. Internship can be considered as a great opportunity for the educators to increase their professional networking and cooperation with the hospitality industry which could keep the abreast of hospitality trends and future developments (Leslie, 1991). The benefits of integrating students’ classroom learning with real-world experience were seen as a crucial component of student engagement and development in higher education (Kuh, 2008).

For practical-based programs such as hospitality, the academic syllabus requires the students to gain practical experiences and understanding on how the hospitality industry operates in a professional setting. This cooperative-learning provides valuable experiences to students within controlled and monitored industry settings (Beggs, Ross, & Goodwin, 2008). Besides that, internship also provides opportunities to practice what they have learnt in the classroom, gain understanding of the industries’ requirements, and develop important hands-on workplace skills (Barron, 1999).

**Objectives of the study**

This study is to assess the expectation level and perceived value of hospitality students towards their internship program and overall satisfaction that influence their intention to stay in the industry. Specifically, this paper has the following objectives which are (i) to study the demographic profile of the respondent in understanding the influencing factor of selecting internship placement, (ii) to explore the gap between hospitality students' expectation and perceived value towards internship program and (iii) to study the overall satisfaction of respondent that influences the intention to stay in the hospitality industry.

**Background of study**

Richardson (2008) explored undergraduate tourism and hospitality student’s views of the industry as a career choice. Based on their view, he found that the tourism and hospitality industry worldwide is facing the problem of attracting and retaining quality employees which has led to a shortage of skilled personnel and staff. In Malaysia, labor demands increasing with the mushrooming of boutique and budget hotels as well as other famous hotel chain companies and restaurant all over the country. However, the industry is still having the problem of poor entrance of fresh hospitality management graduates into
the hotel industry. It has become a serious problems to hotel industry in Malaysia (Zahari and Fraser, 2005; Zahari, Hanafiah, Othman, Jamaluddin and Zulkifly, 2010). Moreover, there is much hospitality and tourism management graduates leaving or rejecting the hotel industry due to low job satisfaction, poor working conditions and lack of motivating factors. It causes high employee turnover rate and wastage of trained and experienced individuals (Richardson, 2009; Jenkins, 2001; Pavesic and Brymer, 1990). According to Gu, Kavanaugh & Cong 2007, many graduates pursue employment into other better paying industries after graduation due to these reasons.

Internship is a credible mean to land their first job in the view of students. Students might become more ambitions and independent after the internship program. Berta (2003) found out that hospitality students had a high expectation of "potential for advancement" which is related to their future career development. They also expected high prospects for promotion and personal growth before internship (Chan et al. 2002).

Some researchers argued that, the students who joined the hospitality and tourism field by having their own perceptions and expectations of what they should experience and gained to be successful in their future career as well as how well the industry training experience that they have gone through to meet their expectation and needs. (Muller, VanLeeuwen, Mandabach and Harrington, 2009). This statement supported by Singh and Dutta (2010), that most of the hospitality students are influenced by the experiences which they gained during their industrial training and intention to stay in this industry in the future.

In addition, according to Fox (2001), a bad internship experience will turn a student away from the industry quickly. Apart from that, the hospitality students felt disappointed with the real working experience which they have obtained through the internship program (Jenkins, 2001; Waryszak, 1999). There are also reports of many tourism and hospitality management graduates who have failed to enter the industry upon graduation (Richardson, 2008). Thus, such failures must be justified and it is of the interest of this study to explore the gap between hospitality students' expectation and perceived value towards internship program. This study will provide more information to assist students to meet their internship goals and students' overall satisfaction and their intention to stay in this industry after internship program. As a result, students can gain a better understanding of expectation of an internship and gain more realistic perspective of hospitality graduates' first jobs in hospitality industry. Industry professionals will have better understanding of interns as they learn more about their educational and working experience as they can strengthen and improve the internship program.

Methodology

Sampling Design and Technique

Judgmental sampling was used in current study by selecting the category of respondent with industrial placement experience. This sampling method selects the respondents based on researcher's judgment on demographic profile (See, 2013).
Data Gathering Procedure

Quantitative method was used in current study to gather data collection. Pilot test were conducted upon 30 respondents from selected private college at Penang to determine the reliability of the questionnaire. Upon completion of pilot test, questionnaires were distributed to students who were studying Diploma and Bachelor in Hospitality and Tourism Management as well as Diploma in Professional Chef Training.

Data Analysis

Descriptive analysis was used to identify the demographic profile of the respondents such as gender, students from, age, religion, races, current education and family income. Meanwhile, T-Test were used to analyze gap analysis in between the expectation and perceived value towards respondents internship experience (See, 2013).

Meanwhile, ANOVA test was used to analyze the difference in students' perceived value towards their internship program with respect to different program they take part which are Diploma in International Hotel and Tourism Management, Diploma in Professional Chef Training as well as Bachelor in International Hotel and Tourism Management. ANOVA Test was used to show the comparison between three groups of students from private college based on their overall satisfaction towards the internship program.

Result and Discussion

Respondent demographic profile mode class

Demographic profile of respondent was studied to understand the influencing factor of hospitality students on selecting internship placement and perceived value once completed their industrial placement. Among the area of interest for the study are gender, students programme, age, religion, race, education level, income status and internship duration. Table 4.1 shows the overall demographic profile of the respondents.

Table 4.1 Respondents Demographic Profile

<table>
<thead>
<tr>
<th>Demographic Profile</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Mode Class</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>76</td>
<td>39.4</td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>117</td>
<td>60.5</td>
<td>Female</td>
</tr>
<tr>
<td>Programme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in International Hotel and Tourism Management</td>
<td>42</td>
<td>21.8</td>
<td></td>
</tr>
<tr>
<td>Diploma in Professional Chef Training</td>
<td>44</td>
<td>22.8</td>
<td></td>
</tr>
<tr>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>107</td>
<td>55.4</td>
<td>Bachelor in International Hotel and Tourism Management</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-19</td>
<td>12</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>20-22</td>
<td>128</td>
<td>66.3</td>
<td>20-22</td>
</tr>
<tr>
<td>23-25</td>
<td>53</td>
<td>27.5</td>
<td></td>
</tr>
<tr>
<td>26-28</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Religion</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Buddhism</td>
<td>150</td>
<td>77.7</td>
<td>Buddhism</td>
</tr>
<tr>
<td>Islam</td>
<td>10</td>
<td>5.2</td>
<td></td>
</tr>
<tr>
<td>Hinduism</td>
<td>12</td>
<td>6.2</td>
<td></td>
</tr>
<tr>
<td>Christian</td>
<td>21</td>
<td>10.9</td>
<td></td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chinese</td>
<td>163</td>
<td>84.5</td>
<td>Chinese</td>
</tr>
</tbody>
</table>
Table 4.1 shows in current study, female respondent were more compared to male respondent. The result indicates that there was more number of female students studying hospitality programme and participate in the survey. Majority respondent of the survey were pursuing Bachelor programme after their internship training. Therefore, the age range of the respondent was 20 to 22 years age old. Result also shows that majority respondent are Buddhism and their race was Chinese. The highest education level of the respondent was diploma as the Bachelor students have not undergoes internship training or graduate from their studies. Since most diploma students who start to work in industry were fresh graduate without sufficient experience therefore, their monthly income status was below than RM2000 as shown in current study. Duration of internship period undergoes by respondent in current study were 3 to 6 months in order to complete their studies.

Comparison of Student’s Expectation and Perceived Value towards Internship Program

Paired T- test result was used to analyze the differences between respondents’ expectation and perceived value from internship programme. The comparison on expectation and perceived value upon completion of industrial training were on superior relationship at work place, team work spirit, autonomy and help from superior, resume and peer relationship and assigned job task. Table 4.2 shows the comparison on respondent’s expectation and perceived value upon completion of internship training.

Table 4.2 Comparison on respondent’s expectation and perceived value upon completion on internship training
Superior is a person who has higher rank at the workplace. Based on Table 4.2, there were 4 statements studied under superior dimension which are reasonable boss, sufficient supervisory support, encouraging innovative ideas and flexible work shift hours. Respondents have high expectation on the superior dimension towards their internship program with the mean score of 3.44±0.76. While, respondent perceived value towards the superior dimension were 3.36±0.76. As the significant value is 0.359, it indicates that there was no significant difference between students' expectation and perceived value towards the superior dimension. In addition, there was a negative gap (-0.08) between students' expectation and perceived value. Students' perceived value is slightly lower than the expectation which indicated that the superior dimension slightly did not meet the expectation of the students. Previous study supported the current study result that the four years hospitality and tourism program students from Turkey also shows negative perceptions toward less opportunity given to them in developing their managerial skills in this industry (Purcell & Quinn, 1995; Kusluvan & Kusluvan, 2000).

Team Spirit and involvement are the spirit among group member that bring the success to the organization and their willingness to cooperate as part of a team at workplace. There are four attributes under team spirit and involvement dimension which are high team spirit in the group, feeling of being a team members, ability students to identify self-strengths and weakness and acceptable work pressure during working time. Based on Table 4.2, students had lower expectation on team spirit and involvement dimension with the mean score of 3.48±0.79. Thus, students' perceived value on the dimension is slightly higher than their expected with the mean score of 3.58±0.65. As the significant value is 0.175 which is more than 0.05, it indicated that there was no significant difference between students' expectation and perceived value towards this dimension. There was a positive gap of 0.10 between students' expectation and perceived value. Result indicates that students had higher perceived value than expectation before their pursue internship program. While in Canada, the survey shows that the students are expected to have good teamwork among peer, training opportunities, working with good people, a good leader, challenging work and good pay which indirectly encourage more than one third of hospitality and tourism program students to stay with their first employer for 3 to 5 years. (Ng & Burke, 2006).

Autonomy is the level of freedom and discretion allowed to an employee over their job. High degree of autonomy will engender a sense of responsibility and greater satisfaction in the employee. Based on Table 4.2, there are four attributes under the dimension of autonomy and help from superior which are high autonomy given to respondent during their internship training, superior involvement when problem occurs, competitive training allowance and competitive fringe benefits. Respondents’ perceived value was slightly higher than their expectation on this dimension with the perceived value mean score of 3.51±0.74 and expectation mean score of 3.31±0.69. As the significant value is 0.008 which is less than 0.05, therefore it indicated that there was significant difference between respondents’ expectation and perceived value towards the autonomy and help from superior. There was a positive gap of 0.20 between students' expectation and
perceived value towards the dimension. Perceived value of the students is slightly higher than their expectation which indicated that autonomy and help from superior dimension met the expectation by the students who had gone through their internship training. Other study shows that most of the students expect work in a peaceful work environment with good pay and have power and authority at the same time. (Aycan & Fikret-Pasa, 2003).

Resume is a brief summary of a person’s professional or working experience with an employment application. Peer relationship is the relationship between students with superiors and colleague at the workplace. Good peer relationship will provide happiness and avoid misunderstanding among each other. There are three attributes under this dimension which are good for my resume, good for peer relationship and ability to develop technical skills during internship training. Respondents expectation were high on the resume and peer relationship dimension towards internship program with the mean score of 3.78±1.18. Respondents satisfied with this attribute with the mean score of 3.78±0.56. As significant value shows 0.927, it indicated that there was no significant difference between respondent’s expectation and perceived value towards resume and peer relationship. Furthermore, there was no gap between respondent’s expectation and perceived value that indicate resume and peer relationship dimension met the expectation of the students throughout the internship program. However, previous studies shows that the hospitality and tourism program is useful in students’ learning and improved the practical knowledge of those students who have no any experience in the related industry, such as hotel industry, tourism industry and food and beverage industry (Gretzel et al., 2008; Wong and Wong, 2008; Sanders & Armstrong, 2008).

Assigned job task is related to the characteristic of the job provide to the students. There are three attributes under this dimension. There were three attributes studied under assigned job task which were interesting and challenging work, good work environment and broad work experience. Respondents expectation was slightly higher than their perceived value with the expectation mean score of 3.62±0.73 and perceived value mean score of 3.58±0.71. As the significant value is 0.553 which is more than 0.05, therefore result shows that there was no significant difference between students’ expectation and perceived value towards the dimension of job assign. There was a negative gap (-0.04) between students’ expectation and perceived value towards the dimension. Expectation of the students is slightly higher than their perceived value which indicated that this dimension slightly did not meet the expectation by the students who had undergone through their internship program. Their expectation supported by previous studies that shows internship students gave high priority toward the career in hospitality and tourism industry such as job assigned, good and fair wages, professional management and good opportunities for career development(Yuksel et al., 2003).

Overall Satisfaction towards Internship Program

Table 4.3 shows the comparison between three programme of respondents from selected private college at Penang towards intention to stay in the industry after their graduation in hospitality field. There are four variables to identify students’ intention to stay
and overall satisfaction which are intention to stay in hospitality industry upon graduation, intention to recommend hospitality industry to family and friends, intention to provide feedback and satisfaction towards the overall internship training that respondents have experience through their training programme.

Table 4.3 Comparison on overall satisfaction of different programme respondent to stay in the industry

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>(I) Student from</th>
<th>(J) Student from</th>
<th>Mean Difference (I-J)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to stay in hospitality industry upon graduation</td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.06385</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>0.0178</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>0.06385</td>
</tr>
<tr>
<td></td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.06563</td>
</tr>
<tr>
<td>Intention to recommend family and friends to take part in the study</td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.02056</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>0.16444</td>
</tr>
<tr>
<td></td>
<td>Diploma in Professional Chef Training</td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>0.02056</td>
</tr>
<tr>
<td></td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.18500</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.16444</td>
</tr>
<tr>
<td>Intention to provide positive feedback towards the industry and education</td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Diploma in Professional Chef Training</td>
<td>0.14394</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>0.09190</td>
</tr>
<tr>
<td></td>
<td>Diploma in Professional Chef Training</td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>0.14394</td>
</tr>
<tr>
<td></td>
<td>Diploma in International Hotel and Tourism Management</td>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>0.09190</td>
</tr>
<tr>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>05204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------------</td>
<td>-------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>09190</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in Professional Chef Training</td>
<td>35204</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in International Hotel and Tourism Management</td>
<td>16883</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in Professional Chef Training</td>
<td>4606</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bachelor in International Hotel and Tourism Management</td>
<td>12277</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in International Hotel and Tourism Management</td>
<td>04606</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diploma in Professional Chef Training</td>
<td>12277</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The dependent variable of respondents’ intention to stay in hospitality industry upon graduation shows that there are a negative mean between respondents from two different programme which are Diploma in International Hotel and Tourism Management and Diploma in Professional Chef Training. It indicated that there was a significant difference of intention to stay between two groups of respondents. Furthermore, intention to stay in the industry of respondents from Bachelor programme has both negative mean towards respondents from Diploma programme. It showed that the students from both diploma groups might have higher intention to leave the industry which is different intention from bachelor respondent in hospitality field. Previous studies indicate the same result that a lot of graduates start to work in hospitality industry as front line employees because they believe that hospitality degrees will create greater professionalism in the industry while some students believe that they are able to find a good job in a big hotel chain after they complete their degree course (Brien, 2004; Jenkins, 2001).

There was a negative mean between respondents from diploma in International Hotel and Tourism Management and diploma in professional chef towards the variable of intention to recommend family and friends to take part in the hospitality study. The result shows that there was a significant difference between this two programme of respondents. The respondents might have different intention to recommend the study to their family and friends. Intention of respondents from bachelor in International Hotel and Tourism Management to recommend the study to friends and family have both negative mean towards respondents from diploma in International Hotel and Tourism Management as well as diploma in Professional Chef Training. It showed that the respondent from these two
groups might have the intention not to recommend the study to their friends and family. According to Maria & Rob (2012) human resource practices such as recruitment and selection, training, compensation system, performance appraisal, job security, employee empowerment and communication were found to have a relationship with intention to stay which implies that human resource practices are able to influence the employees' intention to stay in the industry and encourage their family and friends to pursue hospitality studies in future.

Intention of respondents from diploma in Professional Chef Training to provide positive feedback towards the industry and education have both negative mean towards respondents from diploma in International Hotel and Tourism Management as well as bachelor in International Hotel and Tourism Management. Result shows that the respondents from these two groups might have the intention to provide negative feedback towards the industry and education. There was a negative mean between respondents from bachelor in International Hotel and Tourism Management and diploma in International Hotel and Tourism Management towards the variable of intention to provide positive feedback towards the industry and education. It indicated that there was a significant difference between these two groups of respondents. The respondents might have different intention to provide positive feedback towards the industry and education. Supported by previous studies, Wessel et al., (2003) stated that the main reason of the students that have negative perception toward this industry was, the education in hospitality and tourism program are lack of quality and it caused they are difficult to success in this sector.

Satisfaction of internship program of respondents from diploma in Professional Chef Training has both negative mean towards respondents from diploma in International Hotel and Tourism Management as well as bachelor in International Hotel and Tourism Management. It indicated that students from these two groups might have different level of satisfaction level and slightly do not meet their expectation towards their internship training while compare with respondents in diploma in Professional Chef Training. There was a negative mean between respondents from bachelor in International Hotel and Tourism Management and diploma in International Hotel and Tourism Management towards the variable of satisfied with the internship program and meets their expectation. The result indicates that there was a significant difference between these two groups of respondents. The students respondents might have different level of satisfaction level and slightly do not meet their expectation towards their internship program. According to Ng & Burke (2006), students who study in hospitality and tourism program wish to have high ambitions in their future working career, but their ambitions changed after recognizing the actual circumstances of hospitality and tourism industry.
Conclusion

The results concluded that majority respondents that were taking hospitality and tourism management and professional chef training courses are female. Majority respondents were from Bachelor in International Hotel and Tourism Management programme. It is an obvious fact that most of the students are aged 20-22. Majority respondents are Buddhism and their race was Chinese. There is more diploma holder as compare to degree holder because most of the degree holder have not graduate yet. The result shows that respondent's income is below RM2000. Most of the respondents are students or fresh graduated who are working in the industry. Thus, their income was not high as they have not gain working experience yet since graduate. The most common duration of internship program among respondents is 3 to 6 months.

The result of T-Test analysis between the respondents’ expectation and perceived value towards their internship program shows that the respondents have high perceived value towards variables under team spirit and involvement, autonomy and help from superior dimension. The result shows that respondents’ expectation was not met under superior and job characterizes dimension. It influences respondents overall satisfaction towards their internship program. As a conclusion, respondents’ expectations were unmet. The first research question result was achieved by the study. The result indicated that there is the gap difference between hospitality respondents’ expectation and perceived value towards their internship program. Most of the respondents have high expectation towards their internship program on their supervision of boss, good working environment and etc.

The comparison between three groups of students from private college towards their intention to stay in the industry after their graduation was done in this study by using ANOVA analysis. The result showed that there are significant different between overall satisfaction and different group of students. Thus, the intention to stay in hospitality industry is different among three groups of respondents. Different group of respondents have different intention on recommend the study to their friends and family. The respondents have different intention to provide positive feedback towards the industry and education. Different group of students have different level of satisfaction level and slightly do not meet their expectation towards their internship program. The result indicated that respondents’ internship experience will affect their overall satisfaction towards their internship program. Thus, their intention to stay in the industry will be influence by their perceived value from their internship program.
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- A035 -

Kesan Latihan Pensyarah Terhadap Bimbingan Ke Atas Guru Pelatih Semasa Praktikum

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ABSTRAK

Penulisan refleksi merupakan satu bentuk penulisan ilmiah yang memerlukan seorang guru pelatih membuat pemerhatian, penilaian dan analisis terhadap persekitaran pengajaran serta memberi reaksi berdasarkan standard nilai tertentu. Kemahiran pensyarah pembimbing amatlah penting dalam sesi praktikum bagi membantu guru pelatih menulis refleksi yang berkesan terhadap kualiti pengajaran masing-masing. Kertas kerja ini akan meninjau keberkesanan pendekatan yang dilaksanakan oleh KPAKK dalam membantu pensyarah pembimbing menyelia penulisan refleksi guru pelatih yang secara umunya agak kurang pendedahan terhadap pengajaran di peringkat TASKA dan TADIKA. Di bawah konsep i-Play2Learn, semua pensyarah pembimbing dikehendaki melengkapkan siri latihan perkembangan profesionalisme berdasarkan Model Pengajaran Robert Glaser yang menekankan kepada penilaian berasaskan kriteria. Analisis dibuat menggunakan rekabentuk kualitatif dan data dikumpul secara tinjauan dan analisis dokumen. Data kualitatif diperolehi daripada perbandingan penulisan refleksi guru pelatih sebelum dan selepas siri latihan i-Play2Learn dilaksanakan terhadap pensyarah. Secara perbandingan didapati kualiti bimbingan pengajaran oleh pensyarah telah meningkat, ini digambarkan daripada refleksi yang ditulis dan boleh dibuat deduksi bahawa ini adalah kesan daripada siri latihan i-Play2Learn yang dilaksanakan kepada pensyarah terhadap bimbingan kepada guru pelatih.

Kata kunci: Refleksi, Penilaian berasaskan kriteria, Rekabentuk kualitatif
Pengenalan


Kemahiran membimbing dalam penyediaan refleksi dilihat perlu ditekankan bermula dari peringkat guru pelatih. Walau bagaimanapun, pensyarah pembimbing yang terlibat perlu memiliki kemahiran untuk membimbing guru pelatih dalam proses penyediaan ini supaya refleksi yang dihasilkan mampu memberi kesan terhadap sesi pengajaran dan pembelajaran guru pelatih tersebut seterusnya sesi pembelajaran pelajar akan menjadi satu sesi yang memberi makna kepada mereka.

Menurut Minot, penulisan refleksi membolehkan pengetahuan kontekstual terhadap sesi pengajaran dan pembelajaran dilaksanakan dan seterusnya mampu menghubungkan teori kepada praktis. Ini juga memberi peluang kepada guru pelatih untuk mencuba strategi, kaedah dan teknik yang baru di samping dapat meningkatkan pengetahuan dan kesedaran diri terhadap sesi pengajaran.

Asas Teori


Rajah 1: Proses bagi Model Pengajaran Robert Glaser
Latar Belakang Kajian

KPAKK adalah sebuah IPTS (Institut Pengajian Tinggi Swasta) yang menawarkan program di peringkat sijil, diploma dan ijazah sarjana muda dalam bidang pendidikan awal kanak-kanak. Kolej ini telah mengambil inisiatif bagi merangka satu siri latihan terancang dalam usaha untuk memantapkan kemahiran para pensyarah.

Untuk memperoleh kualiti yang baik dalam latihan kepimpinan, KPAKK telah menetapkan satu piawaian yang boleh diterima pada dasarnya. Terdapat 3 elemen sokongan yang digunakan oleh pihak kolej iaitu i-Play2Learn, i-Play2Teach dan i-Play2Lead. Ketiga-tiga elemen ini dirangkum di dalam sebagai i-play 2 nurture (ip2n). i-Play2Learn adalah salah satu elemen sokongan yang terdiri daripada pembangunan bagi bidang profesionalisme, kurikulum dan standard pengajaran serta piawaian yang berkisar mengenai persekitaran pembelajaran. Rajah 2 menunjukkan elemen i-Play2Learn yang terkandung di dalam konsep i-play 2 nurture kolej.

Dalam piawaian pembangunan profesionalisme, terdapat sub elemen yang mengandungi integrasi penyelesaian masalah dan kemahiran berfikir dalam amalan bilik darjah, perkongsian pengetahuan dalam kalangan tenaga pengajar dan orientasi tugas dengan pendekatan berasaskan projek serta meningkatkan kecekapan pengajaran untuk menyokong penilaian berterusan.

Siri latihan ini dikenali sebagai i-Play2Learn yang secara keseluruhan, terdapat 29 siri latihan termasuk latihan dalaman dan luaran yang telah dirangka untuk para pensyarah sepanjang
tahun 2016. Dari 29 siri latihan ini, 12 latihan adalah berkenaan dengan bidang pembangunan professional serta bidang pengajaran dan pembelajaran.

Objektif Kajian

Kajian ini dilaksanakan untuk meninjau keberkesanan pendekatan yang dilaksanakan oleh KPAK K yang dikenali sebagai i-Play2Learn dalam membantu pensyarah pembimbing menyalurkan refleksi guru pelatih yang secara umumnya masih memerlukan bimbingan terhadap pengajaran dan pembelajaran di peringkat TASKA dan TADIKA dengan menggunakan teori pengajaran oleh Robert Glaser.

Metodologi Kajian

Kajian ini dilakukan secara tinjauan menggunakan soal selidik sebagai instrumen utama (Tahir, 2009). Kajian ini melibatkan responden yang terdiri daripada kumpulan tenaga pengajar Kolej Perkembangan Awal Kanak-Kanak (KPAKK). Bilangan pensyarah yang telah dipilih berdasarkan tempoh perkhidmatan ditunjukkan di dalam Jadual 1 di bawah:

<table>
<thead>
<tr>
<th>BIL</th>
<th>TEMPOH</th>
<th>POPULASI PENSYARAH</th>
<th>SAMPEL PENSYARAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>NOVEMBER 2015 – DESEMBER 2015</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>2</td>
<td>JANUARI 2016 – FEBRUARI 2016</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>3</td>
<td>MAR 2016 – APRIL 2016</td>
<td>15</td>
<td>8</td>
</tr>
<tr>
<td>4</td>
<td>MEI 2016</td>
<td>17</td>
<td>8</td>
</tr>
</tbody>
</table>

Bilangan sampel Daadalah tetap dan sampel terdiri daripada pensyarah yang sama untuk memastikan keberkesanan siri latihan dapat dinilai secara konsisten. Dalam kajian ini, satu siri latihan pensyarah yang telah dirancang oleh pihak kolej dikenali sebagai siri latihan i-Play2Learn digunakan sebagai salah satu garis panduan untuk menilai tahap keberkesanan bimbingan pensyarah terhadap guru pelatih.

Soal selidik adalah alat kajian utama untuk mengumpul data tentang tahap peningkatan penulisan refleksi ini. Daripada 29 siri latihan ini, terdapat 12 latihan yang berkaitan dengan latihan peningkatan bimbingan pensyarah terhadap guru pelatih. Jadual 2 menunjukkan senarai siri latihan yang dilaksanakan oleh pihak kolej ke atas para pensyarahnya:

<table>
<thead>
<tr>
<th>BIL</th>
<th>SIRI LATIHAN i-Play 2 Lead</th>
<th>LATIHAN PENINGKATAN BIMBINGAN PENSYARAH</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Early Childhood Science Seminar (EX)</td>
<td></td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>No.</th>
<th>Event Description</th>
<th>Present?</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Vetting workshop 2</td>
<td>✓</td>
</tr>
<tr>
<td>3</td>
<td>Fieldwork training</td>
<td>✓</td>
</tr>
<tr>
<td>4</td>
<td>Project Zero Conference, Melbourne Australia</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Teaching Methodology 1</td>
<td>✓</td>
</tr>
<tr>
<td>6</td>
<td>Mini seminar on Field Work Project – 1</td>
<td>✓</td>
</tr>
<tr>
<td>7</td>
<td>Mini Seminar on Field Work Project – 2</td>
<td>✓</td>
</tr>
<tr>
<td>8</td>
<td>Teaching Methodology 2</td>
<td>✓</td>
</tr>
<tr>
<td>9</td>
<td>Asia-Pacific Regional Policy Forum on ECE 2016</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Training - Professionalisms and Work Ethics</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Seminar 1 on Screening of Special Need Children – Autism</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Action Research – 1 (Proposal presentation)</td>
<td>✓</td>
</tr>
<tr>
<td>13</td>
<td>Seminar 2 on Assessing of Special Need Children – Autism</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Action Research – 1 (Proposal presentation)</td>
<td>✓</td>
</tr>
<tr>
<td>15</td>
<td>Action Research – 2 (presentation)</td>
<td>✓</td>
</tr>
<tr>
<td>16</td>
<td>Seminar on intervention of Special needs children</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Skill workshop - Writing development for children story book (theory &amp; practical)</td>
<td></td>
</tr>
<tr>
<td>18</td>
<td>Skill workshop - How to do theatre with children and children music</td>
<td></td>
</tr>
<tr>
<td>19</td>
<td>Skill workshop - Photography and animation workshop</td>
<td></td>
</tr>
<tr>
<td>20</td>
<td>Early Childhood Science Seminar</td>
<td>✓</td>
</tr>
<tr>
<td>21</td>
<td>Seminar Pengurusan Anak-Anak Berkeperluan Khas,</td>
<td></td>
</tr>
<tr>
<td>22</td>
<td>Project Zero Conference</td>
<td></td>
</tr>
<tr>
<td>23</td>
<td>Persidangan PAK Peringkat Kebangsaan kali pertama</td>
<td></td>
</tr>
<tr>
<td>24</td>
<td>Bengkel Melodi TASKA,</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>Konvensyen Tarbiyatul Aulad 'Gift From Heaven'(Special Need)</td>
<td></td>
</tr>
</tbody>
</table>
Di bawah konsep i-Play2Learn, semua pensyarah pembimbing dikehendaki melengkahkan siri latihan perkembangan profesionalisme berdasarkan Model Pengajaran Robert Glaser yang mempunyai empat elemen utama iaitu objektif pengajaran, pengetahuan sedia ada, kaedah mengajar dan penilaian pencapaian. Setiap elemen ini perlu melalui proses maklum balas.


Seterusnya elemen ketiga iaitu kaedah pengajaran. Bagi pensyarah yang mengikut siri latihan dengan pihak luar, mereka mesti melaksanakan satu kursus dalaman dalam masa sebulan selepas menghadiri kursus tersebut. Kursus dalaman ini secara umumnya membolehkan mereka berkongsi maklumat seterusnya secara tidak langsung melalui mereka dengan kemahiran mengendalikan kursus.. Elemen terakhir iaitu penilaian pencapaian dilakukan secara berkala oleh pensyarah sendiri (peer observation) dan juga oleh pihak pengurusan akademik kolej. Sesi perkongsian hasil penilaian akan dilakukan sebaik sahaja sesi penilaian selesai dilaksanakan. Proses perkongsian maklum balas sentiasa dilaksanakan bagi setiap elemen bagi memastikan setiap elemen berlaku secara terkawal dan dipantau oleh pihak pengurusan akademik kolej. Proses ini ditunjukkan di dalam Carta 1 di bawah:

Jadual 2 : Senarai Siri Latihan i-Play 2 Learn

<table>
<thead>
<tr>
<th>No.</th>
<th>Kursus Penulisan Buku Kanak-Kanak</th>
<th>V</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td></td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>Kursus Penulisan Artikel Majalah / Akhbar</td>
<td>V</td>
</tr>
<tr>
<td>28</td>
<td>Persidangan Antarabangsa PERMATA 2016 “Children Beyond Tomorrow”</td>
<td></td>
</tr>
<tr>
<td>29</td>
<td>Asia-Pacific Regional Policy Forum on ECE 2016</td>
<td></td>
</tr>
</tbody>
</table>
Bahagian ini membincangkan analisis data yang diperoleh sesuai dengan objektif kajian iaitu tentang perbandingan kualiti bimbingan pengajaran oleh pensyarah berdasarkan refleksi yang ditulis oleh guru pelatih. Data kajian telah diperolehi melalui tinjauan dan analisis dokumen daripada penulisan reflektif guru pelatih di bawah bimbingan pensyarah. Daripada 17 orang pensyarah, 8 orang telah dipilih sebagai sampel untuk dinilai tahap kualiti bimbingan terhadap penulisan reflektif guru pelatih. Lapan orang pensyarah ini telah berkhidmat dalam tempoh lebih dari dua tahun di KPAKK. Hasil analisis dokumen yang dijalankan ke atas penulisan reflektif guru pelatih pada bulan November 2015 sehingga Disember 2015 didapati bahawa terdapat kelemahan yang ketara dalam beberapa aspek bimbingan penulisan refleksi. Perbandingan yang dilakukan ke atas penulisan guru pelatih pada sesi praktikum tahun 2016 telah menampakkan peningkatan dari aspek kefahaman kepentingan penulisan refleksi, pemilihan dan penggunaan perkataan, pemilihan skop refleksi dan bahagian refleksi. Jadual 3 menunjukkan perbandingan analisis penulisan refleksi yang telah dibuat:

Carta 1 : Carta Alir Metodologi Kajian

Analisis Data & Hasil Kajian

...
Kefahaman Mengenai Refleksi

Majoriti guru pelatih kurang memahami definisi refleksi berserta kepentingan penulisan refleksi. Sekiranya guru kurang memahami kepentingan refleksi maka sesi pengajaran dan pembelajaran (PdP) yang efektif serta objektifnya juga akan menjadi sukar dicapai. Siri latihan i-Play2Learn dijalankan secara berperingkat dan ini amat membantu para pensyarah untuk lebih memahami kepentingan refleksi selepas pengajaran, semasa pengajaran dan sebelum pengajaran berlaku. Proses ini memberi ruang dan peluang kepada pensyarah untuk menekankan kepentingan penulisan refleksi terhadap pengajaran guru pelatih.

Pemilihan dan Penggunaan Perkataan

Refleksi adalah satu medium untuk mengekspresikan peristiwa dan catatan yang boleh dijadikan panduan. Oleh itu, pemilihan penggunaan perkataan yang sesuai akan membantu guru pelatih di dalam melaksanakan sesi pengajaran mereka pada masa akan datang. Analisis dokumen mendapati hasil penulisan refleksi adalah secara umum dan guru pelatih lebih cenderung menceritakan mengenai peristiwa yang berlaku. Namun hasil analisis dokumen pada tahun 2016 telah mendapati terdapat peningkatan bimbingan pensyarah untuk proses bimbingan penulisan reflektif terhadap guru pelatih. Penggunaan perkataan, struktur ayat dan penumpuan kepada aspek-aspek akademik telah diberi
perhatian. Ini menunjukkan bahawa kebolehan pensyarah untuk memberi bimbingan penulisan refleksi telah meningkat berbanding tahun 2015.

Pemilihan Skop Refleksi

Aspek yang seterusnya yang diberi perhatian ialah pemilihan skop refleksi. Guru pelatih secara majoritinya cenderung untuk menulis refleksi di dalam skop yang sama seperti aspek penyediaan bahan bantu mengajar yang kurang mencukupi dan akan mengulang aspek refleksi yang sama pada penulisan refleksi seterusnya. Ini menunjukkan guru pelatih tidak peka aspek yang perlu diberi perhatian dan mengulangi kelemahan yang sama. Di sinialah peranan pensyarah untuk membuat penilaian dan penelitian terhadap penulisan refleksi guru pelatih. Komentar yang diberikan oleh pensyarah lebih terarah dan aspek yang diberi perhatian mempunyai skop yang lebih luas, bukan sekadar aspek bahan bantu mengajar semata-mata.

Bahagian Refleksi

Aspek yang terdapat dalam penulisan refleksi adalah penulisan mengenai kelebihan dan kelemahan pengajaran guru. Ini membolehkan guru pelatih untuk berfikir secara lebih kritikal (Minot, 2007). Analisis menunjukkan bahawa pensyarah mempunyai kesedaran dan pengetahuan yang lebih baik selepas menghadiri siri latihan i-Play2Learn untuk membimbing guru pelatih untuk menulis aspek kelebihan dan kelemahan sesi pengajaran mereka. Di samping itu, aspek cadangan juga dititikberatkan oleh pensyarah dan secara tidak langsung guru pelatih akan memikirkan jalan penyelesaian terhadap kelemahan yang perlu diberi perhatian.

Kesimpulan

Latihan merupakan kaedah atau proses yang sistematik untuk mengubah tingkah laku guru. Oleh itu, setiap siri latihan yang dirangka hendaklah mampu mengubah tingkah laku guru ke arah yang lebih baik berbanding dengan sebelum mengikuti siri latihan. Melalui siri latihan ini, dapat membangunkan pengetahuan dan kemahiran baru yang diperlukan oleh pensyarah agar dapat meningkatkan pengetahuan sepanjang melaksanakan tugas mereka.


Berdasarkan siri latihan yang dirangka dan dilaksanakan oleh KPAKK, boleh dibuat deduksi bahawa ini adalah kesan daripada siri latihan i-Play2Learn yang dilaksanakan kepada pensyarah terhadap bimbingan kepada guru pelatih.
Rujukan


SENI DALAM PENDIDIKAN: EKSPRESI GURU PELATIH MELALUI PEMIKIRAN REFLEKTIF

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Abstrak

Kata kunci: Seni dalam pendidikan, Ekspresi, Guru Pelatih, Pemikiran Reflektif

Abstract
Art in education is not only about elements of expression as an approach to enhance the teaching system, but it is also intended to change the teacher trainees perspectives through reflective thinking. The study involved teacher trainees who have completed their practicum by identifying the elements of expression through three aspects which are personal performance, teaching pattern analysis and deliberation in decision making. These three elements have been refined and worked on through technology based teaching. By using the survey method, a set of questionnaire was developed as an instrument for this study. The data from the questionnaire were analysed by using Chi Square Test in accordance to the objectives of the study. Thus, it is hoped that this study will serve as an exposure for the teacher trainees in order to equip them with the teaching professionalism which is beneficial for them in carrying out their duties as teachers in the future.

Keywords: Art in Education, Expression, Teacher Trainee, Reflective Thinking

Pengenalan
Latihan mengajar merupakan elemen paling penting dalam bidang pendidikan. Tiga komponen asas dalam pendidikan sebuah negara melibatkan kurikulum, infrastruktur dan...


Oleh hal yang demikian, kajian berkaitan pemikiran reflektif ini cuba merumahkan pengalaman latihan mengajar khususnya dalam seni pendidikan yang melibatkan unsur
ekspresi, iaitu prestasi diri, analisis corak pengajaran dan pertimbangan dalam membuat keputusan. Malahan, suara dan harapan guru pelatih harus diambil kira dalam proses penambahbaikan kurikulum sedia ada.

Metodologi

Sampel kajian


Instrumen Kajian


Analisis Data

Setelah proses pengumpulan data dilakukan, data-data yang diperoleh dan dianalisis dengan menggunakan Program Statistical Packages of Sciences (SPSS) versi 19.0. Analisis ini melibatkan penggunaan statistik deskriptif dan statistik inferensi.

Dapatan Kajian

Kajian berkaitan aspek ekspresi diri terhadap guru pelatih dalam melaksanakan pemikiran reflektif berkesinambungan dengan kaedah pengajaran menurut kepada pengajaran abad ke-21. Hasil dapatan menunjukkan analisis item demi item dengan menggunakan min dan sisihan piawai. Skor min dan sisihan piawai ekspresi diri dapat dilihat seperti Jadual 1.

**Jadual 1 Skor Min dan Sisihan Piawai Ekspresi Diri**

<table>
<thead>
<tr>
<th>Bil</th>
<th>Pernyataan</th>
<th>MIN</th>
<th>SP</th>
</tr>
</thead>
<tbody>
<tr>
<td>C15</td>
<td>Pendapatan yang diberikan oleh pelajar tidak penting asalkan mereka dapat lakukan dengan baik.</td>
<td>4.39</td>
<td>0.584</td>
</tr>
<tr>
<td>C16</td>
<td>Perkongsian maklumat berkenaan strategi dan matlamat pengajaran bersama guru lain dapat mempertingkatkan mutu pengajaran.</td>
<td>4.38</td>
<td>0.546</td>
</tr>
<tr>
<td>C17</td>
<td>Pengalaman semasa latihan mengajar dapat digunakan untuk memperbaik mod pengajaran sebenar.</td>
<td>4.46</td>
<td>0.521</td>
</tr>
<tr>
<td>C18</td>
<td>Strategi baharu yang dibangunkan bertujuan untuk sampaikan pengajaran dengan lebih baik.</td>
<td>4.45</td>
<td>0.500</td>
</tr>
<tr>
<td>C19</td>
<td>Helm, pengalaman di sekolah kini sangat berbeza daripada pembelajaran saya dahulu.</td>
<td>4.42</td>
<td>0.554</td>
</tr>
<tr>
<td>C20</td>
<td>Terdapat kepelbagaian strategi dalam pengajaran</td>
<td>4.39</td>
<td>0.510</td>
</tr>
<tr>
<td>C21</td>
<td>Pembaharuan terhadap pengajaran dapat menjadikan saya seorang guru yang lebih baik.</td>
<td>4.44</td>
<td>0.519</td>
</tr>
<tr>
<td>C22</td>
<td>Analisis terhadap pengajaran mampu memperkaya strategi pengajaran dengan lebih berkesan.</td>
<td>4.47</td>
<td>0.502</td>
</tr>
<tr>
<td>C23</td>
<td>Maklum balas daripada penyelia latihan mengajar dapat dijadikan peluang untuk penambahbaikan pengajaran.</td>
<td>4.49</td>
<td>0.541</td>
</tr>
<tr>
<td>C24</td>
<td>Berkongsi maklumat dengan rakan-rakan dalam bidangbidang lain dapat memberikan inspirasi terhadap bidang pengajaran saya.</td>
<td>4.52</td>
<td>0.500</td>
</tr>
</tbody>
</table>

Hasil kajian menunjukkan bahawa bagi kumpulan yang mengandungi 100 responden ini, skor min dan sisihan piawai bagi dimensi ekspresi diri yang paling tinggi merujuk kepada pernyataan perbaiki aspek pengajaran iaitu 4.51 dan 0.520. Nilai sederhana merujuk kepada skor min 4.46 dan sisihan piawai 0.500 untuk maklum balas pelajar terhadap guru. Skor paling rendah merujuk kepada pengubahan teknik pengajaran melalui disiplin pengajaran iaitu min dan sisihan piawai 4.27 dan 0.490. Seterusnya, analisis bagi kecenderungan mengikut silih murid memberi penunjuk kekuatan dan kelemahan skor min adalah 4.41 dan sisihan piawai 0.490, penunjuk keberkesanan dalam pengajaran skor min ialah 4.43 dan sisihan piawai 0.520, hubungkait bidang pengajaran dengan pengalaman hidup skor min 4.37 dan sisihan piawai 0.560, pernyataan mengetahui kesilapan yang dilakukan mendapat skor min
4.24 dan sisihan piawai 0.550, penilaian yang dibuat oleh pelajar menilai kemampuan pengajaran guru mendapat skor min 4.41 dan sisihan piawai 0.530 dan pernyataan kesilapan yang dilakukan oleh guru boleh mempengaruhi kehidupan pelajar-pelajar memperoleh skor min 4.39 dan sisihan piawai 0.530.

Selain itu, melalui ekspresi diri, komponen utama yang di bincangkan berkaitan dengan prestasi diri guru pelatih. Dari aspek prestasi diri, guru pelatih dinilai dengan cara melihat semula cara pemikiran melalui hubungkait bidang pengajaran dengan pengalaman lepas dan bukan berdasarkan kepada perbezaan gender. Perkara ini dapat dilihat seperti Jadual 2 di bawah:

**Jadual 2 Ujian Khi Kuasa Dua antara Dimensi Jantina dengan Cara Berfikir berdasarkan Pengalaman lepas Guru Pelatih.**

<table>
<thead>
<tr>
<th></th>
<th>Nilai</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PearsonChi-Square</td>
<td>0.844</td>
<td>2</td>
<td>0.656</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>0.885</td>
<td>2</td>
<td>0.642</td>
</tr>
<tr>
<td>Association</td>
<td>0.499</td>
<td>1</td>
<td>0.480</td>
</tr>
</tbody>
</table>

Ujian Khi Kuasa Dua Likelihood Ratio = 0.844 (df=3, p>0.05)

Nilai Khi Kuasa Dua 0.844 dengan aras signifikan 0.656 (χ² = 0.844, df=2, P>0.05) menunjukkan bahawa kadar pelajar (guru pelatih) yang menggunakan cara berfikir dengan pengalaman hidup terdapat perbezaan yang signifikan. Perbezaan ini adalah besar, iaitu nilai yang melebihi p=>0.05, maka hipotesis ini ditolak. Ini bermakna cara berfikir melalui pengalaman lepas tidak dipengaruhi oleh jantina pelajar.

Komponen kedua di bawah komponen ekspresi diri adalah analisis corak pengajaran. Kaedah pengajaran perlu diperkemas untuk penambahbaikan kaedah yang sedia ada. Perkara ini dapat dilihat berdasarkan Jadual 3 berikut:

**Jadual 3 Ujian Khi Kuasa Dua antara Dimensi Aliran Mengajar dan Kepelbagaian Strategi dalam Pengajaran Guru Pelatih.**

<table>
<thead>
<tr>
<th></th>
<th>Nilai</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PearsonChi-Square</td>
<td>1.718</td>
<td>4</td>
<td>0.788</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>2.065</td>
<td>4</td>
<td>0.724</td>
</tr>
<tr>
<td>Association</td>
<td>0.026</td>
<td>1</td>
<td>0.872</td>
</tr>
</tbody>
</table>

Ujian Khi Kuasa Dua Likelihood Ratio =χ² = 1.72, df=4, P>0.05

Nilai Khi Kuasa Dua 1.718 dengan aras signifikan 0.788 (χ² = 1.718, df=4, P>0.05) menunjukkan bahawa aliran mengajar dengan kepelbagaian strategi dalam pengajaran terdapat perbezaan yang signifikan. Perbezaan ini adalah besar, iaitu nilai yang melebihi p=>0.05, maka hipotesis ini ditolak. Ini bermakna penggunaan kepelbagaian strategi dalam pengajaran tidak dipengaruhi oleh aliran mengajar.

Ketiga pula melibatkan komponen pertimbangan dalam membuat keputusan. Pertimbangan ini dikaji penyesuaiannya antara dimensi bangsa dan motivasi dalam pengajaran guru pelatih. Ini dapat dilihat seperti Jadual 4 di bawah:
Jadual 4 Ujian Khi Kuasa Dua Antara Dimensi Bangsa dan Motivasi dalam Pengajaran Guru Pelatih.

<table>
<thead>
<tr>
<th></th>
<th>Nilai</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>0.145</td>
<td>1</td>
<td>0.703</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>0.145</td>
<td>1</td>
<td>0.864</td>
</tr>
<tr>
<td>Association</td>
<td>0.143</td>
<td>1</td>
<td>0.705</td>
</tr>
</tbody>
</table>

Ujian Khi Kuasa Dua Likehood Ratio = \( \chi^2 = 3.165, \text{df}=3, P>0.05 \)

Nilai Khi Kuasa Dua 3.165 dengan aras signifikan 0.367 (\( \chi^2 = 3.165, \text{df}=3, P>0.05 \)) menunjukkan bahawa kadar pelajar (guru pelatih) yang menjalankan motivasi dalam pengajaran terdapat perbezaan yang signifikan. Perbezaan ini adalah besar, iaitu nilai yang melebihi \( p=>0.05 \), maka hipotesis ini ditolak. Ini bermakna dalam membuat pertimbangan keputusan, penggunaan motivasi dalam pengajaran tidak dipengaruhi oleh bangsa guru pelatih.

Namun begitu, dalam usaha memajukan pengajaran abad ke-21 amat memerlukan teknologi sebagai medium perantara dalam pengajaran. Perkara ini selaras dengan kurikulum pengajaran yang mementingkan kemajuan teknologi dalam pendidikan. Oleh itu, penggunaan teknologi pengajaran terhadap guru pelatih dengan lokasi pengajaran dianalisis bagi menguji kesahihan data. Analisis ujian hipotesis dapat dilihat seperti Jadual 5 di bawah:

Jadual 5 Ujian Khi Kuasa Dua antara Dimensi Lokasi dan Penggunaan Teknologi dalam Pengajaran Guru Pelatih.

<table>
<thead>
<tr>
<th></th>
<th>Nilai</th>
<th>df</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
<td>0.145</td>
<td>1</td>
<td>0.703</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>0.145</td>
<td>1</td>
<td>0.864</td>
</tr>
<tr>
<td>Association</td>
<td>0.143</td>
<td>1</td>
<td>0.705</td>
</tr>
</tbody>
</table>

Ujian Khi Kuasa Dua Likehood Ratio = \( \chi^2 = .145, \text{df}=1, P>0.05 \)

Nilai Khi Kuasa Dua 0.145 dengan aras signifikan 0.703 (\( \chi^2 = .145, \text{df}=4, P>0.05 \)) menunjukkan bahawa kadar pelajar (guru pelatih) yang menggunakan teknologi dalam pengajaran terdapat perbezaan yang signifikan. Perbezaan ini adalah besar iaitu nilai yang melebihi \( p=>0.05 \), maka hipotesis ini ditolak. Ini bermakna penggunaan teknologi dalam pengajaran tidak dipengaruhi oleh lokasi latihan mengajar.

Perbincangan dan Implikasi

Dalam konteks bidang penyelidikan latihan mengajar, analisis kajian ini menrusus kepada penggunaan teknologi dengan lokasi pengajaran guru. Terdapat perbezaan yang signifikan terhadap dua pemboleh ubah ini. Ini menunjukkan bahawa penggunaan teknologi dalam pengajaran tidak dipengaruhi oleh lokasi latihan mengajar. Hal ini demikian kerana pihak Kementerian Pelajaran telah menyalurkan sumber yang selaras dengan keperluan pengajaran guru.

Selaras dengan analisis yang dilakukan terdapat hubungan antara lokasi pengajaran guru pelatih Bahasa Melayu dan penggunaan teknologi. Dapatan analisis kajian mendapati...
wujud perbezaan yang signifikan antara pemboleh ubah ini. Analisis bagi komponen ini menunjukkan perbezaan antara kawasan sekolah bandar dan kawasan luar bandar. Oleh hal yang demikian, lokasi sekolah secara signifikan tidak mempengaruhi penggunaan teknologi dalam pengajaran.


Justeru, dalam konteks penambahbaikan terhadap latihan mengajar sedia ada, terdapat beberapa cadangan yang diusulkan, antaranya:

  i. Pihak Kementerian Pelajaran dan pihak universiti memberi peluang kursus keilmuan untuk mempertingkat ilmu pengetahuan.
  ii. Penyerapan pemikiran reflektif terhadap pengajaran dikemas kini dari semasa ke semasa.
  iii. Sekolah mewujudkan pelaksanaan pemikiran reflektif yang sistematik.
  iv. Guru menggunakan aplikasi pemikiran reflektif dan kaedah pengajaran yang sesuai.
  v. Pihak Sekolah mempelbagaiakan aktiviti untuk menambah pengetahuan sedia ada guru.
Rumusan

Seni dalam pemikiran berunsurkan ekspresi ini perlu diterapkan dalam aspek pengajaran yang melibatkan pemikiran reflektif. Oleh itu, semua pihak perlu memainkan peranan masing-masing untuk meningkatkan pencapaian khususnya aspek pengajaran dalam bidang pendidikan.

Rujukan


Saifulnizan Che Ismail (2007). *Pembinaan Modul Pembelajarn Matematik Menggunakan Perisian Geometri Interaktif*. Tesis Sarjana, UTM.


- A040 -

e-PRASMO: AN ONLINE SOLUTION TO TEACHING PRACTICUM NEEDS

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Abstract

The purpose of this paper is to introduce e-PRASMO or electronic Practicum Assessment Model as a technology-based solution to the fiscal, time, psychological and geographical constraints involved in the traditional teaching practicum. e-PRASMO operates on an online platform called G.O.A.L.S (Global Open Access Learning System) developed by Universiti Sains Islam Malaysia (USIM), and currently consists of two versions. e-PRASMO 1.0 consists of an online learning module displayed in G.O.A.L.S; the supervisees then submit the recording of their teaching practice on Compact Disk (CD). e-PRASMO 2.0 is an improvement, following an online survey conducted on e-PRASMO 1.0 in which 117 supervisees responded. It is found that e-PRASMO 1.0 provides flexible, stress free environment, and improves the supervisees’ technological skills. While it has successfully provided the support that the supervisees need in their teaching practicum, it does not offer room for feedback, a lack which is highlighted in the survey. e-PRASMO 2.0 still retains most of the features of its first version but has evolved to provide a medium for supervision via online forum, that includes reflection, review, feedback and assessment. It also allows for online submission of the teaching practice recordings. In summary, e-PRASMO promotes a practical, cost-effective, stress-free and flexible teaching practicum by mobilising and unleashing the potentials of technology; a characteristic of 21st century teaching and learning skills. e-PRASMO is still maturing and exploring elements of gamification for future improvements but fundamentally, e-PRASMO upholds the two main tenets in teaching practicum – support and feedback.

Keywords: e-PRASMO, feedback, teaching practicum, technology
Introduction

e-PRASMO stands for electronic practicum assessment model. It is utilised as an online practicum supervision tool which is a technology-based solution to the fiscal, time, psychological and geographical constraints involved in the traditional teaching practicum. However, with the advent of technology, there is a question on how far e-PRASMO embodies the essence of traditional teaching practicum. Thus, this paper begins by outlining the important background information on e-PRASMO, and the theoretical underpinnings reviewed from related literature that justify its use in the teaching practicum. It also positions the relevance of the tool to the latest characteristics of 21st century learning and briefly touches on its advantages to adult teacher students, the target group addressed by e-PRASMO. Then it looks at the problem statement, the method, the findings and discussion, before it ends with a conclusion.

e-PRASMO 1.0

e-PRASMO is an electronic kit that contains a standard operational procedure to carry out the teaching practicum for the duration of 8 weeks for 4 credit hours. The kit consists of an e-workshop, an e-guide book, e-lesson plans, assessment forms and criteria. These are uploaded to GOALS (Global Open Access Learning System) developed by Universiti Sains Islam Malaysia (USIM). GOALS provides collective construction and interactive tools for educational purposes. The content could be accessed and downloaded by the teacher-students who are enrolled in the teaching practicum exercise. The GOALS’ interface allows the users to view all the links to the contents on one page. The first main link is for a video of an explanation on the requirements and the flow for the practicum delivered by the Head of Programme during the e-workshop. It also illuminates on how the assessment is conducted and scored. The explanation includes the contents of the guidebook, and the utilisation of the lesson plan forms. On the GOALS’ interface, there are links to the e-guidebook and e-lesson plans. The e-lesson plan also provides samples of good lesson plans. This is a step in keeping abreast with the technology in the 21st century.

The contents uploaded on GOALS are to support the supervisees (teacher-students) in their teaching practicum leading towards the assessment where they are required to record two teaching activities. One lesson is a conventional classroom teaching while the other is a lesson integrating some form of innovation. They will burn the recordings on compact discs (CDs). At the end of the teaching practicum exercise, they submit the CDs and their customised book of daily lesson plans to the supervisors to be assessed. In this case, there is no need for any face-to-face meeting between the supervisors and supervisees. This has saved more than 60% of the cost of conducting traditional teaching practicum observations. Furthermore, time spent for travelling is almost non-existent.

e-PRASMO 1.0 was utilised for one semester for the in-service teachers undergoing their first degree programme at the Faculty of Major Language Studies, USIM. After the semester was over, a study was conducted to find out the usability of e-PRASMO. This paper is a spin-off of one part of the findings.
Teaching Practicum and Supervision

Teaching practicum is an integral feature or a key aspect (McIntyre, Byrd, & Fox, 1996) of a teaching degree or any education-based programme. It is a weave of professional teaching experiences or episodes in which the would-be teachers apply, explore and reconstruct theories on teaching, supervised by their academic/faculty mentors. Teaching competency, expertise and quality are developed and refined during the practicum, thus it is essential for both pre-service and in-service teachers. There has been much discussion in the literature to outline the good practices of a practicum. Two dominating elements are support (Williams, 1994) and feedback (Calderhead & Shorrock, 1997). Supervisors as the main providers of these elements should ideally be on-site or physically present at least twice during the practicum period. Hence, traditionally a supervisor visits the school where the practicum placement is. The supervisor is physically in class observing the supervisee conduct the lesson. Afterwards, the supervisor and supervisee go over the conducted lesson or ‘hold a conference’ (Whitehead as cited in Marzano et al., 2011, p. 102) and discuss at length the strengths, weaknesses, points of interest and ways to improve the lesson as a form of support and feedback.

In the present scheme of things, a few cohorts of in-service teachers are reading for an education degree under a Teacher Graduate Programme (TGP) at the Faculty of Major Language Studies, Universiti Sains Islam Malaysia (USIM). The TGP adopts a long distance learning mode where the teacher students come to USIM for their classes only once in a fortnight. The TGP is an eight-semester programme but the classes run for seven semesters. In the eighth semester, the teacher students embark on their dissertation writing and teaching practicum, concurrently. For the teaching practicum they are assigned a supervisor by the faculty. These in-service teachers are teaching in schools all over Peninsular Malaysia. Having supervisees spread out all over the country has implications on the teaching practicum exercise.

As established earlier, the supervisors’ practicum visits are undoubtedly indispensable but they incur a high cost involving travel expenses and supervisory rates, not to mention the valuable time spent on travelling to bridge the geographical gap and the psychological weariness that comes with it. Thus, it is the premise of this paper to introduce e-PRASMO, as a technology-based solution to the fiscal, time, psychological and geographical constraints in the undertaking of teaching practicum supervision.

21st Century Learning in Teaching Practicum and Supervision

21st century learning is synonymous with the prevalent use of technology where the learning of the basic skills of reading, writing and arithmetic are fortified with the new content domains of cognitive skills: Critical thinking and analysis, Interpersonal skills: teamwork and complex communication and Intrapersonal skills: resiliency, reflection and contentiousness (Sparks, 2016). Technology is an enabler that speeds up learning, provides information, interaction and the sharing of digital content on tap. In the educational setting, educators have recourse to technology to create an appealing and personalised
environment to meet the learner-drivenness and span of today’s learning trend which could create learners for life. In short, twenty-first-century learning is defined by modern learning using modern tools (Chen in Rich, 2010).

In this context, the e-PRASMO is a manifestation of the ‘modern tool’ that is personalised to the practicum needs of teacher student, delivers information, accessible 24/7, provides the constant social interaction with easily shared digital content, without them having to leave their practicum sites. This electronic tool is a virtual classroom that aspires to meet the requirements of 21st century practicum learning process.

**Adult Learners Pedagogical Inferences in Teaching Practicum and Supervision**

Aside from support and feedback, another important component in the practicum is reflection or reflective practice, where teacher students engage in a critical self-reflection or a critique of their practicum experience. Pedagogical inferences for adult learners claim that they will benefit from instruction that allows for self-motivation, ongoing reflection, and multifaceted engagement (Trusting & Barton, 2003, p.36). Reflective practice could be augmented when there is an interactive communication between the teacher-student and supervisor.

The teacher-students have the freedom to chart their own progress and work their learning schedule around their teaching duties. In the light of pedagogical inferences for adult learners, Rogers (2007) asserts that adult learners are responsible for their own learning and due to their maturity they usually know what is needed in order to succeed. This is akin to Merriam's (2001, 2008) discussion on the Theory of Andragogy where it is claimed that adults do self-learning which leads to student-centred learning. In the student-centred learning approach, teachers are facilitators who assist these adult students with their learning needs while the students themselves are the prime movers that manage the learning. The e-PRASMO being an online tool lends itself to flexibility of use by providing the platform/forum for multi-faceted engagement to exchange ideas and fears that encourages self-motivation and nurture the reflective practice. The e-PRASMO has met some of the learning needs for these adult teacher students by making their learning more student-centred, thus providing them with more autonomy in their practicum exercise.

The e-PRASMO has reflected the current and emerging innovative practices of designing and delivering education at a distance, in student-centred, life long learning for adult learners, specifically in the practicum stage of a teacher education programme.
Problem statement

As mentioned earlier, the teacher-students of the TPG in this study teaches in schools all over Peninsular Malaysia. The standard conventional method of teaching practicum would be visits from supervisors at least twice for the whole duration of teaching practicum (16 weeks). Taking these 2 considerations in mind – the location of the schools and the supervisors’ visits – the management of the Education Programme of the faculty estimated a high cost to be spent on the course. These cost include travel expenses, accommodation, daily allowance, food allowance, and supervisory incentives for the supervisors. In addition to that, the conventional teaching practicum would also appoint teacher advisor from the school to supervise the students during teaching practice, and this would also require incentives to be paid to them. Thus, considering that these TPG teacher-students are experienced teachers, the duration of the teaching practicum is shortened to 8 weeks, and supervision is suggested to be online rather than face-to-face. Through earlier estimation of the actual cost that need to be spent for conventional supervision, the figure amounted to more than RM180,000.00 for a semester to supervise 275 teacher-students. However, through online supervision, the cost could be minimized to RM40,000.00 to supervise the same number of teacher-students. Other than that, online supervision would also allow for a lot of time saved on travelling and other related out-of-office duties expenses. Hence, it can be seen that e-PRASMO is the answer to the fiscal, time, psychological and geographical constraints that are faced by supervisors, supervisees and the management. However, there is a need to explicate the use of e-PRASMO with regard to the essence of traditional/conventional supervision. Thus, it is the aim of the paper to reflect upon online supervision using a teaching innovation, e-PRASMO, in relation to traditional/conventional supervision. So, the study adheres to the following research question:

How does ePRASMO 1.0 reflect traditional supervision?

Methodology

This study employed an online survey created on google form. The questions designed were both scale-based and open-ended questions, which aimed at gathering information as well as feedback from supervisees and supervisors, regarding the use of e-PRASMO. However, in this paper, only data from the supervisees are reported. The following sections discuss the participants involved in the study, the research tool used, as well as the data collection and analysis procedures.

The participants

The study was conducted in a public Malaysian university, USIM. It involved 117 participants from the Teacher Graduate Programme (TGP). The context was chosen as it is where e-PRASMO was used for the specific group of participants. The participation of the
TGP teacher-students was voluntary as the link to the google form was sent and received through an email.

Research tool

Data were collected through quantitative means. A questionnaire was used to gather information and feedback from the supervisees, regarding the use of e-PRASMO. The questionnaire was designed using the google form platform to gather their perceptions of e-PRASMO and the way e-PRASMO assists them. The questionnaire is divided into two parts: Part 1 focuses on students’ demographic background, and Part 2 includes 10 questions on students’ perceptions of e-PRASMO - 8 items are created based on a 5-point Likert scale survey, while the other 2 questions are open-ended. The questions included statements that require supervisees to reflect on their view of doing teaching practicum without visits from supervisors, the authenticity of the teaching and learning without the presence of supervisors, the opportunity to choose the best lesson recording for evaluation, the avenue available to improve their teaching and learning recordings, the opportunity to enhance their technological knowledge and skills, the flexibility of class timetable without supervisors’ visits, the understanding they received through Teaching Practicum workshop, the guide provided in the Teaching Practicum handbook, and their suggestions to improve Teaching Practicum at the faculty. The survey is conducted to gain feedback from students on the use of e-PRASMO, so that improvement can be made to the next cycle of students.

Data collection and data analysis procedures

The link to the questionnaire on google form was emailed to the teacher-students or supervisees after they completed the Teaching Practicum exercise. After 3 weeks, 117 out of 275 supervisees responded. In analysing items 1-8 of Part 2 of the questionnaire, the data were analysed quantitatively, using statistical tools provided by Google Form. The answers to the other 2 questions which are open-ended were analysed using thematic analysis. The themes or the findings from the 2 questions are used to answer the research question stated earlier.

Findings and Discussion

To recall, the research question is to find out ‘How far does e-PRASMO 1.0 reflect the traditional supervision’. This question came about due to the concern on the implementation of traditional supervision through the incorporation of technology as done by the utilisation of e-PRASMO 1.0 for one semester. The main open-ended question that gives data for this question is ‘What are your suggestions to make the current teaching practicum (with the use of e-PRASMO 1.0) better?’ The findings for this research question are termed as themes. The discussion of each theme is accompanied by extracts from the
supervisees’ answers for the open-ended questions. The source of the extract is indicated by the use of ‘S’, so ‘S10’ refers to teacher-student/supervisee number 10.

There are 3 themes that emerged from the data gathered. They are presence, support and feedback. In terms of presence, data show that most supervisees expressed the importance of supervisors’ presence in the process of their teaching practicum. S10 stated that the presence of the supervisor is better than recording their lessons as discussion could take place and the discussion could help to improve her teaching approach and technique. This point was also expressed by S9 where she stated that the presence of the supervisors is crucial to ensure the smooth delivery of teaching practicum as a whole. S9 also mentioned that the presence of the supervisors is crucial to guide the students in producing an effective lesson. These points are evidenced in the following extracts (Extract 1: S10; Extract 2:S9).

“Pada saya, kehadiran penyelia adalah lebih bagus daripada rakaman kerana dari sinilah berlakunya perbincangan dan berlakunya penambahbaikan” (Extract 1: S10).

“Kehadiran penyelia amat penting bagi memastikan Latihan Mengajar berjalan lancar sebagai bimbingan” (Extract 2:S9).

This statement is also supported by S29 where she stated that the presence of supervisors during the practicum is important as he or she could give prompt feedback (Extract 3: S29).

“Kehadiran penyelia sewaktu latihan PdP adalah lebih baik kerana selepas sahaja PdP dibuat penyelia boleh terus memberi pandangan dan memberi nasihat” (Extract 3: S29).

S38 and S72 shared almost similar point of view as they stated that it is imperative for supervisors to come to the school in person to see and understand the school context better and monitor the supervisees’ progress. S72 added that the visit from the supervisor is essential at least one time within the three-month duration of the teaching practicum. These points are illustrated in the following extracts.

“Penyelia perlu turun padang untuk memantau keadaan sebenar dalam kawasan sekolah” (Extract 4: S38).

“Penyelia perlu turun ke sekolah bagi melihat keadaan sekolah dan memantau pelajar di bawah seliaannya sekurang-kurangnya sekali dalam tempoh Latihan Mengajar” (Extract 5: S72)

Based on the above extracts (Extracts 1-5), it has been established that most students valued supervisors’ presence in their teaching practicum. Most students recommended that e-PRASMO should include a visit from their supervisors to the school for many reasons. These reasons are elucidated in the next two themes.

The second theme is support. The students expressed that they need support. S14 specified that she would like to have the support early (awal) in the semester as to prepare herself for the teaching practicum. She wrote,
“Adakan pertemuan awal bersama penyelia bagi mengenalpasti kehendak atau kemahiran yang ingin lebih diterapkan dalam pengajajaran dan pembelajaran” (Extract 6: S14)

From the extract above, it can be seen that the support needed is in terms of skills (kemahiran). As they are in-service teachers and mature learners, thus, they could be very specific about the types of support they need. S32, S48, S64 and S68 stated that they would like to be guided on how to conduct the teaching practicum well. More specifically S68 would like to know how to score well based on the marking scheme provided as the credit hours for teaching practicum is 8. She stated,

“Penerangan yang jelas mengenai pemarkahan dan cara mendapatkan skor yang baik memandangkan bahagian ini mempunyai peruntukan jam kredit yang agak besar iaitu 8 jam kredit” (Extract 7: S68)

S34 further requested for examples of good classroom teaching and learning. S48 wanted to be guided in doing innovation in the process of teaching and learning. This proves that they were very interested to improve themselves in becoming better teachers. They wanted to know more about technology specifically video recording (S35 & S41) and use of LCD (S47). The need for knowledge and skill in technology is to enhance their classroom teaching and learning. This is as expressed by the supervisees in the extracts below:

Menambahkan lagi pengetahuan dalam bidang ict untuk pengajaran dan pembelajaran pendidikan Islam (Extract 8:S25)

Memberi latihan teori terlebih dahulu terutama dalam penggunaan ict dalam pengajaran (Extract 9:S61)

Bimbingan ICT khusus untuk Pdp yang menarik dunia kanak-kanak yang berterusan perlulah diwujudkan (Extract 10:S79)

Extracts 6 to 10 are proofs that the supervisees need support not just to complete and get high marks in the teaching practicum as a subject, but also to sharpen their pedagogical skills. They could be seen requesting for support involving technology as they are digital immigrants and their students in school are digital natives who are IT savvy. Thus they need to be equipped to be relevant to their students.

The third theme is feedback. The supervisees wanted to have discussion (S73 & S76) and frequent (lebih kerap) communication (S73) with the supervisors. They requested for feedback in terms of advice and opinion from the supervisors regarding the class observation (S29 & S84). This is seen in the extracts below:

“penyelia boleh terus memberi pandangan dan memberi nasihat” (Extract 11: S29)

Perbincangan, pandangan serta cadangan pembelajaran dengan penyelia akan dapat menghasilkan proses pembelajaran yang lebih baik. (Extract 12: S84)
As seen in extract 12, S84 needed the feedback to ensure that the teaching and learning process is improved. Similarly, S20 wanted to know her performance and her weaknesses so that she would know what is needed to improve. She wrote:

*Sesi pertemuan dengan penyelia adalah penting bagi menilai prestasi kendiri dan mengetahui keperluan serta kelemahan dalam Latihan Mengajar* (Extract 13: S20)

Besides having discussion and communication, getting advice and opinion about one’s teaching, the supervisees also wanted to have feedback sessions to talk about problems (S36) and ask questions and share experience (S14).

Based on the 3 themes made explicit by extracts 1 to 13, it could be surmised that there is a close relationship among the 3 themes. There is a strong need for the supervisors’ presence to give support and feedback to the students in guiding them to complete the teaching practicum successfully and more importantly is to improve their teaching skills involving ICT and this is in line with the 21st Century Learning.

Support (Williams, 1994) and feedback (Calderhead & Shorrock, 1997) are actually the 2 elements highlighted in the traditional supervision. Hence, in providing support and feedback, supervisors need to be present during the teaching practicum. They pay a visit to supervisees in their respective schools to do classroom observation and after that conduct a discussion with them to give feedback and support.

Thus, in answering the research question on how far does e-PRASMO 1.0 reflect the traditional supervision, it can be said that e-PRASMO 1.0 with all its technological advancements does not really reflect the traditional/conventional supervision. This is evinced by the expressions of needs for supervisors’ presence, support and feedback in making e-PRASMO 1.0 better. These setbacks have given rise to e-PRASMO 2.0 as a recommendation.

**Recommendation: e-PRASMO 2.0**

e-PRASMO 2.0 is an improved version of e-PRASMO 1.0 to accommodate the need for interaction between the supervisors and supervisees. It contains all the features in e-PRASMO 1.0 with an additional content of the steps for uploading videos on you tube and samples of good lessons. Besides that, there is also avenue for the supervisors to give feedback and supervisees to ask questions providing the essential support and feedback feature not found in e-PRASMO 1.0. These are done as the supervisees discuss the plans for their lessons with the supervisors via an online forum. Then, after uploading the recording of the first lesson, the supervisors give feedback using the same online forum. Next, the supervisees/teacher-students will record the second lesson taking into considerations the feedback made earlier.

e-PRASMO 1.0/2.0 is designed with the hope to create a cost-effective, stress-free and flexible assessment scheme for the practicum; benefitting management, supervisors and supervisees. This method of practicum process and assessment is deemed essential.
because of its cost-saving benefits as well as reflecting the traditional practicum by including avenue for feedback and discussion or reflexivity. The faculty saves on money and time spent on the site visits by saving up to more than 50% of the cost for the running of teaching practicum in the traditional mode. It is also stress-free as supervisees are able to perform their teaching in a low-anxiety environment and supervisors are able to evaluate their supervisees’ performance at any time that is conducive for grading purposes, ensuring both accuracy and professionalism in their grading.

It is also flexible as supervisees are able to manage their video selections and supervisors are able to revisit their reviews. Furthermore, the accessibility of information on the standard operational procedure of the teaching practicum is just a click away. In short, this online platform is definitely cost-effective, stress-free and flexible as it addresses the current needs of being technologically enhanced and the practicality in the assessment of teaching practicum in the 21st century. To add, the easy accessibility of information, the inclusion of reflexivity and the enhancement in technology among the users are also properties of e-PRASMO 1.0/2.0.

As deliberated earlier, although e-PRASMO 1.0 embodies all the positive properties, it is lacking in implementing the essence of the traditional supervision. Thus, e-PRASMO 2.0 balances both modern (technological-based) and traditional aspects of e-PRASMO by ensuring that support and feedback can be done via online. The data by the supervisees highlight that the supervisors should be physically present at their respective schools. This is, undoubtedly a trademark in a traditional teaching practicum. However, with the advancement of technology, the presence of the supervisors can also be felt online as they guide the supervisees to complete their teaching practicum and become better-equipped teachers.

Conclusion

In conclusion, three main themes have emerged from this study namely presence, support and feedback. These three themes explicated the preference of the supervisees to have the supervisors present for their teaching practicum sessions so that they can get feedback and support from them. Taking into consideration the supervisees’ preference and needs which are in a similar vein to the elements in traditional/conventional teaching practicum, e-PRASMO 2.0 was created to incorporate the support and feedback elements. GOALS is used as a platform to provide support by uploading relevant support materials on teaching practicum. In addition, the online forum acts as a medium to give feedback on the teaching practicum and responses to queries from the supervisees. Being accessible 24/7, e-PRASMO 2.0 provided even a better support and feedback as the supervisees can access online materials and videos, receive comments from lecturers as well as post questions at their own pace and time. Thus, e-PRASMO 2.0 is an electronic tool that is personalized to the practicum needs of supervisees that seek to meet the 21st century practicum learning process. As adult learners, they had the opportunity to experience more autonomy through the flexible nature of e-PRASMO 2.0 in their practicum exercise. Despite the fact that many
electronic tools, which are virtual in nature, often take away the value of support and feedback, e-PRASMO successfully managed to secure these elements through the gradual improvisation from e-PRASMO 1.0 to e-PRASMO 2.0. Based on the benefits and success of e-PRASMO in the context of this study, it is highly recommended to extend its application to other industrial trainings. e-PRASMO is certainly on its way to further explore and incorporate the tenets of gamification in future while upholding the two core principles: support and feedback, to meet the demand of the 21st century learning experience.

References


KESAN TEKNIK PERAYAUN INTERNET TERHADAP PENULISAN KARANGAN MURID SEKOLAH MENENGAH

Kavitha Ratnam
Adenan Ayob

Abstrak

Kata kunci: Teknik perayauan Internet, penulisan karangan, Bahasa Melayu sekolah menengah.

Latar Belakang Kajian
Pernyataan Masalah


Objektif Kajian

Objektif umum kajian adalah untuk meninjau kesan teknik perayauan internet untuk pengajaran penulisan karangan sekolah menengah. Objektif khusus kajian ini adalah seperti yang berikut:

i. Meninjau pencapaian murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet berasaskan teori konstruktivisme dalam penulisan karangan fakta.

ii. Menganalisis kualiti karangan fakta murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta

Soalan Kajian

Soalan-soalan kajian adalah seperti yang berikut:

i. Apakah skor min ujian pra dan ujian murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta?

ii. Adakah terdapat perbezaan yang signifikan antara skor min ujian pra dengan skor min ujian pasca bagi murid sebelum dan selepas didedahkan dengan kesan teknik perayauan Internet dalam penulisan karangan fakta?

ii. Apakah kualiti bahasa, idea dan pengolahan karangan fakta murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet?

Definisi Operasional

Terdapat beberapa definisi operasional dalam kajian ini. Definisi tersebut adalah seperti berikut:

**Teknik Perayauan Internet Berasaskan Teori Konstruktivisme**

Kesatuan lima elemen multimedia, iaitu teks, visual, grafik, audio dan video mampu menggantikan aneka teknik dan bahan bantuan mengajar dalam pengajaran dan pembelajaran Bahasa Melayu di sekolah. Penggunaan Internet dalam sesi pembelajaran menggalakkan guru dan murid melakukan perayauan dalam talian untuk mencapai dan mengumpul maklumat seberapa banyak yang termampu. Tehnik perayauan Internet berasaskan pendekatan konstruktivisme dijangkakan memberikan kesan yang lebih efektif dan
sistematis. Teori Konstruktivisme merupakan suatu teori yang berkonsepkon Konstruktivisme Lima Fasa Needham digunakan dalam teknik perayauan Internet oleh guru. Tahap pertama ialah tahap orientasi yang memerlukan guru Bahasa Melayu menyediakan suatu suasana pembelajaran yang boleh merangsang minat murid dan semangat ingin tahu lebih mendalam tentang sesuatu topik yang dipelajari. Pada tahap kedua, iaitu fasa pencetusan idea guru harus merancang aktiviti yang sesuai dengan kemampuan murid supaya murid dapat menghubungkaitkan pengetahuan sedia ada dengan pengetahuan baharu yang bakal dipelajari.


Penulisan karangan fakta

Ujian pra


Ujian pasca

Ujian pasca ditadbir selepas tempoh sebulan setelah ujian pra dilaksanakan. Soalan ujian pra merupakan soalan yang pernah diuji dalam peperiksaan Sijil Pelajaran Malaysia bagi mata Bahagian B Kertas 1 Bahasa Melayu. Soalan yang diuji terdiri daripada soalan aras sederhana dan tinggi. Murid dikehendaki menjawab dalam masa 1 jam 30 minit seperti yang disarankan oleh Lembaga Peperiksaan Malaysia. Esei murid hendaklah tidak kurang daripada 350 patah perkataan.

Analisis kualiti karangan

Karangan yang berkualiti merupakan karangan yang menepati kriteria penskoran yang telah ditetapkan oleh Lembaga Peperiksaan Malaysia. Karangan yang bermutu mengandungi pelbagai kata yang luas dan tepat, ayat majmuk yang digunakan lancar dan tersusun serta ejaan dan tanda baca yang digunakan betul. Dari aspek laras bahasa karangan ini menampakkan penggunaan laras yang bahasa sesuai dengan tugas dan kosa kata yang dipilih untuk tugas juga luas dan tepat. Idea yang diutarkan relevan dengan tugas, isi dihuraikan dengan jelas dan menampakkan kematangan murid berfikir serta diselitkan contoh yang sesuai. Setiap perenggan yang dihasilkan mempunyai keseragaman idea dan menampakkan pertautan idea antara satu idea dengan idea yang lain. Gaya bahasa yang digunakan juga teratur dan diselitkan dengan pantun, peribahasa dan banyak lagi ayat yang menarik.

Sorotan Literatur

unsur sumber yang tersedia ada (Sandra Rahman et.al, 2014) supaya apa jua bentuk soalan
karangan yang berunsur kemahiran berfikir aras tinggi dapat dijawab dengan baik.

Menurut kefahaman konstruktivisme, ilmu pengetahuan sekolah tidak boleh
dipindahkan daripada guru kepada murid dalam bentuk yang serba sempurna. Murid perlu
bina sesuatu pengetahuan itu mengikut pengalaman masing-masing. Model konstruktivisme
menekankan 3 elemen penting dalam persekitaran e-pembelajaran, iaitu reka bentuk
aktiviti pembelajaran, penilaian pembelajaran dan peranan guru (Alex Koohang, 2009).
Penglibatan murid secara aktif dalam pengajaran dan pembelajaran sangat penting dalam
proses melihat pembaharuan (Zainal Abidin Zainuddin, 2010). Guru yang mengajar perlu
mewujudkan situasi pembelajaran yang menarik dan murid akan menghubungkait
maklumat terdahulu dengan maklumat yang diterima kini serta membentuk idea yang
baharu (Tejo Nurseto, 2011). Pengetahuan baharu murid akan dikaitkan dengan dunia realiti
sebenar (Johan Sandhal, 2013) supaya menjadi satu informasi yang bermakna.

Penggunaan komputer sudah menjadi fenomena global dalam kalangan manusia. Keadaan ini ditambah lagi dengan pengaksesan Internet yang dianggap sebagai alat yang
bernilai neutral dan membolehkan individu mengatasi segala halangan mendatang (Shalni
Gulati, 2008). Penggunaan teknologi maklumat dan komunikasi dalam pengajaran dan
pembelajaran telah mewujudkan pembelajaran interaktif yang lebih berpikir dan
merangsang minda (Sandra Rahman et.al, 2013). Sehubungan dengan ini, guru Bahasa
Melayu memainkan peranan yang penting dalam mempelbagaikan teknik pengajaran dan
pembelajaran (Yahya Othman, 2014). Pengajaran dan pembelajaran akan menjadi mudah
jika guru mahir menggunakan satu teknik yang sudah ada variasi kemudahan, iaitu teknik
perayauan Internet (Francesco Avvisati & Rakan-rakan, 2015). Melalui teknik perayauan
Internet murid dapat didedahkan dengan aktiviti penyelesaian masalah dalam kehidupan
yang sebenar (Micheal Fullan, 2015). Bahan bacaan maya lebih seronok (Adenan Ayob,
2015) dibaca walaupun 100 helai kerana sifatnya yang menarik serta tanpa sebarang
bayaran. Kebanyakan guru era teknologi maklumat juga gemar berkongsi ilmu melalui
Internet dan mengeratkan hubungan antara guru dari seluruh pelosok dunia dalam bidang
yang sama (Larry Johnson et.al, 2015).

Reka Bentuk Kajian

Kajian ini terbahagi kepada dua fasa yang berdasarkan reka bentuk kuantitatif. Kaedah kuasi eksperimen secara rintis digunakan dalam fasa 1 kerana selari dengan ciri-ciri yang wujud dalam kajian ini, iaitu bersifat inferensi kerana data diuji secara mendalam. Ciri kedua kajian ini adalah lebih kepada sesuatu yang menunjukkan sampel yang hendak
digunakan telah disediakan atau ditentukan oleh pihak sekolah. Kaedah ini digunakan
adalah berdasarkan pandangan Campbell dan Stanley (1979). Kaedah ini digunakan dengan
cara pelaksanaan ujian pra dan ujian pasca. Dalam kajian ini, kuasi eksperimen
direkabentukkan dalam Rajah 1.

Analisis karangan murid digunakan untuk meninjau peringkat kualiti karangan murid
berdasarkan kuantiti dan peratus dalam fasa II. Kaedah ini digunakan dengan berpandukan
analisis karangan yang disediakan oleh pengkaji selain diselaraskan dengan kehendak skema yang disediakan oleh Lembaga Peperiksaan Malaysia, 2014.

| O₁ | ----- | X₁ | ----- | O₂ |

Rajah 1: Reka bentuk kajian kuasi eksperimen bagi penyelidikan ini.

Petunjuk:

O₁ = Ujian pra
O₂ = Ujian pasca
X₁ = Rawatan
----- = Olahan

Rajah 1 menunjukkan reka bentuk ujian pra dan ujian pasca yang dijalankan terhadap murid. Kumpulan murid yang sama menggunakan teknik penerangan guru sebelum ujian pra. Setelah ujian pra dilaksanakan kumpulan murid yang sama akan melalui proses rawatan, iaitu teknik perayauan Internet digunakan dalam pengajaran dan pembelajaran karangan fakta Bahasa Melayu. Simbol O₁ merupakan simbol yang menunjukkan proses ujian pra manakala O₂ menunjukkan proses ujian pasca. Simbol X₁ menunjukkan penggunaan teknik perayauan Internet terhadap murid sebagai proses eksperimen selepas ujian pra dan sebelum ujian pasca. Simbol ---- pula merupakan olahan atau proses eksperimen dilaksanakan selepas ujian pra dan sebelum ujian pasca. Ujian pra diadakan untuk melihat kualiti dan pencapaian sedia ada murid dalam menulis karangan fakta. Ujian pasca ditadbir setelah proses eksperimen dilakukan selama satu bulan terhadap sampel.

Sampel Kajian


Lokasi Kajian

Kajian ini dijalankan di sebuah sekolah di daerah Teluk Intan Perak. Dua buah kelas cemerlang Tingkatan empat dipilih sebagai kumpulan kajian yang masing-masing terdiri daripada 15 orang murid yang telah ditentukan oleh pihak sekolah. Kajian dijalankan di sekolah ini kerana memudahkan pentadbiran kajian dan mudah mendapat kerjasama daripada rakan sekerja.

Instrumen Kajian

Instrumen kajian ini meliputi ujian pra, ujian pasca dan analisis kualiti.
Ujian pra


Ujian pasca


Analisis karangan

Skrip jawapan murid, iaitu karangan fakta dijadikan dokumen untuk dianalisis dalam kajian ini. Tujuan analisis dokumen ini adalah untuk membantu penyelidik mendapatkan data secara objektif melalui dokumen serta tidak memerlukan kehadiran informan dan juga dapat memberikan data yang konsisten kerana segala data diperoleh secara tersurat dan
dapat digunakan untuk memperoleh kesahan sesuatu jawapan yang diperoleh. Kaedah ini digunakan kerana sumber yang paling mudah dan maklumat yang diperlukan tersedia ada. Skrip jawapan murid akan dianalisis oleh guru yang berpengalaman sebagai pemeriksa Kertas 1 Bahasa Melayu Sijil Pelajaran Malaysia supaya kualiti karangan dapat dilihat berdasarkan skema permarkahan Lembaga Peperiksaan Malaysia. Pemeriksaan skrip ini bertujuan melihat pencapaian dan kualiti setelah ujian pra dan ujian pasca dilaksanakan. Soalan yang diuji juga merupakan soalan peperiksaan Sijil Peperiksaan Malaysia yang sebenar. Penyemakan karangan dijalankan secara bersilang bagi menilai kebolehpercayaan pemarkahan hasil penulisan karangan. Tujuannya adalah untuk menyesuaikan pemberian markah ujian penulisan karangan yang diberikan kepada murid dan mendapatkan nilai yang boleh diterima bagi sistem pemarkahan sebuah penulisan. Seramai dua orang guru yang mengajar Bahasa Melayu Tingkatan empat yang mempunyai pengalaman mengajar dalam bidang ini lebih dari 10 tahun terlibat dalam pemarkahan yang dijalankan. Sebelum sesi menilai kertas jawapan murid-murid dijalankan, kedua-dua orang guru yang terlibat telah diberikan taklimat dan skema pemarkahan secara bertulis oleh pengkaji.

Teknik Perayauan Internet


**Jadual 1**

<table>
<thead>
<tr>
<th>Elemen Internet</th>
<th>5 Fasa Needham</th>
<th>Aktiviti</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teks Hiperteks</td>
<td>Orientasi (Fasa 1)</td>
<td>Guru besoal jawab dengan murid tentang tajuk yang dipelajari. Murid cuba menjawab sambil membayangkan berdasarkan pengetahuan sedia ada murid.</td>
</tr>
<tr>
<td></td>
<td>Pencetusan Idea (Fasa 2)</td>
<td>Setelah mendapat suatu gambaran setiap murid akan menaip perkataan berdasarkan tajuk yang ingin dicari dalam lamen web. Murid membuat perayauan dari satu laman ke laman sesawang yang lain.</td>
</tr>
<tr>
<td></td>
<td>Aplikasi (Fasa 4)</td>
<td>Rangka karangan dibentuk dalam rupa peta minnda/jadual.</td>
</tr>
<tr>
<td></td>
<td>Refleksi (Fasa 5)</td>
<td>Murid berkongsi pengalaman membuat perayauan dalam Internet.</td>
</tr>
<tr>
<td>Grafik - Bitmap</td>
<td>Orientasi (Fasa 1)</td>
<td>Guru menunjukkan gambar-gambar tentang tajuk yang dipelajari untuk memberikan satu gambaran dan menarik perhatian murid.</td>
</tr>
<tr>
<td>-----------------</td>
<td>--------------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Pencetusan Idea (Fasa 2)</td>
<td>Pameran Internet dilakukan dalam laman teks yang dipenuhi grafik. Grafik tersebut diklik untuk ke laman yang seterusnya.</td>
<td></td>
</tr>
<tr>
<td>Penstrukturan Semula Idea (Fasa 3)</td>
<td>Idea disusun mengikut keutamaan dan membina kerangka karangan dalam bentuk poin ringkas.</td>
<td></td>
</tr>
<tr>
<td>Aplikasi (Fasa 4)</td>
<td>Sekurang-kurang 4 - 5 isi penting disenaraikan. Setiap isi perlu ada sekurang-kurangnya 6 ayat gramatis.</td>
<td></td>
</tr>
<tr>
<td>Refleksi (Fasa 5)</td>
<td>Murid memberikan pandangan tentang cadangan idea dan hurai Murid lain.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bunyi/Audio - Bunyi Asal</th>
<th>Orientasi (Fasa 1)</th>
<th>Guru mendengarkan beberapa jenis bunyi yang berkaitan dengan tema yang dipelajari. Sesi soal jawab.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencetusan Idea (Fasa 2)</td>
<td>Murid membuat perayauan Internet untuk mencari laman teks dan grafik bergabungan dengan audio atau bunyi. Kebanyakan unsur bunyi sudah tersedia ada dalam laman web yang disebut bunyi asal.</td>
<td></td>
</tr>
<tr>
<td>Penstrukturan Semula Idea (Fasa 3)</td>
<td>Maklumat yang telah diperoleh akan disusun mengikut keutamaan setelah mendengar kesan bunyi.</td>
<td></td>
</tr>
<tr>
<td>Aplikasi (Fasa 4)</td>
<td>5-6 isi penting disenaraikan. Setiap isi mengandungi sekurang-kurangnya 5-6 ayat. Peribahasa atau kata-kata hikmat diselitkan.</td>
<td></td>
</tr>
<tr>
<td>Refleksi (Fasa 5)</td>
<td>Murid saling bertukar hasil catatan kerja dan menilai mutu kerja rakan.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Animasi - Animasi Asal</th>
<th>Orientasi (Fasa 1)</th>
<th>Guru menayangkan beberapa video yang berkaitan dengan tajuk yang dipelajari. Sesi soal jawab ringkas berlaku.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pencetusan Idea (Fasa 2)</td>
<td>Murid membuat perayauan Internet. Laman pertama yang dilayari ialah laman yang sudah ada animasi asal, iaitu video. Kemudian murid akan melihat teks yang beranimasi dan animasi grafik.</td>
<td></td>
</tr>
<tr>
<td>Penstrukturan Semula Idea (Fasa 3)</td>
<td>Murid mampu menjana idea lebih dari sepatutnya. Idea disusun secara berturutan.</td>
<td></td>
</tr>
<tr>
<td>Aplikasi (Fasa 4)</td>
<td>Idea disusun dalam perenggan. Ayat-ayat digabungkan dengan penanda wacana yang tepat dan bersesuaian.</td>
<td></td>
</tr>
<tr>
<td>Refleksi (Fasa 5)</td>
<td>Murid dapat membuat penilaian terhadap pengajaran dan pembelajaran yang telah dilalui.</td>
<td></td>
</tr>
</tbody>
</table>
Prosedur Pengumpulan Data

Jadual 2 menunjukkan prosedur pengumpulan data yang bersesuaian dengan kajian ini. Pengumpulan datadibuat berdasarkan urutan yang ditadbir.

Jadual 2

<table>
<thead>
<tr>
<th>Bil</th>
<th>Aktiviti</th>
<th>Sampel</th>
<th>Tempoh/Masa</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ujian Pra – Pengkaji dengan bantuan dua orang guru Bahasa Melayu melaksanakan Ujian Pra terhadap murid (15 orang murid).</td>
<td></td>
<td>Minggu 1&lt;br&gt;1 jam&lt;br&gt;30 minit</td>
</tr>
<tr>
<td>2.</td>
<td>Taklimat pembelajaran berasaskan teknik perayuan internet diberikan oleh pengkaji kepada murid dan 2 orang guru Bahasa Melayu.</td>
<td></td>
<td>Minggu 2&lt;br&gt;45 minit</td>
</tr>
<tr>
<td>3.</td>
<td>Teks</td>
<td>Hiperteks</td>
<td>Minggu 3&lt;br&gt;1 jam&lt;br&gt;10 minit</td>
</tr>
<tr>
<td>4.</td>
<td>Grafik</td>
<td>Bitmap</td>
<td>Minggu 4&lt;br&gt;1 jam&lt;br&gt;10 minit</td>
</tr>
<tr>
<td>5.</td>
<td>Audio</td>
<td>Bunyi Asal&lt;br&gt;Kesan Bunyi</td>
<td>Minggu 5&lt;br&gt;1 jam&lt;br&gt;10 minit</td>
</tr>
<tr>
<td>6.</td>
<td>Animasi</td>
<td>Animasi Asal&lt;br&gt;Animasi Teks&lt;br&gt;Animasi Grafik</td>
<td>Minggu 6&lt;br&gt;1 jam&lt;br&gt;10 minit</td>
</tr>
<tr>
<td>7.</td>
<td>Ujian pasca – Pengkaji dengan bantuan dua orang guru Bahasa Melayu melaksanakan ujian.</td>
<td></td>
<td>Minggu 7&lt;br&gt;1 jam&lt;br&gt;30 minit</td>
</tr>
</tbody>
</table>

Kumpulan murid ini diberikan pra oleh pengkaji dengan bantuan dua orang guru Bahasa Melayu pada minggu pertama. Ujian pra ini diadakan selama 1 jam 30 minit. Pada minggu kedua, satu taklimat ringkas diberikan tentang pengajaran dan pembelajaran karangan Bahasa Melayu berdasarkan teknik perayuan internet selama 45 minit. Pada minggu yang ketiga, murid mula diajar menggunakan teknik perayuan Internet sehingga minggu yang keenam. Murid diajar selama 1 jam 10 minit, iaitu dua waktu pembelajaran Bahasa Melayu. Pada minggu yang ketujuh murid diberikan Ujian Pasca untuk melihat...
pencapaian dan kualiti karangan fakta Bahasa Melayu. Skor ujian pra dan ujian pasca murid direkodkan dalam komputer menggunakan perisian SPSS versi 21.

**Penganalisisan data**

Jadual 3 di bawah menunjukkan secara ringkas cara data dianalisis. Kesemua soalan kajian akan dianalisis sama ada secara deskriptif atau inferensi.

**Jadual 3**

<table>
<thead>
<tr>
<th>Bil</th>
<th>Soalan kajian</th>
<th>Analisis</th>
</tr>
</thead>
<tbody>
<tr>
<td>i.</td>
<td>Apakah skor min ujian pra dan ujian pasca murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta?</td>
<td>Deskriptif</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i. Min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Sisihan Piawai</td>
</tr>
<tr>
<td>ii.</td>
<td>Adakah terdapat perbezaan yang signifikan antara skor min ujian pra dengan skor min ujian pasca bagi murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta?</td>
<td>Inferensi</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i. Min</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Sisihan Piawai</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii. Ujian t Sampel Berpasangan</td>
</tr>
<tr>
<td>iii.</td>
<td>Apakah peringkat kualiti karangan fakta murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet?</td>
<td>Deskriptif</td>
</tr>
<tr>
<td></td>
<td></td>
<td>i. Kualiti</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii. Peratus</td>
</tr>
</tbody>
</table>


**Dapatan Kajian**

Subjek kajian ini merupakan 15 orang murid tingkatan 4 yang terdiri daripada 6 orang murid leaki dan 9 orang murid perempuan dari salah sebuah sekolah di negeri Perak. Terdapat 4 orang murid berbangsa Melayu, 5 orang murid India dan 6 orang murid Cina. Murid-murid ini telah dipilih oleh pihak sekolah berdasarkan pencapaian akademik yang setara. Jadual 4 menunjukkan taburan skor min dan sisihan piawai ujian pra dan pasca murid.
Apakah skor min ujian pra dan ujian pasca murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta?

Jadual 3: Skor min dan sisihan piawai ujian pra dan pasca murid

<table>
<thead>
<tr>
<th>Ujian</th>
<th>Skor Min</th>
<th>Sisihan Piawai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pra</td>
<td>60.53</td>
<td>12.5</td>
</tr>
<tr>
<td>Pasca</td>
<td>78.27</td>
<td>10.6</td>
</tr>
</tbody>
</table>

Jadual 3 menunjukkan bahawa skor min ujian pra kumpulan murid ialah 60.53 dan sisihan piawai 12.5. Skor min ujian pasca pula ialah 78.27 dan sisihan piawai 10.6. Perbezaan skor min ujian pra dan pasca ialah 17.74.

Adakah terdapat perbezaan yang signifikan antara skor min ujian pra dengan skor min ujian pasca bagi murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet dalam penulisan karangan fakta?

Ujian-t dua sampel bersandar dilakukan untuk meninjau sama ada terdapat perbezaan yang signifikan dalam skor ujian pra dan pasca murid. Keputusan ujian-t ditunjukkan dalam Jadual 4 seperti di bawah.

Jadual 4: Perbezaan yang signifikan antara skor min ujian pra dan pasca

<table>
<thead>
<tr>
<th>Ujian</th>
<th>Skor Min</th>
<th>Sisihan Piawai</th>
<th>T</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pra</td>
<td>60.53</td>
<td>12.5</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pasca</td>
<td>78.27</td>
<td>10.6</td>
<td>-6.8</td>
<td>.00</td>
</tr>
</tbody>
</table>

* p < .05

Dalam Jadual 4 di atas, keputusan menunjukkan t (14) = -6.8, p < .05. Keputusan ini jelas menunjukkan bahawa terdapat perbezaan yang signifikan antara ujian pra dan pasca kumpulan murid.

Apakah peringkat kualiti karangan fakta murid sebelum dan selepas didedahkan dengan penggunaan teknik perayauan Internet?
Jadual 5 menunjukkan taburan jantina dan skor ujian pra dan pasca murid.

<table>
<thead>
<tr>
<th>Ujian</th>
<th>Jantina</th>
<th>Skor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>L (80-100)</td>
<td>66-79</td>
</tr>
<tr>
<td>Pra</td>
<td>6 9</td>
<td>1 4</td>
</tr>
<tr>
<td>Pasca</td>
<td>6 9</td>
<td>8 5</td>
</tr>
</tbody>
</table>

Jadual 5 menunjukkan skor bagi ujian pra dan pasca murid tingkatan 4 yang terdiri daripada murid lelaki dan perempuan. Sebelum teknik perayauan Internet digunakan, hanya terdapat seorang murid sahaja yang mencapai peringkat cemerlang, 4 orang murid mencapai peringkat kepujian, 7 orang murid memperoleh markah peringkat baik dan diikuti 2 orang murid mendapat pencapaian peringkat memuaskan serta seorang murid mendapat markah peringkat kurang memuaskan. Setelah melalui proses pembelajaran karangan fakta menggunakan teknik perayauan Internet didapati hasil penulisan murid meningkat dari segi kuantiti dan kualiti. Seramai 8 orang murid mencapai markah peringkat cemerlang, 5 orang murid berada pada peringkat kepujian dan 2 orang murid mencapai peringkat baik. Tiada murid yang mencapai 3 peringkat terakhir dalam kriteria penskoran Bahagian B Kertas 1 Bahasa Melayu Sijil Pelajaran Malaysia.

**Perbincangan**

Perbincangan adalah berkisar kepada dapatan kajian. Hasil kajian menunjukkan bahawa terdapat perbezaan yang signifikan dalam penulisan karangan fakta sebelum dan selepas menggunakan teknik perayauan Internet dalam pengajaran dan pembelajaran karangan fakta.

Berdasarkan dapatan juga, pencapaian dan kualiti karangan murid dikenal pasti meningkat dalam penulisan karangan fakta kerana ciri-ciri teknik perayauan Internet. Teknik yang digunakan ini bukan bersifat pasif malah bersifat aktif, elemen multimedia yang tidak jemu, boleh digunakan pada bila-bila masa, segala aktiviti juga boleh dikawal oleh murid. Dapatan kajian ini adalah sejajar dengan teori konstruktivisme, iaitu pencapaian dan kualiti karangan murid meningkat kerana adanya penggabungjalinan pengetahuan sedia ada dengan pengetahuan baharu. Konstruktivisme merupakan proses pembelajaran yang menerangkan bagaimana pengetahuan disusun dalam mina seseorang manusia. Keputusan kajian ini juga menyokong keputusan UNESCO (2009) yang menyatakan bahawa
penggunaan teknik perayauan atau eksplorasi Internet dalam pengajaran dan pembelajaran akan berlangsung dengan lancar kerana berpusatkan murid. Situasi pembelajaran maya mampu membentuk murid berdaya saing dalam menyelesaikan masalah, membina daya fiqir kemahiran berfikir aras tinggi dan membuat refleksi kendir. Kajian yang telah dijalankan oleh Fish & Gill (2009), mendapati guru boleh melihat faedah menggunakan ketersediaan talian untuk meningkatkan persekitaran bilik darjah cara tradisional. Pembelajaran bahasa wajar menggunakan Internet kerana sifatnya sebagai bahasa komunikasi talian dan mencetuskan suasana optimum untuk belajar menulis (Siti Sudartini, 2010). Penggunaan Internet bukan sahaja membantu murid malah guru juga boleh mendapatkan maklumat untuk bacaan meningkatkan ilmu dan menulis artikel atas talian.


Pada pendapat lain, penggunaan teknik perayauan Internet menjimatkan masa murid dalam menguasai pembentukan ayat bagi penulisan. Murid dapat mengesan ayat dengan pantas. Apabila murid menghadapi masalah untuk melakukan penerokaan maklumat, bantuan guru boleh leraikan segala kebuntuan mencari idea sama ada laman teks, grafik, audio atau video. Pemahaman murid menjadi jelas dan sistematik dengan adanya hiperteks, bitmap, audio asal atau kesan bunyi dan pelbagai animasi. Dapatkan ini

Cadangan

Daripada dapatan dan perbincangan meliputi aspek implikasi, beberapa cadangan dibentangkan. Cadangan-cadangan berkenaan adalah seperti yang berikut:

i. Oleh itu, pihak Kementerian Pendidikan Malaysia wajar mengkaji dan menaiktaraf kelengkapan komputer dan Internet supaya murid dapat menerima manfaat daripada pembelajaran maya.


iii. Integrasi penggunaan teknik perayauan Internet dengan laman-laman web bahasa yang sesuai akan memudahkan murid memperoleh input-input pembelajaran yang lebih luas dan pelbagai.

Kesimpulan

Dapatan menunjukkan bahawa terdapat perbezaan yang signifikan dalam hasil ujian penulisan karangan fakta murid. Perkara ini dapat dilihat pada analisis yang dilakukan menerusi Ujian-t Sampel Berpasangan untuk meninjau perbezaan pencapaian. Analisis karangan adalah dalam kualiti karangan murid. Penggunaan teknik perayauan Internet perlu disebaruaskan di institusi-institusi pendidikan demi menggalakkan perkembangan pengajaran dan pembelajaran dalam bentuk yang digital, maya dan global.
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Sharma P. (2013). *Role of Interactive Multimedia for enhancing students’ achievement and retention*. International Women Online Journal of Distance Education.


THE EFFECTIVE USE OF THE MULTIMEDIA LEARNING DEVICE IN EDUCATION: A REVIEW

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Abstract
Multimedia learning device as a part of a new era of technology innovation learning culture for students is used by the teachers. Based on a research review the basic concept of the design of multimedia learning consists of three processes such as information design, interaction design and interface design is defined. In addition, the focus has also been given priority to the differences between the multimedia elements and design elements. Technologically advanced which could act as a theory of multimedia learning is presented to trigger a learning process that will make students more creative and critical thinking. The aim of these research review paper to improve the knowledge via new strategies in teaching skills where using a variety of approaches that requirement in a multimedia learning device. Finally the paper ends with conclude that we must need as educator to create our own multimedia learning with the best device for teaching and learning process use of the multimedia as an effective tool in education. Therefore, the effectiveness use of the multimedia learning device will give impression with the comparisons between d-learning, e-learning and m-learning.

Keywords: Multimedia, Device, Design, Education, Effective Tool
Introduction

The world in which changing rapidly in use of multimedia within the field of education has accelerated in recent years, and looks set for continued expansion in the future. Most educators will expend to amalgamate technology into instruction and in the high-gain case study schools started software implementation [1] then researchers have tried to evaluate whether the use of multimedia learning in educational technology has a significant and reliable impact on student achievement [2]. Searching for an answer, researchers have realized that technology cannot be considered as a single independent variable, and that student achievement is not only judged by how well students perform on tests but can also be seen in the ability of students to use higher-order thinking skills such as: thinking critically, analyzing, making inferences, and solving problems [3]. Therefore, multimedia learning is an approach that should be combined with technology as a teaching aid in the classroom.

Technology is an electronic device such as computers, tablets, laptops, and mobile. The effective use of the multimedia in different device allows students to learn with a using the new method with various techniques of multimedia elements. Students will have another alternative for learning and teaching anywhere they wish to learn. This situation is to make learning more fun and interactive learning than ever before.

Definition of Multimedia

The phrase “multimedia” refers to elements of multimedia data by combining a variety of information sources, such as video, audio or voice, animation, images, text and full-motion video. Multimedia computing has emerged in the last few years as a major of research [4].

Besides that, according to McGloughlin, “Multimedia is a combination word of “multi” and “media”. Multi is refer to various, while media is refers to combination software and hardware that used for communication. Multimedia is an interactive presentation computer application that incorporating media elements such as graphic, animation, text, video, and sound, on a computer [5]”.

Next, according to Sethi [6] and Mayer [7] Multimedia refers to the integration of two or more different information media within a computer system. These media can include text, images, audio, video, and animation. Vaughan defined multimedia is a combination of text, graphics, sound or audio, animation, and video that have specific information and can be delivered to a computer or other electronic media that can be manipulated digitally when the user has some control of what is presented it becomes interactive multimedia [8].

According to Hajimi Sasaki, multimedia is not just a mixture of several elements of media such as, text, audio, and video, but is a flexible complex of media in digital format with interactivity and bidirectional communication capability [9]. Fusion of computer
technology, communication technology, and solid-state circuit technology has brought multimedia to schools, office, home and even to the outdoors [9].

**The Basic Concept of the Design of Multimedia Learning**

In the process of designing a multimedia application, it can be divided into several main phase of work according to suitability and requirements of each. A subsequent review focuses on phase one of the proposed distribution by Kristof and Satran (1995). The main phase is information design, interaction design and interface design. All three of these phases are interconnected with each other and the software needed to ensure that their products meet the characteristics and quality as required [10] [11].

Firstly, the design is a process of information describing the goal of the software by specifying the contents; regulate the information to be conveyed and how this information is presented to the user. All of this information will be summarized in the form of a flow chart [10].

Construction of a quality learning software design should have good information that described through an orderly presentation of the learning content. This opinion is supported by Baharuddin, Rio Sumarni and Manimegalai [11] which states that the preparations of the information that can better ensure that users focus on what is displayed. When the content of the software orderly, then learning the contents of the software can be delivered easily [11]. Therefore, strategies and instruction methods are very important in phase of information design so that the process of conveying the content of the lesson, provide training and feedback to the students can be achieved [12].

Secondly, interaction design is determine the exploratory action of software will be developed [10]. In other words, it is a process of designing a structure or pattern course of software [12]. A variety of activities that should be take precedence during the phase of interaction design like to build a display as a guide for guiding the user, each screen built have their actions when get feedback from users [12]. There are navigation systems and other control elements setting for the software to be fixed. All the information will be presented in the form of a storyboard [10].

To help designer plan in the interaction design to building educational multimedia software, multiple choice exploratory or navigation structures can be used as a guide. Among the most popular are linear structure, hierarchy structure, rings structure, chains structure and composite structure [10].

Third, interface design refers to screens that display the style and layout of the main elements that contain information to be conveyed to the user [12]. Among the key elements such as the screen background, window and panel, control buttons and icons, text, graphics, audio, video, animation and so forth. It covers various aspects such as color selection, type of media, type of paper, shape and size of the media used [12].
Interface design or design performing involves activities that require a designer or software developer to think about how to shape the software to be built. Design performing specification of software as necessary and appropriate [12]. This specification refers to multimedia elements and design elements. The difference between multimedia elements and design elements shown in Table 1

Table 1 Differences between multimedia element and design element

<table>
<thead>
<tr>
<th>Multimedia Elements</th>
<th>Design Elements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Text</td>
<td>Point</td>
</tr>
<tr>
<td>Graphic</td>
<td>Shape</td>
</tr>
<tr>
<td>Audio</td>
<td>Value</td>
</tr>
<tr>
<td>Video</td>
<td>Color</td>
</tr>
<tr>
<td>Animation</td>
<td>Texture</td>
</tr>
<tr>
<td>Image</td>
<td>Line</td>
</tr>
</tbody>
</table>

Next, when all determine specification is complete, a prototype of the software development process can be implementing based on what was planned and set in the flow chart of the software as well as in storyboard.

The both elements of multimedia in education are very important to use for improved the effectiveness in teaching and learning process. Multimedia learning as a property of a system or object wherein “multiple perceptual representation media, such as speech, music, text, graphic, animation and video, are used in an integrated manner” but, regardless of which definition of multimedia one adopts, there appears to be considerable controversy surrounding the effectiveness of multimedia performance [13].

Otherwise, interface design using text includes letters, words, sentences, and paragraphs to tell a story, state a fact, report an event, or convey an idea. It contains also numbers, punctuation, symbols, and special characters [14]. It is the most used form of communication and is considered a basic element of visual multimedia [15]. The text will also give an overview and understanding of for a user to explain how to use it. Also, text use is more evident in the design of the GUI [16]. So, the designers of multimedia projects have to choose carefully the few words that convey the idea, and they can also use other properties such as size, color, and effects [17].

Overall, the understanding of three design phases is very important to develop educational software. Selection of teaching strategies, approaches multimedia elements and design elements, as well as the selection of a suitable exploration structure should be taken into consideration so that appropriate software built by humans through each level of learning transfer and exchange of information that occurs in human memory consecutively [10].
Theory of Multimedia Learning

In discussing about the basic concept of the design of multimedia to produce a more effective learning, it is closely related to theories of instruction. This view of strategy, approach or teaching methods that are present in design software usually is based on these theories. Here are some of the major theories of learning that provide profound implications in the process of designing a software-based multimedia. For example are behaviorism theory, cognitive theory, constructivist theory and neuroscience theory, however, a top priority of cognitive theory using in multimedia learning.

In multimedia learning, information is presented to learners in two or more formats, such as in words and in pictures [18]. Selected frames from a short animation depicting a cause-and-effect explanation of how the forms along with corresponding on-screen text which provides the explanation in words. To design effective multimedia presentation learning, it is useful to understand how learners integrate words and pictures. The purpose of this study is to contribute to multimedia learning theory by testing a dual-processing theory of working memory [19]. This can be done by example of R.E. Mayer's Cognitive Theory of Multimedia Learning are presented in Diagram 1.

![Diagram 1 R.E. Mayer's Cognitive Theory of Multimedia Learning](image)

Based on the Cognitive Theory of Multimedia Learning as shown above, a review of research on the design of multimedia learning explanations conducted in lab at Santa Barbara such as a multimedia effect in which students learn more deeply from words and pictures than from words alone, a coherence effect in which students learn more deeply when extraneous material is excluded rather than included, a spatial contiguity effect in which students learn more deeply when printed words are placed near rather than far from corresponding pictures, and a personalization effect in which students learn more deeply when words are presented in conversational rather than formal style [20].

A multimedia device is computer hardware designed to display, store, record or play multimedia content such as photos, music and videos [21]. A multimedia device also allows a person to deal with a variety of these media while eliminating the need to have a separate
device for each. There are numerous tasks that may be accomplished on these devices, such as creating, editing, and transferring files [22].

Media is generally defined as a form of communication in conversation. Documents, music, and video are all common types of communication [23]. People are increasingly interested in dealing with media in easier and faster ways. This has led to the development of a wide range of multimedia devices, which allow a person to create and access various types of media files on a single device. Examples of a popular multimedia device is using mobile.

As such, multimedia technologies offer today’s classroom teachers the opportunity to move from a largely linear learning environment to an increasingly nonlinear environment. Such technologies also allow students a strong degree of choice as they pursue learning with multimedia texts. Although multimedia classroom tools offer classroom teachers multiple ways of engaging students in the learning process, they also present challenges for teachers [24].

The following examples of multimedia technologies, taken from our own classroom practice, offer productive ways in which teacher have invited technology application into their coursework with preserve teachers in field settings. These exemplary students, products illustrate how today’s multimedia technologies directly promote 21st-century skills, nonlinear thinking, and reflective practice described in this paper [24].

Studies of the Effectiveness Multimedia Learning Device use in Education

The traditional education is made in classrooms where the teacher presents the learning material to a group of students. The educational technology depends mainly of teacher and the students must physically participate in the learning process. The traditional classroom education has many disadvantages. For example if the student has no ability to take part in some lesson he or she will miss the training material [25].

These disadvantages lead to search for new and more effective educational methods. In reviewing the relevant literature, the existing devices and system of technologies includes distance learning (d-learning), electronic learning (e-learning) and mobile learning (m-learning) offer methods, which decrease the limitations of traditional education [25]. Comparisons between these existing devices are described with advantages and some work has been done to overcome these disadvantages as shown as in Table 1.

<table>
<thead>
<tr>
<th>Existing Devices</th>
<th>d-learning</th>
<th>e-learning</th>
<th>m-learning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>• The provision of course content and feedback to off-campus students [26].</td>
<td>• A subset of technology-based training.</td>
<td>• It can be used everywhere at every time [28].</td>
</tr>
<tr>
<td></td>
<td>• Incorporates a</td>
<td></td>
<td>• Relatively</td>
</tr>
</tbody>
</table>

Table 2 Comparisons between d-learning, e-learning and m-learning
<table>
<thead>
<tr>
<th>Benefits</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>The provision of student support services to off-campus students [26].</td>
<td>Limited bandwidth (the capacity of the communications links)</td>
</tr>
<tr>
<td>Student-to-student and Student to tutor and institution interactivity [26].</td>
<td>Downtime plus mobile as well as “play” are issues to consider as well [31].</td>
</tr>
<tr>
<td>The flexibility of the learning process (students study at the time most convenient to them) [30].</td>
<td>Risk of sudden obsolescence [27].</td>
</tr>
<tr>
<td>A deeper sense of self-fulfillment (acquiring relevant and useful knowledge and achieving professional goals) [30].</td>
<td>Limited memory size [32].</td>
</tr>
<tr>
<td></td>
<td>Slow modems hamper the delivery of sound, video, and graphics, although the technology is improving all the time.</td>
</tr>
<tr>
<td></td>
<td>Learner success depends on “hidden barriers to access” for</td>
</tr>
<tr>
<td></td>
<td>number of learning activities conducted on the Internet, of which mobile learning is one part.</td>
</tr>
<tr>
<td></td>
<td>Real-time or self-paced, also known as &quot;synchronous&quot; or &quot;asynchronous&quot; learning [31].</td>
</tr>
<tr>
<td></td>
<td>New technologies required to support online programs.</td>
</tr>
<tr>
<td></td>
<td>Offers individualized instruction, which print media, cannot provide, and instructor-led courses allow clumsily and at great cost [31].</td>
</tr>
<tr>
<td></td>
<td>Risk of distraction [30].</td>
</tr>
<tr>
<td></td>
<td>There is necessary to regularly charge the mobile devices' battery life.</td>
</tr>
<tr>
<td></td>
<td>Risk of sudden obsolescence [27].</td>
</tr>
<tr>
<td></td>
<td>Limited memory size [32].</td>
</tr>
</tbody>
</table>

Inexpensive opportunities, as the cost of mobile devices are significantly less than PCs and Laptops [28].

Smaller size and light weight than desktop PCs [29].

Ensures bigger students' engage as m-Learning is based on modern technologies, which students use in everyday life.

Using GPS technology the m-Learning can provide location dependent education.
Based on the Table 1 comparisons between d-learning, e-learning and m-learning, we conclude that m-learning are more effectiveness more than that. However, students have also reported wanting to have more options to make learning tools more convenient so they can study when and where they want to. Typically, the use of personal devices affords students’ ownership of learning, which may lead to positive language learning experiences [33].

Unfortunately, many teachers and students resist change in teaching and learning with new technology because they do not think of themselves as part of a new learning culture. In addition, technology-oriented trainings and resources may not meet the needs of individuals in understanding the nature of learning. Survey of the results about mobile learning in classroom settings will be different when the learners have a choice to use mobile devices or something else outside the classroom too [34].

Conclusion

This research is to improve the knowledge via new strategies in teaching skills where using a variety of approaches that requirement in a multimedia learning device. The multimedia learning device environment m-learning can be solved easily by using all elements of multimedia which is applied in teaching and learning process. Designing the m-learning is very important so that the problem of subject can be delivering easily to student. Then, the content based on Cognitive Theory of Multimedia Learning is the best effect is merged together with the basic concept of the design of multimedia learning. So, the conclusion is the multimedia learning device is effective tool on education towards by integrating technology in teaching practice, developed own device by teachers for teaching and learning process.

Future work will involve of research the more explanations of strategy and method instructional design in multimedia learning. Next, more research to the choice exploratory or navigation structures such as linear structure, hierarchy structure, rings structure, chains structure and composite structure. Lastly, the instructional model for design has been focused and principle of design will be represented.
References


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Assessment of Student Performance and Skills Set Attribute with CDIO Rubrics in an Embedded Robotic Course using CDIO Approach in Department of Electrical Engineering Politeknik Ungku Omar, Malaysia

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Abstract

This article report on the application of the Conceive – Design – Implement – Operate (CDIO) Standards and rubrics. It involving 16 groups of final semester students engaging in Embedded Robotic Course of Electrical programme in Ungku Omar polytechnic Malaysia. Students final projects in Embedded Robotic Course were assess using CDIO rubric by the external panel (industry) assigned. The CDIO Standards focusing on relevant skills set and its role in supporting project design and the development of mobile robot project. Then the outline of evaluation process in the survey (self-evaluation) on the level of satisfaction of CDIO rubrics were described. The results are presented from a survey directed to students who have applied CDIO Standards in the final project. The questions in the survey aimed to investigate the relationship between CDIO Standards (through rubrics) and students’ performance as well as their satisfaction with the CDIO framework in general. The result shows that there is a significant relationship between CDIO skills set with students’ performance. Students were also found to satisfy with CDIO rubrics applied in their project assessment. It is concludes that students’ are able to apply the skills teach in CDIO into the final project and better performed. Ultimately, polytechnic graduates are equipped with necessary skills apart from the academic skills and it is accepted by the employer.

Key words: CDIO Skills, Rubrics, Embedded Robotic Course, Final Project.
Introduction and Project Background

The globalization of industry and engineering practices make the role of future engineering graduate become more challenging and competitive. As a result, the engineering education system for the future should be based on engineering practice for easy mobility, flexibility and adaptability to the new changing in science and technology as well as industry requirement (Nor1 et al. 2015). To accommodate these challenges and needs, engineering education in Malaysia polytechnic has bring about the implementation of Outcome Base Education (OBE) since 2010 (Nik Azida et al. 2012). The primary aim of OBE implementation in Malaysia Polytechnic is to facilitate changes within the students, by increasing knowledge, developing soft skills and/or attribute, positively influence attitudes, values and judgment within the context (Muhammad Rumzi Mamat et al., 2013). In order to improve the OBE curriculum as well as industry need, the Conceive-Design-Implement-Operate CDIO concepts in polytechnic curriculum are vital (Mohd Daud et al., 2015).

There are several institutions who have witnessed positive changes with the implementation of CDIO. A comparative study in Linköping University shows that there is a positive improve on student teamwork, problem solving, critical thinking, project management and professional work situations after the CDIO was introduced (Edvardsson, & Jungert, 2007). Evaluations of the chemical engineering program at Singapore Polytechnic also identified positive effects related to student retention and alumni self-assessment of communications, systems thinking and creative skills (Cheah et al., 2013; Ng, 2014). In addition, a study by Malmqvist et al., (2010) on the alumni of Chalmers University (mechanical engineering graduates) showed a significantly higher than graduates from other programs. Indeed, the mechanical engineering program at Chalmers also has won several national (Sweden) awards for high quality education. Therefore, a combination of CDIO and OBE concepts in curriculum will be a value added skills to Malaysian polytechnic graduates. Consecutively, employment rate amongst the Malaysia Polytechnic graduate is expected to improve gradually.

The main purpose of this paper is to share the knowledge about implementation of CDIO approach in engineering course particularly in Embedded Robotic Course in the Electrical Engineering Department of Polytechnic Ungku Omar. It is vital as it can be used as a platform to develop not only knowledge but attribute and skills. It is also can assist in measuring the enhancement of student attribute and skills especially in skills such as personal and professional, interpersonal skills i.e. critical thinking, problem solving, interest, commitment and communication and teamwork.

Embedded Robotic Course Learning Approach.

Embedded Robotics course is a combination mobile robot modules and embedded systems. The combination of these two modules complements each other in the mobile robot applications. It is not only produces robots but to make the movement smart and intelligent. It teaches students the concept of positioning, identification and communication between the sensor and servo motor controlled by embedded controller (PIC
microcontroller). To ensure intelligent mobile robot movement effective and efficient, the controller is controlled by a programming algorithm. The course focus on active and experiential learning which involves ideas, work design (hardware and software), developing, troubleshooting and robot testing. At the end of the semester (one semester) students need to produce smart and intelligent mobile robot according to the specifications given. The mobile robot produced by the students will be assessed on the performance. This test will be conducted on the track specially designed for mobile robot performance test. The robot with the shortest time taken without any assistance will be the winner. The assessment process also includes presentation session. Students are expected to share their findings in a group on the designing and developing the mobile robot.

**CDIO as Learning Approach in Teaching and Learning of Embedded Robotic Course in the Department Of Electrical Engineering Polytechnic Malaysia**

The CDIO principle is based on the twelve’s (12) CDIO standards. All CDIO syllabuses were designed to accommodate the teaching and learning activity such as learning to know, learning to be, learning to live together and learning to do as referring to four learning pillars stated by UNESCO (Zhou, 2015). More importantly, the four learning domain in CDIO are complement to the eight learning domain in Malaysian Quality Accreditation (MQA). However, the second domain - technical skills/practical skills as in the MQA were not elaborated in details in the OBE curriculum as compared to the CDIO learning domain (CDIO skills). Table 1.0 shows Teaching and Learning (T & L) activity related to the 12 CDIO Standards applied in the syllabus.

The CDIO skills standard 9 and 10 in Table 1.0 refer to the design process in the CDIO standards and product development as practice in the industry (Raymond et al.2015). It captures the skills apply by the industry to yield product. It’s started with conceiving followed by design or formulates then implement/develop/produce and lastly operate/evaluate. The CDIO concept seems more thorough and precise in imitating product life cycle of real life of engineering scenarios (Peng et al., 2006; Bai et al., 2012; Wong, Imrie & Xie, 2008). Therefore, by using the product life cycle in learning process, students will develop better skills. Three other standards in T & L activity in CDIO like disciplinary knowledge (standard 1, 2, 3 & 4), personal skills (Standard 5, 7, 8) and interpersonal skills (standard 11 & 12) are also closely related to the T & L activities in the UNESCO learning domain (learning to know, learning to be and learning to live together). Generally it can be concluded that the CDIO standard listed are very much alike the UNESCO learning domain.
Table 1.0: Teaching and Learning Activity related to CDIO Standard Apply in the Syllabus.

<table>
<thead>
<tr>
<th>Disciplinary Knowledge (Learning to Know)</th>
<th>Knowledge of underlying maths &amp; sciences, Core fundamental knowledge, Advanced fundamental knowledge</th>
<th>Curriculum Standards 1, 2, 3, 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Skills (Learning to Be)</td>
<td>Analytical reasoning &amp; Problem solving, Experimentation &amp; knowledge discovery, System thinking, Personal skills &amp; attributes</td>
<td>T &amp; L Activities Standards 5, 7, 8</td>
</tr>
<tr>
<td>Interpersonal Skills (Learning to Live Together)</td>
<td>Multi-disciplinary teamwork Communication Communication in a foreign language</td>
<td>Assessment Standards 11, 12</td>
</tr>
<tr>
<td>CDIO Skills (Learning to Do)</td>
<td>Conceiving, Designing, Implementing &amp; Operating Systems in the Enterprise/Business &amp; External/Societal Context, Designing Formulate Implement/Develop/Produce Operating/ Evaluate</td>
<td>Faculty Competence Standards 9 &amp; 10</td>
</tr>
</tbody>
</table>

Table 2.0 shows the 4 stages of CDIO concept with different skills development. It began with identifying the problem and selecting solutions, designing, implementing and operating or maintaining of products. As mentioned earlier it is observed that the CDIO concept in education clearly explain the product life cycle of the engineering real life scenarios. Students not only learn theoretically but engaged in solving engineering problems (Karl et al., 2003; Nhut & Crawley, 2008; Takemata et al., 2013; Raymond et al, 2015). While going through the process, the generic skills such as problem-solving, commitment, responsibility, self-confidence, teamwork and accountability were developed (Perry & Robert, 2008). More importantly, students are able to design the products according to customer requirements, solving problem in real situation and eventually produce better quality and performance product (Kok & Sin, 2010). In addition, students are able to develop different skills requires as an engineers and solving problem using the CDIO approach.

Table 2.0 CDIO Stages with Different Skills.

<table>
<thead>
<tr>
<th>Stage</th>
<th>CDIO</th>
<th>Develop Different Skills Set</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Conceive</td>
<td>This initial stage involves defining the needs and problems to be solved and technology required, considering the enterprise strategy and regulations. Here they develop the concept, technical and business plans.</td>
</tr>
<tr>
<td>2</td>
<td>Design</td>
<td>This stage focuses on creating the design such as the plans, working drawing, and algorithms that describe what will be implemented in completing the project.</td>
</tr>
<tr>
<td>3</td>
<td>Implement</td>
<td>The implement stage involves transforming the design into the product solution. This includes manufacturing, coding, testing and validating.</td>
</tr>
</tbody>
</table>
4. **Operate**

This is the final stage and involves operating the implemented product to deliver the intended function, including maintaining, evolving and retiring the system.

**Objective and Implementation**

Based on the CDIO framework applied in Embedded Robotic Course, this study aims to investigate and answer the following research questions:

i. Is there a relationship between students’ performance after the application of CDIO rubrics in final project?

ii. What are the achievements of CDIO skills (personal and professional, interpersonal and CDIO skills) acquire by student after the implementation of CDIO on the student activities especially in mobile robot design and testing?

iii. What are the levels of students’ satisfaction in the application of CDIO rubric in student assessment of embedded robotic course?

In conducting this study, the CDIO learning domain and skills development stage was used as a guide in designing a survey questionnaire. The CDIO assessment or CDIO rubric (Table 3.0) with separated attribute skills such as personal and professional, interpersonal and CDIO skillswere developed. The brief outline of the CDIO Standards are also described and followed by the explanation on how it is applied in the Embedded Robotic course evaluation. Basically student were formally explained about the concepts of CDIO approach in designing and developing of project followed by the rubrics as a guide while conducting their project at the beginning of the semester. The results obtained and presented is expected to provide more evidence about the degree of CDIO skills acquired or engaged as well as valuable information about what is learned by the students. In addition, performance test also were conducted during product assessment based on functioning of hardware and software (algorithm). This rubric was also mean to guide the panel in the projects presentation during the final mobile robot exhibition. The CDIO learning domain and skills development stage used is shown in Table 3.0.
Table 3.0: CDIO Presentation Assessment or CDIO Rubric

<table>
<thead>
<tr>
<th>PERSONAL AND PROFESSIONAL SKILLS &amp; ATTRIBUTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving skills.</td>
</tr>
<tr>
<td>Interest and participation.</td>
</tr>
<tr>
<td>Commitment and sense of responsibility.</td>
</tr>
<tr>
<td><strong>B. INTERPERSONAL SKILLS: TEAMWORK AND COMMUNICATION</strong></td>
</tr>
<tr>
<td>Committed.</td>
</tr>
<tr>
<td>Accountable for the successful task completion.</td>
</tr>
<tr>
<td>Confident and follow the specification given clearly.</td>
</tr>
<tr>
<td>Logical sequence and provide explanations / elaborations.</td>
</tr>
<tr>
<td>Explanation and justification of the reasons for selecting solutions.</td>
</tr>
<tr>
<td>CDIO attribute</td>
</tr>
<tr>
<td>Design and construct a product that meets specifications given.</td>
</tr>
<tr>
<td>Use relevant criteria to select the most appropriate solution option.</td>
</tr>
<tr>
<td>Product meets its operational ability.</td>
</tr>
<tr>
<td>Product practicality (hardware and software).</td>
</tr>
<tr>
<td>Product performance.</td>
</tr>
<tr>
<td>Improvements or corrective actions.</td>
</tr>
<tr>
<td>Product applicability in other forms.</td>
</tr>
</tbody>
</table>

Research Methodology

Respondents consist of students with CDIO framework approach from the academic session June 2015 (33 controlled samples from 16 groups). In the CDIO, the framework exposed students with the brain storming activity at the beginning of the project. It is then followed with the designing stage where students were exposed to steps on how to produce better product by taking into account specifications allowed in designing more innovative products. Subsequently, they need to actively develop products and lastly tested or demonstrated the products via relevant competitions. In the assessment process, the CDIO groups were evaluated throughout the process instead of at the end of the session as applied earlier. Apart from the ability to produce circuit board (connection and operation) the CDIO rubrics also taken into account the holistic view of students by evaluating their generic skills as mentioned section 5.0. The product performance (project) marks obtained by each group came from the panel during the performance test (final evaluation). Presentations were marked according to the CDIO rubrics given. Pearson correlation coefficients were conducted to investigate a relationship between CDIO skills set and students’ performance. The correlation coefficient denote as r, ranges between -1 and +1 (Pallant, 2009). The positive correlation denotes higher levels of one variable are associated with higher levels of the other and negative indicate higher levels of one variable are associated with lower levels of the other.

Result and Discussion

The result analyzed shows that there is a strong (positive) relationship between professional characteristic and students’ performance, \( r = 0.923, p<0.000 \) with high level of professional skills associated with high level of students marks/performance (Table 4.0).
There is also a strong relationship associated with interpersonal skills and student’s’ performance \((r = .730, p<.001)\) indicate the high level of interpersonal skills is associated with high level of students marks/performance. Similarly, the positive and strong relationship was also witnessed in the planning, designing, implementation and operation in enterprising to the community context with students’ performance \((r = .926, p<.000)\). From the correlation analyses, it could be concluded that the more positively students regarded the skills as per rubrics (the CDIO components), the higher the marks scored. This meant that students’ are able to apply the skills teach in CDIO into the final project. Excellent performance is also witnessed in the marks evaluated by the independent panel (industry). These imply that polytechnic graduates are equipped with necessary skills apart from the academic skills and it is well accepted by the employer.

**Table 4.0: The Correlation Coefficient between CDIO Skills Set and Students’ Performance**

<table>
<thead>
<tr>
<th>Professional Characteristics</th>
<th>Pearson Correlation</th>
<th>Interpersonal Skills</th>
<th>CDIO</th>
<th>Overall marks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Characteristics</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>.730(**)</td>
<td>.764(**)</td>
<td>.923(**)</td>
</tr>
<tr>
<td></td>
<td>.001</td>
<td>1</td>
<td>.001</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Interpersonal Skills</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.730(**)</td>
<td>.001</td>
<td>.002</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>CDIO</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.764(**)</td>
<td>.001</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.722(**)</td>
<td>.002</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Overall marks</td>
<td>Pearson Correlation</td>
<td>Sig. (2-tailed)</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td></td>
<td>.923(**)</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>.872(**)</td>
<td>.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).

The relationship between the rubrics and students’ performance (overall marks) is also shown in the table. The professional characteristic and students’ performance significant level is significant with \(p<.000\) (correlation is significant at the 0.01 level – 2 tailed) which concluded that these two have a strong relationship i.e. the higher the student’s professional characteristic, the higher the students’ performance will be. The significant relationship is also witnessed between students’ interpersonal skills and performance \((p<.000)\) indicate the high level of interpersonal skills is associated with high level of students overall marks/performance. Eventually, the relationship between the CDIO components and students’ performance are also witnessed \((p<.000)\) which indicate that an
increase in the application of CDIO components will upsurge student’s performance. From the results analyzed, it can be concluded that there was significant positive relationship between the variables with students’ project evaluation (referred as student’s performance) which could be used for assessing the effectiveness on the implementation of CDIO in teaching and learning (T & L).

Table 5.0 illustrates the mean value and standard deviation for each itemise skills/statement measure. Students’ ability or level in adapting the CDIO skills set can be seen from the mean score shown. The table illustrates the mean value and standard deviation for each itemise skills set. Mean score for each skills elements tested ranges from the lowest of 2.50 (product performance) to the highest of 3.62 (Committed and responsibility). Therefore, it is concludes that the skills elements from CDIO skills sets are moderate to good. This indicates that student’s performances are moderately good with the application of CDIO.

<table>
<thead>
<tr>
<th>Skills Elements</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Problem solving</td>
<td>2.9375</td>
<td>.85391</td>
</tr>
<tr>
<td>Interest &amp; participation</td>
<td>3.5625</td>
<td>.62915</td>
</tr>
<tr>
<td>Commitment &amp; responsibility</td>
<td>3.5000</td>
<td>.51640</td>
</tr>
<tr>
<td>Committed</td>
<td>3.6250</td>
<td>.50000</td>
</tr>
<tr>
<td>Accountable</td>
<td>2.7500</td>
<td>.77460</td>
</tr>
<tr>
<td>Confident</td>
<td>3.0625</td>
<td>.77190</td>
</tr>
<tr>
<td>Logical sequence</td>
<td>2.6875</td>
<td>.47871</td>
</tr>
<tr>
<td>Explain &amp; justify</td>
<td>2.6875</td>
<td>.47871</td>
</tr>
<tr>
<td>Design &amp; construct</td>
<td>3.0625</td>
<td>.92871</td>
</tr>
<tr>
<td>Relevant criteria</td>
<td>2.8750</td>
<td>.88506</td>
</tr>
<tr>
<td>Product meet operational ability</td>
<td>2.9375</td>
<td>.68007</td>
</tr>
<tr>
<td>Product practicality</td>
<td>3.1250</td>
<td>.88506</td>
</tr>
<tr>
<td>Product performance</td>
<td>2.5000</td>
<td>.51640</td>
</tr>
<tr>
<td>Improvement or corrective action</td>
<td>3.2500</td>
<td>.57735</td>
</tr>
<tr>
<td>Product applicability</td>
<td>3.0625</td>
<td>.68007</td>
</tr>
</tbody>
</table>

The analysis was conduct further to investigate students’ satisfaction with the CDIO implemented in their project assessment. The survey contained 5 overall statements
related to the rubrics. For each statement, the respondents were asked to answer using a Likert scale ranging from 1 to 5. Level 5 corresponds to respondents’ satisfaction as (excellence), while level 1 corresponds respondents’ less satisfaction. Figure 1 illustrates the score of each statement. The overall average rating was excellence (5) for all the statements, followed by good and satisfactory. None of respondents’ rate approaching expectation or below expectation, indicating all are basically satisfy with the CDIO rubrics embedded.

![Figure 1: Students’ Satisfaction with the CDIO Rubrics Embedded](image)

**Conclusions**

The CDIO learning domain and skills development applied in Embedded Robotic course through the assessment using the CDIO rubric was utilized to evaluate students’ final project and presentation. The results indicate that the rubrics as per CDIO skills set are relevant and applicable for this course. The positive relationship between the skills set and students’ performance imply that students with CDIO equipped can perform well in their final project and presentation. The results also indicate that the rubrics and CDIO skills sets are relevant and applicable for a wider range of programmes and that making changes towards implementing the CDIO would improve programme quality. The results also indicate that the rubrics’ most important benefit is that they provide a basis for systematic evaluation process. Challenging issues when undertaking a CDIO skills sets include interpreting and designing the rubrics within the context of the programmes and the proper use of the rating scale. There were also concerns regarding the fact that mainly the programme’s actions to develop generic skills are invisible in the evaluation, and this does not do justice to its attention to disciplinary knowledge and connections to research. This points to the need to make sure the understanding of CDIO Standards with other instruments in an overall evaluation process and to make CDIO role transparent.
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INTEGRASI TEKNOLOGI DALAM PENGAJARAN DAN PEMBELAJARAN KESUSASTERAAAN MELAYU MEMPERTINGKATKAN KEYAKINAN DAN KEBERHASILAN GURU SEMASA LATIHAN MENGAJAR

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Abstrak


Kata kunci: Integrasi Teknologi, Kesusasteraan Melayu, Latihan Mengajar
PENGENALAN


MASALAH KAJIAN

Senario masa kini yang menyaksikan jumlah pelajar yang mengambil subjek Kesusasteraan Melayu semakin merosot dan kurangnya galakan dari pelbagai pihak untuk menyemarakkan subjek ini. Selain itu latihan mengajar juga diadakan bagi membolehkan guru pelatih dapat dinilai dan dibimbing oleh penyelia dan juga guru pembimbing di sekolah berkenaan. Sehubungan itu para guru pelatih harus sedar bahawa penilaian ini bukannya bertujuan untuk penggredan semata-mata sebaliknya merupakan suatu mekanisme untuk melatih bakal guru agar sentiasa menilai diri sendiri, mendidik dan memperkembangkan kemahiran dan profesionalisme keguruan, bukan sahaja semasa latihan mengajar sebaliknya sepanjang perkhidmatan nanti. Oleh itu, selain dinilai oleh individu yang mempunyai autori dalam bidang pendidikan, guru pelatih juga perlu membina kemahiran kendi terutama dalam kaedah pengajaran dan pembelajaran (p&b) berasaskan teknologi terkini. Kamaruddin Haji Husin (1986) menyatakan penilaian kendi guru pelatih semasa latihan mengajar adalah bertujuan untuk memberi peluang kepada mereka menilai diri sendiri serta memupuk kemahiran menilai pembelajaran pelajar. Penilaian secara umumnya dapat membantu guru pelatih dalam beberapa keadaan. Seperti kebanyakan model pengajaran melibatkan tiga elemen penting iaitu objektif pengajaran, aktiviti pengajaran dan pembelajaran serta penilaian, (p&b) abad ke-21 pula menambah kepentingannya dengan aplikasi teknologi dalam pengajaran di bilik darjah. Namun demikian sebagai proses penyeliaan, kaedah penilaian boleh memberikan maklumat balas terhadap kedua-dua objektif pengajaran dan aktiviti pengajaran dan pembelajaran. Maklum balas penilaian dalam aktiviti pengajaran dan pembelajaran pula memberikan gambaran mengenai keberkesanan kaedah (p&b) yang digunakan dan juga memberikan maklumat mengenai kekuatan dan kelemahan pelajar. Ini seterusnya dapat membantu mengenal pasti kekuatan dan kelemahan (p&b) guru pelatih berkenaan dan pada masa yang sama dapat merancang aktiviti pengayaan serta pemulihan untuk pelajar. Ini kerana dalam proses (p&b) melibatkan dua pihak iaitu guru dan pelajar, oleh yang demikian penilaian yang dilaksanakan adalah sebagai suatu maklum balas tentang keberkesanan pengajaran guru dan pembelajaran pelajar.
Atau alasan “saya mengambil subjek ini kerana guru yang mengajar elektif lain tidak mahu menerima saya”. Pelbagai alasan diberikan bukan sahaja dalam kalangan para pelajar malah dari pihak pentadbir, ibubapa dan dari pihak-pihak yang tertentu. Bukan sahaja memandang remeh malah mengecilkan lagi penawaran subjek ini di sekolah menengah.

Selain daripada itu subjek Kesusasteraan Melayu seringkali dipandang seperti kerana beranggapan subjek ini tidak mendatangkan atau menjamin masa depan untuk para pelajar. Malah menyatakan Kesuasteraan Melayu suatu subjek yang membosankan dan hanya sesuai untuk pelajar kelas hujung sahaja. Sehubungan itu para guru Kesuasteraan Melayu perlu mengambil inisiatif dan berfikirkan lebih berleva untuk mempelagai subjek ini dengan berdaya saing dalam pembentukan kaedah (p&p) yang lebih menarik untuk para pelajar yang mengambil subjek ini. Oleh yang demikian tidak keterlaluan jika dikatakan bahawa kemajuan teknologi pada masa kini mengingatkan para guru Kesuasteraan Melayu supaya tidak ketinggalan dalam arus pemodenan abad ke-21 dan seharusnya selari dengan kemajuan teknologi terutama dalam kaedah (p&p) yang hendak disampaikan kepada para pelajar.

Oleh yang demikian boleh dikatakan bahawa tugas guru semakin mencabar, sebagai pendidik adalah menjadi tanggungjawab untuk membantu setiap pelajar meningkatkan prestasi mereka dalam pelajaran. Justeru bagi mewujudkan pembelajaran yang berkesan, para pendidik haruslah bijak dan kreatif dalam memilih dan merancang kaedah pengajaran dan pembelajaran (p&p) dalam bilik darjah. Sehubungan itu (p&p) yang dilaksanakan haruslah sesuai serta dapat menarik minat pelajar untuk mengikutinya. Kaedah pengajaran yang bermutu akan dapat membantu pelajar mengikuti pengajaran dengan baik di sampling memperoleh ilmu pengetahuan, kemahiran serta memupuk minat yang mendaikan dalam diri para pelajar. Oleh yang demikian pelbagai usaha dan upaya untuk meningkatkan kualiti pendidikan telah dilakukan dalam pelbagai bentuk inovasi dan kreativiti. Dalam hal ini, amalan pengajaran konvensional melalui cara 'chalk and talk' tidak relevan lagi. Para pelajar mudah berasa bosan apabila pengajaran seharga oleh guru yang tidak memberikan peluang kepada murid untuk menyuarakan pendapat mereka. Pengajaran yang pasif tanpa bantuan teknologi maklumat tentulah membosankan pelajar. Hal ini dikatakan demikian kerana terdapat pelajar yang terlebih cekik komputer hingga dapat pula mereka membantu guru dalam dunia pengkomputeran.

(p&p) dapat dijalankan dengan lebih mudah, ringkas dan padat kerana pelajar akan didedahkan dengan gambaran dan persembahan menarik serta mudah untuk di fahami. Justeru itu pelajar tidak mudah merasa jemu dan bosan dalam menjalani proses (p&p) kerana tertarik dengan gaya persembahan yang ditunjukkan melalui ICT.

OBJEKTIF KAJIAN

i) Mengenal pasti kaedah pengajaran dan pembelajaran yang diamalkan oleh guru Kesusasteraan Melayu masa kini.

ii) Menganalisis Integrasi Teknologi dalam Pengajaran dan Pembelajaran Kesusasteraan Melayu bagi Mempertingkatkan Keyakinan dan Keberhasilan Guru Semasa Latihan Mengajar

METODOLOGI KAJIAN


TEORI SISTEM PEMIKIRAN BERSEPADU 4K (SPB4K)


Konsep 4K dapat dihuraikan iaitu yang pertama ialah konsep pemikiran kerohanian. Contohnya, setiap manusia haruslah memikirkan hal-hal berkaitan kejiwaan, keagamaan, kerohanian, soal dalam berasaskan kepada ajaran kepercayaan agama. Sebagai manusia, kita perlulah beriman kepada soal-soal yang berkaitan ghaib, abstrak berteraskan keimanan. Contohnya bagi orang-orang Islam, mereka wajib percaya dan yakin sepenuh hati terhadap rukun iman, rukun Islam, hukum pahala dan dosa, perkara-perkara berkaitan


Di Malaysia pula, penteori telah mendapat ilham hasil daripada pemerhatiannya terhadap masyarakat berbilang kaum seperti Melayu, Cina, India dan lain-lain. Dalam ad-dinul Islam pula, manusia dilihat daripada dua peranannya iaitu sebagai hamba kepada Allah SWT dan khalifah sesama manusia. Teori ini diaplikasikan dalam melihat peranan guru pelatih menyebarkan ilmu pengetahuan sebagai seorang pendidik menepati peranan yang harus dijalankan oleh seorang khalifah, di samping menyeru ke arah kebaikan dan menghindarkan segala larangan dalam kalangan para pelajar di sekolah. Pemikiran kesaintifikan pula boleh di kaikan dengan pengaplikasian teknologi semasa latihan mengajar. Manakala kekreatifan diaplikasikan apabila subjek Kesusasteraan Melayu diajar kepada pelajar di sekolah.
Menurut Mohd Yusof Hasan (2004:30), menjelaskan bahawa konsep dwiperanan adalah hubungan secara vertikal dengan Allah SWT dan hubungan secara horizontal sesama manusia. Kedudukan manusia dengan dwiperanan ini dapat dilihat sebagai gambar rajah berikut:

![Diagram Dwiperanan Manusia](image)

Dicipta makhluk

**Rajah 1**: Rajah Dwiperanan Manusia

*Sumber*: Mohd Yusof Hasan (2004:30)

Pembinaan teori Pemikiran Bersepadu 4K ini terjadi berpunca daripada modul asal teori SPB4K iaitu SPB4L yang melibatkan pemikiran Luhur, pemikiran Lahir, pemikiran Logik dan pemikiran Literal. Walaubagaimanapun, penteori Mohd. Yusof Hasan telah mengemaskini teorinya. Oleh sebab itu, beliau memberikan istilah baharu kepada setiap pemikiran di dalam teori SPB4K.


Pemikiran yang ketiga adalah Pemikiran kesaintifikan merujuk kepada pemikiran yang bersifat logik, objektif, saintifik, berfakta, berangka, tersurat, konkrit yang membawa kepada kebenaran, kepastian, ketepatan dan kegunaan fakta dan angka. Pemikiran ini adalah sesuatu yang logik, memiliki kebenaran, kepastian, ketepatan dan kesahihan. Manakala, pemikiran yang terakhir ialah Menurut Mohd. Yusof Hasan (2004: 43), pemikiran...

![Diagram KEOHANIAN, KEBITARAAN, KESAINTIFIKAN, KEKREATIFAN](image)

*Rajah 2: Rajah Empat Jenis Pemikiran*
*Sumber: Mohd Yusof Hasan (2004:35)*

Walaubagaimanapun, menurut pakar perkembangan minda, Roger Sperry, menyatakan minda atau otak manusia terbahagi kepada dua hemisfera yang berbeza fungsinya iaitu pertama left-brain hemisphese atau hemisfera otak kiri atau ringkasnya hoki. Otak sebelah kiri mempunyai kemampuan yang maksimum dari aspek pemikiran sains dan juga teknologi.

Manakala kedua, right-brain hemisphere atau hemisfera otak kanan atau ringkasnya hoka. Otak sebelah kanan ini mempunyai kemampuan maksimum dari aspek kreativiti, inovasi dan sastera. Oleh hal yang demikian, teori SPB4K yang dijelaskan ini turut boleh digandingkan bersama hoka dan hoki seperti gambar rajah berikut:

![Diagram KEOHANIAN, KEBITARAAN, KESAINTIFIKAN, KEKREATIFAN](image)

*Rajah 3: Rajah Hoka dan Hoki*
*Sumber: Mohd Yusof Hasan (2004:35)*

**PENGAPLIKASIAN TEORI SPB4K DALAM KAJIAN SECARA INSTRINSIK DAN EKSTRINSIK**


Berdasarkan kaedah ekstrinsik pula, sesuatu karya sastera boleh dihayati dari aspek falsafah dan kepercayaan melalui pemikiran Kebitaraan dari aspek sejarah dan kemasyarakatan melalui pemikiran Kekreatifan. Hubungkait kesemua aspek ini boleh dilihat dengan lebih jelas berdasarkan jadual berikut:

<table>
<thead>
<tr>
<th>Teori SPB4L/4K</th>
<th>Kaedah intrinsik (dalaman)</th>
<th>Kaedah ekstrinsik (luaran)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pemikiran Kerohanian</td>
<td>Tema dan Persoalan</td>
<td>Falsafah dan kepercayaan</td>
</tr>
<tr>
<td>Pemikiran Kebitaraan</td>
<td>Perwatakan manusia</td>
<td>Psikologi dan Kemanusiaan</td>
</tr>
<tr>
<td>Pemikiran Kesaintifikan</td>
<td>Latar suasana</td>
<td>Sejarah dan Kemasyarakatan</td>
</tr>
<tr>
<td>Pemikiran Kekreatifan</td>
<td>Teknik dan stail</td>
<td>Estetika dan Keindahan Seni</td>
</tr>
</tbody>
</table>
Jadual 1: Jadual Hubungkait Teori SPB4K dengan Kaedah Intrinsik dan Ekstrinsik

**Sumber:** Ani Omar (2011:260)

Rumusannya dapatlah dikatakan bahawa teori SPB4K merupakan sebuah teori yang unggul dan sempurna dalam menilai sesuatu karya sama ada secara zahir mauhupun batinnya. Hal ini demikian kerana, teori ini merupakan satu-satunya teori yang meletakkan perhubungan manusia dengan Allah S.W.T dan perhubungan manusia sesama manusia di hadapan berbanding perkara-perkara lain.

**DAPATAN KAJIAN**

Dalam membincangkan aspek pedagogi dalam pengajaran dan pembelajaran (p&p) Kesusasteraan Melayu, terdapat pelbagai cara, kaedah atau teknik mengajar yang boleh dilakukan oleh para guru di sekolah pada masa ini. Fokus utama kaedah dalam (p&p) subjek Kesusasteraan Melayu adalah menurus kepada penekanan idea dan tema serta keupayaan pelajar berdikari tanpa bergantung sepenuhnya kepada guru mereka. Sehubungan itu kejayaan atau kegagalan (p&p) bergantung kepada guru yang menyampaikan pelajaran itu. Dalam hal ini, guru bukan sahaja seharusnya mengajar sendiri, malah guru perlu memiliki pengetahuan psikologi, sosiologi dan yang paling penting adalah ilmu pedagogi. Pedagogi yang berkesan merupakan perkara yang amat penting dalam dunia pendidikan pada hari ini. Hal ini demikian kerana dengan adanya ilmu pedagogi yang luas dalam kalangan guru pelatih, pelbagai penambahbaikan dan pembaharuan yang boleh dilaksanakan untuk mencapai objektif (p&p) di dalam bilik darjah, seterusnya mampu menyumbang kepada peningkatan prestasi pelajar. Teknik pengajaran dan pembelajaran yang bercorak tradisional seharusnya diubah suai kepada teknik yang lebih modern dan menarik minat pelajar untuk terus mengikuti pengajaran guru tanpa jemu dan bosan.

**INTEGRASI TEKNOLOGI DALAM KALANGAN GURU PELATIH KESUSASTERAA MELAYU**


Kajian juga mendapat kreativiti dalam amalan (p&p) guru mampu menarik minat pelajar untuk terus mengikuti aktiviti (p&p) di dalam kelas kerana mereka tidak bosan dan lebih mudah untuk memahami isi pengajaran yang hendak disampaikan oleh guru dalam pelbagai genre Kesusasteraan Melayu umpamanya novel, cerpen, hikayat, puisi moden dan puisi tradisional. Sebagai contoh aplikasi audio dalam (p&p) dapat memberikan suatu pengalaman yang menarik kepada pelajar kerana gambaran yang tepat dapat diperolehi dengan lebih berkesan. Permainan interaktif pula sesuai untuk menjawab soalan kuiz Kesusasteraan Melayu. Secara tidak langsung permainan interaktif seperti ini dapat menarik minat pelajar untuk menjawab soalan yang telah disediakan berbanding dengan kaedah lama iaitu guru menyuruh pelajar menyalin soalan dan menjawabnya. Tidak keterlaluan jika dikatakan (p&p) Kesusasteraan Melayu berasaskan teknologi mampu memindahkan sesuatu maklumat daripada buku teks yang statik kepada suatu corak pembelajaran yang lebih menarik. Secara tidak langsung kemenjadian para pelajar yang mengambil subjek ini akan menjadi kenyataan seiring dengan keperluan dalam pasaran kerja masa kini. Hal ini kerana subjek Kesusasteraan Melayu bukan sahaja membentuk para pelajar menjadi insan yang memiliki nilai kemanusiaan yang tinggi, malahan dapat menyuburkan daya apresiasi, kreativiti, imaginatif, dan berfikiran rasional. Inilah yang dikatakan antara transformasi dalam amalan pendidikan yang perlu dilakukan oleh para guru Kesusasteraan Melayu masa kini untuk menarik lebih ramai murid meminati dan mengambil subjek ini.

Oleh itu, kompetensi celik maklumat adalah penting bagi membolehkan proses di atas dilaksanakan dengan sempurna.


**Media ICT dalam Pendidikan Masa Kini**

Secara umumnya terdapat enam unsur media dalam ICT yang boleh menyumbang dalam meningkatkan kualiti proses (p&p) iaitu internet, teks, grafik, audio, video dan animasi. Untuk huraian selanjutnya pengkaji hanya memfokuskan kepada tiga elemen sahaja iaitu internet, audio dan animasi.

**Internet**

Internet atau International Network of Networks ialah sebuah rangkaian gergasi computer di peringkat antarabangsa (TMB, 1998) dan merupakan cara computer berkomunikasi antara satu sama lain (Crumlish, 1996). Internet mengandungi lebih daripada 50 ribu rangkaian computer di seluruh dunia, lebih daripada 6.6 juta computer hos dan lebih daripada 50 juta pengguna yang terdiri daripada 160 buah Negara (Abdul Rahim, 2002). Dalam rangkaian internet, terdapat pelbagai jenis bahan dan bilangannya sentiasa bertambah dari hari ke sehari. Bahan ini termasuk artikel, majalah, jurnal permainan, projek dan sebagainya. Disebabkan perkembangan teknologi internet yang begitu pesat dan tersebar ke seluruh dunia, ia telah dimanfaatkan oleh kebanyakan Negara, institusi dan ahli...
akademik untuk pelbagai kepentingan termasuk dalam pendidikan dan pembelajaran. Ia boleh dijadikan salah satu sumber atau bahan yang membantu pengajaran dan pembelajaran. Menurut kajian terdahulu, ilmu sentiasa berkembang maju seperti yang dinyatakan dengan jelas dalam al-Quran. Kemajuan ini terletak pada kreativiti dan juga usaha individu. Secara umum, guru yang kreatif dan bermotivasi tinggi dapat mewujudkan suasana (p&p) yang menyeronokkan dan pelajar akan lebih memahami perkara yang hendak disampaikan.


i. Internet hanya akan bertindak sebagai sumber dan alat bantu dalam (p&p). aktiviti pembelajaran hendaklah dirancang dengan teliti oleh guru supaya internet dapat digunakan dengan berkesan.

ii. Kemudahan internet tidak akan mengubah peranan guru. Sebaliknya, guru akan sentiasa berusaha meningkatkan pengetahuan dan kemahiran mereka khususnya dalam bidang ICT. Keterampilan dan keperibadian yang mulia akan tetap menjadi tunjang dan ikutan utama.

iii. Penggunaan internet dapat mengurangkan beban tugas guru dan murid di samping setiap kerja dapat dilakukan dengan kemas, teratur dan sistematik.

iv. Internet amat berguna kepada guru dan murid serta ibu bapa khususnya dalam menghadapi cabaran ICT dan era globalisasi. Industry berasaskan
maklumat yang akan mencorakkan kehidupan pada masa hadapan dan perlu diberi perhatian sewajarnya oleh setiap ahli masyarakat, khususnya warga pendidik dan ibu bapa.

Audio

Kesan audio atau bunyi merupakan salah satu daya penarik yang berkesan untuk menarik perhatian pelajar. Audio merujuk kepada rakaman suara, suara latar, muzik, kres can audio dan sebagainya. Keseluruhannya memainkan peranan penting dalam bidang pendidikan masa kini. Ia boleh digunakan dalam menyampaikan persembahan agar lebih mantap dan berkesan. Selain itu, audio mampu meningkatkan motivasi dalam kalangan pelajat agar lebih berminat mengikut sesuatu pembelajaran. Di samping itu, audio dikatakan mampu memberi suasana yang lebih menarik dan akan menghasilkan tumpuan yang lebih terhadap perkara yang ingin disampaikan.


i. Gunakan perkataan yang mudah dan elakkan penggunaan ayat yang kompleks dan sukar difahami.

ii. Gunakan ayat yang pendek dan mudah. Ini bagi membolehkan pendengar mengambil masa untuk mendengar lalu membuat sintesis serta analisis ke atas mesej yang ingin disampaikan.

iii. Gaya bahasa harus tidak formal bagi memudahkan pendengar membuat andaian.

iv. Pelbagaiakan jenis bunyi dan suara. Penggunaan suara dan bunyi yang pelbagai akan dapat menarik minat serta member tumpuan kepada pendengar.

v. Kadar penerimaan oleh pendengar mesti sesuai dengan tajuk sesuatu cerita yang dipaparkan.

vi. Penggunaan kesan bunyi dapat dapat menarik minat dan menghidupkan lagi jalan cerita.

vii. Suara yang dihasilkan perlu mempunyai intonansi dan gaya percakapan yang dapat menarik minat pelajar secara umumnya.

ix. Sumber media audio boleh digunakan dalam jangka masa 7 hingga 10 minit dalam tempoh pengajaran 30 minit. Informasi yang terlalu banyak akan mematikan motivasi dan minat pendengar.

x. Elemen hentian harus diambil kira dalam pembinaan skrip. Ruang dan soalan perlu diberikan bagi menggalakkan pelajar berfikir.

xi. Nada suara perlu mempunyai intonansi serta personality menarik mengandungi perubahan ritma frekuensi persembahan dengan penekanan suara, tinggi rendah suara, kecepatan dan memperlahankan kepada frasa-frasa yang sukar.

**Animasi**

Animasi merupakan paparan pantas imej yang berjujuran dan dapat dilihat oleh mata kasar manusia dalam bentuk pergerakan. Ia juga merujuk kepada suatu paparan visual yang bersifat dinamik dan merupakan suatu proses menjadikan sesuatu objek agar kelihatan hidup atau member gambaran bergerak kepada sesuatu yang pada dasarnya adalah static. Animasi merupakan media teknologi yang paling diminati dan mendapat perhatian ramai kerana mampu melahirkan sesuatu fantasi manusia kea lam realiti. Ia membolehkan sesuatu yang agak sukar untuk diterangkan menggunakan perkataan atau imej static disampaikan dengan lebih mudah dan berkesan. Penggunaan animasi dalam sesuatu persembahan maklumat juga dapat mencerahkan proses penyampaian dan membolehkan persembahan tersebut kelihatan lebih hidup dan realisitik. Animasi mampu member penegasan terhadap sesuatu penyampaian bagi membolehkan perhatian para penonton difokuskan kepada tujuan atau maklumat yang ingin disampaikan.

Animasi digital merupakan salah satu media komunikasi yang boleh digunakan bagi menghasilkan persekitaran pembelajaran yang merangsang dan menyeronokkan dan menarik perhatian pelajar kerana imej dan mesej yang disampaikan lebih pantas. Pelajar mampu memberi tumpuan yang lebih lama kepada media yang bersifat dinamik. Ia juga mampu menarikkan satu persekitaran pembelajaran yang lebih menyeronokkan, meningkatkan motivasi dan merangsang pemikiran pelajar dengan berkesan. Pendekatan ini akan membantu mengurangkan beban kognitif pelajar menerima pelajar atau mesej yang ingin disampaikan oleh para pendidik. Persembahan secara visual dan dinamik yang disediakan oleh teknologi animasi berupaya memudahkan proses penerangan konsep atau demonstrasi sesuatu kemahiran. Amalan ini membolehkan seseorang pelajar memanfaatkan lebih banyak deria dalam proses pengumpulan maklumat. Hal ini secara tidak langsung mempercepatkan proses pemahaman dan mengekalkan maklumat tersebut dalam tempoh masa yang lebih lama dalam ingatan.

Di sekolah pengajaran guru pelatih sentiasa dinanti-nantikan. Dalam suasana bilik darjah yang ceria dan aktif, pasti ada perkara baharu yang dipelajari dari penterjemahan guru yang kreatif dan inovatif. Pelajar pasti dapat merasai keseronokan belajar, suatu pengalaman yang jarang-jarang dilalui. Berakhirnya latihan mengajar merupakan satu kesedihan bagi para pelajar kerana mereka kehilangan seorang guru yang sejati. Inilah yang
dikatakan keberhasilan sebagai seorang guru pelatih semasa menjalani sesi latihan mengajar. Kesedihan dari para pelajar melambangkan kejayaan (P&P) guru pelatih yang berkenaan.

Integrasi Teknologi dalam (P&P) Kesusasteraan Melayu Meningkatkan Keyakinan dan Keberhasilan Guru Pelatih


i. Berperawakan sebagai insan guru
ii. Menghayati dan mengamalkan nilai-nilai keguruan
iii. Berdaya menasihati dan memotivaskan pelajarnya dengan berkesan
iv. Menjalankan peranan yang berkesan sebagai pengurus pembelajaran
v. Berkemahiran menggunakan teknologi ICT dalam proses pengajaran dan pembelajaran
vi. Tidak berkompromi tentang standart dan tidak mengorbankan aspek kecemerlangan atau kualiti
vii. Mencungkil bakat dan kebolehan dalam kalangan pelajarnya yang terpendam dan merealisasikannya
viii. Menjadi model kepada pelajarnya dalam semua aspek seperti kepimpinan, tulusan, pertuturan, bahasa, perilaku, perwatak dan tegur sapa
ix. Cekap metodologi dan pedagogi dalam proses pengajaran dan pembelajaran
x. Melayan saksama semua pelajarnya yang terdiri daripada pelbagai kebolehan dan latar belakang
xi. Sentiasa mempunyai inisiatif menguasai dan mengatasi sebarang permasalahan yang dihadapi oleh pelajarnya
xii. Berasa puas hati dan bahagia terhadap kesungguhan, pencapaian, kejayaan pelajarnya dari pelbagai kebolehan dan latar belakang

Guru adalah seorang pengurus, pemimpin pengajaran dan agen perubahan (Abdullah, 2004; Ozmon & Craver, 2003; Swee Chiew, 2002). Ketokohan seorang guru terletak kepada kesungguhan dan kejayaan beliau mengubah sikap, kepercayaan dan perlakuan individu kanak-kanak menjadi orang yang dewasa. Seseorang guru tidak sahaja berpengaruh dalam mengubah perlakuan pelajarnya, tetapi pada masa yang sama mereka turut belajar secara berterusan daripada muridnya untuk meneguhkan kepercayaan, nilai dan sikap mereka dalam mencetuskan dan melestarikan perubahan.
KESIMPULAN

Pendidikan abad ke-21 memfokuskan tiga komponen utama, iaitu pengetahuan teknologi, pengetahuan pedagogi dan pengetahuan kandungan atau kurikulum serta penilaian. Pengajaran dan pembelajaran pada abad ke-21 mempunyai ciri-ciri yang berbeza dengan pendidikan masa lampau. Tujuan pembelajaran pada abad Ke-21 adalah untuk melahirkan murid yang produktif tinggi, mahir dalam komunikasi, mempunyai kemahiran berfikir aras tinggi serta mahir dalam penggunaan teknologi maklumat dan komunikasi (ICT). Hal ini demikian kerana, bagi memastikan objektif pengajaran dapat dicapai, guru-guru perlu terlebih dahulu melengkapi diri dengan pelbagai kemahiran sebelum melaksanakan pengajaran dengan berkesan. Pengajaran dan pembelajaran pada abad ke-21 bertunjang kepada teknologi yang digunakan dalam pengajaran. Sebagai guru yang profesional, kemahiran dalam menggunakan teknologi sangat penting supaya dapat merealisasikan hasrat Kementerian Pendidikan Malaysia untuk mencapai pelajar yang berpotensi dan celik IT dalam akademik dengan melibatkan penggunaan ICT dalam pengajaran, selaras dengan hasrat peningkatan dalam kualiti pendidikan. Sehubungan itu dunia pendidikan sangat mengharapkan kehadiran media pembelajaran yang bermutu tinggi untuk meningkatkan kualiti pendidikan. Integrasi teknologi dalam pendidikan Kesusasteraan Melayu harus terus dipertingkatkan. Oleh yang demikian kejayaan pengaplikasian ICT dalam (p&p) Kesusasteraan Melayu bergantung juga kepada faktor-faktor lain seperti sejauh mana dasar, galakan, kemudahan prasarana yang dibekalkan dan pemantauan yang dilaksanakan dalam sistem pendidikan masa kini. Seterusnya, peranan yang dimainkan oleh semua pihak dalam memanfaatkan kemudahan yang ada dengan penuh semangat, kesungguhan dan iltizam yang tinggi. Sehubungan itu, warganegara yang berketerampilan, kreatif dan inovatif yang berakhlak mulia dapat dilahirkan melalui sistem pendidikan yang berasaskan penggunaan ICT.
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BLEND LEARNING: ITS IMPLEMENTATION AND PROMOTE CONTINUING E-LEARNING ENVIRONMENT AMONG STUDENT-TEACHERS

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ABSTRACT

The aim of this paper is to understand and explore the implementation of blended learning among student-teachers in Sultan Idris Education University (UPSI). UPSI has implemented blended learning via MyGuru and IMS platforms. Under the platforms, student teachers are able to perform E-Portfolio, E-Assessment, E-Quiz, E-PBL and etc. Besides, the paper also focuses on how far MyGuru and IMS in UPSI are complying with the E-Learning Framework as E-Learning Tools and promote blended learning among adult learners especially student teachers. A case study approach drawing on a phenomenological perspective was carried out in this research. The research has conducted in-depth interviews with students and lecturers to understand and explore their individual perception on the implementation of blended learning in teaching and learning among student teachers.
1. Introduction

Technology in higher institutions has now taken a place in the agenda of international meetings, along with trade and economics. Ken Wasch, the President of Software and Information Industry Association (SIIA) in International Society for Technology in Education (2004), stated that technology in education is critical to ensure that all students gain 21st century skills necessary for success by engaging them in the learning process. Information and communications technology has provided tools to help in the teaching and learning processes. Songkram (2015) remarked that the growing importance of education is a new international development because every sensible leader recognizes that the economic, social and cultural wealth of a nation in the Information Age lies in its people, and what they know and can do (Ministry of Finance, 2004). In the technological trends of the 21st century, all member countries of the South East Asia Ministers of Education Organization (SEAMEO), including Malaysia, have begun to focus on benefit of information and communications technology to improve the teaching and learning of certain subjects.

Thus, Malaysian higher institutions have devoted considerable resource to technology. Malaysian higher institutions have included computer technology as an integral part of students learning experiences and as a way to equip them with the skills and knowledge necessary to succeed in the 21st century. In line with that, Universiti Pendidikan Sultan Idris (UPSI) has implemented e-learning method via MyGuru and IMS recently. E-learning is the delivery of instructional content through electronic which include Internet, intranets, satellite broadcasts, audio tapes, video tapes and conferencing, virtual classrooms, digital collaboration and CD-ROMS (Alammary, Sheard, & Carbone, (2014).

E-learning is merely another mode of technology aided teaching and learning. Adding e-learning technologies into the education process does not simplify teaching and learning activities but only adds another dimension of complexity. The adoption of e-learning and computer based learning in teaching is a complex innovation in which many obstacles need to be overcome (Kong, 2014).

According to Glenn and Carrier (1989), the last decade has seen unprecedented growth in the amount of technology available in educational institutions and thus, issue concerning the implementation process has become a focus. Implementation of E-learning technologies involves the careful assessment of numerous factors, such as hardware, software, budgetary decisions, support services and user attitudes, competencies and participation.

E-learning in Malaysia became much stronger and vital in Malaysian education system after the introduction of Smart School. The Smart School is one of the seven flagships applications underlying Multimedia Super Corridor (MSC) which began its operations in 1997. Moreover, the Malaysian government has established various institutions, such as the National Information Technology Council (NITC), the Malaysian Institute of Microelectronics Systems (MIMOS), the Communications and Multimedia
Commission (CMC) and the Multimedia Development Corporation (MDC) (Tipton, 2002) to encourage the use of computer related technologies in the Malaysian society. Hence, billions of Ringgits have been poured into the educational sector to acquire necessary equipment. Funding efforts over the past few years have dramatically increased the availability of e-learning technology for all higher institutions across Malaysia such as UPSI.

In UPSI, there is widespread recognition that E-learning can play a powerful role in supplementing and complimenting the process of teaching and learning activities among graduates in UPSI but unfortunately at the same time, there is also growing concern that many academic staff lack in either experience or skills that are needed to integrate this new technology (E-learning) in their teaching and learning activities. Besides that, students in UPSI also are reluctant to use MyGuru in their process of learning. So, it is vital to identify the root of the problems in this issue by via comprehensive approach to program evaluation in E-learning program under E-learning Framework by Khan (2004).

The following discussion will identify how far our e-learning program in UPSI is complying with the E-learning Framework by Khan which has been recognized by many leading universities in the world. Khan (2004) noted that there is always room for improvement by exploring what works and what did not. To understand online learning environment, we need to have a comprehensive picture of people, process and product involved in it, and also study critical issues encompassing its various dimensions.

Adding technologies into the education process does not simplify teaching and learning activities but only adds another dimension of complexity. The adoption of e-learning and computer based learning in teaching is a complex innovation in which many obstacles need to be overcome (Machado & Chung, 2015; Cudanov, Savoiu, & Jasko, 2012).

E-learning in education has seen unprecedented growth in the amount of technology available in educational institutions and thus, issue concerning the implementation process has become a focus (Tshabalala, Ndeya-Ndereya, & Merwe, 2014). Implementation of E-learning technologies involves the careful assessment of numerous factors, such as hardware, software, budgetary decisions, support services and user attitudes, competencies and participation. Khan (2004) has developed a Framework for E-Learning which puts the instructional systems design and pedagogical issues in the context of a much wider and complex set of factors integrating the analysis of an organization’s e-learning environment.

2. E-Learning Framework

According to Khan (2004), E-Learning Frankwork which can be used to capture an organization’s inventory of e-learning by addressing issues encompassing the following eight dimensions of open and distributed learning environments:

1. Pedagogical: Refers to teaching and learning. This dimension addresses issues concerning content, audiences, goal and media analysis; design approach; organization and methods and strategies of e-learning environments.
2. Technological: Examines issues of technology infrastructure in e-learning environments. This includes infrastructure planning, hardware and software.

3. Interface Design: Refers to the overall look and feel of e-learning programs. The interface design dimension encompasses page and site design, content design, navigation, and usability testing.

4. Evaluation: Includes both assessment of learners, and evaluation of the instruction and learning environment.

5. Management: Refers to the maintenance of learning environment and distribution of information.

6. Resource Support: Examines the online support and resources required to foster meaningful learning environments.

7. Ethical: Relates to social and political influence, cultural diversity, bias, geographical diversity, learner diversity, information accessibility, etiquette, and the legal issues.

8. Institutional: Issues of administrative affairs, academic affairs and student services related to e-learning.

3. How far MyGuru and IMS in UPSI is complying with the E-learning framework as E-learning tools

Success in MyGuru and IMS as E-learning tools involve a systematic process of planning, designing, evaluating and implementing online learning environment where learning is actively fostered and supported. In my personal point of view, the programme such as MyGuru and IMS which currently used in UPSI are actually brilliant software or package towards E-learning purposes. This is because the system not only is meaningful to learners, but also meaningful to all stakeholder groups including instructors, support services staff and UPSI staff. At this moment, the most important issue is that how to encourage the use of MyGuru and IMS among UPSI staff. Thus, create the E-learning environment is vital in this stage.

When we discuss and evaluate E-learning tools (MyGuru and IMS), we need to focus on P3 Model (People – Process – Product). Furthermore, the discussion needed to spin out together with E-learning Framework by Khan (2004) in order to get understand and ensure whether the criteria for entire E-learning tool has been fulfilled and implemented.

In general, MyGuru is more likely to be meaningful to learners (students) as it is easily accessible, clearly organized, well written, authoritatively presented, learner-centered and flexible. For example, online assignment, group forum, announcements, coursemate and etc. Besides that, MyGuru also meaningful to academic staff (lecturers) when learners display a high level of participations and success in meeting a course’s goals and objectives. For example, students can use E-forum to do discussion and answer the questions online.
Student’s involvement in E-assessment and E-portfolio has proven that MyGuru is a platform for UPSI students to get into the E-learning activities. For Support Services Staff, MyGuru and IMS also achieve it goals. Students in UPSI enjoy all available support services provided in the course without any interruptions. Finally, MyGuru and IMS can be categorized as marvelous tools for encourage E-learning activities in UPSI and achieve high level of learner satisfaction with both quality of instruction and all support services. According to Mohd Nazri and Megat Azri (2014), MyGuru has been through some of the innovation process to ensure they are stable and effective systems in an effort to cultivate learning blended learning. The innovations that have been done are; 1. Integration of data - as part of the University Integrated Management System (UIMS), MyGuru has been fully integrated with other systems in the university and can be accessed through a single log-in. 2. E-portfolio - allowing students to manage and update the individual portfolio evidence of their learning. 3. E-Assessment - online evaluation of the academic staff at the end of the semester. 4. Evaluation of the university - the assessment program and university infrastructure through a poll of students. 5. Review lab - quality evaluation of industrial training through a poll of students. 6. The outcome-based education - building framework specific curriculum (taking into account aspects of soft skills, Bloom's taxonomy and so on). 7. Video Up-loader - allow students to upload video content to a cloud server (cloud server) and sharing among learning communities and 8. E-PBL – E-PBL able students to discuss activities related to problem based learning.

4. Promoting continuing e-learning environment via MyGuru and IMS in UPSI

As we know that technology alone is unable to create a meaningful environment for E-learning activities. Integration of pedagogy in technology is vital for the success of MyGuru and IMS in teaching and learning. Academic staff (lecturers) play very important role in planning and designing stage that have been mentioned in P3 Model. Please note that none of the E-learning tools can create meaningful learning features without the proper integration of instructional design. For example; How well the instructional strategy used for each objective? Or How well are E-learning standards for interchangeability of learning objects used throughout the course? Or How good is the content? How well do learners interact with it? These are the questions need to be identified by academic staff during the planning and designing stage. In E-learning Framework by Khan also clearly noted that Pedagogical, Technological and Interface design should come first in any E-learning activities.

In my personal point of view, MyGuru and IMS which have been used in UPSI for years, is only in initial stage for promoting and introducing E-learning to students. This is most due to the reason that no compulsory for the academic staff to use the MyGuru and IMS system or software. Lecturers only use it when come to the needs such as apply for leaves, pay slip, apply housing loan, key in student’s marks and etc. In conjunction with that, the management team of UPSI should encourage academic staff to explore more that what they need to do or use especially in development stage like what happen in UPSI. In P3
Model and E-learning Framework by Khan (2004) clearly mention that top management team should play their role when come to the development stage. Management team should ensure that staff in UPSI understands the University is very serious on implementing and promoting E-learning culture.

For Evaluation Stage, according to Khan (2004) in his E-learning Framework, the evaluation of E-learning including both the assessment of learners and evaluation of Instruction and learning environment. For MyGuru, assessment of learners again depend on lecturer’s initiative whether they way to upload the assessment or test in the system. MyGuru has the marvelous platform for lecturer to do so. MyGuru itself would not able to show how many times entire student access MyGuru system directly. For second part, evaluation of Instructional and learning environment, yet depend on the academic staff (lecturer). Lecturers require creating learning environment such as E-form, E-portfolio, E-assignment and etc. in their daily teaching and learning activities. Staff has to align with the fundamental values of E-learning features. UPSI’s staff should create a Code of Ethics for E-learning and this endeavor begins with a top-down commitment. Dean and head of department should ensure all staff understands the importance of increasing the level of E-learning in UPSI. This may require greater number of faculty enforcing the policies, procedures or code.

For Delivery and Maintain Stage under MyGuru and IMS, it provides secure E-learning environment to lecturer (academic staff) and students in UPSI. MyGuru and IMS provide a personalized E-learning teaching and learning environment where lecturers can access online course and teaching tools. Lecturers have access to learner’s data, student feedback and statistical data for research purposes. Lecturers also can design and create their own website that able to facilitate the teaching and learning. This is an addition to conventional teaching activities.

MyGuru also create initiate platform for E-learning to depart in UPSI. Students in UPSI able to access to online resources, communication and administration facilities such as register online and knowing their assignments, timetables, examination results and other asynchronous tools like email and E-forum and discussion.

5. Towards A New E-Learning Environment in UPSI

A well-designed E-learning tool can definitely provide numerous features conducive to learning. MyGuru and IMS are still in the initiate stage in encouraging UPSI staff and students to use E-learning in their teaching and learning. MyGuru and IMS are still in the beginning stage and have huge room to improve to reach quality and effective E-learning tools.

In UPSI, MyGuru and IMS offer huge opportunity for E-learning activities but now the main concern it on the user themselves (Siti Nazuar, 2014). Lecturers offer limited amount of supplemental course resources that are made available and interactivity and
communication tools online are used at a minimal. In my personal point of view, many UPSI lecturers believe those internet resources as optional for teaching and learning and many instructional still through printed materials and face-to-face teaching method still as the primary choice for most of the lecturers in UPSI. They believe that conventional teaching methods can achieve better results. Due to this drawback, accesses to electronic and online participation among UPSI students become optional and voluntary.

In order to cultivate E-learning environment in UPSI, lecturers and students are required to have access to the internet and have a working knowledge of the tools. Students in UPSI should interact with tools such as online assignment submission, discussion forums, conduct internet-based projects and access a wider range of online materials.

Besides that, lecturers have to ensure most of the course content, supplemental materials or notes and administrative tools only available online to ensure UPSI students use MyGuru in their daily learning activities. For starting, 30% of lectures should reliant on interactivity and communication tools such as email and discussion forum. Scheduled online collaborative activities, e-assessment (computer based testing) should become compulsory methods in UPSI. Mobile learning (M-learning) is extension of E-learning where use of cell phones and Short Message Service (SMS) or text messaging been focused in future.

For Resource Support, UPSI should work toward increasing its technology resources including computers link across the various campuses in Malaysia. Launching training sessions for all UPSI staff on the E-learning approach is vital to prepare them to utilize E-learning technology. UPSI top management needs provide supports both the instructors and learners in various ways (E-learning) by facilitating the design and development of instructional materials. Students in UPSI should attend formal orientation session on E-learning teaching and learning approach at the beginning of each academic year.
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MULTIMEDIA IN THE TEACHING AND LEARNING OF FORM 5 NOVEL AMONG LOW PROFICIENCY STUDENTS IN RURAL SECONDARY SCHOOLS IN PERAK, MALAYSIA

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Abstract

In view of the recent introduction of the Malaysian Education Blueprint (2013-2025) to rejuvenate and reform the education system in order to help Malaysia achieve the status of a developed nation by 2020, this research study sets out to module a courseware, which is known as Multimedia Courseware. It is to be used in the teaching and learning of the novel section of the Form Five literature component of the small “i” as a primary resource material to enhance the students understanding of the novel. Besides that, the teachers would also deploy it as teaching and learning aid to enrich their teaching practice. Eventually, the courseware would bridge traditional approach of teaching the novel to a futuristic approach. The courseware will assist the students to comprehend the novel as it has graphics, animations, talking word processor, games, and built-in activities. It is intentionally programmed for the low proficiency students in rural schools with regress computer technology. These will eventually help the students to develop their critical and creative thinking skills (CCTS). The study uses a qualitative research methodology and the instrumentations used are interviews, observation protocols, survey questionnaires and the multimedia courseware. The samples are students from a low proficiency background from five rural secondary schools in the state of Perak. It is hoped that through this study, the courseware which would be programmed with the necessary input will be beneficial for both students and teachers in the Teaching and Learning of Literature.

Keywords: multimedia courseware, literature component, critical and creative thinking skills, low proficiency.
Introduction

This research will be done taking into consideration the low proficiency students in rural secondary schools in focusing the difficulty in comprehending and understanding the novel section from the literature component in the English 1119/2 paper. As the result, they are not proficient enough to answer the novel question in the Sijil Pelajaran Malaysia (SPM) English 1119/2 paper. Swami and Furnham (2010) found in a nationwide study of self-assessed intelligence, that urban participants tended to have higher self-assessments than their rural counterparts. Therefore, a multimedia courseware has been identified as a technology mean to promote active learning (Martyn, 2007). The multimedia courseware will enable students, particularly in the rural environment to understand the novel elements, which are setting, characters, themes, moral values, plot, and point of view through its content, games and activities.

Multimedia technology is one of the most exciting innovations in the age of information. The rapid growth of multimedia technology over the last decade has brought about fundamental changes in computing, entertainment and education (Mukti and Hwa, 2004). Educational multimedia courseware and applications are in many ways similar to printed textbooks and other teaching and reference materials in that they come in a wide range and variety. They further emphasise that multimedia is suitable for presenting stories to students for it facilitates learning and enjoyment of stories. Today, besides traditional books, computers provide a new means of presenting literature to children. Besides, greater demands are being placed on education systems at all levels to produce citizens who can apply knowledge in new domains and different situations. With the gradual increase in the integration of computer and multimedia technology in educational activities, there is a need to consider not only the unique opportunities they bring to learning and learners but also the benefits that may be derived from their use.

LITERATURE REVIEW

Introduction

The place of literature in language teaching and learning has time and again been viewed differently across the curriculum. It is, therefore, important to understand the true nature of what literature is and its function in different settings. Sidhu, Chan & Kaur (2010) defined literature as an expression of life through the medium of language and in the ESL classroom and it is often seen as an authentic means of learning the target language. The word ‘literature’ is derived from Latin, where it signified (a) writing ; (b) grammar; and (c) wide reading, erudition or what might now be described as ‘cultural literacy' Hirsch (1987), this last meaning implying a broadly accepted notion of normative value or a canon of literature. Chitravelu, Sithamparam and Teh (2005) cited that literature is an art created by man. Experiences and feelings are used to imaginatively record, explain, explore and shape. From the experiences and feelings, which the writer selects, he develops a structure or form which could be a story, poem, or play and uses literary devices such as rhythm, rhyme, and metaphor so that the reader receives a message which is full of meaning. Lazar (1993)
defined literature as feelings and thoughts in black and white. It is a language to evoke a personal response in the reader or listener. He further said that literature also means:

“......to meet a lot of people, to know other different points of views, ideas, thoughts, minds.......to know ourselves better”.

Literature and language learning and teaching

Literature is said to be fundamentally a study of language and literature is language in use and cannot be separated from language (Widdowson, 1985). A number of other researchers like Collie & Slater (1987), Carter & Long (1991b), and McRae (1991) pointed out that learners often read a literary text to enjoy a good story and the desire to go on reading despite linguistic difficulties motivates them to read on.

Literature can be used to teach language through interesting activities such as brainstorming, role playing, word association, situational scenes, and prediction. In this case, teachers of literature should be able to polish up the linguistic skills and language competence of their students. By bringing literature into language classroom it will give students opportunities to express their opinions about general subjects, to involve in conflicts and act out direct responses, to deduce the meaning of words when used in different context, to develop an understanding of abstract or unfamiliar concepts and to speculate about common or exceptional issues that serve to improve both linguistic and literary competence of students.

Literature in the 21st Century

According to the Malaysia Education Blueprint (2013 – 2025), literature is taught to equip our students holistically to allow them to succeed in the 21st century. Literature is mean to develop young Malaysians who can think critically and creatively. Students of this era are more self-centered, innovative, and creative (Covey, 1992). So to think creatively and critically is the most effective mode in the education system. On the other hand, it also provides students with greater exposure to the language, for example via an expanded, compulsory literature in English module at the primary and secondary level.

Multimedia in Novel Lessons

Multimedia provides a complex multi-sensory experience in exploring our world through the presentation of information through text, graphics, images, audio and video, and there is evidence to suggest that a mixture of words and pictures increases the likelihood that people can integrate a large amount of information (Mayer, 2001). The multimedia educational software/courseware has developed the paradigms of the technological era (Ministry of Education, Bahagian Teknologi Pendidikan, 2002). There are many efforts being carried out within the Malaysian Educational landscape, to use the multimedia instructional courseware in the English Language classroom. In the case of English Language, the pilot experiment began at Form One level. The English teachers were provided with the multimedia technology and later it was gradually utilised in the literature component (Ramanair & Sagat, 2007). The supplying of multimedia technology to schools is
conceptualised as a tool that would pave towards facilitating innovations particularly in integrating and develop the skills of listening, speaking, reading and writing. As far as novel lessons are concerned, all the four skills are incorporated in the classroom and it has to reach out to the students in a simple and straightforward manner. The traditional method of teaching the novel component is still widely being practiced by teachers nationwide so there should be some kind of transformation done to it.

First and foremost a theory has been identified which is the Cognitive theory of learning which has been popularised by Richard E. Mayer (Stephen, 2012). The theory stresses that people learn more deeply from words and pictures (Mayer 2005a). Researchers have claimed that multimedia learning occurs when the human are able to build mental representations of these words and pictures (Mayer, 2005b). Therefore, the theory is supported by the ASSURE model which gives more concrete backing for the use of multimedia in the teaching and learning of the novel section among the low proficiency students. The researcher then implements the multimedia courseware in the classroom and looks into the effectiveness of it. The researcher wants to identify if the multimedia courseware used is practicable and effective in studying the novel section comparing to the traditional method. The student samples are able to use the tool in studying the novel in a more interactive and enjoyable manner because the activities are more into interactive games. Other than the students, the teachers are able to use the multimedia tool in their teaching because the content has been simplified from the novel textbook. From that aspect, the focus has been narrowed down to the low proficiency students in rural schools. This will help them in comprehending the novel text in a more sophisticated manner.

METHODOLOGY

Population and Sample

A purposive sampling is used whereby the researcher intentionally selects the individual and sites to study or apprehend the central occurrence of the research. In this matter, a homogeneous sampling will be practiced because the researcher purposefully samples individuals or sites based on membership in a subgroup that has significant characteristics. The research will occupy five rural schools in the state of Perak in Malaysia with approximately 5 to 6 samples from each school. The purpose of choosing these five schools are because of their location and the data collected could be generalized to the whole population.

Survey Instruments

The present study will employ a Qualitative Design supported by survey questionnaires in which it involves a narrative approach. The instruments, which will be used to collect the data, are an observation of classroom discourse, interviews, survey questionnaires and the multimedia tool. This is an appropriate design for the study because the goal of the study is to explore and describe whether the students are beneficial in using the multimedia courseware in the studying of the novel in the literature classroom.
Multimedia Courseware Programming

The researcher adopts the ADDIE Model by Steven J. McGriff (Dick, W. & Carey, L., 1996) to develop the courseware.

![ADDIE Model Diagram](image)

The ADDIE instructional design model is traditionally used by instructional designers and training developers in the universal process. It subsists of five cyclical phases which are Analysis, Design, Development, Implementation, and Evaluation. These five processes represent a productive, flexible guideline for interactive multimedia courseware. In programming the multimedia courseware, the instructional designer has to go through all these stages in order to have a complete design which is compatibility in the end users device.

CONCLUSION

In order to gain a better teaching and learning environment particularly for the low proficiency students in rural schools, the multimedia application could be utilised and upgraded to the standard of our Malaysian School Literature programme and promote its' usage to any rural school as a pilot project. The Ministry of Education (MOE) can later look into the beneficial of its usage for the literature programme in general and novel section in specific. The Curriculum Development Centre (CDC) can use it as part of its project to enhance the teaching and learning novels in rural schools.

Even though there are many coursewares, softwares, and online apps available in the education market but this particular multimedia application is meant for the rural students’ needs with simple instructions, user-friendly options, more animated graphics, non-internet requirement and higher order thinking skills questions (HOTS).
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ABSTRAK

Kajian ini dijalankan untuk mengenal pasti kesediaan profesionalisme dalam kalangan guru pelatih semasa menjalani praktikum di sekolah-sekolah. Kesediaan profesionalisme guru pelatih dilihat dari tujuh aspek iaitu perancangan pengajaran; pelaksanaan proses pengajaran dan pembelajaran; pelaksanaan pentaksiran berasaskan sekolah; pengurusan pelajar; kokurikulum; penggunaan teknologi maklumat dan komunikasi; dan sosial. Selain daripada itu, kerjasama dan sokongan yang diterima oleh guru pelatih sepanjang menjalani praktikum juga dikaji. Kajian ini menggunakan reka bentuk kajian tinjauan yang melibatkan sampel dalam calangan guru pelatih yang telah menjalani praktikum di sekolah-sekolah. Pelaksanaan kajian melibatkan dua fasa. Dalam fasa pertama, soal selidik telah digunakan untuk mengumpul data daripada sampel yang dipilih. Sejumlah 600 sampel terlibat dalam fasa pertama. Dalam fasa kedua, sesi temu bual telah diadakan dengan lapan orang guru pelatih berdasarkan protocol temubual yang telah disediakan. Dapatkan kajian menunjukkan kesediaan profesionalisme guru pelatih dari aspek-aspek perancangan pengajaran; pelaksanaan proses pengajaran dan pembelajaran; pelaksanaan pentaksiran berasaskan sekolah; dan pengurusan pelajar adalah sederhana. Kesediaan profesionalisme guru pelatih dari aspek-aspek kokurikulum; penggunaan teknologi maklumat dan komunikasi; dan sosial adalah tinggi. Kerjasama dan sokongan yang diterima oleh guru pelatih sepanjang menjalani praktikum juga adalah tinggi. Implikasi ke atas guru pelatih dan pensyarah dibincangkan.

Kata Kunci: guru pelatih, praktikum, profesionalisme.

Pengenalan

Kemajuan dan kejayaan sesebuah negara amat bergantung kepada rakyatnya. Tidak dinafikan modal insan merupakan aset penting yang perlu dicorakkan bagi memastikan matlamat jangka panjang negara mampu dicapai. Dalam usaha membangunkan modal insan negara, guru memainkan peranan utama dalam mendidik generasi masa hadapan di peringkat sekolah. Justeru, kualiti guru perlulah dipantau sejak dari awal lagi. Dalam sesuatu program latihan guru, pemerolehan ilmu pengetahuan semata-mata adalah tidak memadai;
bakal guru perlu berterampilan serta mengamalkan nilai-nilai murni yang diterima masyarakat. Di Malaysia, hal ini ditegaskan dalam Falsafah Pendidikan Guru (FPG) yang menegaskan ciri-ciri guru iaitu berperkerti mulia, berpandangan progresif dan saintifik, bersedia menjunjung aspirasi negara serta menyanyung warisan kebudayaan negara, menjamin perkembangan individu dan memelihara suatu masyarakat yang bersatu padu, demokratik, progresif dan berdisiplin (Kementerian Pelajaran Malaysia (KPM), 2012a).

Pernyataan Masalah

Secara umumnya, seseorang bakal guru dikehendaki mengikuti kurikulum latihan perguruan yang merangkumi tiga komponen iaitu komponen akademik, komponen ikhtisas dan komponen perkembangan diri. Di bawah komponen ikhtisas, bakal guru diberi pendedahan secara teori dan amali iaitu melalui penawaran kursus-kursus profesional pendidikan dan latihan mengajar atau praktikum. Sepanjang tempoh praktikum, selain berpeluang untuk mempraktikkan ilmu yang dipelajari di bilik-bilik kuliah, guru pelatih dapat mengembangkan profesionalisme dan potensi diri sebagai pendidik melalui pengalaman langsung dalam persekitaran sekolah yang tidak dapat diperoleh melalui pembacaan atau simulasi.


Kajian-kajian terdahulu menunjukkan terdapat aspek-aspek yang perlu dipertingkatkan dalam kalangan guru pelatih lantaran belum mencapai ke tahap yang cemerlang (Kamarulzaman Kamaruddin, Che Anuar Che Abdullah & Mohd Noor Idris, 2014; Misnan Jemali, Mazda Marzuki, Azmil Hashim & Ahmad Yunus Kasim, 2014; Nor’Ain Mohd Tajudin, Faeiza Samat & Zamzana Zamzamir, 2002; Omar Hisham Mohd Baharin, 2005). Dalam usaha melahirkan guru permulaan yang cemerlang adalah penting program latihan
perguruan yang berkualiti disediakan. Bagi menjamin hal ini, kajian perlu dilaksanakan dari semasa ke semasa bagi menilai kesediaan, kekuatan, kelemahan dan masalah-masalah yang dihadapi oleh guru pelatih sepanjang tempoh menjalani praktikum. Program-program pengisian dalam latihan perguruan boleh dirancang agar dapat membantu guru pelatih bersedia menjadi guru permuluan yang cemerlang. Justeru, kajian ini dilaksanakan bagi menilai kesediaan guru pelatih serta kerjasama dan sokongan yang diterima semasa menjalani praktikum di sekolah-sekolah.

Objektif Kajian

Objektif kajian adalah seperti berikut:

a. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek perancangan pengajaran.

b. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek pelaksanaan proses pengajaran dan pembelajaran.

c. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek pelaksanaan pentaksiran berasaskan sekolah.

d. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek pengurusan pelajar.

e. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek kokurikulum.

f. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek penggunaan teknologi maklumat dan komunikasi.

g. Untuk menilai kesediaan profesionalisme guru pelatih dari aspek sosial.

h. Untuk mengenal pasti kerjasama dan sokongan yang diterima oleh guru pelatih sepanjang menjalani praktikum.

Tinjauan Literatur

Dalam melaksanakan tugas untuk mendidik generasi masa hadapan, tugas dan tanggungjawab adalah mencabar kerana guru bukan sahaja perlu berkemampuan mengajar di bilik-bilik darjah tetapi guru juga perlu berketerampilan dalam pelbagai kemahiran yang diperlukan dalam melaksanakan tugas. Kajian Norila Md Salleh (2006) berkaitan pandangan guru permuluan yang merangkumi kemampuan kursus dari segi membina kemahiran berfikir aras tinggi; kemahiran kejayaan akademik asas; pengetahuan dan kemahiran disiplin khusus; bidang kemanusiaan dan nilai akademik; persediaan kerja dan kerjaya; dan pembentukan peribadi mendapati guru permuluan mempunyai persepsi yang positif terhadap matlamat pengajaran sepanjang mereka mengikuti pengajian pra perkhidmatan. Tidak dinafikan pengalaman melalui latihan mengajar merupakan pengalaman praktik sebenar dalam pembangunan profesional bakal guru. Aspek-aspek penting yang perlu diberi
perhatian dalam pembangunan profesional termasuklah perancangan pengajaran; pelaksanaan proses pengajaran dan pembelajaran; pelaksanaan pentaksiran berasaskan sekolah; pengurusan pelajar; kokurikulum; penggunaan teknologi maklumat dan komunikasi; dan sosial.

**Perancangan Pengajaran**


Dengan Surat Pekeliling Ikhtisas ini, berkuatkuasa kan pada tarikh ia dikeluarkan, Rekod Pengajaran dan Pembelajaran hendaklah mengandungi hanya dua unsur sahaja, iaitu (i) Rancangan Pelajaran Tahunan, dan (ii) Rancangan Pengajaran Harian.


**Pelaksanaan Proses Pengajaran Dan Pembelajaran**

Bagi memastikan guru berupaya menyampaikan isi kandungan mata pelajaran dengan berkesan, penguasaan pengetahuan kandungan sahaja tidak memadai. Guru perlu menguasai pengetahuan pedagogi kandungan mata pelajaran yang berkaitan agar berjaya melaksanakan perancangan pengajaran dengan berkesan serta merangsang kemahiran berfikir aras tinggi dalam kalangan pelajar. Dalam program latihan guru, pendedahan berkaitan kemahiran pelaksanaan proses pengajaran dan pembelajaran dilaksanakan melalui pengajaran mikro dan pengajaran makro.

Semasa set induksi, guru boleh merangsang minda pelajar dan naluri ingin tahu menggunakan pengelola awal (*advance organizer*) melalui aktiviti-aktiviti seperti mengemukakan soalan, menunjukkan suatu situasi melalui gambar, rajah atau tayangan video, dan sebagainya. Setelah berjaya menarik tumpuan pelajar, baharulah guru boleh meneruskan langkah-langkah pengajaran yang telah dirancang. Komunikasi yang berkesan adalah salah satu komponen penting bagi memastikan guru dapat melaksanakan proses...
pengajaran dan pembelajaran dengan jayanya. Penerangan guru hendaklah jelas dengan menggunakan bahasa yang sesuai dengan peringkat umur pelajar. Guru hendaklah bijak menggerakkan pelajar-pelajar untuk terlibat dalam aktiviti pembelajaran. Aktiviti hands-on dan aktiviti berkumpulan adalah amat digalakkan kerana dapat membina keyakinan diri, semangat kerjasama, sikap toleransi dan menghasilkan proses pengajaran dan pembelajaran yang berkesan serta berpusatkan pelajar.


Pelaksanaan Pentaksiran Berasaskan Sekolah

Salah satu tugas guru ialah melaksanakan pentaksiran bagi menilai perkembangan dan kemajuan pelajar-pelajarnya. Moore (2001) menegaskan “All teachers must evaluate in order to determine where students are with respect to targeted learning objectives” (hal. 255). Kaedah penilaian dalam sistem pendidikan seringkali melalui proses perubahan. Penilaian yang berdasarkan pencapaian dalam peperiksaan awam merupakan penilaian sumatif yang dilaksanakan apabila Malaysia melaksanakan kurikulum kebangsaan setelah mencapai kemerdekaan. Namun, kaedah penilaian ini telah beransur-ansur mengalami penambahbaikan dengan peralihan ke arah sistem pentaksiran yang bersifat holistik; melibatkan peperiksaan pusat dan pentaksiran berasaskan sekolah.
Sistem pentaksiran yang diamalkan di Malaysia berfungsi sebagai petunjuk kualiti pendidikan negara. Pentaksiran yang dijalankan bertujuan mendapatkan maklumat tentang tahap penguasaan murid dalam pembelajaran dan membantu murid memperbaiki pembelajarannya melalui maklumat yang diperoleh (hal. 35).

(KPM, 2012a)

Di sekolah menengah, Pentaksiran Berasaskan Sekolah (PBS) diperkenalkan secara berperingkat mulai tahun 2012 ke atas pelajar-pelajar Tingkatan 1. PBS merupakan bentuk penilaian holistik yang merangkumi aspek akademik dan bukan akademik. Namun begitu, PBS bukanlah perkara baru kerana penilaian dalam Pentaksiran Kerja Amali (PEKA) Sains yang merangkumi mata pelajaran Fizik, Kimia, Biologi, Sains Tambahan, Sains Penilaian Menengah Rendah (PMR) dan Sains Sijil Pelajaran Malaysia (SPM) adalah berdasarkan PBS. Begitu juga dalam pelaksanaan Pentaksiran Lisan Berasaskan Sekolah (PLBS) dan penilaian kerja kursus bagi mata pelajaran-mata pelajaran Kemahiran Hidup Bersepadu, Sejarah dan Geografi di peringkat PMR yang mana penilaian adalah berdasarkan folio dan projek pelajar.

Pihak sekolah bertanggungjawab untuk merancang dan melaksanakan PBS. Sebagai garis panduan guru, kriteria penilaian disediakan oleh Lembaga Peperiksaan Malaysia menggunakan Sistem Pengredan Berdasarkan Kriteria yang merupakan rubrik penskoran bagi membolehkan penilaian yang setara dalam kalangan guru yang berbeza. PBS dilaksanakan secara berterusan melibatkan semua mata pelajaran. Setiap guru perlu menyediakan instrumen PBS bagi menaksir pencapaian pelajar-pelajarnya. Hasil kerja pelajar yang dinamakan sebagai evidens ditaksir berdasarkan deskriptor yang telah ditetapkan.

Pengurusan Pelajar

Di bilik darjah, guru berperanan sebagai pemimpin. Oleh itu, guru seharusnya berupaya mentadbir dan mengurus bilik darjah serta pelajar dengan baik dan berkesan. Pengurusan pelajar yang baik berkait rapat dengan pengurusan bilik darjah yang berkualiti. Abd Rahman Abd Aziz (2005) menegaskan “Pengurusan bilik darjah yang bermutu dan berjaya melibatkan bukan sahaja tindak balas yang berkesan apabila timbulnya sesuatu masalah tetapi yang lebih utama ialah tindakan menyedia suasana yang kondusif agar sesuatu masalah tidak timbul” (hal.91).

Keupayaan menangani masalah yang berlaku dalam bilik darjah adalah amat penting bagi memastikan suasana pembelajaran yang kondusif. Hal ini menuntut guru mempunyai ilmu yang luas, pelbagai dan terkini; tidak terbatas kepada ilmu dalam bidang pengkhususannya. Abd Rahim Abd Rashid (2000) berpendapat, Guru-guru juga perlu mempunyai pengetahuan yang kemas kini (up-to-date) dalam bidang pendidikan, khususnya dalam aspek-aspek kaedah mengajar, perancangan penggunaan sumber dan aktiviti murid, menangani kelemahan murid dan meningkat kemahiran dan cara belajar, penggunaan teknologi maklumat, pengetahuan dalam pengurusan bilik darjah, pengetahuan mengenai penilaian pembelajaran, pengetahuan mengenai teori-teori terkini dan sebagainya (hal. 9).
Oleh itu, keupayaan guru untuk mengurus pelajar dengan baik adalah penting bagi memastikan disiplin terkawal dan pelajar tidak terabai.


*A teacher who does not understand the ways in which different children learn differently, who does not have a sense of scaffolding of a field of knowledge or how to evaluate students’ prior knowledge, and who does not have a wide repertoire of alternative representations, explanations, and modes of teaching is not going to be equipped to help all children learn”* (hal. 21).

Nabilah Abdullah dan Nurshamsida Md Shansuddin (2011) mendapati guru novis menghadapi masalah berkaitan kawalan pelajar iaitu gagal mengawal pelajar yang bermasalah dan pelajar yang tidak berdisiplin ketika guru mengajar. Tidak dapat dinafikan, di dalam bilik darjah terdapat berbagai ragam tingkah laku pelajar. Kadang kala tingkah laku pelajar bersifat mengganggu yang menjemaskan pelaksanaan proses pengajaran dan pembelajaran seperti tidak memberi tumpuan di dalam kelas, tidak mengikut arahan arahan guru, mengganggu pelajar lain, membuat bising, tidak menyiapkan kerja rumah, dan sebagainya. Justeru, guru perlu bijak mengatasi halangan bagi memastikan proses pengajaran dan pembelajaran dapat berlangsung dengan lancar.


**Kokurikulum**

Merujuk kepada Peraturan Pendidikan 1997, kokurikulum bermaksud apa-apa kegiatan yang dirancang lanjutan daripada proses pengajaran dan pembelajaran dalam bilik darjah yang memberikan pelajar peluang untuk menambah, mengukuh dan mengamalkan pengetahuan, kemahiran dan nilai yang dipelajari di bilik darjah. Peranan kokurikulum dalam kurikulum pendidikan di Malaysia telah disentuh dalam sub peraturan 3(3), Peraturan Pendidikan 1997 tentang kurikulum kebangsaan iaitu
Kurikulum Kebangsaan ialah satu program pendidikan yang termasuk kurikulum dan kegiatan kokurikulum yang merangkumi semua pengetahuan, kemahiran, norma, nilai, unsur kebudayaan dan kepercayaan untuk membantu perkembangan seorang murid dengan sepenuhnya dari segi jasmani, rohani, mental dan emosi serta untuk menanam dan mempertingkatkan nilai moral yang diingini dan untuk menyampaikan pengetahuan (hal. 4).

Penglibatan pelajar-pelajar dalam aktiviti kokurikulum adalah penting. Surat Pekeliling Ikhtisas Bil. 2/2007 juga telah menjelaskan bahawa kegiatan kokurikulum adalah merupakan lanjutan daripada proses pengajaran dan pembelajaran yang telah dilaksanakan dalam bilik darjah. Perlu difahami bahawa aktiviti kokurikulum yang dilaksanakan di sekolah bertujuan untuk mempelbagaikan pengetahuan dan pengalaman dalam kalangan pelajar agar dapat memperkembangkan intelek, minat, bakat, jasmani dan rohani bagi membangunkan kepimpinan pelajar, membentuk nilai estetika, jati diri dan nilai sosial yang positif (KPM, 2012a). Pelaksanaan aktiviti kokurikulum adalah sebagai landasan bagi membuka peluang kepada pelajar untuk menambah, mengukuh dan mengamalkan pengetahuan, kemahiran serta nilai yang telah dipelajari melalui proses pengajaran dan pembelajaran di bilik darjah. Justeru, penglibatan dalam aktiviti kokurikulum mampu memantapkan jati diri serta pembangunan modal insan yang cemerlang dalam diri pelajar agar sedia bersaing dalam dunia sebenar kelak.

Penggunaan Teknologi Maklumat Dan Komunikasi (TMK)


KPM (2012a) menegaskan bahawa TMK dalam pendidikan adalah untuk melahirkan modal insan yang berkeupayaan, berinovasi dan meneroka bidang baru agar mampu
menjana kekayaan negara di masa hadapan. KPM (2012a) telah menggariskan enam tindakan dalam strategi pelaksanaannya iaitu

- Menyediakan infrastruktur dan perkakasan TMK yang mencukupi dan terkini untuk semua peringkat institusi pendidikan;
- Memperluas mata pelajaran TMK di semua institusi pendidikan;
- Membudayakan penggunaan TMK secara kreatif dan inovatif dalam pengajaran dan pembelajaran bagi semua mata pelajaran;
- Meningkatkan pengetahuan dan kemahiran reka bentuk pengajaran bagi pengintegrasian TMK dalam pengajaran dan pembelajaran;
- Membangunkan dan memperluas bahan pengajaran dan pembelajaran dalam bentuk digital dan menggalakkan perkongsian kolaboratif kelompok pakar dalam pembangunan bahan sumber digital; dan
- Memastikan infrastruktur TMK dan semua aplikasi KPM dalam keadaan tersedia dan berfungsi secara optimum.

Masalah yang mungkin dihadapi oleh guru pelatih dalam usaha mengintegrasikan TMK dalam proses pengajaran dan pembelajaran bukanlah sesuatu yang luar biasa. Terdapat sekolah-sekolah yang mempunyai prasarana TMK yang agak terbatas. Roblyer, Edwards dan Havriluk (1997) menyatakan,

*One of the biggest challenge that teachers face in integrating technology successfully is how to stimulate class time so that student use technology effectively and efficiently. Schools rarely have enough equipment to seat at a standalone computer or technology station* (hal. 258).

Haruslah difahami bahawa penggunaan teknologi dalam proses pengajaran dan pembelajaran di bilik darjah tidaklah secara otomatik meningkatkan pembelajaran pelajar (Moore, 2001). Perancangan yang rapi adalah amat perlu agar penggunaan TMK benar-benar mampu menjadikan proses pengajaran dan pembelajaran yang dinamis serta mendatangkan manfaat kepada setiap pelajar dari segi minat dan motivasi.

**Sosial**

Sosialisasi adalah satu proses penting yang perlu dilalui oleh guru pelatih semasa menjalani praktikum di sekolah. Guru pelatih perlu mengadaptasi diri dalam suasana dan persekitaran sekolah di samping guru, staf dan pelbagai ragam pelajar. Tugas sebagai pendidik memerlukan seseorang guru berinteraksi dengan pelbagai pihak termasuklah para pentadbir iaitu pengetua, penolong-penolong kanan dan penyelia petang; pegawai-pegawai di kementerian pelajaran, jabatan pelajaran negeri dan pejabat pelajaran daerah; rakan sejawatan; staf-staf di sekolah; pelajar-pelajar; ibu bapa pelajar; dan ahli komuniti. Hal ini menuntut seseorang guru memiliki kemahiran komunikasi interpersonal yang merupakan salah satu kemahiran bersosial yang perlu dipelajari sejak menjadi guru pelatih. Semasa

Kerjasama Dan Sokongan Yang Diterima Oleh Guru Pelatih

Program latihan mengajar atau praktikum merupakan satu landasan bagi bakal guru mempraktikkan ilmu yang telah diperoleh di bilik-bilik kuliah dalam suasana bilik darjah sebenar. Guru-guru pelatih bukan saja belajar untuk mempraktikkan ilmu yang telah dipelajari malahan perlu menyesuaikan diri dalam dunia pekerjaan sebenar. Dalam hal ini, kerjasama dan sokongan dari pelbagai pihak amat diperlukan bagi membimbing bakal guru melaksanakan tugasnya dengan betul dan cekap agar di akhir program praktikum bakal guru memperoleh pengalaman, kemahiran dan keyakinan diri yang tinggi serta bersedia memulakan tugas sebagai guru sebenar.

Penerimaan pihak sekolah adalah amat penting bagi memberi ruang kepada guru pelatih menjalani praktikum. Penerimaan oleh pentadbir sekolah, guru-guru, staf dan pelajar mampu mewujudkan rasa kesepakatan kerana guru pelatih merasai bahawa mereka adalah sebahagian daripada masyarakat sekolah tempat mereka menjalani praktikum. Tidak dinafi, guru pelatih yang menjalani praktikum kurang pengalaman tentang hal-hal dunia pendidikan. Pengalaman menjadi pelajar sekolah suatu ketika dahulu tentunya berbeza dengan peranan sebagai guru. Oleh itu, guru-guru pelatih memerlukan bimbingan, panduan dan tunjuk ajar daripada guru-guru yang sudah berpengalaman. Hakikatnya selama tempoh menjalani praktikum memberi peluang kepada guru pelatih membina keserasian dengan dunia pendidikan serta membina sebarang mungkin pengalaman yang berguna dan boleh dimanfaatkan apabila menceburkan diri dalam kerjaya perguruan sebenar kelak.

Peranan Guru Pembimbing

Sepanjang guru pelatih menjalani program praktikum di sekolah, guru pelatih adalah tertakluk dengan peraturan sekolah berkenaan. Oleh kerana guru pelatih masih belum mahir sepenuhnya dalam melaksanakan tugas serta perlu mengadaptasi dengan suasana sekolah di mana guru pelatih ditempatkan, maka guru pembimbing dilantik untuk membimbing guru pelatih. Guru pembimbing berperanan sebagai pakar rujuk kepada guru pelatih bukan saja dalam hal-hal berkaitan dengan proses pengajaran dan pembelajaran di bilik darjah tetapi juga berkaitan pengurusan pelajar sama ada di bilik darjah mahupun dalam aktiviti kokurikulum dan aktiviti sekolah yang lain. Antara kriteria kelayakan untuk dilantik sebagai guru pembimbing seperti yang ditetapkan oleh Pusat Latihan Mengajar dan
Industri Universiti Pendidikan Sultan Idris ialah mempunyai kelayak ikhtisas pendidikan dan telah disahkan dalam jawatan; dan mempunyai pengalaman mengajar mata pelajaran atau bidang yang berkenaan sejak kurang-kurangnya tiga tahun (Buku Panduan Latihan Mengajar; n.d.). Oleh itu, semasa latihan mengajar, guru pelatih sewajarnya mengambil peluang untuk menimba ilmu dan kemahiran melalui bimbingan guru pembimbing dalam usaha untuk meningkatkan amalan profesionalisme sebagai guru.

Peranan sebagai guru pembimbing dalam program latihan mengajar bukanlah suatu tugas yang mudah. Sebagai orang yang berpengalaman dalam pendidikan, guru pembimbing seharusnya mampu membinging guru pelatih dalam pembentukan sikap dan minat positif terhadap bidang pendidikan yang mencabar. Bimbingan bertarikh dari guru pembimbing juga diharap dapat meyakinkan bakal guru dalam menjalankan tugas sebagai pendidik serta menghadapi suasana sebenar di sekolah di samping menangani isu dan masalah yang muncul secara profesional, bijaksana dan berhemah. Adalah diharapkan perkongsian pengalaman guru pembimbing oleh guru pelatih diharapkan akan dapat memperkembarkan personaliti bakal guru yang berkualiti dan komited serta cemerlang dalam setiap aspek yang dibangunkan secara bersepadu.

Metodologi

Kajian ini menggunakan reka bentuk kajian tinjauan yang melibatkan dua fasa iaitu Fasa 1 dan Fasa 2. Dalam Fasa 1, soal selidik digunakan untuk mengumpul data daripada guru-guru pelatih yang telah menjalani tempoh praktikum di sekolah-sekolah Seramai 600 orang sampel telah terlibat sebagai responden. Dalam Fasa 2 melibatkan sesi temu bual dengan guru-guru pelatih terpilih yang telah menjalani latihan mengajar.

Soal selidik dan protokol temu bual yang dibina merangkumi tujuh aspek iaitu:

- Perancangan Pengajaran
- Pelaksanaan Proses Pengajaran Dan Pembelajaran
- Pelaksanaan Pentaksiran Berasaskan Sekolah
- Pengurusan Pelajar
- Kokurikulum
- Penggunaan teknologi maklumat dan komunikasi
- Sosial

Di samping itu, di bahagian akhir soal selidik dan protokol temu bual adalah berkaitan kerjasama dan sokongan yang diterima oleh guru pelatih sepanjang menjalani praktikum.

Soal selidik Kesediaan Profesionalisme Guru Pelatih telah dibina oleh penyelidik mengikut prosedur pembinaan item soal selidik. Soal selidik yang disediakan mengandungi dua bahagian. Bahagian A merupakan demografi responden yang meliputi jantina, program pengajian, sesi dan semester menjalani praktikum. Bahagian B merupakan soal selidik tentang kesediaan profesionalisme guru pelatih. Item-item yang dibina telah disemak oleh
pakar bagi menentukan kesahan instrumen kajian. Berdasarkan komen dan cadangan pakar, terdapat item-item yang diterima dan terdapat juga item-item diubah suai atau dikeluarkan.

Kajian rintis telah dijalankan bagi menentukan kebolehtadbiran serta kebolehpercayaan instrumen kajian. Jadual 1 menunjukkan bilangan item dan nilai pekali kebolehpercayaan α Cronbach bagi setiap aspek yang dikaji.

Jadual 1 : Bilangan Item dan Nilai Pekali Kebolehpercayaan Instrumen Kajian

<table>
<thead>
<tr>
<th>Aspek</th>
<th>Bilangan Item</th>
<th>Nilai α Cronbach</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perancangan Pengajaran</td>
<td>7</td>
<td>.668</td>
</tr>
<tr>
<td>Pelaksanaan Proses Pengajaran dan Pembelajaran</td>
<td>11</td>
<td>.740</td>
</tr>
<tr>
<td>Pelaksanaan Pentaksiran Berasaskan Sekolah</td>
<td>5</td>
<td>.663</td>
</tr>
<tr>
<td>Pengurusan Pelajar</td>
<td>8</td>
<td>.826</td>
</tr>
<tr>
<td>Kokurikulum</td>
<td>10</td>
<td>.828</td>
</tr>
<tr>
<td>Penggunaan Teknologi Maklumat dan Komunikasi</td>
<td>7</td>
<td>.807</td>
</tr>
<tr>
<td>Sosial</td>
<td>7</td>
<td>.800</td>
</tr>
<tr>
<td>Kerjasama dan Sokongan Yang Diterima</td>
<td>12</td>
<td>.890</td>
</tr>
</tbody>
</table>

Berdasarkan skala pemeringkatan empat poin yang digunakan dalam soal selidik Kesediaan Profesionalisme Guru Pelatih iaitu Sangat Tidak Setuju (1), Tidak Setuju (2), Setuju (3) dan Sangat Setuju (4), intepretasi skor min adalah seperti Jadual 2.

Jadual 2: Intepretasi Skor Min

<table>
<thead>
<tr>
<th>Nilai Min</th>
<th>Intepretasi</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.00 – 2.00</td>
<td>Rendah</td>
</tr>
<tr>
<td>2.01 – 3.00</td>
<td>Sederhana</td>
</tr>
<tr>
<td>3.01 – 4.00</td>
<td>Tinggi</td>
</tr>
</tbody>
</table>

Dalam Fasa 2, rakaman temu bual dengan setiap responden yang ditemu bual ditranskripsi bagi tujuan dianalisis.

Dapatan

Skor min dan sisihan piawai tahap setiap aspek kesediaan profesionalisme guru pelatih serta kerjasama dan sokongan yang diterima adalah seperti Jadual 3.

Jadual 3: Skor Min Dan Sisihan Piawai Tahap Kesediaan Profesionalisme Guru Pelatih

<table>
<thead>
<tr>
<th>Aspek</th>
<th>Min</th>
<th>Sisihan Piawai</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perancangan Pengajaran</td>
<td>2.4936</td>
<td>.4717</td>
</tr>
<tr>
<td>Pelaksanaan Proses Pengajaran dan Pembelajaran</td>
<td>2.8450</td>
<td>.3180</td>
</tr>
</tbody>
</table>
Dapatan menunjukkan kesediaan profesionalisme guru pelatih dari aspek perancangan pengajaran, pelaksanaan proses pengajaran dan pembelajaran, pelaksanaan pentaksiran berasaskan sekolah dan pengurusan pelajar adalah pada tahap sederhana. Manakala tahap kesediaan profesionalisme guru pelatih dari aspek kokurikulum, penggunaan teknologi maklumat dan komunikasi dan sosial adalah tinggi. Kerjasama dan sokongan yang diterima oleh guru pelatih dari pihak sekolah juga pada tahap tinggi.

Perbincangan

Perancangan Pengajaran

Guru pelatih masih berhadapan dengan masalah dalam perancangan pengajaran. Antara masalah yang dihadapi oleh guru pelatih adalah berkaitan penentuan objektif pengajaran dan pembelajaran; pengetahuan kandungan; pengetahuan pedagogi kandungan; bahan bantu mengajar; dan kaedah penilaian. Sebagai contoh,

.... waktu permulaan saya menjalani praktikum saya terlalu meletakkan objektif pembelajaran yang terlalu tinggi dan sukar untuk dicapai. Pada waktu tu saya tak dapat mengenal pasti tahap keseluruhan pelajar. .... masalah yang timbul ialah saya sukar untuk mencapai objektif pembelajaran tersebut. (GP H)

Namun begitu guru-guru pelatih berusaha mengatasi masalah yang dihadapi.

Saya mempunyai masalah dalam menentukan objektif pengajaran tapi apa yang saya buat ialah untuk mengatasi masalah ini, saya berbincang dengan guru pembimbing saya. (GP B)

Saya akan berbincang dengan guru pembimbing untuk mendapatkan penyelesaian ...... (GP D)

...... akan rujuk guru pembimbing dan juga pensyarah penyelia. (GP E)

Guru pelatih juga menghadapi masalah berkaitan pengetahuan kandungan dan pengetahuan pedagogi kandungan berkaitan mata pelajaran yang diajar.

Dari segi isi pembelajaran yang saya hadapi masalah contohnya dalam subjek perdagangan. Ada sesetengah subjek yang memerlukan penggunaan nombor .... saya ada kelemahan mengenai nombor. (GP G)
...... dalam subjek perakaunan, tajuk-tajuk yang kebelakang ni ialah tajuk-tajuk killer jadi memang ada masalah ...... (GP A)


Saya dah ada tajuk tapi nak ajarkan kepada pelajar tu macam saya fikirlah lah apa yang saya perlu buat untuk ajar kepada pelajar tu .... Kadang-kadang pelajar ini bila kita tanya dia faham tapi sebenarnya dia tak faham daripada situ saya ada jugalah masalah. Nak fikir cara untuk nak bagi pelajar tu faham dengan apa yang kita nak ajar. (GP F)

Guru pelatih mengakui kepentingan penggunaan bahan bantu mengajar dalam proses pengajaran dan pembelajaran.

Bahan bantu mengajar ni penting kerana dia memudahkan proses pengajaran dan memudahkan pemahaman pelajar tentang sesuatu yang dipelajari selain itu juga meningkatkan minat pelajar terhadap apa yang dipelajari. (GP B)

Bagi saya satu kemestian. Sebab dengan bahan bantu mengajar dapat meningkatkan lagi kefahaman pelajar. (GP F)

Walau bagaimanapun, masih terdapat guru pelatih yang mengabaikan penggunaan bahan bantu mengajar walaupun mereka sedar akan kepentingannya.

Masalah utama saya masa. Kalau satu masa, saya tidak boleh menggunakan bahan bantu mengajar yang memakan masa yang lama. Yang kedua, kewangan. Kos untuk menyediakan bbm tu banyak mengganggu emosi saya. (GP C)

Malahan ada guru pelatih yang tidak tahu apa bahan bantu mengajar yang perlu digunakan bagi sesuatu tajuk yang diajar.

...... berkaitan dengan nombor atau akaun saya tak pasti atau memang susahlah bagi saya untuk menentukan BBM apa yang sepatutnya saya guna agar penyampaian saya diterima oleh pelajar ...... (GP G)

Guru pelatih juga menghadapi masalah merancang bahan bantu mengajar berasaskan TMK.
...... di sekolah saya tu kurang kemudahan ICT. (GP B)

...... laptop atau komputer riba saya mungkin boleh bawa daripada rumah tapi untuk skrin layar tu, LCD tu saya tak mampu untuk sediakan jadi saya meminta bahan bantu tersebut daripada pihak sekolah. Sebenarnya di sekolah tersebut ada satu bilik yang memang dikhaskan untuk kegunaan tersebutlah tapi penggunaan bilik tersebut hanya dihadkan kepada kelas-kelas hadapan dan kebetulan saya memang mengajar dikelas-kelas hujung jadi pelajar-pelajar memang tak berkesempatan ...... (GP H)

Justeru, guru pelatih mencari alternatif dengan menggunakan bahan bantu mengajar konkrit.

...... saya lebih utamakan bahan bantu mengajar yang bersifat tradisional seperti kertas mahjung, kertas manila kad ...... (GP A)

...... saya menggunakan banyak kertas mahjung dengan marker untuk presentation untuk pembentangan. ...... Tidak gunakan teknologi. (GP B)

Selain daripada itu, kefahaman guru pelatih tentang penilaian objektif pengajaran masih kurang mantap.

Setiap akhir saya punya pengajaran tu saya akan buat satu sesilah macam sesi untuk soal jawab ataupun sesi macam kuiz untuk tentukan tahap kefahaman ...... (GP A)

Di akhir pdp, saya akan membuat penilaian dengan tanya beberapa soalan. (GP C)

.... selain daripada peperiksaan atau ujian, saya selalulah akan tanya kembali pada pelajar apa yang telah mereka pelajari. (GP G)

Hal ini memberi gambaran tentang kefahaman guru pelatih tentang penilaian objektif iaitu masih terhad kepada soalan-soalan yang dimukakan di akhir sesi pengajaran dan pembelajaran. Hakikatnya, pelaksanaan penilaian objektif pengajaran tidak terhad di akhir sesi pengajaran dan pembelajaran, malah boleh berlaku semasa sesi pengajaran dan pembelajaran terutama yang melibatkan kemahiran di mana penilaian boleh dilakukan semasa pelajar melaksanakan aktiviti pembelajaran.
Pelaksanaan Proses Pengajaran Dan Pembelajaran

Set induksi merupakan permulaan pengajaran yang dilakukan bagi tujuan mendapatkan fokus minda pelajar terhadap sesi pengajaran dan pembelajaran. Guru pelatih mengakui akan kepentingan set induksi. Guru pelatih juga berpendapat mereka berjaya melaksanakan set induksi yang berkesan.

*Set induksi sangat membantu kerana dia dapat memberikan gambaran awal apa yang dipelajari oleh pelajar. Yang keduaanya set induksi juga dapat menarik minat pelajar...... (GP B)*

Bagi saya set induksi ni penting sebagai langkah pengajaran, untuk permulaan pengajaran. Maknanya kalau tak ada set induksi ini, kalau kita terus mengajar, pelajar macam tak tahu apa yang guru nak sampaikan kepada mereka. (GP F)

Dalam kajian oleh Nor’Ain Mohd Tajudin et al. (2002) mendapati guru pelatih tidak mengabaikan set induksi dalam proses pengajaran dan pembelajaran walaupun kemahiran menggunakan set induksi adalah dalam lingungan memuaskan hingga baik. Hal ini menunjukkan guru pelatih sedar akan kepentingan set induksi dalam proses pengajaran dan pembelajaran sama ada untuk tujuan menarik minat, memberikan gambaran awal, membuat perkaitan dengan pengetahuan sedia ada, atau sebagai motivasi.

Terdapat sebilangan guru pelatih yang menghadapi masalah untuk melaksanakan pengajaran yang telah dirancang. Salah satu faktor ialah dari segi masa.

*Masalahnya satu, masalah masa tak cukup untuk pengajaran. Yang keduanya pelajar sering lewat ke kelas. Kelas saya kat padang selalu dan cikgu yang sebelumnya lepaskan lewat, para pelajar turun lewatlah ke padang. (GP B)*

*Saya selalu kesuntukan masa untuk melaksanakan RPH seperti yang dirancang. (GP C)*

...... kekangan masa untuk melaksanakan RPH itu di dalam kelas. (GP E)

...... contohnya satu hari tu, sekolah ada menjalankan program ataupun event jadi pelajar masuk kelas saya lambat, jadi saya terpaksa langkah set induksi. (GP G)

Lantaran itu, pengurusan masa oleh guru-guru pelatih perlu dipertingkatkan agar berupaya mengurus masa secara bijak dan berkesan. Perancangan pengajaran yang dibuat hendaklah mengambil kira tempoh masa bagi sesuatu sesi pengajaran dan pembelajaran sebagaimana yang telah ditetapkan dalam jadual waktu di samping bijak menyesuaikan pelaksanaan
rancangan pengajaran dengan aktiviti-aktiviti sedia ada di sekolah termasuk perhimpunan sekolah.

Dari segi aktiviti kumpulan, guru pelatih mengakui akan kepentingannya dan kerjasama diperoleh daripada pelajar apabila melaksanakan aktiviti kumpulan.

Penting sebab nanti ia akan memupuk nilai-nilai murni dalam diri pelajar tu. Contoh pelajar saling bekerjasama dalam satu kumpulan dan mereka juga saling membantu kawan-kawan yang kurang memahami dalam kumpulan yang sama. (GP E)

..... dalam melakukan aktiviti kumpulan ni pelajar dapat bertukar pendapat lepas tu dia dapat membantu antara satu sama lain. Bertukar pendapat kalau ada pelajar ni yang lemah, yang advance sikit yang pandai sikit akan bantu pelajar yang lemah. (GP B)

Saya membuat aktiviti berkumpulan supaya pelajar sentiasa aktif dan mengambil bahagian dalam pembelajaran. (GP D)

Dengan melaksanakan aktiviti kumpulan ini diyakini guru pelatih berusaha melaksanakan proses pengajaran dan pembelajaran yang berpusatkan pelajar di samping menerapkan nilai bekerjasama antara satu sama lain dalam kalangan pelajar.

Dari aspek penyoalan, tidak semua soalan yang hendak dikemukakan semasa sesi pengajaran dan pembelajaran telah dirancang lebih awal oleh guru pelatih.

Ada yang dirancang ada yang tidak dirancang. (GP B)

Ada yang saya telah rancang dan ada juga saya tanya secara spontan. (GP D)

Guru pelatih menunjukkan usaha mewujudkan hubungan dua hala dengan memberi peluang kepada pelajar mengemukakan soalan semasa sesi pengajaran dan pembelajaran. Guru pelatih juga berkeyakinan menjawab soalan yang dikemukakan oleh pelajar. Namun, sekitanya guru pelatih tidak dapat menjawabnya, mereka menangguhkan jawapan sehingga sesi pengajaran yang berikutnya.

Saya akan cakap yang saya akan jawab pada sesi pengajaran yang akan datang. (GP C)

Biasanya saya akan memberitahu jawapan tu pada minggu akan datang ...... (GP D)

Guru pelatih menyedari kepentingan nilai murni dan menerapkan nilai murni semasa sesi pengajaran dan pembelajaran; sama ada nilai murni yang telah dirancang dalam RPH ataupun secara spontan. Namun, terdapat guru pelatih yang keliru tentang 16 nilai murni yang perlu diterapkan dalam proses pengajaran dan pembelajaran.
Yang pertama sekali nilai murni yang cuba terapkan berfikiran secara kreatif dan kritis dalam diri pelajar. Saya ajukan soalan-soalan yang mengikut aras untuk memupuk nilai-nilai tu. (GP E)

Hakikatnya, berfikiran kritis dan kreatif tidak tersenarai sebagai nilai murni; sebaliknya salah satu kemahiran yang perlu dikembangkan dalam diri pelajar. Penerapan nilai murni merupakan elemen yang penting dan perlu diterapkan oleh guru dalam proses pengajaran dan pembelajaran bagi semua mata pelajaran. Guru hendaklah kreatif dan menggunakan peluang yang ada untuk menerapkan nilai murni sama ada secara langsung mahupun secara tidak langsung. Untuk tujuan ini, guru pelatih terlebih dahulu hendaklah jelas tentang kesemua nilai-nilai murni yang disenaraikan.

Guru pelatih memahami konsep refleksi dan mengakui kepentingan refleksi.

...... refleksi ni catatan akhir pengajaran dan ini adalah untuk penambahbaikan pengajaran pada masa akan datang...... Penulisan refleksi tu saya lakukan selepas kelas ataupun masa di bilik guru. (GP B)

Penulisan refleksi ni sangat pentinglah untuk merujuk balik apa kelemahan kita, apa yang kita tak capai semasa mengajar tu...... biasanya habis mengajar saya akan terus menulis. (GP D)

Secara umumnya, guru pelatih memahami bahawa penulisan refleksi bertujuan membantu mengenal pasti kelemahan yang berlaku dalam proses pengajaran dan pembelajaran, dan seterusnya melaksanakan penambahbaikan dalam pengajaran yang akan datang.

Pelaksanaan Pentaksiran Berasaskan Sekolah

Tahap kefahaman tentang PBS bagi kebanyakan guru pelatih masih rendah.

PBS ni saya tak berapa pasti sangat sebab saya tak terlibat ...... (GP A)

Ya.. saya faham tapi sedikitlah. (GP C)

Secara keseluruhannya saya masih kurang faham pentaksiran berasaskan sekolah ...... (GP H)

Tidak semua guru pelatih terlibat dalam melaksanakan PBS semasa praktikum yang sekaligus mengehadkan peluang untuk memahami dan melalui pengalaman melaksanakan PBS. Alasan tidak terlibat dengan PBS kerana mata pelajaran yang diajar adalah di peringkat menengah atas boleh diterima dan difahami. Namun alasan tidak terlibat dengan PBS disebabkan guru praktikum atau PBS dikendalikan oleh guru pembimbing menjadi tanda tanya; seolah-olah PBS tidak berlaku dalam proses pengajaran dan pembelajaran.

Saya tak terlibat dengan PBS kerana guru-guru lama yang melaksanakan PBS tu so dia tak bagi kat sayalah untuk laksanakan PBS tu. (GP B)

Semasa saya praktikal, pengetua saya tak bagi saya terlibat, kalau cikgu praktikal dia tak bagi terlibat dengan PBS, PT3 semua itu. (GP F)

Dapatan kajian ini memberi gambaran adanya kepincangan berkaitan kefahaman dan pelaksanaan PBS di sekolah. Hal ini terbukti dengan dapatan kajian Eftah Moh @ Abdullah dan Izazol Idris (2014) yang melibatkan responden dalam kalangan guru-guru di sekolah, yang mana mendapati kefahaman guru tentang pentaksiran sekolah berada pada tahap lemah. Ternyata bahawa masalah pemahaman berkaitan konsep PBS bukan sahaja berlaku dalam kalangan guru pelatih malahan berlaku dalam kalangan guru berpengalaman yang ada di sekolah.

Selain daripada itu, dapatan kajian juga menunjukkan terdapat guru pelatih yang masih kurang jelas tentang JSU. Hal ini berdasarkan hasil temu bual dengan guru pelatih,

Tentang Jadual Spesifikasi Ujian sebenarnya ada juga, saya pernah dengar. Masa saya praktikal tu, masa tu tak ditekankan tentang Jadual Spesifikasi Ujian, dia lebih kepada guru pembimbing saya yang akan buat semua ni. Dia tak minta tolong guru praktikal. (GP A)

Terdapat juga guru pelatih yang kurang jelas tentang kepentingannya. Contohnya

JSU ni menghuraikan beberapa aspek yang dapat diukur serta memberikan panduan untuk mendapatkan satu sampel atau item soalan tulah. Kepentingan JSU ni, ia dibina secara rapi atau tersusun dan terancanglah supaya soalan yang disediakan tu tidak bocor dan menjamin kesahan dan kebolehpercayaan ujian tu. (GP D)

Pendedahan berkaitan pentaksiran sekolah kepada bakal guru semasa latihan pra perkhidmatan wajar dipertingkat lagi bagi memastikan kefahaman dan kesediaan untuk melaksanakannya apabila berada di lapangan. Setiap perubahan dan perkembangan berkaitan sistem pentaksiran seharusnya diikuti oleh guru pelatih. Setiap guru semestinya faham dan mampu melaksanakan PBS di bilik darjah kerana pentaksiran yang dilakukan adalah sebahagian daripada proses pengajaran dan pembelajaran. Matlamat pelaksanaan PBS sebagai menyediakan pentaksiran holistik, seimbang dan adil untuk perkembangan pelbagai potensi individu ke arah kemenjadian dan kebolehpasaran insan seharusnya dihayati oleh semua bakal guru.
Pengurusan Pelajar

Tahap kesediaan profesionalisme guru pelatih dari aspek pengurusan pelajar didapati sederhana. Salah satu masalah yang dihadapi oleh guru pelatih ialah dari segi kawalan kelas. Guru pelatih juga berhadapan dengan masalah menguruskan pelajar yang bermasalah pembelajaran dan kelas-kelas yang besar iaitu yang bilangan pelajarnya melebihi 40 orang.

.... terutamanya pelajar datang lewat ke kelas .... disebabkan guru sebelum itu lepaskan pelajar lewat, lepas tu pelajar bising dalam kelas sebab pelajar yang saya ajar ni satu kelas tu dalam 45 orang. .... pelajar ada yang tak bawa baju sukan, yang tak lengkap dengan pakaian sukan dia untuk main, ada yang main dengan baju sekolah. (GP A)

Antaranya pelajar tidur di dalam kelas, pelajar bersembang dengan rakan-rakan mereka, pelajar hilang fokus sewaktu pengajaran dan pembelajaran dijalankan. (GP E)

Dapatan kajian ini selari dengan dapatan kajian oleh Misnan Jemali et al. (2014) melibatkan guru pelatih dalam pengkhususan Geografi dan Pendidikan Islam yang mendapati salah satu masalah yang dihadapi oleh guru pelatih ialah masalah kawalan kelas.

Beberapa tindakan telah diambil oleh guru pelatih bagi mengatasi masalah yang belaku di dalam kelas.

..... kalau pelajar tak patuh arahan saya, saya akan panggil ke depan, duduk dekat dengan saya, dia duduk dekat dengan saya tu dia akan senyap sebabnya dia mungkin malu sebab mata tertumpu pada dia. (GP B)

Kalau pelajar tu tak patuh arahan saya, saya bagi warning untuk kali pertama. Kalau masih lagi dengan tindakan yang sama mereka buat, saya akan ambil tindakan. Biasanya saya akan denda dia orang macam saya suruh dia orang berdiri. Nanti masa habis, baru saya suruh duduk. (GP F)

Walau apapun tindakan guru pelatih untuk mengatasi masalah disiplin yang berlaku di dalam kelas, ternyata tidak ada yang menggunakan rotan sebagai langkah penyelesaian.

.... kalau dia orang tak boleh siapkan kerja saya akan suruh mereka buat kat depan atas lantai, dia orang akan buat kerja tu sampai siap. Rotan tak digalakkan. (GP A)

Terdapat juga guru pelatih yang bertindak mengikut situasi.

Selalunya kalau pelajar tingkatan 1 saya akan tegur dengan tegas. Kalau pelajar tingkatan 3 atau 4 saya akan lebih berbual secara kawan.
Maksudnya kita menegur dia secara lembut lah tidak perlu ketegasan. (GP G)

Masih terdapat sebilangan guru pelatih tidak yakin mengajar murid-murid dalam kategori kelas cemerlang; sebaliknya memilih untuk mengajar kelas-kelas sederhana atau lemah dengan alasan tertentu.

Pilihan saya, saya akan mengajar kelas sederhana. Sederhana sebabnya kelas dia senang nak dikawal ...... (GP B)

Sederhana. Pelajar yang berada di kelas sederhana ini dia orang punya penerimaan terhadapilmu yang kita berikan ini senang dan mudah. Mereka takkan banyak komen tentang ilmu yang kita bagi. (GP E)

Lemah. Kebanyakan daripada mereka bermasalah sebenarnya. Jadi, saya tertarik nak tolong. (GP C)

Saya suka pilih pelajar yang lemah. ...... Kalau yang lemah ni kadang-kadang kita memang akan n ak as. Walaupun sedikit kita dah rasa puas hati. Kadang-kadang kita nak tahu kenapa dorian sangat dan itulah yang menaikkan minat kita untuk mengajar”. (GP G)

Oleh yang demikian, pendedahan tentang aspek pengurusan pelajar kepada guru pelatih hendaklah dilakukan dengan lebih intensif lagi agar bakal guru lebih bersedia dan yakin untuk mengurusan pelajar. Pertama, sebagai langkah pencegahan iaitu bagi memastikan guru pelatih memperoleh ilmu yang membolehkan guru pelatih kreatif dalam pengajarannya sehingga pelajar tidak berpeluang menimbulkan masalah. Kedua, bagi memastikan tindakan yang diambil oleh guru pelatih terhadap pelajar yang bermasalah tidak menimbulkan isu yang lain. Contohnya, meminta pelajar menyiapkan kerja di atas lantai dibimbing boleh menimbulkan isu baru.Tidak dinafikan terdapat pelbagai ragam yang ditunjukkan oleh pelajar setiap hari. Walau apapun perangai dan tingkah laku pelajar, sebagai guru tindakan yang diambil oleh guru pelatih terhadap pelajar yang bermasalah tidak sepatutnya bertentangan dengan mana-mana garis panduan, peraturan, atau akta.

Kokurikulum

Saya cukup bersedia sebab masa di universiti pun saya ada terlibat dengan program-program yang dianjurkan oleh kolej, oleh subjek-subjek yang saya belajar kat universiti. (GP B)

Ya. Selama saya berpraktikum tu, semasa saya diberikan tugas, saya memang dah bersedia. (GP F)

Bagi segelintir guru pelatih yang kurang bersedia, usaha tetap dilakukan untuk menjalankan tanggungjawab dalam hal berkaitan kokurikulum.

Sebenarnya memang kurang persediaan tu tapi kita sebagai guru ni perlu jalankanlah sebab tu tanggungjawab kita. Jadi saya cuba untuk melaksanakan seadanyalah. Sebenarnya saya lebih refer pada guru-guru yang senior ...... (GP A)

Justeru, penglibatan guru pelatih dalam aktiviti kokurikulum mahupun aktiviti-aktiviti anjuran universiti, kolej kediaman, fakulti, persatuan pelajar dan sebagainya adalah penting bagi membina keterampilan diri. Ternyata guru pelatih yang melibatkan diri dalam aktiviti-aktiviti semasa di universiti cukup bersedia untuk mengendalikan aktiviti kokurikulum di sekolah.

Pelbagai peranan berkaitan kokurikulum telah dilakukan oleh guru pelatih sepanjang tempoh praktikum.

Sepanjang tempoh berpraktikum, saya menjadi jurulatih bola sepak peringkat sekolah dan peringkat daerah. Saya juga menjadi guru pengiring pasukan itu untuk peringkat daerah. (GP B)

Sebagai guru penasihat, fasilitator terhadap aktiviti yang dijalankandalam setiap badan uniform, persatuan itu semua. (GP E)

Dalam sukan dan permainan semasa praktikum, saya diarahkan untuk mengurus aktiviti sukan futsal yang under sekolah saya. Sekolah saya jadi tuan rumah. Maknanya saya kena urus semua termasuk makanan, persiapan hadiah, jadual permainan semua itu. (GP F)

Kemampuan guru pelatih untuk terlibat dalam aktiviti-aktiviti bukan sahaja peringkat sekolah tetapi juga peringkat adalah sesuatu yang patut dipuji.

Sepanjang menjalani praktikum di sekolah, guru pelatih juga berpeluang mendapat pengalaman baru dalam mengurus dan mengenalikan aktiviti kokurikulum.

Pengalaman saya ialah saya menganjurkan Program satu murid satu sukan .... saya juga menjadi jurulatih bolasepak sekolah. .... surau ada pertandingan tercitantik peringkat kebangsaan, saya juga AJK keceriaan, mengecat dinding, buat mural kat surau dan satu lagi aktiviti iaitu majlis
qurban raya haji. Saya sediakan peralatanlah. Peralatan saya ambil dari pada Kampung Sungai Sireh contohnya, mencari haiwan qurban untuk dikorbankan ku”. (GP B)

...... selama ini saya tak pernah jadi MC dalam mana-mana aktiviti. Semasa praktikal itu saya belajar benda baru. .... jadi MC tu ia dapat hilangkan ketakutan saya selama ini, takut untuk menjadi MC. (GP F)

Pengalaman sebenar yang dilalui di sekolah semasa praktikum merupakan suatu pengalaman yang berharga. Pengalaman baru yang diterima oleh guru pelatih ini akan dapat membantu apabila menjalankan tugas semasa menjadi guru novis kelak.

Bakal guru juga perlu bersedia dari aspek kokurikulum bersesuaian dengan perancangan KPM di bawah Inisiatif 5, Mentransformasi Kurikulum dan Kokurikulum, Pelan Strategik KPM 2011-2020 iaitu untuk menambah kegiatan kokurikulum yang bersepadu dengan kurikulum di sekolah. Terdapat empat aktiviti yang dirancang iaitu

- Pembangunan kurikulum bagi aktiviti kokurikulum mengikut struktur dan organisasi aktiviti kokurikulum sedia ada;

- Meningkatkan bilangan perkhemahan aktiviti kokurikulum (pakaian seragam) di setiap peringkat – antarabangsa, kebangsaan, negeri, daerah, sekolah;

- Meningkatkan bilangan pertandingan aktiviti kokurikulum (kelab dan persatuan) di setiap peringkat - antarabangsa, kebangsaan, negeri, daerah, sekolah; dan

- Menyediakan konstruk pengiktirafan yang standard untuk penglibatan murid dalam kokurikulum di setiap peringkat penyertaan - antarabangsa, kebangsaan, negeri, daerah, sekolah. (KPM, 2012b)

Untuk melaksanakan perancangan oleh KPM memerlukan guru-guru yang mempunyai kemahiran dan keterampilan mengendalikan kesemua aktiviti kokurikulum. Justeru, di peringkat latihan guru lagi, bakal guru perlu mempersiap diri agar mampu melaksanakan tugas kelak.

Penggunaan Teknologi Maklumat Dan Komunikasi

guru bersikap negatif terhadap pengintegrasian teknologi dalam pengajaran dan pembelajaran. Guru-guru pelatih juga memanfaatkan kemudahan internet untuk mencari bahan-bahan yang boleh digunakan dalam proses pengajaran dan pembelajaran.


Penggunaan bilik-bilik khas ini memerlukan tempahan selain daripada melibatkan pergerakan murid yang tentunya mengambil masa.

*Saya pernah guna dalam dua tiga kali je ICT tu seaborn bila saya nak gunakan ICT tu dia banyak proses. Kadang-kadang bila kita nak guna ICT tu ada cikgu-cikgu Sains, cikgu Kimia, cikgu Bio yang dia orang nak gunakan bilik tu sekali. Bila berlaku pertindihan tu saya lebih gunakan pengajaran dalam kelaslah, tak guna kemudahan ICT ni.* (GP A)

*Masalah utama bila nak tempah bilik. Susah untuk berurusan dengan guru ICT seaborn dia selalu berkursus.* (GP C)

*Selalunya akan berlaku pertindihan jadual penggunaan bilik itu. Yang kedua, kelengkapan yang out of date. Maksudnya peralatan itu seperti dah lama perlu diselenggara setiap masa. Contohnya, seperti saya nak gunakan saya kena cek dulu boleh guna atau tak. Sebab takut ada fius yang putus atau tidak.* (GP G)


- Meningkatkan keberkesanan pengajaran dan pembelajaran melalui pengintegrasian TMK sepenuhnya untuk semua mata pelajaran;
- Menyediakan prasarana dab bahan bantu TMK di semua sekolah terutama di kawasan pedalaman dan luar bandar;
- Menggunakan TMK bagi menggalakkan pembelajaran tanpa sempadan; dan
Mengukuhkan kerjasama antara sekolah dengan agensi luar dalam memperluas pelaksanaan pembelajaran maya.

(KPM, 2012b)

Namun begitu, sekininya kemudahan prasarana tidak disediakan, tentulah hasrat tidak menjadi kenyataan.

Sosial


Ada sebenarnya teguran daripada pihak sekolah ni ada. Pada mula-mula tu tentang pergaulanlah sebab kita tak berapa berani tegur cikgu-cikgu yang lama ni. (GP A)

Terdapat jurang komunikasi antara guru senior dan guru pelatih. Contohnya, teguran yang pernah diterima oleh guru pelatih:

Saya pernah dapat teguran daripada guru PK HEM. Ada guru yang senior yang tua-tua tu. Saya jarang berkomunikasi dengan dia orang. Jadi dia orang anggap kita ni tak rapat, tak mesra dengan mereka. (GP E)

Dapatan ini selari dengan dapatan kajian pengesanan graduan pendidikan oleh Mohd Mustamam Abd Karim et al. (2006) yang mendapati kemahiran komunikasi memperoleh skor yang paling rendah dalam kategori kemahiran interpersonal. Begitu juga kajian oleh Kamarulzaman Kamaruddin et al. (2014) yang mendapati kemahiran komunikasi interpersonal guru pelatih UPSI adalah sederhana.
Disiplin guru pelatih wajar dipertingkat lagi. Disiplin yang lemah memberikan gambaran yang kurang elok tentang bakal guru. Contohnya,

_Kalau bab teguran ni memang banyak, bukan saya sahaja, rakan praktikal saya pun kena juga malahan cikgu-cikgu lama pun ada kena juga. Salah satunya kedatangan, kehadiranlah sebab saya selalunya lewat sedikit yang sepatutnya. Sepatutnya masuk sekolah 7.15, saya kadang-kadang datang 7.20 baru saya masuk. Kalau pakaian pula, saya pernah ditegur sewaktu tengahari saya dah buka tie, saya dah menanggalkan nametag._ (GP G)

Dalam usaha memartabatkan profesion keguruan, penghayatan etika kerja dalam kalangan bakal guru seharusnya telah bermula dan menjadi kebiasaan sejak di peringkat praperkhidmatan.

Kemahiran bersosial merupakan satu kemahiran yang penting apabila seseorang itu berada dalam sesebuah masyarakat. Seseorang guru juga berada dalam suatu kelompok masyarakat di sekolahnya. Seseorang guru baru seharusnya mampu menyesuaikan diri agar diterima dalam masyarakat di tempat bertugasnya. Semasa menjalani praktikum, guru-guru pelatih melalui fasa penyesuaian diri dalam kelompok masyarakat sekolah tempat menjalani praktikum. Kemahiran interpersonal yang dipunyai oleh seseorang guru pelatih amat penting dan diperlukan bagi membolehkan guru-guru pelatih menjalin hubungan yang baik dengan guru-guru senior yang sedia ada di sekolah berkenaan.

_Kerjasama Dan Sokongan Yang Diterima Oleh Guru Pelatih Sepanjang Menjalani Praktikum_


Kajian ini mendapati guru pelatih menerima kerjasama yang baik daripada majoriti guru-guru, pentadbir sekolah, ketua panitia dan staf sokongan. Contohnya berkaitan dengan guru pembimbing,
Mereka sangat baik dalam memberikan kerjasama kepada kami guru-guru praktikal. Apa yang kami tanya mereka jawab. Tak lokek dalam memberi ilmu. (GP D)

Kerjasama yang saya terima adalah baik kerana guru-guru sekolah ni banyak membantu saya dalam mengajarkan. Dia orang pula menerima saya macam saya dah lama berkhidmat sebagai guru, padahal saya baru guru praktikum macam kawanlah. (GP B)

Kerjasama oleh guru pembimbing amat dibanggakan yang dapat memainkan peranan sebagai mentor di peringkat school based training.

Kerjasama dan sokongan yang diterima oleh guru-guru pelatih tidak terhad daripada guru pembimbing, malahan diterima daripada guru-guru lain yang menggambarkan kesudian guru-guru menerima kedatangan guru pelatih dan berkongsi pengalaman.

Alhamdulillah penerimaan pihak sekolah terhadap guru-guru pelatih ini positif kerana membantu memudahkan program-program sekolahlah. .... Pihak sekolah juga bagi kita kepercayaan, bagi saya kepercayaan uruskan event besar, .... Kita akan ada banyak pengalaman, boleh kaut pengalaman yang banyak ...... (GP B)

Mereka sangat teruja apabila kami datang ke sana. Mereka berharap saya dan rakan-rakan akan terus mengajar di sekolah tu. (GP D)

Mereka sangat mengalu-alukan guru pelatih untuk menjadi tenaga pengajar di sekolah mereka. Sebab bagi mereka guru-guru pelatih ini banyak ilmu baru untuk meneroka sesuatu dalam bidang perguruan. (GP E)

Justeru, hubungan baik dan kerjasama antara UPSI dan sekolah-sekolah seharusnya dikekalkan.

Hanya segelintir yang kurang memberi kerjasama yang berkemungkinan terdapatnya jurang umur.

Ada sesetengah kurang baik dan ada sesetengahnya terlalu baik. Kalau yang tak baik tu mungkin kerana faktor umur. Sebab cikgu lama kan lebih berpengalaman (GP G)

Mungkin ada certain guru baguslah sebab dia menerima kehadiran guru-guru praktikum dengan baik, dia menyambut kedatangan kami dengan baik membantu kami seadanya. Tapi ada juga sesetengahnya yang bersikap terlalu bias mungkin memandang rendah terhadap guru-guru
praktikum dan tidak berminat membantu guru-guru praktikum seperti kami. (GP H)

Bagi saya selama saya praktikal dekat sekolah itu ada setengah guru boleh terima saya sebagai guru pelatih dekat sekolah. Ada setengah guru tak boleh terima saya sebagai guru pelatih dekat sekolah itu. Adalah masalah-masalah teguran kasar yang mereka berikan kepada saya. (GP F)

Namun, secara umumnya kehadiran guru pelatih UPSI di sekolah-sekolah untuk menjalani praktikum diterima baik oleh pihak sekolah.

Sebagai mengukuhkan lagi layanan baik pihak pentadbiran sekolah yang diterima oleh guru pelatih UPSI semasa praktikum ialah guru-guru pelatih diberikan mejanya sendiri di bilik guru dan majoriti dibenarkan menggunakan kemudahan yang ada di sekolah.

Alhamdulilah saya masuk tu pihak sekolah menyambut kedatangan saya dengan baik dengan pengetua mengarahkan pekerja sekolah mencari mejanya untuk saya. (GP H)

Ya, saya diberi kebenaran untuk menggunakan peralatan lain sama macam cikgu lainlah macam saya guna peralatan sukanan, saya boleh guna macam guru-guru lain, perpustakaan saya boleh gunakan, bilik kesihatan. Kira kemudahan di sekolah saya boleh gunakanlah dengan buat tempahan. (GP B)


Contohnya, photostat tak boleh. Saya kena photostat kat luar lah. (GP C)

Kemudahan sekolah tu kalau saya tak dapat guna pun actually guru-guru lain pun tak dapat guna. .... bilik ICT, mana-mana guru kalau yang mengajar kelas hujung memang tak dibenarkan menggunakan bilik tersebut. (GP H)

Sehubungan dengan itu, guru pelatih perlu kreatif dan bijak mencari alternatif sebagai jalan penyelesaian.

Tidak dapat dinafikan setiap guru melalui pengalaman sebagai guru pelatih dan melalui proses latihan di sekolah iaitu latihan mengajar atau praktikum. Kolaborasi antara sekolah dan institusi latihan guru adalah sangat penting kerana bakal guru yang dilatih di institusi latihan guru memerlukan tempat untuk menjalani latihan dalam situasi sebenar di sekolah dan bilik darjah. Sepanjang menjalani praktikum, bimbingan dari guru berpengalaman amat diperlukan yang berperanan sebagai mentor atau pembimbing. Bakal guru juga hendaklah mempertingkatkan usaha penerokaan ilmu melalui pembacaan yang luas serta perkongsian ilmu bukan sajaha dengan rakan dari program atau tempat pengajian.
yang sama tetapi dengan guru dan bakal guru di seluruh dunia. Pembacaan yang luas akan memantapkan ilmu dalam diri seseorang dan hal ini dapat memberikan idea yang banyak kepada guru pelatih apabila ingin merancang pengajarannya. Idea-idea baru yang lebih berkesan boleh digunakan semasa mengajar dan mampu menarik minat pelajar. Pendedahan melalui pembacaan mahupun melalui kemudahan teknologi terkini mampu menjadikan bakal guru kreatif dalam banyak perkara termasuk menyediakan bahan bantu mengajar yang sesuai, menarik dan berkesan. Sebagaimana dinyatakan dalam Standard Guru Malaysia (SGM), guru yang memiliki dan menguasai ilmu yang mantap mampu meningkatkan profesionalisme keguruan, dapat melaksanakan tugas dengan cekap dan berkesan di samping menjadi lebih kreatif dan inovatif. Di Malaysia, merupakan piawai yang menggariskan kompetensi profesional yang patut dicapai oleh guru menekankan tiga kompetensi bagi menjamin penghasilan guru yang berkualiti iaitu amalan nilai profesionalisme keguruan; pengetahuan dan kefahaman; dan kemahiran pengajaran dan pembelajaran. Di Indonesia, terdapat empat kompetensi yang perlu ada pada guru sebagaimana yang ditetapkan oleh pemerintah iaitu kompetensi pedagogi; kompetensi keperibadian; kompetensi profesional; dan kompetensi sosial (Elly Malihah, 2014; Wilodati, 2014). Manakala

Kesimpulan

Rujukan


Nafisoh Md Desa et al. (2014). Tahap penguasaan pengetahuan kandungan guru pelatih program Ijazah Sarjana Muda Pendidikan Teknologi Maklumat UPSI. Prosiding International Conference on Teaching and Learning 2014. Tanjong Malim: UPSI.


Abstract

The question of how higher order thinking skills (HOTS) can be invoked to enable our students to enhance their performance in Calculus has been widely debated among educators. Although HOTS was highlighted in the Malaysian Education Blueprint 2013-2025 (MEB) and integrated vigorously into national curriculum and national examinations, recent researches show the acquisition of HOTS among Malaysian students and implementation of HOTS in school are still unsatisfactory, especially among the Lower Achievers (LA). This paper proposes and examines the Polmind Method, which blends Polya’s Model with Mind Maps, to invoke HOTS in mathematics classroom, specifically to enhance the performance of LA. A quasi-experimental study conducted using Polmind Method were used to teach the topic of First Derivatives in Calculus to LA. The same content was taught to HA by using a workbook. The mean scores between groups were analyzed using the independent sample t-tests. The results shows no significant difference in mean scores although the mean score of LA is one point higher than HA. It is concluded that, although Polmind Method did not significantly help LA surpass HA in their test scores, the treatment sessions has allowed the LA to perform slightly better than HA. This demonstrates that Polmind Method can enhance the performance of LA in a short term. Future studies should explore longitudinal effects of integrating Polmind Method in mathematics lessons to invoke HOTS.

Keywords: Higher Order Thinking Skills, Lower Achievers, Polya’s Model, Mind Maps
Introduction

Higher Order Thinking Skills (HOTS) are highly emphasized in the recent revival of Malaysian education, clearly seen in the Malaysian Education Blueprint (MEB) 2013-2015. It sets the performance in international assessments as the benchmark of quality education, incorporates a big portion of higher order thinking questions in national and school-based assessments, and revamps the national curriculum to integrate HOTS into all subjects. Thus researchers are delving into the question of how teachers can impart HOTS to students. In the field of mathematics, specifically in Calculus, various methods are introduced to help students learn, with and without the use of computer (for example, Hashemi, Abu, Kashefi, & Rahimi, 2014; McGivney-Burelle & Xue, 2013). However, recent researches which aims to assess the level of HOTS among students (for example, Md Yunos et al., 2013) and the implementation of HOTS in schools (for example, Andin, Qistina, Ambotang, & Mosin, 2016) shows that both are at an unsatisfactory level. In analysing the needs of teachers to integrate HOTS in mathematics, Kassim and Zakaria (2015) concluded that teachers are not ready and they need more resources in order to move forward. Thus the intention of this paper is to introduce the Polmind Method to help students, particularly the lower achievers, learn the First Derivatives in Calculus by invoking HOTS. Although low mathematics achievers are found to have difficulties in learning differentiations (Juter, 2007; Wangle, 2013), instruction of HOTS is still appropriate for high and low achievers alike, and is able to improve the ability of low achievers in mathematics (Zohar and Dori, 2003).

Literature Review

Higher Order Thinking Skills (HOTS)

Higher Order Thinking Skills (HOTS), according to the Examination Board, Ministry of Education Malaysia, is the ability to apply knowledge, skills and values in the process of reasoning and reflection in order to solve problems, to make decisions, to innovate and to create. The upper four Cognitive Process Dimension of Bloom’s Revised Taxonomy (Anderson, Krathwohl, & Bloom, 2001) are used to describe HOTS in the Malaysian context. Apply is the ability to execute a procedure given an unfamiliar situation, Analyze is to break down materials given and then find the relationships of the pieces to the overall structure, Evaluate is to make judgement based on a criteria or standard, and Create is to combine the elements to build a new product, pattern or a functional whole. Therefore, students who have acquired HOTS are able to fuse existing and new information by reasoning and reflecting, in order to generate several possible strategies of solving a problem, then make selection with their good judgement, and proceed to solving the new problem creatively.

HOTS and Lower Achievers

Instruction of HOTS is found to be appropriate for both low and high achievers (Zohar & Dori, 2003). The H.O.T.S. program initiated by Stanley Pogrow in 1982 had also resulted in the increase of thinking skills and knowledge of a group of educationally disadvantages students. However, lower achievers still perform less well compared to the
higher achievers due to their belief. Lin-Siegler, Ahn, Chen, Fang, and Luna-Lucero (2016) discovered that most science students who did not do well tend to give up too soon because they believe that their performance in science depends on their inborn ability. Both low and high achievers need some help when they encounter difficulties in mathematics. Visual strategies and cooperative environment would benefit lower achievers (Swanson, Lussier, & Orosco, 2015). This is in line with the theory of social constructivism where Vygotsky (1978) assumed that if students do not progress, it could be that they are not in their Zone of Proximal Development (ZPD) when the More Knowledgeable Others (MKOs) are imposing scaffolding on them. Thus, with the right method, lower achievers’ performance can be enhanced.

Mind Mapping

Tony Buzan’s Mind Maps was created to promote radiant thinking, creative thinking and critical thinking, and has been developed extensively since 1970s (Buzan & Buzan, 1993; Buzan, Buzan, & Harrison, 2010). It has been featured in the BBC TV’s Use Your Head series, and numerous books were published on the Mind Maps. Many researches confirmed the effects of Mind Maps in promoting deep learning by helping students understand concepts visually (for example, Davies, 2011). However, Brinkschulte, Enders, Rebstadt, and Mertens (2016) argued that overly crowded Mind Maps will hinder visualization. The use of Mind Maps are further enriched with technology. It is found to improve creativity and attitudes of learning among users (for example, Tungprapa, 2015). Thus Mind Maps have great potentials to be used in enhancing students’ higher order thinking skills.

Polya’s Four-Phase Model

The four phases of problem solving, Understanding the problem, Devising a plan, Carrying out the plan and Looking back as included in the Malaysian Mathematics Curriculum as one of the important aspects to be considered during teaching and learning process. The Polya’s four-phase model was once introduced as a complete chapter in the textbook of Additional Mathematics (Teoh & Yap, 1999; Zainudin, 2012). It is widely used in the mathematics education, regarded and proven as a classic and a favourite by many researchers and educators when dealing with problem solving (for example, C.-Y. Lee & Chen, 2015) and even game-based programs (for example, Chang, Wu, Weng, & Sung, 2012). A brief explanation of the four phases are as below (Polya, 1971):

(i) Understanding the problem

In this phase, students make use of new information in relation with the existing information to further understand the problem.

(ii) Devising a plan
In this phase, students search for strategies and evaluate the suitability of the strategies, and choose the most appropriate strategy to solve the problem.

(iii) **Carrying out the plan**

In this phase, students carry out the plan, constantly checking the steps to ensure they have accurate algorithm.

(iv) **Looking back**

In this phase, students review the completed solution and aim to improve the understanding of the solution. They are encouraged to find new and better solutions to consolidate their problem-solving skills.

Thus, by going through the four phases, students will go through a complete cycle of solving a problem.

**The Polmind Method**

Brookhart (2010) claimed that, usually teachers who do not plan ahead for a classroom discussion with HOTS, they are often asking recall-level questions without realising it. Williams (2015) too, argued that the ability to recall is not knowledge, and it is not enough for a person of 21st century. Thus, he suggested that by teaching students to think clearly, critically and creatively, that is by teaching higher-order thinking skills, teachers can help students in life and work, far into the ever-changing and complex future. Therefore, this study is proposing a method which integrates the essentials of Polya’s four phases model into the creative attributes of Mind Maps, and is presented in such a casual way that teachers can use it in everyday classrooms without being burdened with lengthy procedures and instruments. Figure 1 shows the Polmind Method which gives such benefits.

![Polmind Method Diagram](image)

**Figure 1** The Polmind Method

Each of the four phases of Polya’s Model is integrated into the arms of the Mind Map. It reminds the users to explore a problem systematically besides providing freedom (Davies, 2011) to actively participate in the higher-order thinking process in solving the
problem at hand. The Understand arm deals with analysing the question, the Plan arm searches for different strategies and evaluating the best possible solution, the Do It arm applies the plan with accurate algorithm, and the Alternative Method arm sharpen the user’s ability to create. Thus this method integrates higher order thinking skills while solving a mathematics problem. Therefore, by using the Polmind Method, teachers are provided with a simple framework for promoting HOTS, and it can be used with the questions in the table below, adapted from Polya’s (1971) work:

<table>
<thead>
<tr>
<th>Arm</th>
<th>Questions to ask when using Polmind Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understand</td>
<td>What is the unknown?</td>
</tr>
<tr>
<td></td>
<td>What are the data?</td>
</tr>
<tr>
<td></td>
<td>What is the condition?</td>
</tr>
<tr>
<td>Plan</td>
<td>Have you seen similar problem before?</td>
</tr>
<tr>
<td></td>
<td>Do you know a related problem or theorem?</td>
</tr>
<tr>
<td></td>
<td>Should you introduce some auxiliary elements in order to make use of the result and method of the related problem?</td>
</tr>
<tr>
<td></td>
<td>Could you restate the problem differently?</td>
</tr>
<tr>
<td></td>
<td>Could you solve part of the problem?</td>
</tr>
<tr>
<td></td>
<td>Did you use all the data?</td>
</tr>
<tr>
<td></td>
<td>Did you use the whole condition?</td>
</tr>
<tr>
<td>Do It</td>
<td>Can you see clearly that the steps are correct?</td>
</tr>
<tr>
<td></td>
<td>Can you prove that the steps are correct?</td>
</tr>
<tr>
<td>Alternative</td>
<td>Can you check the result?</td>
</tr>
<tr>
<td>Method</td>
<td>Can you check the argument?</td>
</tr>
<tr>
<td></td>
<td>Can you derive the result in a different way?</td>
</tr>
<tr>
<td></td>
<td>Can you use the result for other problems?</td>
</tr>
</tbody>
</table>

Table 1: Questions to ask when using Polmind Method

The Looking Back phase of Polya’s model is renamed Alternative Method in this Polmind Method to spur the students’ creativity in finding other method to counter-check their solutions. This act is prompt by an exploratory study carried out by S.-Y. Lee (2011) using an Alternative-Solution Worksheet (ASW) to encourage students to generate different solutions to the problems. The result shows that students improved on their problem solving performance after the intervention.

The use of mind maps is proven by previous researches to promote active learning, as well as promoting the Constructivist learning approach (for example, Somers, Passerini, Parhankangas, & Casal, 2014). Moreover, the use of Polya’s Model can promote problem solving and problem posing abilities, as well as creativity for using other methods to recheck the work (for example, Novotná, Eisenmann, & Přibyl, 2014). Therefore, the combination of
Mind Maps and Polya’s Method will encourage students to think systematically, and creatively finding more solutions for a problem.

Figure 2 shows a student’s work solving a problem of First Derivatives using the Polmind Method. First, the student interprete the question by writing the given and relevant information in the Understand section. Then the student devise a Plan to solve the problems. At the Do it section, the student carry out his plan and performed the calculation, constantly checking for correct algorithm. At the Check/Alternative Method section, the student used another method to counter-check his/her answer. Therefore, by using this Polmind Method, the student is given a guide to think systematically. This framework also encourages students to think creatively for alternative methods to counter check his findings. Thus this framework promotes HOTS.
Research Objective

The primary objective of the research is to compare the performance of LA and HA in learning the concept of First Derivatives after going through the process using the Polmind Method.

Methodology

Design

This study uses the quasi-experimental method since the students chosen as HA and LA has already been assigned to different classes by the school authority, according to their Penilaian Tahap 3 (PT3) results. Thus the participants cannot be randomly assigned to groups and are in their natural context in school. Furthermore, this study requires the LA group (experimental group) be separated from the HA group (control group).

Procedures

This study is carried out in two stages. During the first stage, the researcher carries out five sets of treatment sessions with 70-minutes per session, with the experimental group. Mind Maps is introduced to the sample by the researcher guiding the sample to draw a mind map of their own biodata. The topic of biodata is chosen because it relates to the group’s personal interest, thus they are more motivated. At this point, features of Mind Maps are made clear to the group to ensure that they use the proper way of drawing Mind Maps. After that Polmind method is introduced during the teaching and learning process of First Derivatives. The four branches in Polmind Method is constantly emphasized: Understand, Plan, Do It, Alternative Method. All problems presented in class is solved using Polmind Method.

In the second stage, a 1-hour test is carried out for both the experimental and control group, two weeks after the treatment sessions. The participants are required to answer the questions in Sijil Pelajaran Malaysia (SPM) format because the marking scheme are set similar to SPM marking scheme. The participants’ answers are marked by the researcher based on the predetermined marking scheme. Their test scores are analysed and compared.

Sample

The sample consisted of two classes of 54 form four students in a government secondary schools in the state of Johor, Malaysia. 29 students are in the experimental group while 25 students were in the control group. LA in this study are the form 4 science stream students who had a lower achievement in Mathematics PT3 compared to the HA group. Majority of the LA group obtained grade C in their Mathematics PT3. The experimental group consists of the LA because of their mediocure Mathematics PT3 result, while the
control group consists of the HA because of their excellent Mathematics PT3 result. This sample is chosen because science stream students are usually the students who achieved high average scores in PT3, however they might not be excellent in Mathematics. Science stream students are also the hope of the school to excel in SPM. Thus schools have high expectation for them in mastering HOTS, as SPM questions consists of 50% HOTS starting 2016.

Instruments

The instrument used is a 1-hour post test which consists of four SPM formatted questions prepared by the researcher and verified by a two mathematics experts. The questions are based on the topic of First Derivatives learned, that is the tangent and normal of a curve. The Post Test is administered to both experimental and control groups after the experimental group completed the five treatment sessions. The test scores of both groups have reflected their understanding of the topic and thus shows the effect of the Polmind Method toward students’ learning.

Data Analysis & Discussion

The mean of test scores were analysed using the independent sample t-test between the experimental and control group.

Prior Achievement Results (Mathematics PT3 2014)

Both the experimental and the control group went through their lower secondary education in the same school, and took the same national assessment, that is the Penilaian Tahap 3 (PT3) in year 2014. The achievement of the two groups are as follow:

- Experimental Group:
  - 27.6% scored A, 27.6% scored B, 44.8% scored C.

- Control Group:
  - 80% scored A, 20% scored B.

The sample’s Prior Achievement Results shows clear differences in their abilities in mathematics. Therefore, the experimental group is considered the LA while the control group is considered the HA.

Result of Post Test & Discussion

The result of post test administered to both groups shows that there is no significant difference between the performance of both groups. However, the experimental groups exhibited a slightly better mean score and standard deviation for each individual in the group. Even though the experimental group was not a group of better students compared to
the control group when referring to their Prior Achievement Result, they were able to score better in the post test as shown in the table below, after going through the Polmind Method. This result clearly shows that the Polmind Method is working fine and effectively in enhancing the LA’s performance in learning the First Derivatives, by invoking HOTS in the learning process.

<table>
<thead>
<tr>
<th>Question</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Experimental Group (LA)</td>
<td>Control Group (HA)</td>
</tr>
<tr>
<td>1 (4 marks)</td>
<td>3.45</td>
<td>3.36</td>
</tr>
<tr>
<td>2 (3 marks)</td>
<td>2.00</td>
<td>1.96</td>
</tr>
<tr>
<td>3 (5 marks)</td>
<td>3.41</td>
<td>2.60</td>
</tr>
<tr>
<td>4 (8 marks)</td>
<td>1.21</td>
<td>1.08</td>
</tr>
</tbody>
</table>

Mean of LA = 10.07  
Mean of HA = 9.00  
Independent Sample t-test = 0.398  
SD of LA = 4.46  
SD of HA = 4.75

Report:
There is no significant difference between the performance of LA and HA, t= 0.398, p<0.001

Table 1 Result of Post Test
The finding shows that Polmind Method has the potential to invoke HOTS among LA, and this is parallel with views of Brookhart (2010) and Williams (2015) that by planning and teaching HOTS deliberately, teachers are able to help students in learning to solve problems.

Conclusion
Although Polmind Method was not found to help the LA group surpass the performance of the HA group significantly, introduction of Polmind Method to the LA group did allow them to perform at the same level as the HA group. Therefore, the Polmind Method was able to promote understanding of LA group in a short term and did not place them at a disadvantage compared to the HA group. In light of the potentials of Polmind Method, the researcher is conducting further study with different methodology and to implement it for a longer duration. This study is significant to provide resources for teachers implementing HOTS in school. It is also important in helping LA perform in examinations and raise their self-esteem. Future studies should also explore the longitudinal effects of integrating Polmind Method in mathematics lessons of different levels to invoke HOTS.
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THE APPLICATION OF SYSTEMS THEORY FRAMEWORK IN UNDERSTANDING SCHOOL COMMUNITIES’ CULTURAL VALUES TOWARDS GUIDANCE AND COUNSELLING SERVICES

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Abstract

This paper discusses the application of Systems Theory Framework (STF) in understanding school guidance and counselling services. It highlights the experiences of the researcher who conducted her qualitative study on cultural values towards guidance and counselling in one school in Malaysia. The sample of the study consisted of 41 students, 2 teachers, 8 school counsellors and 5 administrators. Semi structured individual interviews and focus groups were conducted to elicit their experiences. The findings indicated that systemic issues were associated with negative values towards the service. The study provides the implication of STF in regard to understand the school guidance and counselling services as a system. The characteristics demonstrated by STF enabled the researcher to comprehend the holistic picture of guidance and counselling services and its acceptance towards the service.

Keyword: Systems Theory framework, guidance and counselling services, cultural values, qualitative study

Introduction

School is considered a unique place that can provide required support for addressing multiple aspects of students’ diversity, including race, sexual orientation, socioeconomic status, at-risk students and underachievers (Yeh, 2003). In the Malaysian context, school is regarded as a platform for unity among different racial backgrounds (Sapora, 2007). It is also a place specifically to inculcate knowledge, values and morality to produce well-rounded students. The existence of guidance and counselling services in every school has been regarded as the catalyst to achieve these proposed aims. However these efforts will be hampered if the acceptance of the counselling service is withheld or only partial. Hence, it is important for school counsellors to understand school communities’ attitudes and expectations towards counselling services. Gerstein, Rountree and Ordonez (2007) argue that most counsellors are still embracing an individual lens in the helping process and tend to indirectly ignore the cultural aspect embedded in the client’s life. Therefore, comprehending students’ voices and the school communities’ understanding and needs is essential, because it can provide counsellors with insights into understanding the role of helping in the client’s culture. An exploration of cultural values from the school communities’ perspective will facilitate better understanding of their attitudes, reveal their
opinions of counsellors and counselling programmes from their cultural perspectives, and will enable a description of multi-cultural value patterns to be formed which will help explain any commonalities and differences in their perception of counselling services.

Objective of study

The purpose of my research is to explore and understand the aspect of cultural values inherent in the life of students and school communities, and how these influence their appreciation of guidance and counselling services.

Methodology

This study embraced qualitative methods specifically narrative ethnography, using case study approach as it seeks to understand and examine in-depth cultural experiences of participants (Ponterotto, 2005). This is in line with Adams, Benshoff and Harington’s suggestions (2007) that qualitative research is appropriate for various aspects of cultural studies because it has the ability to examine in-depth the multicultural issues and provide open-ended responses for exploring and understanding participants in multicultural research.

Participants

Information was elicited through in-depth case studies of 41 students, eight (8) school counselors, two (2) school teachers, and five (5) school administrators. The participants were fully informed about the study and were assured of confidentiality and anonymity.

Data collection methods and analysis

The study employed semi structured interviews as well as focus group interviews to understand the participants’ experiences. Ethics approval was obtained from the ethics committee of the university, and written consent were obtained from all the participants. The study used constant comparative analysis of constructivist grounded theory approach proposed by Charmaz (2006). In this study, the researcher used triangulation approach which involved two types of data collection namely interviews and focus groups.

Systems Theory Framework (STF)

This study embraces Systems Theory Framework (STF) as a guideline for understanding cultural values towards guidance and counselling services. STF has come from multidisciplinary fields such as physics, biology, anthropology and psychology (Patton and McMahon, 2006). It has been proposed as a potential framework for dealing with many issues in human behaviour. This framework has put its central focus not only on the individual system, which constituted intrapersonal influences, such as personality, ability, gender, and sexual orientation, but also on their interpersonal influences, such as connection with the broader social system – family, socioeconomic status, school, etc.
System theory has been extensively used by Patton and McMahon in their research and writing. Both of them have applied the principles of the Systems Theory Framework (STF) into career counselling framework (2006; 2014). This framework has challenged traditional career theory in viewing the position of a person in relation to his or her career development. In explaining career development, this systems framework not only places its emphasis on individual characteristics, such as self-concept, personality, belief systems to name but a few, but also includes interpersonal aspects of human beings. Thus, this conception is considered holistic in viewing the position of an individual in relation to his or her society as it celebrates the importance of both elements; personal and interpersonal in explaining human behaviour.

This framework is seen to be practical in the sense that it demonstrates the process and relationship of the individual in a system. The fundamental principle in understanding the STF is that it embraces an open system that is subject to influence from outside and beyond its boundaries. This perspective is also in line with Constructivism view that stresses the person as an open system, constantly interacting with the environment, seeking stability through ongoing change. This framework regards human development as a dynamic process. It is clearly explained by the process of recursiveness, change over time and chance. Recursiveness in the STF, which in diagrammatic form is depicted by broken lines that represent the permeability of the boundaries of each system, denotes that the element
surrounding the individual may change over time. The final process; chance, is depicted in the STF diagram as lightning flashes, reflecting an increased recognition of the part chance plays in human development. “All of the systems of influence are located within the context of time-past, present and future-all of which are inextricably linked; past influences the present, and together past and present influence the future” (p. 154).

Findings

School Guidance and Counselling Services: Lost in the Midst of Systemic Processes

The finding of the study indicated that school guidance and counselling lost in the midst of systemic processes. It was collectively communicated by most participants in the respective school. This issue had considerably affected the overall school scenario as well as the participants’ positive engagement with counselling services. Most of the participants—especially the counsellors, teachers and administrators—mentioned the students’ resistance to counselling and learning processes, in favour of their part-time jobs after school. They mentioned that the harsh economic realities facing the students played a decisive role in whether school was the most viable option for the students. The lack of family support and encouragement that the students received further confounded the decision between school and work. This was mentioned by the school administrator as below:

“As for the underachievers, they cannot see the importance of knowledge in their lives. The attractions outside school lure them to work as part timers to earn extra money. They don’t see the effect of working on their academic performances. In addition, some of them come from broken families who urge them to work to support their lives. They usually do the job after school until the early hours of the morning, which makes them sleepy, tired, and less focused in school the next day. There are students who are forced to come to school just for the sake of getting money from their parents. When they are here, they can easily eat at the school canteen. They choose to come to school rather than stay at home, as they can avoid helping their parents with household chores. There are cases of students opting to come to school just to kill time and escape from the uncomfortable conditions facing them at home like crowded and stuffy houses”.

(School Administrator D)

One referred client also admitted that due to his involvement in part time job had made him sleepy in the classroom.

“I spend the rest of my time in classroom sleeping”.

“I did not bother having my lunch for the sake of sleeping. I slept from the first morning lesson until the last teaching period of the day”.

(Student 2- Referred client)
Counsellor A, B and C also expressed their dismay concerning the irresponsible parents who left it to the school to carry on the burden of nurturing their children’s well-being.

“...//.. there was a parent who came and scolded me asking why I couldn’t take care and find their son whereabouts. They didn’t understand their role. They just let the school take care of their children’s well-being”.

“...//.. only 30 parents turned up (during a parent-teacher meeting) although the school has 3,000 students”.

The school’s structural system also provides certain implications for the participants. The students in the research context showed their estrangement not only from their lessons but also from the school community. The referred clients spoke of reacting negatively to the institutional power structure of the school and employing behavioural tactics that constitute part of a “culture of resistance” which is anti-school. Similarly, those participants especially who were not involved in counselling did not feel that the teachers and counsellors were concerned about their interests. They reported that they neither obtain genuine concern and understanding from the school community nor do they feel that they owe the teachers any respect. They generally perceived that the school system is more interested in maintaining authority and discipline than in providing education. In such a context, the students are less cooperative with teachers who are seen to be disrespectful to them and uninterested in their welfare. The issues of authority, power and respect represented the disparate power relations which exist within schools and were, thus, seen as areas of resistance. These statements were explained by them as below:

“I don’t understand what the hell the teacher is teaching us. Every time we are asked to copy all the things written on the whiteboard without him / her trying to explain to us... so why the heck should I be sitting in the classroom doing things that I don’t understand at all”?

The other issue that was raised by school counsellor (C) was the school disciplinary system, which was considered weak due to the poor monitoring system. It was no surprise that students tended to be disrespectful of the school rules and dared to make fun of them.

“I can say there are a pros and cons in this system. There are many cases in which no action is taken against students, even though they have earned 600 or 700 points. One student boasted that despite having earned 600 points, he wasn’t afraid of getting suspended from school (200 points were the maximum points leading to suspension). They also observed many cases in which their friends who were suspended from school managed to re-enrol... they didn’t bother at all about how many penalty points they had accrued”.

(School Counsellor)
“I found that Indian students show many attitude problems. In addition, I have also been bullied by them. They keep on insulting me and calling me various names like fat woman, old granny, and mother in law”. (Teacher K)

Similar views were also communicated by other students regarding school guidance and counselling services.

“../../ if you happen to be counselled, you will find lots of condemning and blaming words all around you ... even if you don’t understand what the hell they are talking about ... you need to endure your ears listening to their lectures for hours and hours. It was so irritating ...” (Student A - Focus group 1)

“Counselling has its own existing image. When people coin the term ‘counselling’, automatically it signifies the students who have committed disciplinary problems; and hence it prevents other students from getting close to counselling”.

“I think the most important issue is peers’ influence. Most of them said counselling is not good ... being in a counselling room is just like living in hell”. (Student B - Focus group 1)

“Some of the students are not so close with their teachers, because sometimes they tend to display their negative images such as having fierce outlooks. So they would assume the same also goes for the counsellor”. (Student C - Focus group 1)

“I have an experience with two Malay female students.. One of them said what the heck is counselling for. Its bullshit, she even burst out with lots of condemning and nonsense words. I tried to persuade her to enter the room. Surprisingly she refused by saying she would never set foot inside, never. Then I asked her why? She said counselling is only meant for students in trouble, if I were to be here, surely I will be terminated from my post as a school prefect and my mother always warned me not to come here because this room is not meant for me; it is only for those (troubled) groups”. (School counsellor B)

“My personal view is that students do not seem to understand what counselling is all about. They simply regard counsellors as their saviour from disciplinary action”.

“Referred students consider counselling as part of school games and tricks. They neither understand the exact role of counselling nor know
the purpose of their suspension from school”.

(School counsellor D)

Besides that, an improper school environment was also contributing to this bad situation. A high number of students and the poor quality of the physical infrastructure had added to the deteriorating situation. These situations were mentioned by the school teacher known as Madam K and the school administrator, Madam F as below:

"Due to the high number of students, we cannot easily manage to control their attendance in the extracurricular activities.

Classrooms are not comfortable. For example, upper six students have been placed in the science lab and need to endure sitting in the tiny lab chairs”.

../..Our system has made the students even more mischievous.

“I’m not a racist, but as far as I have observed, I can say that the Indian and Chinese students are not really concerned with the school cleanliness. They dare to throw rubbish everywhere, especially along the classroom corridors. I have spoken to students so many times during the school assembly, reminding them to take care of the school cleanliness. Unfortunately, my efforts were in vain. They do not seem to be bothered about it at all and keep on repeating the same bad behaviour. As a result, the school cleaners need to double their efforts to pick up the rubbish dumped by the students every day”.

(Madam F)

Madam K also reiterated her concerns about the number of students who she considered to be out of control. She framed them in these shocking analogies:

“Staying in this school is like living in a cow or goat shed. The situation cannot be controlled anymore... Seriously, the huge amount of students in this school is just like sardines in a can. The Ministry still accepts the failed students. That is why the school’s situation is becoming worse”.

../..This school is so boring because of its system.

Similar views were also explained by the school administrator.
“Teachers are also having problems with the school’s infrastructure. Besides facing limited and stuffy spaces for their rooms, they also need to endure placing themselves in a very small meeting room”.

(Madam F)

According to Madam F, there were only 186 teachers to cater for 3,490 students. This indicates that the teacher-student ratio was about 1:19, while in the classroom, the ratio would be 50:1. This ratio signified the extra burden carried by the schoolteachers in managing students in the school, as well as encountering their attitude in the classroom. This situation was an additional cause of distress to the teachers, as they had to face turbulent and chaotic classrooms. Madam Fateema recounted:

“The large amount of students contributes to this uncontrolled condition in this school. There are 11 floating classrooms (students are placed in temporary locations like the science laboratory for a certain period of time), which indirectly contribute to the disciplinary problems among them”.

Madam Y who was also the school administrator seemed to admit that the large number of students did not strike a good balance with the school’s capacity.

“Our greatest challenge so far is in terms of managing students’ disciplinary problems. At this point, we have to deal with the large number of students. Can you imagine the chaotic situations that we have to face with 50 classes in the morning session and 40 in the afternoon? I would say, out of 15 classes of Form 5, 5 of them are good while the rest are not. As administrators, we have to understand that not all teachers are able to endure this situation. There are times that their emotions are out of control”.

(Madam Y)

According to school counsellor, known as Madam D, the poor condition of school infrastructure; (main hall) had indirectly affected guidance and counselling service.

“.//. as you can see the condition of the hall is not really conducive, no sound proof and the worst part is that it is really hot ... 

(School Counsellor B)

I think the number of teachers does not sufficiently accommodate the needs of high number of students.
I think the barriers include the infrastructure, I mean the condition of the room does not protect the clients’ confidentiality so far.

(School Counsellor, Madam D)

In addition, according to Madam D, the large number of students posed certain pressure on school counsellors as they had to prioritise troublesome students rather than concentrating on the well-being of the well-behaved students.

“I do understand and admit that the large number of students is beyond the counsellors’ control. Furthermore, they need to give priority to the neediest students rather than concentrate on non-threatening cases”.

“Due to the high number of students, they (troublesome students) take the opportunity to play truant because they believe that the teachers do not bother about their situation”.

“They become involved in truancy because they are not interested in studies”.

Discussion

The findings of the study indicated systemic issues were the major problems that contributed to students’ negative values towards guidance and counselling services. I observed that the four key relationships of school climate mentioned by Dorsey (2000)—the relationships of student to self, student to peers, student to parent and community and student to teacher, and administrators—was not positively exhibited by the participants. Indeed, the school had become powerless in establishing a good relationship between them, as it was unable to deal with the students’ behaviour (Gottfredson, 1989), and thus, inhibited a sense of cohesion and successful student outcomes (Stewart, 2008). The findings are also in agreement with Stewart (2008), who mentioned that a school’s experiences of higher levels of disorder relate to the situations where students do not believe they belong or feel cared for by the school personnel. Besides, Stewart added that an unsafe school is one that ignores misconduct; for instance, schools in which teachers and administrators have disagreements about the rules, or do not know them, and schools where students do not believe in the rules.

I learned from this study that the issue of the large number of students, the lack of physical facilities in the school and inadequate space for developing the students’ potential and capabilities had contributed to the school’s structural problems. These problems carry implications for the rest of the school system, including learning processes as well as students’ attitudes towards school guidance and counselling services. I find these situations echo the findings of Dei et al. (2007), who indicated that the negative values of students and the school system could adversely affect the overall school climate, possibly turning the school into a chaotic environment. In a similar vein, I do agree with Patton and McMahon’s
(2006) assertion that these elements (i.e. structural problems and students’ attitudes) work in circular rather than linear patterns in which they are mutually influencing each other.

Additionally, I was enlightened by Leithwood and Jantzi (2009), who indicated that smaller schools benefit students most. Based on their review of 57 empirical studies about school size effects, they indicated that students who traditionally struggle at school and students from disadvantaged social and economic backgrounds are the major benefactors of smaller schools. The results of the review indicated that secondary schools serving exclusively largely diverse and/or disadvantaged students should be limited in size to about 600 students or fewer, while those secondary schools serving economically and socially heterogeneous or relatively advantaged students should be limited in size to about 1,000 students. These results are in agreement with my study. The condition of this school, which consisted of a large number of students (approximately 3,500), with the lack of physical facilities, was deemed inappropriate for the students and school community. Besides lacking teachers’ attention, the students were vulnerable to the negative influence of peers. This echoes Silins and Mulford (2004), William and Walberg (1991) and Crosnoe, Johnson and Elder (2004), who mentioned that larger schools provide less benefits to students compared to smaller schools, where the latter indicate stronger engagement, superior “sticking” power and high student attendance and retention rates. Furthermore, smaller schools can promote higher participation and opportunities for students to participate in extracurricular activities than larger schools (McNeal & Ralph, 1999). Thus, students are more likely to feel connected and engaged and contribute more in smaller schools rather than larger schools.

Implications of Systems Theory Framework

The findings of the study fit into the STF that emphasises the interconnectedness and the importance of wholes rather than parts. According to McLeod (2003), each part of a system plays certain roles and performs specific tasks within the system. Crucially, change in any one part affects the rest of the system. The study shows that the changing of students’ values and attitudes carries implications for the rest of the school systems, including learning processes, as well as their values towards school guidance and counselling services. Similarly, the role of school counsellors in dealing with troubled students creates impressions which are detrimental to the general perception of counselling. In a similar situation, understanding the participants’ contextual background is important. Their behaviour cannot be accounted for in a linear way, as individuals actively participate in the creation of their own reality. Therefore, understanding the school structural system is important in comprehending the participants’ values towards counselling services.

In addition, the findings indicate that the students’ attitudes towards guidance and counselling services had been influenced by their personal values as well as their interactions with the school system. This finding fits with the basic assumption of the framework which emphasises that individual behaviour is best understood under the influence of the dynamics of the context in which the person is located. Patton and
McMahon (2006) urged that individuals are considered dynamic, recursive and open systems in which they are subjected to many influences from inside as well as beyond their boundaries. Additionally, the relationship between the client and the counsellor in the counselling process can be regarded as a system in its own right. Both become elements of the system and influence each other.

The findings of the research can be appropriately placed in this framework, as it highlights the importance of understanding diversity in guidance and counselling processes. According to Patton and McMahon (2006), diversity is not only confined to the relationship between counsellor and clients of diverse backgrounds, but also covers their interactions within the system. This includes having knowledge and an understanding of school structural systems as well as the needs of different types of students.

The researcher also agree with the suggestions proposed by McMahon and Patton (2002) that the STF can provide a map for counselling approaches because it accommodates not only the perspective of the traditional predictive theories, but also the positions of the more recent constructivist school counselling approaches. This theory emphasises that knowledge is formed through the process of co-construction between counsellor and clients. Based on my research findings, school counsellors had largely been using traditional ways of approaching clients, mostly by means of referral methods by teachers. Meaning-making as well as collaborative processes were rarely practised between students. Affirming this approach will probably enhance the counsellors’ contributions to their clients.

The research has merely uncovered a map on which we can begin a journey towards improving school counselling in this particular school as well as beyond to where the findings may be of relevance to practitioners. Embracing systems theory as a framework for understanding human beings has indeed allowed my findings to be of relevance to others, as it views human beings as dynamic, open system and recursive. These principles that consider individual as both a system and subsystem of a broader contextual system permits the transfer of human knowledge as it supports the applicability of influence from inside and beyond the boundaries of the system. Moreover, this framework that operates within the constructivist and social constructionist theories of human knowledge could have wider applications to the readers as it considers the holistic view of human’s interactions within a micro and macro understandings.

I learned through this research that the effort to understand counselling is not only established between the client and counsellor but also with the school system. I acknowledge that throughout recent history, emphasis has been placed largely by school guidance and counselling in Malaysia as well as across the globe on the importance of individualising problems as a response to individual suffering and individual needs. However, as we are now living in a complex social system, there is a need to understand school counselling on a systemic level (Low, 2009). According to McLeod (2003, p. 190), there is a need to understand the principles by which systems operate and the types of intervention that can bring about change on a systemic level. He stressed that the organisational factors characterised by the type of agency or setting, and the way it is
organised, may have an impact on many aspects of counselling. Furthermore, Anderson Goolishian, Pulliam, and Winderman (1986) mentioned that “problems are not the result of an objective defect that exists within or between individuals, but rather, the distinction of the system of treatment of concern is defined by those who share in the communication that defines the problem” (p. 118). Hence, I consider having a good understanding of the school ethos and systems as essential for all counsellors. In this vein, I acknowledge Bunce and Willower’s (2001) view that the examination of organisational values, beliefs and practices in relation to professional values, beliefs and training may inform capacity building for counsellors. I learned from them that the process of providing effective counselling strategies involves counsellors’ self-reflexivity (Strous, 2006). Counsellors need to examine their worldviews and, at the same time, try to understand others and have the awareness that they are not only working with their clients but with systems. Proactive efforts must be taken by school counsellors to resolve this issue. A holistic perspective enables individuals to recognise the themes and interconnectedness among various behaviours (Jackson & Meadows, 1991).

Immersing in the research process made the researcher understand the influence of a system on the values and attitudes of human beings. It is about time for guidance and counselling services to enhance their quality and to regain support from the school community by strengthening their roles. This is in accordance with McLeod (2003), who encouraged counsellors to play a more active part in facilitating organisational change. This involves the act of educating the school community about the role of counselling as well as establishing a viable relationship with this community. In the context of the researched school, more outreach promotions can be conducted to spread awareness about the service. Various efforts need to be made to demystify the actual meaning of guidance and counselling. This can be done by establishing collaboration with the school community (Clark & Breman, 2009) especially teachers and school administrators, in conducting programmes. Once counsellors have gained acceptance and respect in the staffroom, they can then fulfil a more specific counselling role. This is in line with the suggestion made by Akos (2005) that school counselling requires a unique design and responsive developmental programmes to cater to the needs of the school community. In this context, counsellors and the school community need to find a better way to restore a positive relationship and a supportive environment within the school community. Establishing advisory programmes and teaming, for example, could help improve teacher-counsellor-student relationships, promote social and emotional development as well as build feelings of belonging and caring.

Conclusion

Indeed, this framework has given the insights into connecting the researcher’s wide-ranging ideas into a more coherent whole. The conceptions of an individual in a system demonstrated by STF enable the researcher to explain the nature of human behaviour as a dynamic and fluid process. Through the process of recursiveness and chance, it clearly displays the fluid conception of human interaction. Therefore, this framework gives due
consideration to the dynamic elements surrounding human beings in a system is helpful in understanding school communities’ cultural values towards the service. Furthermore, this framework has opened up the possibilities to narrow down the understanding concerning this issue.

References


PRESERVICE TEACHERS’ TEACHING MIXED NUMBER FRACTION SUBTRACTION OPERATION

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Abstract

A study was conducted to reveal preservice teacher’s algorithm in teaching mixed number fraction subtraction operation during their teaching practicum in Malaysian primary schools. An initial survey was conducted to identify the implementation of preservice teacher’s in applying an algorithm in teaching to solve mixed number fraction subtraction operation. The sample surveyed consisted of 30 preservice teachers in semester 6 from a Malaysian Teacher Training Institute. The findings showed that 73.3% of preservice teachers were using that algorithm and 26.7% otherwise. The algorithm consisted of steps that are considered as mathematically illogical, beyond Malaysian Primary Education syllabus and in some cases absurd. Therefore, pre-service teachers should put proper attention when devising an algorithm to teach solving mixed number fraction subtraction operations.

Keywords: algorithm, fraction, operation, subtraction

Introduction

According to Newton (2008), the study of pre-service teacher’s knowledge of fractions is important. It is because one of the hardest math skills for students to learn in school is fraction (Naiser et al, 2004; Test & Ellis, 2005; Newton, 2008). Moreover, according to Ndalichako (2013), students could not perform correct operations related to fractions and they tended to confuse fraction concepts with whole number concepts. Nevertheless, Test and Ellis (2005) provided evidence that given systematic instruction, students with mild disabilities can acquire complex math skills. This is described by Naiser et al (2004) as a situation where teachers must find a variety of strategies to use in the classroom for teaching fractions. However, Olanoff et al (2014) says that the trend in the research has moved from looking almost entirely at pre-service teachers’ understanding of fraction operations, particularly multiplication and division, to a more balanced study of both their
knowledge of operations and fraction concepts. Therefore, Olanoff et al (2014) contended that their study findings suggest the need for a broader study of fractions in both content and methods courses for pre-service teachers, as well as research into how pre-service teachers’ fraction content knowledge develops.

In the Malaysian Primary School Syllabus, fractions are taught in year 1 onwards. However, it is only in year 5 that pupils are taught mixed number fraction operations. By this time pupils already have a firm grasp of whole number operations. During a routine pre-service teachers’ practicum observation in a Malaysian primary school, it was found that the pre-service teachers taught pupils to solve mixed number fraction subtraction operations using an algorithm that was conceptually incorrect (Elango, 2014). This was particularly so for fraction subtraction operations involving mixed number fractions with mixed number fractions and whole numbers with mixed number fractions vice versa and the procedure used by these pre-service teachers is as shown in Figure 5 and Figure 6. Although the algorithm used looked correct and the students arrived at a correct answer, however, it is not aligned to the Malaysian primary mathematics education curriculum. Nevertheless, further investigation into the Mathematics concept for Malaysian primary education, found that the second step is illogical and absurd (Elango, 2014). This is because there are many assumptions made by the pre-service teacher which is mathematically beyond the Malaysian Primary Mathematics syllabus. Therefore, a study was conducted to discuss the Mathematics pre-service teachers’ technique in teaching fraction subtraction operation using the algorithm as shown in Figure 5 and Figure 6 in our Teacher Training Institute.

**Literature Review**

Chan, Maun and Krisnan (2015), proposed the following technique in solving subtraction operation involving two mixed number fractions and whole number with mixed number fraction as shown in Figure 1 and Figure 2 respectively for year five education. The example in Figure 1 shows solving of subtraction operation involving mixed number fraction with mixed number fraction. The algorithm shown consists of four steps used to solve as follows:

i). both the denominators of the fraction part for the mixed numbers were changed to a same denominator using the cross multiplication technique;

ii). Subtracting the whole number with whole number that is 2 minus 1 equal to 1;

iii). Solving the fraction part by subtracting 7 from 12;

iv). Combining the whole number from (ii) and fraction from (iii) and writing it as the final answer.
Meanwhile, the example in Figure 2 shows solving of subtraction operation involving whole number with mixed number fraction. The algorithm shown also consists of four steps used to solve as follows:

i). the whole number 3 were changed to mixed number $2 + \frac{5}{5}$ with denominator equivalent with the denominator of the mixed number fraction
   
   ii). Subtraction of both fractions were solved

   iii). the remaining whole number is added to the fraction from (ii)

iv). Combining the whole number and fraction from (iii) to form a mixed number fraction as the final answer.

\[
3 - \frac{2}{5} = 2 + \frac{5}{5} - \frac{2}{5} = 2 + \frac{5 - 2}{5} = 2 + \frac{3}{5} = 2\frac{3}{5}
\]

**Figure 2** Subtraction of a whole number with mixed number fraction
Yong, Wong and Chew (2013) proposed the following technique in solving subtraction operation involving mixed number fraction with mixed number fraction and whole number with mixed number fraction as shown in Figure 3 and Figure 4 respectively for lower secondary education. They adopted the technique of finding the Lowest Common Multiple (LCM). The example in Figure 3 shows solving of subtraction operation involving mixed number fraction with mixed number fraction. The algorithm shown consists of four steps used to solve as follows:

i). both of the mixed number fractions were changed to improper fractions;
ii). Finding LCM and solving it;
iii). Arriving at an answer which was an improper fraction;
iv). Changing the improper fraction to mixed number fraction.

\[
3 \frac{1}{3} \quad - \quad 1 \frac{2}{5} \\
= \frac{10}{3} \quad - \quad \frac{7}{5} \\
= \frac{50 - 21}{15} \\
= \frac{29}{15} \\
= 1 \frac{14}{15}
\]

**Figure 3** Subtraction of two mixed number fractions

Meanwhile, the example in Figure 4 shows solving of subtraction operation involving whole number with mixed number fraction. The algorithm shown also consists of four steps used to solve as follows:
i). the whole number were changed to improper fraction with denominator equivalent with the denominator of the mixed number fraction and the mixed number fraction was converted to improper fraction

ii). Now, the both improper fractions were solved

iii). Arriving at an answer which was an improper fraction;

iv). Changing the improper fraction to mixed number fraction.

\[
8 - 3\frac{3}{8} = \frac{64}{8} - \frac{27}{8} = \frac{64 - 27}{8} = \frac{37}{8} = 4\frac{5}{8}
\]

**Figure 4** Subtraction of a whole number with mixed number fraction

Elango (2014) observed pre-service teachers adopting an algorithm in teaching mixed number fraction subtraction operation during their practicum in primary schools as illustrated in Figure 5 and Figure 6. Figure 5 showed how pre-service teachers taught to solve subtraction operation of two mixed number fractions as follows:

i. Firstly, they segregate whole numbers and fractions.

ii. Secondly, using a parenthesis they write whole number minus whole number, 3 minus 1, and fraction minus fraction, 5/6 minus 4/6 in parenthesis and combined both with an addition symbol.

iii. Thirdly, they solve the whole number subtraction and add it with solving the fraction subtraction, arriving at 2 plus 1/6.

iv. Finally, by adding 2 with 1/6 and arrive at \(2\frac{1}{6}\) which is a correct answer.
Figure 5 Subtraction operation of two mixed number fractions

Figure 6 show how pre-service teachers taught to solve subtraction operation of mixed number fractions with whole number as follows:

i. Firstly, they segregate whole numbers and fractions.

ii. Secondly, using a parenthesis they write whole number minus whole number, 5 minus 2, and fraction 4/7 minus 0 in parenthesis and combined both with an addition symbol.

iii. Thirdly, they solve the whole number subtraction and add it with solving the fraction and zero subtraction, arriving at 3 plus 4/7.

iv. Finally, by adding 3 with 4/7 and arrive at 3 4/7.

\[
\begin{align*}
3 \frac{5}{6} - 1 \frac{4}{6} &= (3 - 1) + \left( \frac{5}{6} - \frac{4}{6} \right) \\
&= 2 + \frac{1}{6} \\
&= 2 \frac{1}{6}
\end{align*}
\]
Ndalichako (2013), reported similar observations as Elango (2014) in a study that was conducted among pupils in Tanzania where 865 048 candidates sat for the Mathematics subject for Primary School Leaving Examination. One of many fraction questions that candidates were asked to answer was as in Figure 7.

A total of 860 028 candidates attempted this question where only 283 399 (32.76%) were able to select the correct answer E. Distracter A was more attractive than others as 177 216 (20.49%) candidates selected it.

$$\frac{5}{3} - \frac{1}{3} =$$

A. $4 \frac{1}{15}$
B. $4 \frac{1}{2}$
C. $3 \frac{1}{15}$
D. $4 \frac{14}{15}$
E. $3 \frac{14}{15}$

These candidates used an incorrect procedure for subtracting mixed fractions with different denominators. They treated whole numbers in isolation of their related fractions. They are likely to have selected option A through an incorrect computation approach as shown in Figure 8.

$$\frac{5}{3} - \frac{1}{3} = (5 - 1) \left( \frac{3}{5} - \frac{2}{3} \right)$$

$$= 4 \left( \frac{9 - 10}{15} \right)$$
There are various algorithms used by teachers to teach pupils subtraction operation involving mixed number fraction with mixed number fraction, mixed number fraction with whole number or whole number with mixed number fraction. Some of the algorithms used are beyond the syllabus of primary Mathematics education and there is no continuity between the primary education and lower secondary education curriculum in teaching solving of mixed number fraction subtraction operation. The review of literature urged the researchers to conduct a survey to identify how widespread the adoption of solving algorithm as in Figure 5 and Figure 6 among pre-service teachers.

Methodology

The researchers conducted a survey involving 30 pre-service teachers from a Malaysian Teacher Training Institute to identify whether they are using the same algorithm as in Figure 5 and Figure 6 to teach mixed number fraction subtraction operations and how widely spread this problem was. The respondents were in their 6th semester and attending their final practicum in primary schools. The two questions forwarded to them were “Do you teach to solve subtraction operation involving two mixed numbers as shown in Figure 5?” and “Do you teach to solve subtraction operation involving mixed number with whole number as shown in Figure 6? The data collected were analysed descriptively.

Findings

Table 1 Number and percentage of pre-service teachers teaching as in Figure 5 and Figure 6

<table>
<thead>
<tr>
<th>No</th>
<th>Item</th>
<th>Number of Pre-service teachers Agree (%)</th>
<th>Number of Pre-service teachers Disagree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Do you teach to solve subtraction operation involving two mixed number as shown in Figure 5?</td>
<td>22 (73.3%)</td>
<td>8 (26.7%)</td>
</tr>
<tr>
<td>2</td>
<td>Do you teach to solve subtraction operation involving mixed number with whole number as shown in Figure 6?</td>
<td>22 (73.3%)</td>
<td>8 (26.7%)</td>
</tr>
</tbody>
</table>
Table 1 shows the number and percentage of pre-service teachers teaching using an algorithm as in Figure 5 and Figure 6 to teach mixed number fraction subtraction operation solution. Based on Table 1, 22 (73.3%) pre-service teachers agreed that they taught to solve subtraction operation involving two mixed numbers as shown in Figure 5 meanwhile 8 (26%) pre-service teachers disagreed. Moreover, 22 (73.3%) pre-service teachers agreed that they taught to solve subtraction operation involving mixed number with whole number as shown in Figure 6 and 8 (26%) pre-service teachers disagreed.

Discussion

The survey results showed that 73.3% pre-service teachers would teach pupils to solve subtraction of mixed number with mixed number operations using the algorithm as shown in Figure 5 and only 26.7% pre-service teachers said otherwise. This finding is quite alarming. This is because the algorithm shown in Figure 5 should not be allowed because it allows learners to make mistakes during calculation as found from Ndalichako (2013) study. Moreover, the survey results also showed that 73.3% pre-service teachers would teach pupils to solve subtraction operation of mixed number with whole number using the algorithm as shown in Figure 6 and only 26.7% pre-service teachers said otherwise. Even though, the algorithm used arrives at a correct answer but Elango (2015) explains the step that show \((\frac{2}{7} - 0)\) is absurd. This is because no one can answer the question where did the zero come from? So, how do we explain this phenomenon? Mathematically it is misleading and beyond the content knowledge of the Malaysian primary school syllabus which involves negative number concepts.

As a result, this initial survey shows that there is a serious pedagogical problem concerning the teaching of mixed number fraction subtraction operations among our Mathematics pre-service teachers which needs to be addressed immediately. Especially when learning fractions is an essential and yet an enormously challenging part of the upper-elementary mathematics curriculum (Wood 2013). Therefore, we need to devise accurate pedagogical approaches in training pre-service mathematics teachers so that they are able to address such difficulties in the teaching and learning of operations involving fractions, particularly mixed number subtraction operations.

Conclusion

The researchers will conduct a research to design and develop a teaching learning module in mixed number fraction subtraction operation for pre-service teachers. It is important to note that there must be a continuity between the algorithm used during primary education and lower secondary Mathematics in solving subtraction operation involving mixed number fractions. So, collaboration among the teaching algorithm adopted should be conducted between primary and lower secondary educators.
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Kata Kunci: Guru, pengetahuan, kesediaan, teknik pengajaran, cadangan pengajaran, program inklusif.

1.0 PENGENALAN

Pendidikan khas di Malaysia merupakan suatu bidang yang semakin mendapat tempat dan perhatian masyarakat. Konsep masyarakat prihatin yang diwarwarkan oleh kerajaan telah menempatkan golongan orang kurang upaya ini seiring dengan golongan manusia normal yang lain. Ianya memerlukan sentuhan para profesional untuk mengendalikan keperluan khas golongan ini daripada segala aspek khasnya dalam
meningkatkan kualiti hidup secara umumnya melalui saluran institusi pendidikan. Akta Pendidikan 1996 (Akta 550) dan Peraturan-Peraturan Pendidikan (Pendidikan Khas) 2013, Bahagian 1, perkara 2 (b) dan (c) ada menyebut tentang perlunya mewujudkan satu program percantuman di sekolah biasa bagi murid-murid yang mempunyai kecacatan penglihatan atau kecacatan pendengaran atau masalah pembelajaran dan suatu program pendidikan inklusif bagi murid-murid dengan keperluan khas yang boleh menghadiri di dalam kelas biasa bersama-sama dengan murid-murid biasa.

Bilangan pelajar yang ditempatkan di dalam program pendidikan khas pada hari ini telah menunjukkan bilangan yang begitu memberangsangkan dan ianya dapat dilihat daripada jumlah enrolmen pelajar yang dibekalkan oleh Bahagian Pendidikan Khas, Kementerian Pendidikan Malaysia telah menunjukkan peningkatan tinggi daripada segi enrolmen tahunan bagi jumlah pelajar pendidikan khas yang mengikuti program integrasi (Maklumat Pendidikan Khas, 2007).

Inklusif bermaksud menempatkan pelajar pendidikan khas ke dalam aliran perdana yang bersesuaian dan boleh memberikan cabaran kepada kebolehan dan keperluan selain sokongan dan bantuan yang diperlukan oleh pelajar untuk berjaya di aliran perdana. Program inklusif ialah tempat di mana setiap pelajar diterima dan mempunyai sokongan daripada rakan-rakan dan komuniti sekolah dengan keperluan pendidikan mereka disediakan (Stainback & Stainback, 1990).

Menurut Kenyataan Salamanca dalam artikel 2, 1994. Inklusif adalah berkisar tentang sekolah biasa dengan orientasi kepada inklusif, ia merupakan cara yang paling berkesan untuk memerangi sikap diskriminasi, mencipta masyarakat yang ramah, membina masyarakat yang inklusif dan mencapai pendidikan untuk semua, disamping memberikan pendidikan yang berkesan kepada majoriti anak dan meningkatkan kecekapan dan akhirnya keberkesan daripada segi kewangan dalam sistem pendidikan secara keseluruhan.

Inklusif adalah penyediaan perkhidmatan kepada pelajar cacat, termasuk mereka yang mempunyai tahap kecacatan yang teruk. Di dalam persekitaran sekolah pelajar cacat ini diberikan khidmat sokongan dan bantuan tambahan agar mereka boleh berjaya dalam pencapaian akademik, perubahan tingkah laku dan keupayaan bersosial. Ia juga bertujuan untuk mempersiapkan pelajar-pelajar cacat bagi menyertai sebagai ahli penuh dan mampu memberikan sumbangan di dalam masyarakat (Lipsky & Gartner, 1996).

Kajian ini adalah bertujuan untuk melihat pengaplikasian ICT dalam pengajaran dan pembelajaran inklusif di program-program integrasi selaras dengan peruntukan undang-undang yang telah diluluskan untuk mereka serta ke arah menormalisasikan kehidupan golongan pelajar pendidikan khas ini dalam kehidupan masyarakat normal.

2.0 Penyataan Masalah

Isu yang akan dikaji adalah berkisar pengetahuan guru dan murid tentang penggunaan ICT dalam pendidikan Inklusif di Sekolah Rendah. Permasalahan yang dikaji
juga adalah berkenaan tahap kesediaan guru-guru resos pendidikan khas yang terlibat secara langsung dalam perlaksanaan inklusif. Masalah berkaitan dengan keperluan latihan seringkali dijadikan sebagai alasan oleh guru yang tidak bersetuju untuk mengajar kelas yang mempunyai pelajar pendidikan khas. Hal ini telah dibincangkan oleh Harris-Murri dan Rostenberg (2006) yang menyatakan guru yang tiada latihan yang khusus dalam menjalankan pengajaran di kelas inklusif akan merasa terbeban kerana mereka tidak mempunyai bimbingan khusus untuk menjalankan pengajaran dan pendekatan yang perlu digunakan bagi memastikan pelajar yang diinklusifkan dapat apa yang diajarkan kepada mereka.


Kajian yang dijalankan oleh Ainscow (2005) menyatakan, pemahaman tentang keperluan menjalankan program inklusif adalah suatu rutin biasa yang mana ianya perlu dipelajari oleh semua guru. Menurut Apple (1993), beliau mengatakan pengetahuan tentang menjalankan inklusif memerlukan seseorang guru itu faham apa yang dimaksudkan dengan program inklusif dan bagaimana menjalankannya mengikut kesesuaian dan kebolehan institusi menyediakan perkhidmatan mengikut kesesuaian semasa.

Menurut Lindsay (2007), inklusif itu adalah suatu bentuk pengajaran yang mana ianya memerlukan kefahaman yang tinggi kerena dengan  istilah tersebut dan ianya tidak difahami akan menimbulkan pelbagai isu yang besar. Hal ini dibincangkan oleh Armstrong (2005) yang mengatakan pengetahuan dan pemahaman guru tentang bentuk perkhidmatan pendidikan yang ada dalam kelas inklusif adalah elemen asas yang perlu disediakan oleh guru. Guru juga adalah bertanggungjawab untuk mendapatkan pengetahuan atas berkenaan perlaksanaan program inklusif dan bagaimana menyediakan kelas inklusif yang dapat membantu pelajar pendidikan khas yang diinklusifkan agar mereka mendapat manfaat daripada program yang dijalankan.

Fokus utama kajian ini adalah untuk mengetahui aspek pengetahuan, kesediaan dan teknik pengajaran yang menerapkan unsur ICT oleh guru aliran perdana yang mengajar pelajar pendidikan khas yang diinklusifkan khas di mana antara pemalar yang digunakan adalah dari segi pengalaman guru. Ia lebih merujuk kepada perlaksanaan inklusif itu di sekolah-sekolah yang mempunyai program integrasi pendidikan khas yang menjalankan program inklusif. Menurut Avramidis et al., (2002) kesediaan guru yang terlibat dalam kelas inklusif adalah suatu tuntutan yang memerlukan kerelaan mereka untuk mengajar pelajar aliran perdana dan pelajar pendidikan khas yang diinklusifkan. Hal ini disokong oleh Biklen
et al., (1989) beliau mengatakan mainstream adalah suatu program yang akan memberikan peluang pelajar pendidikan khas untuk bersaing dan belajar bersama-sama pelajar normal. Hal ini memerlukan kesediaan guru untuk memberikan perkhidmatan yang adil tanpa mendiskriminasi keperluan dan kekurangan pelajar pendidikan khas yang ditempatkan di kelas tersebut.

Menurut Rouse dan Florian (2009) menyatakan teknik pengajaran yang diubahsuai akan dapat membantu guru resos dan guru aliran perdana menyediakan pelajaran yang baik kepada pelajar di kelas inklusif. Hal ini bermaksud, sedikit pengubahsuaian diperlukan agar guru yang mengajar di kelas inklusif dapat memberikan perkhidmatan yang baik dengan kerjasama yang baik di antara kedua-dua pihak iaitu guru resos dan guru aliran perdana.

3.0 KERANGKA KONSEPTUAL

Kerangka konsep kajian ini adalah hasil daripada gabungan beberapa komponen asas di dalam pendidikan sebagaimana yang dihasratkan oleh Falsafah Pendidikan Kebangsaan yang ingin melihat kesepaduan yang menyeluruh. Beberapa pendekatan yang ditekankan di dalam Kenyataan Salamanca juga diberikan penekanan iaitu tiga teknik yang seharusnya berlaku dalam inklusif iaitu Pengajaran Bersama, Bantu Pengajaran dan Kolaborasi (Salamanca Statement, 1994).

Rajah 1.1 Kerangka Konsep Perlaksanaan ICT Dalam Pendidikan Inklusif

4.0 Objektif Kajian

Terdapat empat objektif kajian yang ditimbulkan dalam penyelidikan ini bagi mengkaji pengaplikasian ICT dalam proses pengajaran dan pembelajaran inklusif. Objektif tersebut adalah seperti yang berikut:

i. Mengenalpasti tahap pengetahuan guru dalam penggunaan ICT pendidikan Inklusif di Sekolah Rendah.
ii. Mengenalpasti tahap kesediaan guru dalam penggunaan ICT pendidikan inklusif di Sekolah Rendah.

iii. Mengenalpasti tahap penggunaan teknik pengajaran guru dalam penggunaan ICT pendidikan inklusif di Sekolah Rendah.

iv. Mengenalpasti cadangan-cadangan berkenaan dengan peningkatan kualiti peralatan ICT dalam inklusif di kalangan guru-guru aliran perdana yang mengajar pelajar pendidikan khas di Sekolah Rendah.

5.0 METODOLOGI KAJIAN

Kajian ini adalah secara kuantitatif dan kualitatif menggunakan instrumen berupa soalan soal selidik dan juga soalan temu bual. Kaedah persampelan bertujuan digunakan dalam kajian ini yang melibatkan guru-guru yang mengajar kelas inklusif pendidikan khas di 6 buah sekolah di Melaka. Seramai 30 orang guru aliran perdana yang mengajar pelajar pendidikan khas inklusif dijadikan sampel kajian. Manakala sampel temu bual pula adalah seramai 6 orang yang diwakili seorang guru setiap satu sekolah.

Instrumen soal selidik kajian ini dibahagikan kepada 4 bahagian latar belakang, pengetahuan guru, kesediaan guru dan penggunaan ICT dalam pengajaran inklusif. Semua soalan berjumlah 50 soalan yang menggunakan skala lima tahap. Instrumen berupa soalan temu bual pula digunakan kerana penyelidik berpendapat terdapat banyak maklumat yang boleh diperoleh sekiranya soalan terbuka digunakan. Selaras dengan kajian Ercikan dan Roth (2006), dan Cousin (2009), yang menyatakan temu bual digunakan untuk memperoleh maklumat berkaitan verifica, kepercayaan, perasaan, kehendak dan sebagainya untuk mencapai sesuatu objektif penyelidikan dengan memberikan pertimbangan khusus berkenaan hubungan secara empirikal berkaitan data, literatur, kewajaran dan perbualan bersama responden yang memberikan maklumat. Terdapat 8 soalan temu bual, hasil data temu bual dikod dan di transkripsi. Proses Mengekod membolehkkan pengkajian menstrukturkan semula isi kandungan hasil daripada temu bual yang dijalankan. Manakala transkripsi pula akan membolehkan data yang diperoleh disemak semula agar setiap isi yang diperlukan tidak tertinggal atau terabai dan ianya memudahkan analisis dibuat.

Keseluruhannya, data-data yang diperoleh akan dianalisis menggunakan ‘Statistical Package for the Social Sciences’ (SPSS) Versi 20.0. Analisis deskriptif dan min serta peratusan digunakan untuk persoalan kajian satu hingga ketiga.

Bagi menentukan tahap bagi data yang diperoleh, korelasi koefisien diukur dengan menggunakan tiga pembahagian tahap seperti jadual 1 di bawah.

Jadual 1 Penentuan Tahap Nilai Skor Min

<table>
<thead>
<tr>
<th>Nilai Skor Min</th>
<th>Tahap</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.67 hingga 5.00</td>
<td>Tinggi</td>
</tr>
<tr>
<td>2.34 hingga 3.66</td>
<td>Sederhana</td>
</tr>
<tr>
<td>1.00 hingga 2.33</td>
<td>Rendah</td>
</tr>
</tbody>
</table>
Manakala bagi persoalan kajian keempat pemerolehan data adalah menggunakan interpretasi hasil temu bual.

6.0 DAPATAN KAJIAN DAN PERBINCANGAN

Kajian ini memberikan penumpuan kepada guru aliran perdana yang menerapkan unsur ICT dalam mengajar pelajar pendidikan khas dalam program inklusif. Terdapat tiga aspek utama yang hendak diketahui oleh pengkaji berkenaan dengan pengetahuan, kesediaan dan teknik pengajaran yang ada pada seseorang guru aliran perdana yang menerapkan unsur ICT dalam mengajar pelajar pendidikan khas yang diinklusifkan. Dapatkan kajian dibincangkan mengikut persoalan kajian.

i. Apakah Tahap Pengetahuan Guru Tentang Penggunaan ICT Dalam Pendidikan Inklusif Di Sekolah Rendah?

Dapatan dari data yang diperoleh daripada soal selidik dan temu bual menunjukkan tahap pengetahuan guru berada pada tahap tinggi iaitu pada min 3.5633. Ini dijelaskan memulai jadual dibawah.

<table>
<thead>
<tr>
<th>No.</th>
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<th>STS</th>
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<th>KS</th>
<th>ST</th>
<th>SST</th>
<th>Min</th>
<th>Tahap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Saya tahu menggunakan MS Word untuk pemprosesan perkataan dalam kelas inklusif</td>
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<td>0</td>
<td>5</td>
<td>15</td>
<td>10</td>
<td>3.5633</td>
<td>Tinggi</td>
</tr>
<tr>
<td>2</td>
<td>Saya tahu menggunakan MS Exel untuk membuat lembaran elektronik dalam kelas inklusif</td>
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<td>0</td>
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<td>16</td>
<td>8</td>
<td>3.5633</td>
<td>Tinggi</td>
</tr>
<tr>
<td>3</td>
<td>Saya tahu menggunakan MS Power Point untuk membuat persembahan dalam kelas inklusif</td>
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<td>0</td>
<td>7</td>
<td>14</td>
<td>9</td>
<td>3.5633</td>
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<tr>
<td>4</td>
<td>Saya tahu menggunakan Macromedia Flash untuk membuat animasi dalam kelas inklusif</td>
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<td>3</td>
<td>3.5633</td>
<td>Tinggi</td>
</tr>
<tr>
<td>5</td>
<td>Saya tahu menggunakan CAD untuk melukis dan membuat reka bentuk dalam kelas</td>
<td>4</td>
<td>19</td>
<td>5</td>
<td>2</td>
<td>3.5633</td>
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</tr>
<tr>
<td></td>
<td>6. Saya tahu menggunakan Adobe Photoshop untuk edit grafik dan gambar dalam kelas inklusif</td>
<td>0</td>
<td>2 (6.7)</td>
<td>19 (63.3)</td>
<td>8 (26.7%)</td>
<td>1 (3.3%)</td>
<td></td>
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<td></td>
<td></td>
<td>3.5633 Tinggi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>7. Saya tahu menggunakan MS Access untuk membuat pengkalan data dalam kelas inklusif</td>
<td>1 (3.3%)</td>
<td>2 (6.7%)</td>
<td>17 (56.7%)</td>
<td>8 (26.7%)</td>
<td>2 (6.7%)</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td>3.5633 Tinggi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>8. Saya tahu menggunakan Internet Explorer untuk mencari maklumat dari internet dalam kelas inklusif</td>
<td>0</td>
<td>1 (3.3%)</td>
<td>12 (40%)</td>
<td>10 (33.3%)</td>
<td>7 (23.3%)</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>3.5633 Tinggi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>9. Saya tahu menggunakan Statistic Package for Social Science (SPSS) untuk membuat kerja analisis</td>
<td>1 (3.3%)</td>
<td>0</td>
<td>19 (63.3%)</td>
<td>7 (23.3%)</td>
<td>3 (10%)</td>
<td></td>
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<td></td>
<td>3.5633 Tinggi</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10. Saya tahu mengarang alat pengajaran dengan Authorware dalam kelas inklusif</td>
<td>1 (3.3%)</td>
<td>1 (3.3%)</td>
<td>21 (70%)</td>
<td>6 (20%)</td>
<td>1 (3.3%)</td>
<td></td>
<td></td>
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<td></td>
<td>3.5633 Tinggi</td>
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</tr>
<tr>
<td>Min Keseluruhan</td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td>3.5633 Tinggi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hasil dari soal selidik didapati kebanyakan guru memberikan respon yang bahawa mereka sangat memerlukan latihan berkenaan dengan cara mengajar pelajar pendidikan khas yang diinklusikan sebelum penerapan unsur ICT dalam pengajaran diterapkan. Hal ini wujud kerana pendekatan yang berbeza perlu diberikan kepada pelajar pendidikan khas berbanding pelajar aliran perdana.

Daripada data yang diambil semasa kajian ini dijalankan, responden menyatakan bahawa mereka akan berusaha untuk mendalami hal-hal yang menjadi keperluan khas para pelajar program inklusif dan juga mereka faham bahawa dengan meletakkan pelajar pendidikan khas di aliran perdana maka tiada isu kesilapan penempatan pelajar sebenarnya. Guru yang menerima tanggung jawab tersebut seharusnya peka tentang keperluan pelajar pendidikan khas terutama dalam penerapan unsur ICT dalam pengajaran.
Dari segi kekuatan dan kelemahan pelajar program inklusif, kebanyakan responden menyatakan ia adalah bersifat sementara dan lebih daripada separuh responden tidak memandang kepada kelemahan pelajar yang diinklusifkan sebagai kekurangan yang melemahkan minat mereka untuk belajar kerana ada juga pelajar program inklusif yang berjaya menjadi saingan kepada pelajar aliran perdana. Dapatan ini menyokong kajian Black-Hawkins, Florian dan Rouse (2007) yang menegaskan tentang pencapaian akademik pelajar di dalam sesebuah institusi yang menerima inklusif sebagai salah satu cara pembelajaran dan pengajaran.

ii. Apakah Tahap Kesediaan Guru Tentang Penggunaan ICT Dalam Pendidikan Inklusif Di Sekolah Rendah?

Dapatan dari data yang diperoleh daripada soal selidik dan temu bual menunjukkan tahap kesediaan guru berada pada tahap tinggi iaitu pada min 4.2367. Ini dijelaskan memalui jadual dibawah.

<table>
<thead>
<tr>
<th>No.</th>
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<th>STS</th>
<th>TS</th>
<th>KS</th>
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<th>SST</th>
<th>Min</th>
<th>Tahap</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saya yakin dengan kebolehan mengajar pelajar inklusif melibatkan ICT</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>19</td>
<td>7</td>
<td>4.2367</td>
<td>Tinggi</td>
</tr>
<tr>
<td>2.</td>
<td>Saya sedia menjalankan pengajaran di dalam kelas inklusif melibatkan ICT</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>18</td>
<td>8</td>
<td>4.2367</td>
<td>Tinggi</td>
</tr>
<tr>
<td>3.</td>
<td>Saya bersemangat tidak mudah mengalah walau mengajar pelajar inklusif melibatkan ICT</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>20</td>
<td>6</td>
<td>4.2367</td>
<td>Tinggi</td>
</tr>
<tr>
<td>4.</td>
<td>Saya teruja dengan kehadiran pelajar inklusif melibatkan ICT</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>17</td>
<td>7</td>
<td>4.2367</td>
<td>Tinggi</td>
</tr>
<tr>
<td>5.</td>
<td>Saya tidak membezakan pelajar inklusif dan pelajar biasa dalam kelas inklusif melibatkan ICT</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>17</td>
<td>10</td>
<td>4.2367</td>
<td>Tinggi</td>
</tr>
<tr>
<td>6.</td>
<td>Saya tidak melihat kekurangan sebagai penyebab pelajar tidak boleh</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>14</td>
<td>12</td>
<td>4.2367</td>
<td>Tinggi</td>
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</tbody>
</table>
berjaya dalam kelas inklusif melibatkan ICT

7. Saya sedia mengajar di kelas resos melibatkan ICT

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<tr>
<td>7</td>
<td>(23.3%)</td>
<td>13</td>
<td>(43.3%)</td>
<td>10</td>
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<tr>
<td>4.2367</td>
<td>Tinggi</td>
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</table>

8. Saya sedia mengajar pelajar kelas inklusif melibatkan ICT walaupun secara individu

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<table>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>(23.3%)</td>
<td>12</td>
<td>(40%)</td>
<td>11</td>
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<tr>
<td>4.2367</td>
<td>Tinggi</td>
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</tbody>
</table>

9. Saya sedia menjalankan kelas bimbingan tambahan untuk pelajar inklusif melibatkan ICT walaupun secara individu

<p>| | | | | |</p>
<table>
<thead>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>(23.3%)</td>
<td>16</td>
<td>(53.3%)</td>
<td>7</td>
</tr>
<tr>
<td>4.2367</td>
<td>Tinggi</td>
<td></td>
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</tr>
</tbody>
</table>

10. Saya sedia memberi kerja rumah tambahan kepada pelajar inklusif melibatkan ICT

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<table>
<thead>
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</thead>
<tbody>
<tr>
<td>7</td>
<td>(23.3%)</td>
<td>16</td>
<td>(53.3%)</td>
<td>7</td>
</tr>
<tr>
<td>4.2367</td>
<td>Tinggi</td>
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<td></td>
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</tbody>
</table>

**Min Keseluruhan**

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</thead>
<tbody>
<tr>
<td>4.2367</td>
<td>Tinggi</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hasil daripada temu bual yang dijalankan juga menunjukkan guru bersedia untuk menjalankan lebih tanggungjawab. Hal ini merujuk kepada perlakuanan program inklusif tersebut. Jika seseorang murid diletakkan di kelas aliran perdana seharusnya gaya pengajaran dan pembelajaran mereka juga mengikut pelajar aliran perdana. Pengajaran yang dijalankan di luar peruntukan masa bagi sesuatu mata pelajaran dianggap sebagai kerja sukarela seseorang guru dan bukananya wajib bagi setiap guru yang mengajar pelajar program inklusif.


Aspek motivasi guru juga ditunjukkan yang mana kebanyakan guru aliran perdana, mereka meletakkan aspek cabaran sebagai salah satu elemen untuk membangkitkan semangat para pelajar yang lain. Guru aliran perdana memberikan...

Menurut pendapat Nind et al., (2005) aspek tidak mewujudkan pembahagian diantara empati dan simpati kepada pelajar program inklusif akan memberikan kelebihan kepada guru dalam memberikan tumpuan terhadap pencapaian baik para pelajar dan pedagogi yang digunakapai. Di dalam sesebuah kelas ia adalah standard dan tidak memberikan kelebihan kepada sesuatu pihak secara teori dan praktis. Bagi kebanyakan guru baru, terdapat juga skor yang menunjukkan rasa teruja mereka tentang kehadiran pelajar pendidikan khas di dalam kelas aliran perdana. Berpandukan analisis data yang diperoleh, separuh daripada guru baru yang berpengalaman kurang daripada 5 tahun menunjukkan mereka merasakan kehadiran pelajar program inklusif ini akan memberikan pengalaman baru dalam karier mereka sebagai guru.

Berbanding dengan data yang ditunjukkan oleh guru yang berpengalaman lebih daripada 11 tahun, mereka mempunyai prinsip yang kuat berkenaan pelajar pendidikan khas. Tiada lagi perasaan yang melibatkan emosi seperti terlalu berempati dan simpati tetapi mereka menegaskan perkara-perkara yang membolehkan bantuan secara terus diberikan terutamanya dari aspek pencapaian akademik yang baik.

Salah satu tujuan perlaksanaan program inklusif adalah untuk memastikan pelajar pendidikan khas berinteraksi dengan dunia luar. Aspek interaksi ini melibatkan sosialisasi mereka dengan pelajar aliran perdana serta kepelbagaian interaksi untuk membentuk hubungan melalui kesedaran para guru memberikan bimbingan kepada mereka agar pelajar ini keluar dari stigmatism masyarakat dan menghilangkan label pendidikan khas yang diberikan kepada mereka.

Daripada data yang diperoleh, kebanyakan guru menyatakan kesedaran mereka untuk memastikan pelajar yang diinklusifkan belajar cara untuk bersosialisasi di dalam kelas dan salah satunya memalui penggunaan ICT dalam pembelajaran. Mereka juga berpendapat jika diberikan peluang dan pelajar inklusif menyahut peluang tersebut, satu pengalaman yang akan membentuk pengetahuan kepada mereka dan akan digunakan sebagai panduan kelak setelah tamat persekolahan.

iii. Apakah Tahap Penggunaan Teknik Pengajaran Guru Dalam Penggunaan ICT Pendidikan Inklusif Di Sekolah Rendah?

Dapatan dari data yang diperoleh daripada soal selidik dan temu bual menunjukkan tahap penggunaan teknik pengajaran guru berada pada tahap tinggi iaitu pada min 3.7167. Ini dijelaskan memalui jadual dibawah.
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<th>ST</th>
<th>SST</th>
<th>Min</th>
<th>Tahap</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Saya memperoleh maklumat berkaitan ICT dengan berkursus</td>
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<td>0</td>
<td>13</td>
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<td>3</td>
<td>3.7167</td>
<td>Tinggi</td>
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<tr>
<td>2.</td>
<td>Saya kerap menggunakan peralatan ICT dalam kelas inklusif</td>
<td>0</td>
<td>0</td>
<td>13</td>
<td>14</td>
<td>3</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>3.</td>
<td>Saya kerap mencari maklumat berkaitan pengajaran dalam internet</td>
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<td>21</td>
<td>5</td>
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<tr>
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<td>10</td>
<td>5</td>
<td>3.7167</td>
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<tr>
<td>5.</td>
<td>Saya kerap memuat turun fail (download file)</td>
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<td>12</td>
<td>5</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>6.</td>
<td>Perisian komputer banyak membantu saya dalam menyediakan tugasan kepada pelajar</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>16</td>
<td>8</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>7.</td>
<td>Saya menggunakan grafik atau animasi komputer semasa menyediakan tugasan</td>
<td>0</td>
<td>3</td>
<td>13</td>
<td>11</td>
<td>3</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>8.</td>
<td>Saya sentiasa mengintegrasikan pelbagai penggunaan bahan multimedia (video presenter, LCD projector dan lain-lain)</td>
<td>0</td>
<td>1</td>
<td>13</td>
<td>12</td>
<td>4</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>9.</td>
<td>Saya menggunakan secara optimum perisian computer</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>20</td>
<td>2</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
<tr>
<td>10.</td>
<td>Saya mengamalkan pembelajaran</td>
<td>1</td>
<td>0</td>
<td>15</td>
<td>12</td>
<td>2</td>
<td>3.7167</td>
<td>Tinggi</td>
</tr>
</tbody>
</table>
dalam net-working (chat, perbincangan, forum dan lain-lain)

| Min Keseluruhan | 3.7167 | Tinggi |

Bagi persoalan kajian yang ketiga ini, dapatan dari data yang telah diperoleh dari pada 10 soalan yang merangkumi tiga komponen utama teknik dalam inklusif iaitu Kolaborasi, Bantu Pengajaran dan Pengajaran Bersama menunjukkan bahawa semua guru aliran perdana yang mengajar pelajar pendidikan khas bersedia untuk menjalankannya. Walau bagaimanapun, terdapat juga guru yang telah menjalankan ketigatiga teknik tersebut tetapi tidak mengetahui bahawa pendekatan yang dijalankan itu adalah teknik pengajaran program inklusif. Hal ini sememangnya sering berlaku di mana-mana program inklusif kerana guru yang mengajar program inklusif tidak pernah berkursus secara formal dan tiada pendedahan mengenainya (Aefsky, 1995).

Menurut D’Alessio (2007) kefahaman guru aliran perdana yang memberikan perkhidmatan kepada pelajar pendidikan khas program inklusif kebiasanya adalah merangkumi keperluan kendiri seseorang pelajar. Bagi kebanyakan guru pula, mereka faham bahawa dengan menggunakan pendekatan Bantu Pengajaran di antara guru resos dengan guru aliran perdana akan dapat membentuk semangat kerjasama dalam kalangan pendidik ke arah hasil pembelajaran yang sama.

Hal ini berlaku di dalam program inklusif di Malaysia, khususnya bagi guru-guru resos program cacat penglihatan dan cacat pendengaran yang mana mereka banyak membantu guru aliran perdana dalam proses penyediaan bahan dan soalan peperiksaan yang disediakan oleh guru aliran perdana. Setiap keperluan dari segi penggunaan alat bantu mengajar termasuklah penggunaan ICT. Ia dapat dilihat dalam data yang diperoleh di dua buah sekolah yang mempunyai pelajar program inklusif cacat penglihatan dan pendengaran.

Perbincangan merupakan kunci kepada kejayaan (Hollander, 2009). Dalam perlaksanaan program inklusif, perbincangan merupakan suatu tuntutan yang mesti berlaku di antara guru pendidikan khas dengan guru aliran perdana tidak kira teknik pengajaran yang akan digunakan. Perbincangan yang berlaku akan menentukan kejayaan seseorang pelajar yang diinklusifkan. Hal ini dapat dibuktikan daripada data yang diperoleh yang mana guru yang mengajar berkenaan dengan teknik Bantu Pengajaran dan Pengajaran Bersama. Terdapat juga sekolah yang menjalankan Pengajaran Kumpulan yang mana guru pendidikan khas dan guru aliran perdana mengajar dalam kelas yang sama.

Jumlah responden yang memberikan respon secara keseluruhan adalah sangat baik kerana bagi pelajar pendidikan bermasalah pembelajaran mereka tidak mengikut ‘inklusif penuh’ kerana mata pelajaran yang diinklusifkan dihadkan kepada beberapa mata pelajaran sahaja. Oleh itu guru resos mengajar sebahagian daripada mata pelajaran lain yang mana pelajar pendidikan khas sukar mempelajarinya di dalam
kelas. Walaupun konsep program inklusif sedikit bercanggah dengan pendekatan ini, tetapi ia adalah relevan dengan apa yang dijalankan di Malaysia (Manisah et al., 2006).

Kebolehan seseorang guru aliran perdana dan guru pendidikan khas dalam menjalankan teknik Kolaborasi sangat diperlukan terutamanya bagi memastikan topik-topik tertentu dalam sesuatu mata pelajaran dapat diajar terus kepada pelajar. Daripada kajian yang dijalankan terdapat responden yang akan mengembalikan pelajaran program inklusif ke kelas pendidikan khas jika didapati mereka tertinggal dan tidak dapat menguasai sesuatu kemahiran jika pengajaran kelas dijalankan.

Menurut Lambe (2007) kecenderungan membuat penempatan semula pelajar program inklusif ke kelas pendidikan khas adalah munasabah jika terdapat permasalahan dalam memenuhi kebolehan dan memperbaiki pencapaian seseorang pelajar. Guru pendidikan khas hendaklah menerima kembali dan berbincang mengenai penempatan semula agar tahap pencapaian pelajar dapat diimbangkan dengan tahap kebolehannya (Raver, 2007). Daripada dua pendapat di atas didapati tindakan guru aliran perdana yang memulangkan pelajar program inklusif bagi tujuan membaiki kelemahannya dapat diterima kerana ia adalah untuk kebaikan pelajar tersebut selain dapat mengekalkan hubungan baik dalam kalangan pendidik di sesebuah sekolah.

Pengajaran individu merupakan salah satu daripada beberapa pendekatan yang ada dalam pendidikan khas. Walaupun begitu, bagi pelajar yang mengikuti program inklusif, konsep ini sangat jarang dijalankan kerana tidak mempunyai kesesuaian dalam pengamalan ‘mainstream’. Daripada skor yang diperoleh, di dapati ramai responden yang kurang bersetuju dengan pendekatan pembelajaran secara individu kerana menurut mereka, pengajaran secara individu hanya bersesuaian dilaksanakan dalam kelas bimbingan dan mereka menyerahkan tugas dari kepada guru resos kerana kepakaran dari segi pendekatan adalah dalam kalangan guru pendidikan khas dan bukannya dalam kalangan guru aliran perdana.

Pendapat ini mempunyai kesamaan dengan apa yang dikatakan oleh Schmidt dan Cagran (2008) yang mana mereka menyatakan kaedah pengajaran individu akan memberikan kesan yang lebih baik dan sebolehnya ia dilakukan oleh guru yang mempunyai kemahiran yang tinggi dalam teknik pengajaran pendidikan khas. Daripada pendapat tersebut, jika dikatakan teknik pengajaran pendidikan khas, kebiasaannya hanya guru pendidikan khas sahaja yang terlatih dan berpeluang mengikut kursus yang berkaitan. Oleh itu wajarlah pendapat guru aliran perdana yang meletakkan tanggungjawab mengajar secara individu kepada guru pendidikan khas.


Terdapat cadangan-cadangan bagi meningkatkan kualiti perlaksanaan inklusif. Antaranya ialah cadangan kepada pihak sekolah, penerangan kepada murid normal, kolaborasi antara guru khas dengan guru mata pelajaran, kerjasama antara Jabatan Pendidikan Negeri dengan Jabatan Pendidikan Khas dan peranan dari pihak luar. Antara cadangan lain adalah :
a) Penglibatan adalah berguna untuk keperluan manusia untuk menikmati dan menjayakan hak-hak manusia dalam program inklusif.
b) Perbezaan manusia adalah normal
c) Perbezaan pembelajaran mesti diadaptasi mengikut keperluan kanak-kanak pendidikan khas.
d) Sekolah biasa mesti mengenalpasti dan memberi respon terhadap kepelbagaian keperluan pelajar mereka.
e) Sekolah biasa dengan orientasi inklusif merupakan satu cabaran besar dalam melawan sikap mendiskriminasi, membentuk komuniti yang mengalu-alukan pendidikan inklusif, membina masyarakat inklusif dan memecap tahap pendidikan untuk semua
f) Bila sekolah aliran perdana menyediakan pendidikan yang efektif kepada majoriti kanak-kanak khas, mereka juga meningkatkan kecekapan dan keefektifan bagi keseluruhan sistim pendidikan
g) Kerajaan perlu mengadaptasikan undang-undang dan prinsip polisi bagi kemasukan pelajar pendidikan inklusif dalam sekolah biasa.

Data temu bual yang diperoleh menunjukkan kebanyakan guru aliran perdana menyuarakan pendapat mereka berkenaan penempatan pelajar program inklusif yang tidak bermula di awal persekolahan seperti di tahun 4. Guru-guru mencadangkan program inklusif bermula di awal persekolahan. Selaras dengan Moore (2003) yang menyatakan penempatan pelajar pendidikan khas yang hendak diinklusifkan perlu dimulakan seawal mungkin kerana kesediaan dan pendedahan awal akan membolehkan pelajar mengurangkan rasa kecacatan yang mereka alami. Pendekatan menempatkan pelajar program inklusif di peringkat yang lebih awal akan membolehkan guru mengenal pasti kebolehan dan kelemahan pelajar. Ini akan dapat memberikan peluang yang lebih kepada pelajar untuk menyesuaikan diri selain memotivasikan mereka untuk belajar dengan lebih baik dengan bantuan guru aliran perdana.

7.0 Kesimpulan

Berdasarkan kepada keputusan kajian dan perbincangan, di dapati pengaplikasian ICT dalam pengajaran dan pembelajaran pendidikan inklusif yang dijalankan di Malaysia memerlukan sedikit perubahan dari segi peluang berada di dalam kelas aliran perdana dan aspek penerimaan pembelajaran yang disediakan kepada pelajar pendidikan khas disediakan lebih awal daripada amalan yang telah dijalankan. Implikasinya, kajian ini diharapkan memberikan lebih ruang kepada perlaksanaan pengaplikasian ICT dalam pengajaran dan pembelajaran pendidikan inklusif yang lebih baik. Perlaksanaan yang lebih baik akan memberikan peluang sama rata kepada semua pelajar yang berupaya mengikuti pembelajaran di kelas aliran perdana. Diharapkan dengan memastikan perlaksanaan ICT dalam pengajaran dan pembelajaran program inklusif dapat dilaksanakan
ini sedikit sebanyak akan memberikan peluang pelajar OKU untuk lebih berdikari selain mengurangkan stigmatisme dan label yang diberikan kepada para pelajar pendidikan khas sejak sejak sekian lama.

8.0 Rujukan


THE DEVELOPMENT OF A FRAMEWORK TO DETERMINE THE EXTENT TO WHICH THE MATHEMATICAL KNOWLEDGE OF PRE SERVICE TEACHERS IMPACTS THE MATHEMATICAL QUALITY OF THEIR INSTRUCTION

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Abstract

The aim of the study is to develop two protocols to examine the mathematical quality of pre service teachers’ instruction (MQI) and the mathematical knowledge for teaching (MKT) that they hold. Used simultaneously, the protocols offer a reliable method of documenting how the knowledge components of pre service teachers' (PSTs') MKT that are constantly being reshaped by their school based experiences impacts the MQI. The research method involved conceptualizing a framework for PSTs' MKT and a framework for the MQI based on the theoretical and empirical work of past studies, the curriculum of the Teacher Education Program and also the researchers’ experience as teacher educators. Guided by these frameworks, the protocols were piloted and revised based on the findings. The finalized protocols will be used in a case study to find out how the mathematical quality of PSTs' instruction is shaped by their MKT. The findings from the pilot study confirm that the knowledge domains of PSTs conceptualized in the framework is similar to those of more experienced in service teachers. It also highlighted that the elements used to capture the mathematical quality of PSTs' instruction were divided into two categories: positive instances of classroom mathematics (affordances) and negative instances (deficits). However, this has to be further fine-tuned to reflect the mathematical quality of pre service teachers’ teaching. The protocols will provide a deeper understanding of the similarities and differences in MKT and the MQI of pre service and in service teachers.

Keywords: mathematical knowledge, mathematical quality, instruction

Introduction

Results of the Trends in International Mathematics and Science Studies (TIMSS) and the Program for International Student Assessment (PISA) have demonstrated the strengths and weaknesses in the teaching and learning of mathematics nationwide and internationally. Similar to other participating countries, the results of such studies in Malaysia have given rise to a lot of interest shown in doing studies on the mathematical quality of instruction (MQI), the amount of knowledge teachers need to possess to teach mathematics effectively and how this knowledge can be developed in pre service teachers (PSTs). One such study claims that teachers’ weak knowledge of mathematics and failure to provide rich learning experiences to pupils resulted in poor attainment in mathematics (Pournara, Hodgen, Adler & Pillay, 2015).
In the light of these concerns, teacher educators seek to develop strategies for assessing the results of their efforts. Once the PSTs are posted to schools, the assessment tools commonly used for gauging their ability to teach mathematics as well as the teacher educators’s success in reinforcing them include, among other things, the PSTs’ Course Assessments, PSTs’ School Based Experience (SBE) Assessments as well as the Perceptions of Preparedness of the PSTs and their employers. However, these alone do not provide clear evidence of the knowledge PSTs have and how it can be accessed for planning and using mathematical knowledge for teaching and learning.

A high quality of instruction is not synonymous with a high quality of mathematical instruction. Only when a high mathematical quality environment is created by the teacher can the pupils develop and explore mathematical ideas, make conjectures, reason logically and mathematically and justify various methods for solving problems. The new Standard Curriculum for Primary Schools in Malaysia places emphasis on developing these higher order thinking skills as well as their proficiency in mathematics through conceptual understanding, mathematical communication and mathematical reasoning. The implementation of an effective standard curriculum depends upon the work of skilled and knowledgeable teachers who understand the subject matter, pupils and learning. Teacher educators must be in the forefront to ensure that the PSTs develop their mathematical knowledge for teaching (MKT) and are successful in translating that mathematical knowledge into instruction of high mathematical quality.

Since the knowledge components of the domains of the PSTs’ MKT are constantly reshaped by their latest School Based Experiences, it defies systematic categorization and being made available. The development of MKT in prospective teachers is complex, requiring a more specific framework to describe the knowledge compared to what experienced teachers require. More studies are needed to investigate PSTs’ MKT and to identify what constitutes this knowledge.

A study of how MKT is enacted in classroom instruction and its impact on the dimensions of MQI is essential to determine the success of the teacher education program. Findings on how the domains of MKT are translated into classroom instruction and how they impact MQI will give important information on the preparedness of PSTs during in-school practicum placements. It will further facilitate teacher educators to focus training on practices that will develop the appropriate MKT so that prospective teachers will be able to translate the new standards of the mathematics curriculum into attainable learning outcomes. If PSTs are incapable of translating the acquired knowledge for teaching mathematics into instruction of high mathematical quality, it will lead to a disparity between the knowledge and effectiveness of the teacher to achieve the curriculum aims.

Compelled to examine this phenomena from a qualitative perspective, the researchers of this study conceptualized the necessary frameworks to study the PSTs’ Mathematical Knowledge for Teaching (MKT) and their Mathematical Quality of Instruction (MQI). They wanted to find out what actually constituted the mathematical quality of the PSTs’ classroom teaching and how the PSTs’ Mathematical Knowledge for Teaching (MKT)
impacted it. In order to answer these questions, the researchers looked into the PSTs actual classroom practices.

This paper addresses the conceptualization of two frameworks, one for MKT and another for MQI and describes how they were developed into protocols that were utilized in authentic classroom situations to study the MKT, its interplay with other elements of classroom practice and how together they impacted the MQI. The protocol developed from the MKT framework is the Pre Service Teachers' Mathematical Knowledge for Teaching (PTMKT) protocol while the protocol developed from the MQI framework is the Pre Service Teachers' Mathematical Quality of Instruction (PTMQI) protocol. Although mapping of critical dimensions of mathematics classroom instruction has been carried out by many researchers (Hill et al., 2008; Ball, Bass & Hill, 2011), the interplay of factors such as MKT on the mathematical quality of PSTs’ classroom instruction has remained unexplored.

Theoretical Background to Mathematical Knowledge for Teaching (MKT) and Mathematical Quality of Instruction (MQI)

Before going further, it is important to explain how the construct Mathematical Knowledge for Teaching (MKT) evolved from prior domains of mathematical and pedagogical knowledge and how Mathematical Quality of Instruction (MQI) evolved as a dimension of classroom instruction. In order to present the issues related to mapping the MKT, to define the dimensions of MQI and to review the research involving the measurement of these constructs, it is important to understand what 'knowledge' means.

Mathematical Knowledge for Teaching (MKT)

Knowledge is regarded as a collection of wisdom that results from innovative responses to new opportunities and challenges (Frappalo, 2006). Knowledge for teaching is the meaningfully-organized accumulation of content and pedagogical information gained through experience, communication or inference.

Polanyi (1966) distinguishes two types of knowledge and contends that all knowledge can be classified according to its complexity on a continuum from explicit to tacit knowledge. A crucial part of what is taught in mathematics is tacit knowledge. To a degree, part of the knowledge that mathematics teachers hold is also tacit in nature. Tacit knowledge for teaching mathematics is subconsciously understood and applied in planning and teaching. It is difficult to articulate, is developed from direct experience and action, and is usually shared through highly interactive discourse and shared teaching and learning experiences. The more explicit form of knowledge for teaching mathematics can be more precisely and formally articulated and therefore is more easily codified, documented, transferred or shared.

Based on this view of knowledge, the framework the researchers developed and the methodology they used, (i.e. through observation and loosely structured, interactive and in depth interviews), this study attempts to capture the MKT held by PSTs in both the tacit and
explicit forms. However, like Polanyi, it can be conceded that not all tacit knowledge can be made explicit, nor can it be extracted from its owner and codified in order to make it more sharable.

Shulman conceptualized seven diverse categories of teacher knowledge. Three of them focused explicitly on 'content' knowledge which included subject matter knowledge, pedagogical content knowledge (PCK) and curricular knowledge. Shulman’s PCK included finding ways of presenting the subject matter more comprehensively, of having an understanding of what makes the teaching and learning of specific topics easy or difficult and having knowledge of common misconceptions and strategies for correcting them. Subsequent researchers successfully used the categories proposed by Shulman (1986) in a framework for their research in mathematics education.

Grossman (1990) reorganized Shulman and his colleagues’ categories of knowledge for teaching into four groups. These categories were subject matter knowledge, general pedagogical knowledge, pedagogical content knowledge and knowledge of content. Grossman’s PCK addressed teachers’ knowledge of students’ understanding, curriculum knowledge and knowledge of teaching strategies. Cochran, DeRuiter and King (1993) revised Shulman’s original model to make it more consistent with a constructivist perspective of teaching and learning by incorporating four components: knowledge of subject matter, knowledge of pedagogy, knowledge of students and their characteristics (student abilities, learning strategies, ages and developmental levels, attitudes, motivation and prior knowledge) and knowledge of environmental contexts (the social, political, cultural and physical environments in which students are asked to learn). Ma’s (1999) notion of PFUM (Profound Understanding of Fundamental Mathematics) represented a particularly generative form of the structure for PCK (Ball & Bass, 2000). But, none of these packages of knowledge adequately represented all facets of teaching mathematics.

These domains of knowledge for teaching mathematics remained incomplete as they could not adequately anticipate the common features of classroom instruction such as what the students may think or answer, how some concepts may evolve during the teaching period or the need to introduce a new form of representation or explanation for a familiar concept when the teacher has exhausted all other avenues. Furthermore, as teachers meet novel situations in classroom teaching, they must effectively call into play different kinds of knowledge from different domains. Ball and Bass (2000) used the term Mathematical Knowledge in teaching to capture the complex relationship between mathematics content knowledge and teaching. Subsequently, Ball, Lubienski and Mewborn (2001) refined Shulman’s PCK and introduced MKT as a specialized knowledge of content that is specific to the task of teaching. In their refinement, MKT not only included PCK but also incorporated subject matter knowledge, both common and specialized.

Another existing study that gave further input for the conceptualization of the researchers’ framework of PSTs’ MKT is the Teacher Education and Development Study on Mathematics (TEDS-M). The TEDS-M framework (Teacher Education International Study Center, 2008) was developed to determine the development of MKT in prospective teachers enrolled in various Teacher Education Programs in selected countries including Malaysia.
the TEDS-M framework, MKT is assumed to have two dimensions: Mathematics Content Knowledge and Mathematics Pedagogical Content Knowledge (Tatto et al., 2007). Mathematics Content Knowledge draws on the four content domains that were used in the TIMSS studies of primary and secondary school students (Mullis, Martin, Ruddock, O’Sullivan, Arora, & Erberber, 2007). These were: number, algebra, geometry and data.

The Mathematics Pedagogical Content Knowledge is divided into three sub-domains: Mathematics Curricular Knowledge, Knowledge of Planning Mathematics and Knowledge of Enacting Mathematics. Researchers in the TEDS-M study used Factor Analysis and Item Response Theory to confirm that Mathematics Content Knowledge and Mathematics Pedagogical Content Knowledge are indeed different constructs and appear to be different dimensions of MKT. The framework that was developed for this study of PSTs was based on this important finding from the TEDS-M study and the MKT domains mapped by Ball et al. (2008).

The domain map of MKT (Ball et al., 2008) contains six strands. Three strands represent Subject Matter Knowledge: Specialized Content Knowledge (SCK), Common Content Knowledge (CCK) and Knowledge at the Mathematical Horizon (KMH). The remaining three strands are associated with Pedagogical Content Knowledge and contains Knowledge of Content and Students (KCS), Knowledge of Content and Teaching (KCT) and Knowledge of Curriculum (KC). The knowledge domains conceptualized in this research framework of PSTs knowledge for teaching mathematics (MKT), comprises both traditional solutions (predetermining teacher responses to anticipated stimulus) and knowledge (information that result in innovative responses to address unanticipated stimulus) in explicit and tacit forms.

**Mathematical Quality of Instruction (MQI).**

Research-based knowledge about mathematics education claim that high quality mathematics instruction requires good teaching practices, highly developed mathematics and pedagogical knowledge (Borko, Eisenhart, Brown, Underhill, Jones & Agard, 1992; Fennema, Franke, Carpenter, & Carey, 1993; Leinhardt & Smith, 1985; Lloyd & Wilson, 1998; Swafford, Jones, & Thornton, 1997; Thompson & Thompson, 1994; Hill et al., 2008; Hill, Umland, Litke, & Kapitula, 2010). In most studies, teacher knowledge and classroom instruction were simultaneously studied in order to make the claim that teacher knowledge is critical to instruction. These studies can be classified into two groups: “deficit studies” and “affordance studies”. In the deficits group, a teacher’s lack of mathematical understanding is linked to negative patterns in her mathematics instruction. The latter, highlight the affordances or enrichment elements that reinforce a strong mathematical (and related) understanding for classroom culture and instruction. Although both the affordance and deficit studies have been tremendously generative for the field of mathematics education, they also provided conflicting views. Borko et al. (1992) found that a PST who was well-prepared and knowledgeable in upper-level mathematics had significant difficulties explaining the division of fractions in response to a student’s question. Thompson and
Thompson (1994) showed that although a teacher had strong conceptual knowledge on a paper-and-pencil test in a professional development setting, he had trouble talking conceptually about rates while teaching. While each study gives several suggestions on how teacher knowledge influences instruction, there is no comprehensive framework to actually describe this relationship in the PSTs' instruction nor is there an authentic, in-depth investigation into it.

Hill et al.'s (2008) notion of Mathematical Quality of Instruction (MQI) is multidimensional and characterizes the richness of the mathematics of a lesson, including the presence or absence of mathematical errors, mathematical explanation and justification, mathematical representation and observable characteristics related to pupil participation in meaning making and problem solving. The authors developed the MQI observational instrument to provide a balanced view of the numerous elements that comprise the mathematical quality of a video recorded mathematics lesson. The instrument provided separate teacher scores for different dimensions of the mathematical work that teachers do, as well as an “overall” MQI score (Hill et al., 2008).

More recently, Ball et al. (2011) further refined the coding guidelines in the MQI observational instrument. The researchers provided the coding guidelines for constructs of MQI based on indicators such as the presence of errors and how they were treated, the appropriateness of the teachers' responses to students, the precision in the use of mathematics language and the promotion of equity. These elements formed the foundation for the framework developed for investigating the mathematical quality of the PSTs' instruction in this study.

**Conceptualization of the MKT and MQI Frameworks for the PSTs**

Various means have been used to identify the mathematical knowledge needed for teaching. One such means is the examination of the mathematics curriculum. However, Ball & Bass (2000) found this to be incomplete as it failed to anticipate the mathematical demands of its enactment in classrooms. Other methods for identifying MKT include paper-and-pencil tests and teacher interviews. Although these are valuable tools for gathering information, they too were found to be insufficient because they infer teacher knowledge from teachers' accounts of what they think or would do in a hypothetical classroom situation or mathematical problem. The researchers of this study are of the opinion that identifying the mathematical knowledge needed for teaching from the examination of classroom teaching is a more reliable method because it studies in greater depth the interplay of mathematics and pedagogy in the course of classroom practice. Valid data on MKT can be acquired through authentic investigations of teacher practices as they mediate pupils’ ideas, address misconceptions and make choices about mathematical representations, pupils' misconceptions as well as curriculum materials.

The framework of MKT domains and the protocol developed from it will facilitate the study of PSTs' MKT in lesson planning, classroom instruction and in PSTs' reflection,
affording teacher educators a means to explore how MKT influences the pedagogical and mathematical choices the PSTs make during school based practicum placements. The pre service teachers' MKT protocol is also beneficial for exploring the intersections of the various domains of MKT and the ways in which it combines and separates to influence the mathematical quality of the PSTs' instruction. It is proposed that increased knowledge and experience in any of the domains can generally impact MQI, benefitting the teaching and learning of mathematics. The protocol used not only addresses this proposition but will provide teacher educators with the lens to examine PSTs' MKT more closely.

Although the content of the mathematics pedagogy courses in the mathematics teacher education program in Malaysia is related to the structure, sequence and content of the primary school mathematics curriculum (KBSR and KSSR), this facet of themathematics teacher education program did not warrant delineation of the Mathematics Content Knowledge category of the MKT framework, based on the content domains of the KBSR and KSSR curriculum. In this respect, the MKT framework is not similar to the TEDS-M framework. Moreover, the MKT framework used here does not distinguish knowledge of planning (pre active) and knowledge of enacting teaching (interactive). This highlights another dissimilarity between the researchers' and the TEDS-M frameworks. Knowledge of Content and Students (KCS) and Knowledge of Content and Teaching (KCT) were listed together as Knowledge of Content Students and Teaching in the initial MKT framework that was conceptualized.

The development of the pre service teachers' MQI framework was guided by the theoretical and empirical work done (Ball, Thames and Phelps, 2008; Hill, Rowan & Ball, 2005; Hill, Schilling & Ball, 2004 and Hill et al., 2008) and designed to view and code the mathematical quality of the video recorded lessons of the PSTs. The elements in Hill et al.'s (2008) framework, although developed on the affordance and deficit elements of more experienced mathematics teachers' instruction, provided a foundation for the framework for studying the mathematical quality of the PSTs' instruction.

In mapping the elements for the PSTs' MQI framework, the elements of affordances and deficits in PSTs' mathematics lessons were identified. In conceptualizing the framework and developing the protocol, the researchers acknowledge that in effective mathematics instruction, pupils are required to be actively engaged in communicating about mathematics. They propose that affordances in the quality of mathematic instruction such as pupils linking mathematical concepts and procedure, considering alternative solutions, making connections to real-life experiences, explaining their mathematical thinking and reasoning should be considered to be essential characteristics of affordances and make up a separate strand known as Student Participation in Mathematics. Findings from this study showed that this affordance characteristic is mainly the result of the joint enactment of the KCT and SCK held by PSTs during the planning and presentation phase.

The framework for analyzing the PSTs’ MQI was developed on the guidelines that were provided by the essential dimensions given in Hill et al.'s MQI Instrument. These included mathematical tasks, meaningful problem solving investigations and mathematical
classroom discourse which represented a reasonable referent for this qualitative study since the authors had used it successfully in the quantitative analysis of in-service teachers. Since the primary goals of the present study were to describe pre-service teachers’ MQI and to investigate how it related to their MKT, some dimensions were omitted and others were added.

The MKT and MQI frameworks were developed based on the proposition that the PSTs’ domains of MKT involve cognitive constructs that are revised or reinforced by the influence of experience and training. Additionally, their MKT translates into lesson plans, decisions and actions in the classroom and ultimately these influence the mathematical quality of their instruction (MQI).

The Pilot Study

It was during the process of studying the various aspects of each of the MKT and MQI frameworks that the researchers conceptualized the development of the PTMKT and PTMQI protocols. These protocols listed the domains of the MKT and elements of MQI (from the abovementioned frameworks), accompanied by indicators that establish their existence. Just like a pilot interview schedule “can provide interviewers with some experience of using it and can infuse them with a greater sense of confidence” (Bryman, 2008, p.247), piloting the protocols and analyzing the findings not only provided experience in using the protocols but also provided valuable information on the frameworks, the indicators, the coding process and the interpretations of the findings. The pilot study involved PSTs not included in the main study but who were placed in similar types of schools as the PSTs of the main study.

In the pilot study, the protocols (PTMKT and PTMQI) analyzed pre and post observation interviews, video-recorded lessons and the PST’s reflective writing materials. As mentioned in the earlier section, the frameworks of the protocols were developed from the literature and earlier research findings and adapted further, based on the Program Outcomes and Course Outcomes of the Teacher Education Program (the teacher education program that the PSTs were enrolled in). During the observation of the lesson, episodes denoting deficits or affordances were identified and noted in the PST’s lesson plans and researchers’ notes. In depth pre observation interviews were conducted based on these lesson plans. Similarly, in depth post observation interviews were conducted based on the observed critical events. These interviews were designed to elicit the PSTs’ MKT. The recorded lessons were transcribed using Powell et al.’s 2003 analytic model (Powell, Francisco & Maher, 2003) and coded based on the PTMKT and PTMQI protocols. Similar coding was carried out for the corresponding pre and post observation interviews and PSTs’ reflective written work.

In the initial PTMKT protocol, the differences between the domains of knowledge within the two categories of knowledge, Mathematics Content Knowledge (Subject Matter Knowledge in Ball et al., 2008) and Mathematics Pedagogical Content Knowledge (Pedagogical Content Knowledge in Ball et al., 2008) could not be clearly distinguished. This
was because in the mathematics education (methods) courses of the Teacher Education Program and in the planning and enacting stages of teaching, these domains were addressed together. However, during the piloting of the protocol, the researchers found that to facilitate coding, these MKT domains had to be separated as suggested by Ball et al. (2008). This was because although the domains of MKT are linked in their courses, the PSTs were not always successful in blending the two strands of knowledge during classroom practice.

During the coding and analysis of the transcribed episodes of the pilot study, it was apparent that the domains of the Mathematics Pedagogical Content Knowledge i.e. the Knowledge of Content and Students and Knowledge of Content and Teaching could not be examined simultaneously. The codes for these two domains of teacher knowledge were then decomposed. As a result of the pilot study, slight changes were made to the codes for the domains of MKT and they were separated into the original six that were delineated by Ball et al. (2008).

The pilot study findings of some of the teacher observations also suggested that the characteristics that were shown by the teachers during the classroom teaching fit into multiple knowledge domains. For example, "able to select examples that do not create confusion and demonstrate the concept with clarity" indicates Knowledge of Content and Teaching. In order to select appropriate examples and representations, the teacher, to some extent must possess "understanding of students' prior knowledge", linking it with indicators of Knowledge of Content and Students like "able to take into account pre conceptions and prior knowledge". This difficulty and confusion had been anticipated earlier in the study based on the literature review of related theoretical and empirical studies of MKT. Contextual clues were drawn based on the researchers’ experience as teacher educators to make appropriate choices during the coding process. Moreover, as this is not a quantitative study; "double counting" the indicator in two domains of MKT does not pose a serious problem statistically.

The revised framework of PSTs’ MKT that guided the development of the PTMKT protocol is shown in Table 1. It delineates two main categories of knowledge, Mathematics Pedagogical Content Knowledge and Mathematics Content Knowledge. Each category consists of three domains of knowledge. The indicators established in the PTMKT protocol have their base in Ball et al. (2008), TEDS-M (2008) and existing literature on knowledge for teaching mathematics effectively.
Table 1

Framework of Pre Service Teachers’ Mathematical Knowledge for Teaching used for the Development of the (PTMKT) Protocol

<table>
<thead>
<tr>
<th>Category</th>
<th>Domains of MKT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mathematics Content</td>
<td>Knowledge of Content and Students (KCS)</td>
</tr>
<tr>
<td>Pedagogical Content</td>
<td>Knowledge of Content and Teaching (KCT)</td>
</tr>
<tr>
<td>Knowledge of Curriculum</td>
<td>Knowledge of Curriculum (KC)</td>
</tr>
<tr>
<td>Mathematics Knowledge</td>
<td>Common Content Knowledge (CCK)</td>
</tr>
<tr>
<td></td>
<td>Specialized Content Knowledge (SCK)</td>
</tr>
<tr>
<td></td>
<td>Knowledge at the Mathematical Horizon (KMH)</td>
</tr>
</tbody>
</table>

Similarly, the four domains of MQI were found to be insufficient in tagging all the affordances and deficits in the pilot study. We fine-tuned the characteristics of affordances and deficits in the mathematical quality of classroom instruction based on our observations and also by referring to the MQI coding rubric and protocol described by Hill et al. (2008). This resulted in three domains of MQI that indicated affordance in the instruction (Richness of the Mathematics, Student Participation in Meaning Making and Teacher Working with Students and Mathematics). The deficits in the Mathematical Quality of Instruction (MQI) was also revised. The deficits in the revised PTMQI protocol were indicated by three negative characteristics of instruction: Errors and Imprecision, Mathematically Lacking and Unproductive Interaction. ‘Mathematically Lacking’ encompassed lack of richness, lack of mathematic direction and lack of clarity in presentation. ‘Unproductive Interaction’ included unproductive use of time and unproductive interaction about the content.

In the use of the MQI protocol (PTMQI), it was found that the positive indicators of elements of affordances like "Richness of the Mathematics" was opposed and mutually exclusive from its negative counterparts. Subsequently, for deficit events, these indicators were reworded and established as indicators for a separate deficit domain, "Mathematically Lacking" in the revised PTMQI protocol, as mentioned above. Thus the domain indicating deficit, "Mathematically Lacking" also indicated a lack of Richness in Mathematics offered to the pupils. This is similar to the development of Hill et al.’s MQI Instrument for in service teachers.

The PTMQI protocol was developed to examine the affordances and deficits in episodes (critical events) of the observed lessons. However, during the pilot study, it was
found that not all critical events fell into the category of affordance or deficit. As expected in PSTs instruction, these episodes had elements of both, making it difficult to classify it as one or the other. According to King and Horrocks (2010), some overlap of codes and themes is inevitable, because researchers impose distinctions on free-flowing accounts of complex experiences and actions. Based on past studies and the personal experiences of the researchers as teacher educators, in such instances they used their judgement to assign the episode as affordance or deficit. However, both the characteristics (affordances and deficits) of the ambiguous episodes were described and interpreted in the findings.

The final PTMQI protocol was based on the revised MQI framework. The revised framework for PSTs’ MQI is shown in Table 2. It delineates the two key dimensions of MQI, affordances and deficits. It consists of three elements that are categorized as affordances (positive instances of classroom mathematics) and three more that are categorized as deficits (negative instances of classroom mathematics). Though the two categories measure different elements, they converge around key classroom foci such as teachers’ facility in responding to students, making connections and choosing effective examples and representations, all of which are linked to indicators of teachers’ MKT.

Table 2

<table>
<thead>
<tr>
<th>Type</th>
<th>Elements of MQI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deficit (Negative Instance of MQI)</td>
<td>Mathematical Errors and Imprecisions (E&amp;I)</td>
</tr>
<tr>
<td></td>
<td>Mathematically Lacking (ML)</td>
</tr>
<tr>
<td></td>
<td>Unproductive Interaction (UPI)</td>
</tr>
<tr>
<td>Affordance (Positive Instance of MQI)</td>
<td>Richness of the Mathematics (RM)</td>
</tr>
<tr>
<td></td>
<td>Student Participation in Meaning-Making and Reasoning (SPM)</td>
</tr>
<tr>
<td></td>
<td>Teacher Working with Students and Mathematics (TSM)</td>
</tr>
</tbody>
</table>

It is interesting to note that the PTMQI protocol developed from the framework in Table 2 does not offer a definitive list of the ways one might observe or measure the mathematical quality of classroom work. According to Lincoln and Guba (1985), the notion
of reliability with regard to instrumentation (in this case, protocols) is similar to its meaning in traditional research. Instead of statistical techniques, the authors suggest that the human instrument (researcher) can become more reliable through practice. The pilot study afforded the researchers the practice they needed for the main study. Lincoln and Guba (1985) also suggest that researchers should focus on the ‘dependability’ and ‘consistency’ of the results obtained from the data rather than 'reliability'. The procedures applied in piloting the protocols on the lessons and interview transcripts, as well as the PSTs' reflective writing work is described in greater detail below.

Using Powell et al.'s (2003) analytic model (Powell, Francisco & Maher, 2003), the lesson was segmented into critical events (episodes in the lesson that depicted affordances and deficits in the teaching and learning of mathematics). The length of these episodes varied from 5 to 20 minutes. Verbatim transcription was done for the critical events of the observed lessons and the interviews. Member check was conducted to establish the internal validity of the transcriptions.

The analyzing process of the pilot study data began by reading the entire transcript (without coding it) in order to allow the researchers to become familiar with it as a whole. The main aim of using both the protocols was not to code and generate themes but more for identifying causal-links which required the researchers to constantly go back and forth within/between the context of the lesson and/or the interview.

During data analysis, to make sense of the affordances and the deficits in the lesson as well as the characteristics of their MKT, the researchers were often required to refer to something that had taken place earlier or to something the participant or the pupils had said earlier (or later or both). In analyzing the data, they were not able to proceed in a purely sequential manner. Going back and forward within a specific data source and across different data sources was a slow and meticulous process. During this process, other aspects of the lessons and the interviews that impacted the two constructs were also highlighted in the transcripts. Peer checking was used to establish dependability and consistency. After the data had been coded, further peer checking was conducted to determine the internal reliability of the protocols. Murphy, Dingwall, Greatbatch, Parker and Watson, (1998) defined internal reliability as ‘the extent to which, given a set of previously generated concepts, new researchers would match these concepts with the data in the same way as the original researchers’ (p176).

According to King and Horrocks (2010), there are two strategies that can be used for assessing the quality of the coding: code-defining and code-confirming. For the PTMQI, the code-defining approach was used. Here two of the researchers’ colleagues used the PTMQI protocol to code the critical events in the transcribed video-recordings of the pilot study. Although it was rigorous, it was time-consuming. They only needed to code the lesson transcripts, but other data sources were also made available to them.

For the PTMKT protocol, the code confirming approach was used which was equally time consuming. This was because it required the coders to work back and forth between transcripts of the pre and post observation interviews, the transcripts of the lessons, the
lesson plans and the reflection of the lessons. The subsequent discussion to compare and critically assess the coding, allowed them to make slight modifications to the protocol (as explained in the earlier section) and the coding process. This exercise provided the researchers with the confidence to go ahead with the coding of data of the PSTs in the main study.

Next, expert check was conducted in a similar manner for the protocols. A lecturer with specialized mathematical and pedagogical knowledge and extensive experience in qualitative studies scrutinized the protocols (PTMKT and PTMQI) and the coding process. The final analysis of the pilot study results were not taken back to the PSTs for member validation (King & Horrocks, 2010) because the participants of the pilot study did not have access to the protocol used for coding and therefore could not offer any helpful feedback in enhancing the accuracy of the interpretation.

The Use of the Protocols

In the main study, the PSTs' data consisting of researcher observed and recorded lessons, pre and post observation interviews, lesson plans and written reflections of lessons are collected. The lessons are viewed repeatedly and segmented into critical events. The critical events are coded for facets of MQI based on the PTMQI protocol. The interview transcripts, PSTs' reflection of the lessons and their lesson plans are coded based on the PTMKT protocol in order to identify domains of MKT apparent in the documents, their responses and other supporting evidence. The analysis is performed one lesson at a time for each PST. To a certain extent, the researcher has also to rely on her own judgment and intuition in determining which data falls into which coding. Notes and memos on issues and ambiguities that arise while doing the coding will facilitate analysis. Analysis is on-going, involving continual reflection about the data and interpretations.

Following this, a rough form of what Yin (2009) terms “pattern-matching” is conducted to investigate how the domains of MQI are impacted by the domains of MKT in each PSTs' classroom instruction. According to Yin (2009), pattern matching is a strategy that not only brings together disparate data (from multiple methods and sources) in a case study but also reconciles the diverse worldviews they represent, accommodating epistemological diversity. That research on such a complex phenomenon like MKT impacting MQI is not a linear, unidirectional process is true. Rather it is a complex, cyclic and recursive process that requires multiple visits with multiple data as well as analysis based on sound theoretical perspective to produce rich descriptions and narratives of the phenomenon.

The protocols described in this paper will facilitate in-depth studies on how the PSTs’ MKT comes to play in classroom teaching. By utilizing the protocols, one can examine PSTs’ perceptions and knowledge of mathematics for teaching and investigate the affordances and deficits in their classroom instruction in order to describe qualitatively the nature of the relationship between MKT and MQI. This study suggests that coding and analysing four to
six of the PST's lessons will yield sufficient information on how the mathematical quality of their instruction is impacted by their knowledge for teaching mathematics.

Conclusion

The protocols to investigate the PSTs' MQI and how it is impacted by their MKT bring to light the lack of specifics regarding the nature of the relationship between teacher knowledge and instruction. Besides addressing the gap in theoretical knowledge regarding the relationship between MKT and MQI, the protocols also allow teacher educators to form a deep understanding of the phenomenon by using these rigorously developed instruments. How the different facets of the teacher education program including school based practicum experiences together with other factors, impact MQI can be determined by utilizing both the protocols simultaneously. It is hoped that the protocols and methodology concerning the analysis of data gathered from the pre service teachers' authentic classroom instruction, can give teacher educators greater insight into ways to improve the training and assessment of pre service mathematics teachers and researchers and the viability of using the two constructs in determining what matters mathematically in classrooms.
References


CONTRIBUTIONS OF THE IMPLEMENTATION PROCESS OF MARA JUNIOR SCIENCE COLLEGE RECITATION PROGRAMME IN PERAK STATE ON STUDENT CONDUCT IMPACT

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ABSTRACT

This working paper is intended to evaluate the contributions of the Recitation Programme process among form four MARA Junior Science College students in Perak state based on the CIPP Model. The study design is a descriptive study which comprised students from three MARA Junior Science Colleges in Perak i.e. MARA Junior Science College Felda, MARA Junior Science College Pasir Salak and MARA Junior Science College Taiping. A total of 240 students were selected as study samples through convenient random sampling. Data was obtained from questionnaire forms and processed using Statistical Package for Social Sciences (SPSS) version 17. Results of multiple regression tests showed that four predictors contributed 13.3 per cent. The major predictor which contributed the most was student objectives with a contribution of 6.8 per cent, the second largest predictor was planning which contributed 3.5 per cent, while the third largest predictor that is student tasks and enrichment activities contributed 2.10 per cent and the last predictor, student strategies and recitation methods contributed 0.90 per cent. These findings revealed the possibility that there could be several other factors which affected or influenced the impact on student conduct, which was not accounted for in this study. On the whole, there are three main recommendations which look at the role of the management and administrator, the role of the teachers and students which require mutual cooperation for this programme to succeed. In conclusion, a more comprehensive evaluation on implementation needs to be conducted to produce consistent results.

Keywords: evaluation, implementation, recitation program, MJSC

INTRODUCTION

MARA Junior Science College (MJSC) is one of the secondary educational institutions within the purview of the Council of Trust for Indigenous People (MARA), an agency of the
Ministry of Rural and Regional Development. The establishment of MJSC indirectly equipped fully residential science schools of the Ministry of Education. Sessions for student intake comprise form one and form four students who fulfil entry requirements.

MJSC was established under the Council of Trust for Indigenous People Act No. 20, 1966 as a commitment to achieve MARA goals in the field of training and education. MJSC was set up to provide education at secondary and pre-university levels in the fields of science and technology to Bumiputera students with high mental abilities. MJSC education will familiarise students with education based on science and an aspect of Malaysian culture which will foster long-lasting physical, spiritual and intellectual development and to produce students with critical thinking, creative, and healthy with breadth and depth besides having a high spirit of patriotism and nationalism.

The Monitoring Committee Meeting of the MARA Secondary Education Division No. 5/2011 dated 15 June 2011 reached a decision that MJSC Muslim students were required to memorise at least one part (30 parts) for lower secondary students and four selected suras (as-Sajadah, al-Insan, Yaasin and al-Mulk) for upper secondary students.

To ensure the success of this programme, the school is allowed to use monetary contributions should additional teachers be required for reciting (reading aloud recitations) students’ readings. Therefore, the following lists the objectives of the programme:

i. Develop and educate students toward excellence and glory.

ii. Reach out to students with the Quran to produce smart and obedient students.

iii. Imbue a college atmosphere which continuously enculture the Quran in life.

The target is all form one to form five MJSC students throughout Malaysia. The contents of the syllabus is as follows:

Lower secondary has 30 parts

i. Form one: an-Nas to ad-Dhuha suras (common suras)

ii. Form two: al-Lail to al-Mutaffifin suras

iii. Form three: al-Infitar to an-Naba’ suras

Whereas upper secondary comprises selected suras such as:

i. Form four: as-Sajadah and al-Insan suras

ii. Form five: Yaasin and al-Mulk suras

According to the circular, the time for recitation is three times a week between maghrib and isha. However, it depends on the respective MJSCs to determine how the programme is implemented. Therefore, the suggested implementation method for this programme is as follows:

i. Students are separated into groups.
ii. Each group consists of only four or five persons.

iii. Each group is led by a student.

iv. At least one teacher takes turns to conduct monitoring during the recitation programme.

v. Students recite using the huffaz method i.e. 60 repetitions of each verse in parts.

The huffaz method entails the teacher reading with correct articulation to the student before the student begins reciting or the student reads aloud in front of the teacher first before beginning the recitation to ensure correctness and tajweed in reading. The student will repeat a verse/the first part of a verse in sixty repetitions (60 times). The student is required to look at the Quran in the first five repetitions. In the sixth to the tenth repetition however, the student is required to close the Quran. This is carried on with five times of repetition with the Quran closed. The total number of closing and opening of the Quran is sixty times. After completion, recite verse/second part of verse using method number 1 and 2.

**STATEMENT OF THE PROBLEM**

Recitation requires students to devote their full attention because they need to read many times. After observing and interviewing the students, the researchers found that generally there were four problems encountered by the students in this programme.

One is required to read with tajweed, correctly and accurately while reading the Quran. Despite this, the researchers found that after conducting the Quran reading screening tests only 47% of the students could read the Quran fluently, 36% were average and 17% were not fluent and had not mastered the way of reading with tajweed. Therefore, they required a guide to be able to read correctly. Nevertheless, there are monitoring teachers on duty assumed to serve as student guides too however they are also weak in their reading. This statement parallels the views of Mohd Yakub Zulkifli Mohd Yusoff and Saidi Mohd. (2008) who stated that failure to read the Quran well and excellently bring undesirable effects on the Muslim individual. Among the undesirable effects are invalidity of worship and not perfecting other religious obligations which concern reading of the Quran and this indirectly means that the individual does not honour the Quran as laws and ethics laid down in the reading of the Quran have been violated; which was also asserted by Abdul Halim El-Muhammad (1991) that reading the Quran correctly is important in order to determine whether the religious obligations performed was valid or invalid.

In this regard, if students wished to attain skills to read the Quran correctly, they had to read continuously from time to time. The time to read and recite also needs to be taken into account whether it is appropriate and does not interfere with specified academic times. In this case, the researchers found that the students did not have much time to recite and read aloud verses or recite suras in front of the teacher. It was only during the allotted period between maghrib and isha. This problem makes it quite complicated for the students
to recite with the burden of existing MJSC activities i.e. either academic or non-academic activities. Therefore the school management needs to set aside time for the students to read or memorise the Quran. The teachers involved must also be trained in reading the Quran and have the skills to read correctly because the teachers involved will identify and correct the students’ reading. Likewise, teacher preparedness, the same as the students are not taken into account whether they are ready to teach or recite (listen to students’ recitation of verses) as the existing burden of teachers in schools also clearly influences the teachers’ preparedness.

The researchers were compelled to conduct a study on the programme based on implications from the above situation. It is evident that the uniqueness of this programme needs to be examined because the students’ pure science backgrounds and the main objective of the school differed from the involvement of maahad tahfiz in this recitation programme. There are five implementation aspects which will be examined - the first aspect is the student objective during recitation i.e. their ability to recite within a stipulated time, the ability to recite the as-Sajadah and al-Insan suras. While the second aspect is the student planning which will be examined such as before, during and after recitation. The third aspect is student strategies and methods of reciting and retaining verses which have been recited. The fourth aspect is the student tasks and enrichment activities such as tasks during training, listening and reviewing a friend’s reading and reading aloud in front of a friend(s) and the last aspect is the programme’s impact on the students, to become disciplined students such as disciplined, ethical and proper in conduct. On the whole, the aim of this study is to look at the success of implementing the programme on the students employing the theoretical learning approach by Edward L. Thorndike (1874-1949). He introduced ‘trial and error learning’ in this theory, and the three laws of learning i.e. the law of readiness, law of exercise and law of effect.

METHODOLOGY OF STUDY

This study is a descriptive study and its purpose is to evaluate the implementation of the recitation programme at MJSC in the state of Perak. According to Mohd. Majid Konting (2009), descriptive study is a study aimed at explaining a phenomenon that is happening as well as to explore a field that has yet to be studied or less studied. On the other hand, Sidek Moh Noah (2002) defined descriptive study design as usually undertaken with the intention of providing systematic explanations regarding facts and characteristics of a certain population or field of interest, factually and accurately. The instrument of this study was developed based on previous studies conducted and expert opinion was also sought from educational intellectuals in Malaysia concerning the implementation of this recitation programme. Questionnaires were used in this study. They were distributed to form four students as well as those distributed personally by the researchers themselves to the students concerned. In this way, the researchers could evaluate the implementation of the recitation programme on the MJSC students.
Population and Study Sample

The population of this study comprised students from three MJSCs in Perak state i.e. MJSC Felda, MJSC Pasir Salak and MJSC Taiping. The study population consisted of form four male and female, Muslim students who are currently enrolled in the Quran Recitation Programme as stipulated by the Islamic Education and Arab Language Unit, MARA Secondary Education Division (SED).

Sampling Method

The sampling method used in this study was the convenient random sampling method using the numbering system in the attendance record book by selecting the odd numbers of student attendance. The maximum number of students in a class was 30 and the number of classes involved was seven. Based on the student attendance record book, the overall random total in a class numbered 15 with the overall total for a school corresponding to 105.

The total number of respondents from the three MJSCs was estimated at 315 respondents. This method is the process of taking or using samples where each individual in the population has an equal chance of being selected (Mohd. Majid Konting, 2009). The researchers selected form four students from MJSC Felda, MJSC Pasir Salak and MJSC Taiping using convenient random sampling. Employing the convenient random sampling technique will enable an individual to have an equal chance of being tested.

Study Instrument

The instrument used in this study is a questionnaire developed by the researchers to examine the status of implementation of the MJSC Quran Recitation Programme in Perak state through developing an instrument by way of an Instrument Specification Table (IST).

RESULTS OF STUDY

Multiple regression tests were used stepwise to answer the research questions and to test significant contributions of independent variables (objective, planning, strategies and methods including tasks and enrichment activities) on the impact of student conduct. Before multiple regression tests could be conducted several assumptions which became test preconditions were examined. The preconditions that needed to be fulfilled were adequate sample size, absence of isolated data, absence of multicollinear problems and singularity and normal distribution, linear as well as having equality of variances or homoscedasticity (Pallant, 2001; Muijis, 2014; Coakes, 2005).
The normal distribution is as shown in Figure 4.1.

![Normal Distribution](image)

**Figure 4.1: Normal Distribution of IMPAK Dependent Variables**

After the preconditions have been fulfilled as depicted in Figure 4.1, then regression tests involving six predictor variables (objective, planning, strategies and methods including tasks and enrichment activities) and the impact on student conduct as the criterion variable were conducted. Analysis of variance in the regression clarified whether the model developed produced a sound predictor with regards to the significance of the predictor which was developed. It tested the difference which existed between the dependent and independent variables.

In this regard, Table 4.17 elaborates the results of the analysis of variance to identify the F value with the significant value, \( p < 0.05 \).

**Table 4.17: Analysis of Variance**

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Regression</td>
<td>4</td>
<td>1.050</td>
<td>7.208</td>
<td>.000(df)</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>228</td>
<td>.146</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>37.413</td>
<td>232</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Therefore, results of the analysis in Table 4.17 showed that the F value = 7.208 and its significant value = \( p < 0.05 \).

Results of the multiple regression analysis stepwise which identified the relative contributions of six independent variables on the impact of student conduct is summarised in Table 4.18.
Multiple regression analysis (stepwise) in Table 4.18 shows independent variables objective, planning, strategies and methods including tasks and enrichment activities are predictors with contributions (13.3%) of significance (p < 0.05) toward the impact on student conduct for the study population (sample size = 242).

Results of the study showed a correlation between the dependent variables (impact on student conduct) and the overall group of independent variables of 0.112 (R multiple). Rate variance in the dependent variables that was significantly associated with all the independent variables can be explained by the power of the regression model with the value ($R^2$) of 13.3 per cent.

The main and highest predictor for impact on student conduct in implementing the recitation programme at MJSCs, Perak state was the student’s objective in reciting ($β = 0.172$, $t = 2.279$ and $\text{sig-t} = 0.024$) which contributed 6.80 per cent. This situation can be shown when the objective score of the students in reciting increased by one unit causing the impact on student conduct to increase by 0.172 units. While the second most important predictor which contributed 3.50 per cent was planning ($β = 0.166$, $t = 1.899$ and $\text{sig-t} = 0.059$) which contributed 3.50 per cent. In other words, when the students’ planning score in reciting increased by one unit it caused the impact on student conduct to increase by 0.166 units and the third most important predictor were tasks and enrichment activities ($β = 0.162$, $t = 1.997$ and $\text{sig-t} = 0.047$) which contributed 2.10 per cent. This means that when the scores for student tasks and enrichment activities in reciting increased by one unit it caused the impact on student conduct to increase by 0.162 units.
Student strategies and methods (β = -0.150, t = -1.835 and sig-t = 0.068) in implementing the recitation programme formed the fourth and last predictor which had an effect and contributed 0.90 per cent toward impact on student conduct. This showed that when student strategies and methods increased by one unit, the impact on student conduct increased by 0.150 unit. This showed that student strategies and methods also played a role in contributing to the impact changes on student conduct in the implementation of the MJSC recitation programme in the state of Perak.

These findings revealed the possibility that there could be several other factors which affected or influenced the impact on student conduct which were not mentioned in this study (Hair et al., 1998; Pallant, 2001; Tabachnick & Fidell, 2001).

The value of adjusted R2 provided an estimate with regards to the extent in which this model matches with other data sets from the same population. Its value is in the range of 0.0 to 1.0 in evaluating the fit regression model or suitable (fit) with the data.Muijs (2004) suggested that the value of adjusted R2 < 0.1 is weak (not good), 0.11 - 0.3 is low, 0.31 – 0.5 is average and > 0.5 is robust (good). Given that the value of adjusted R2 in this study was 0.191. Therefore the resultant model was characteristically low. The regression equation for this study is as follows:

\[
\text{Impact} = x + X_1 + X_2 + X_3 + X_4
\]

where;

\[x = \text{constant}\]
\[X_1 = \text{objective}\]
\[X_2 = \text{planning}\]
\[X_3 = \text{strategies & methods}\]
\[X_4 = \text{tasks & enrichment activities}\]

Therefore, \(\text{Impact} = 1.968 + 0.185* X_1 + 0.149* X_2 - 0.121* X_3 + 0.112* X_4\)

**DISCUSSION AND SUMMARY**

**Objective**

Based on the analysis in Chapter 4, the study found that most students did not set their objective in reciting as-Sajadah and al-Insan suras. They only recited according to requirements i.e. following teachers’ instructions without continuing further. If there is no prompting from the teachers, the students did not feel the need for them to recite the suras that have been set. The study also found that most students could only recite a maximum of only three to four verses for each recitation session. Students who have no religious school backgrounds and never studied or completed reading the Quran also need to be taken into
account. These factors could also possibly contribute to the percentage of students who do not set their objective when reciting.

Results of findings in this study are supported by Rita O’Donoghue (2005-2006) who stated that students who have an objective in learning motivate themselves. Since 49.4% to 56.5% of the students did not set their objectives during recitation, the mean level obtained was average resulting in them not being able to achieve the objective of reciting the al-Sajadah and al-Insan suras according to the targeted stipulated time.

Planning

The study also found that students did not have a specific plan either, before, during and after reciting. They were also not consistent in planning such as not using the whole recitation suras sourced from the Ottoman tradition of the Quran, and did not practise reading whole recitation verses/sentences and so on.

Nevertheless, this study contradicts the findings of a study by Pinto and Prescott (2007), that planning is crucial to ensure the successful implementation of a programme. According to Pelnekar (2011), planning is a process to identify the objectives of a programme.

Thus, the absence of a specific plan would mean that students are unable to set their recitation objective according to the targeted specified period.

Strategies and Methods

It was revealed that students also implemented less of the strategies and methods commonly used by a Quran hafiz and a pathetic issue was that there were also some students who did not have strategies in reciting even though strategies and methods are very crucial for a person to achieve the objective set.

These study results paralleled the findings by Dunlosky, Rawson, Marsh, Nathan and Willingham (2013) who found that the use of tools in learning can assist students in enhancing their cognitive and educational psychology. Nevertheless, students in this study did not use suitable methods which resulted in a decline in their cognitive and psychological levels during recitation.

Tasks and Enrichment Activities

Tasks and enrichment activities are also no less important. This process can help students to recall the verses recited and could assist in their reading fluency. Based on the analysis in Chapter 4, the students preferred to recite individually without pairing, which was easier for them to mutually recite the verses which have already been recited between each other. Perhaps there is less time to recite, or daily routine is too jammed packed with activities or
other factors such as personal problems and their non-religious school backgrounds before entering MJSC – all these also contribute to the students’ weakness in performing tasks and enrichment activities.

In this regard, findings of this study corresponded to the findings of Jablon and Wilkinson (2006) which proved that the existence of student enrichment activities can assist them in learning. Although the students did not have a specific objective nor careful planning or using strategies and methods earnestly; however, tasks and enrichment activities can assist them in reciting. In this study, the students were more inclined to recite alone as compared to in pairs and usually most reciters recited, alone.

Impact

This study found that the students had yet to achieve their ability in ethical conduct. They can only behave in a disciplined and proper manner. The researchers viewed that disciplined conduct involves reward and punishment. For instance, if students come in late for class, they will be punished by the class teacher. On the other hand, praise will be given to those who come early. Whereas the ability to behave properly could be driven by how they are taught at home and not due to this programme which contributed to a high mean.

The ability to behave in a disciplined and proper manner corresponds to the findings by Ramsay and Richards (1997) who found that cooperative learning can create a positive impact on the students because reciting the Quran in this programme has cooperative learning characteristics as students can recite in groups or pairs. Nevertheless, there were students who chose to recite alone which could contribute to the reason why some students lacked the ability of ethical conduct.

This programme was implemented to produce students who are not only smart but who can be obedient human beings in facing lives’ challenges in this world and able to balance demands in the afterlife. There are a few issues in this implementation which needs to be improved in order for the programme to actually produce students who are smart and obedient.

Recommendations

Recommendations in this study refer to three main parties, namely the role of the management and administrator, the role of the teachers and the role of the students, themselves.
(i) Role of Management and Administrator

With reference to the report of the results analysis in Chapter 4, the students’ mean in strategies and methods in reciting was very weak. Most of them only repeated their readings without using recitation tools or facilities in school because of the problem of shortage of teachers or drawbacks in the facility itself.

(a) The role of the management is crucial in conducting a program in order to assist the programme to run smoothly. Among factors that need to be taken into consideration include finance, access to student facilities to recite, and the time for them to recite. The researchers proposed that the management sets aside a special budget specifically for this programme as mentioned by headquarters and as stated in a

(b) The financial aspect becomes increasingly important because the programme requires religious teachers from outside MJSC to assist in student recitations and to teach students who are still weak in their reading. The inadequate number of religious teachers could jeopardise this programme in the long term. This is because the existing number of teachers have already committed to students who will be sitting for major examinations such as PMR and SPM. Therefore, it is suggested that the administrators extend their cooperation to provide a special budget for this programme.

(c) In addition, the lack of access to facilities is also identified as the cause of students’ difficulty to recite. If copies of the Quran are inadequate, it is feared that the students would be unmotivated to recite. Apart from that, the ventilation conditions where the students conduct recitations i.e. at the surau which is quite warm could prove uncomfortable. Therefore, it is suggested that the management install air conditioners or increase the number of fans to provide comfort for students to conduct recitations.

(d) As the main curriculum of MJSC is in the field of science, therefore special credit hours for reciting do not exist. In this regard, the time allotted to recite i.e. between maghrib and isha was found to be insufficient. During that time, the students and also the teachers are required to do recitations. Therefore, it is recommended that the management together with the timetable management unit allocate credit hours for this programme in the timetable to facilitate the implementation of the programme.

(e) The researchers also suggested that the management provide special certificates to students who have successfully recited the suras set by the Secondary Education Division (SED). It is hoped that with the awarding of the certificates it would perk the students’ interest to continue reciting and to make early preparations to recite the suras for next year’s syllabus without being instructed by the teachers.

(ii) The Role of the Teacher

(a) Based on the report of the results analysis, in terms of ability in the level of achievement of student objective in reciting, the researchers found that the students’ mean was average but the standard deviation in the students’ ability to
recite according to the targeted specified period was high compared to two other abilities i.e. ability to recite as-Sajadah and al-Insan suras. Based on the standard deviation mentioned, the level of the students’ achievement in the ability mentioned was uniform (homogeneous). Therefore, it is suggested that the teachers raise the students’ awareness and explain to them about the steps to formulate objectives in reciting because teachers are among the parties involved in the success of the programme. It was found that most of the students did know their objective of reciting and that they also did not put in place a proper plan to recite. Apart from this, the students did not know appropriate strategies and methods to recite as well as the kinds of activities which can be conducted to retain recitations in their memory.

(b) The researchers also found that the students’ mean in planning was also at an average level with a mean value of 2.476 (SD 0.446) which referred to the students’ mean in planning before reciting which was 2.456 (SD 0.538), the mean in planning during recitations was 2.439 (SD 0.509) and the mean in planning after recitation was 2.563 (SD 0.595). The researchers found that the students only made plans of not more than two items in the planning namely whether before planning, during or after. However, based on the standard deviation, the students have uniformity in their planning before, during and after. The researchers also suggested to the teachers to provide planning guides before, during and after recitation to the students so that they know what needs to be done during the recitation process.

(c) On the whole, the mean for student strategies and methods was at a weak level but the standard deviation was high. This showed that student strategies and methods was uniform in reading verses which were recited during prayers. As nearly 40% of the students come from non-religious school backgrounds, whether secondary or primary, it made the situation slightly difficult for them to recite quickly. For this reason, it is suggested that teachers identify students who have this difficulty. These students need to be assisted and taught the correct way to recite because they do not have Arabic language skills.

(d) The researchers suggested that the teachers inform the students regarding the importance of reciting. They need to be aware of the benefits which they will obtain not only in this world but also in the afterlife. Reciting not only sharpens their thinking but also brightens their hearts. Therefore, teachers should help students by sparking their interest in this recitation programme through conducting programmes such as talks, seminars, workshops, recitation competitions and etc., either at MJSC or between MJSCs in Malaysia.

(e) As there are significant differences in planning before, during and after between MJSC Special Education Programme (SEP) and non SEP and also in the strategies and methods of reciting among male and female students, therefore it is suggested that the teachers develop recitation modules based on high mean scores in planning including strategies and methods of reciting. Therefore it is recommended that teachers plan using the Quran of the Ottoman tradition, dividing the number of verses to be recited and reading fluently verses which have been recited, reciting individually according to the number of verses set, reading fluently the verses which have been recited and correcting errors in reading. While sound strategies and
methods include participating in recitation tests at school and reading suras which have been recited during prayers.

(iii) The Role of the Student

The mean level of student tasks and enrichment activities reported in Chapter 4 was moderate. Similarly, the impact on programme implementation was also at a moderate level because the students only behaved in a disciplined and proper manner but still lacked ethical conduct. Nevertheless, there was uniformity in the students’ ethical conduct due to the high standard deviation as compared to their ability in disciplined and proper conduct.

(a) Therefore, the researchers suggested that students perform self-reflection in order to internalise the programme. This is to be conducted not merely for the sake of the programme itself but also for the aim of producing students who are smart and obedient. The role played by students is crucial for the successful implementation of the recitation programme. The students need to persevere in reciting because its benefits is not just for the school but will come back to the reciters, themselves.

(b) It is also suggested that the students take the teachers’ suggestions and advice as a guide to monitor the verses or suras which have been recited. Discipline in reciting can assist the students not only in life but also in academic matters. This is because students’ awareness in reciting can provide a huge impact generally, on themselves and specifically, on the aims of the programme.

(c) Observing one’s conduct and speech are among the ways to retain recitations in one’s memory. Despite the various efforts conducted by the school, if students do not desire to help themselves then their personal aims and those of this programme will not be achieved. The main drive comes from the students themselves. In this regard, the researchers found that suggestions to observe one’s conduct and speech could indirectly assist in achieving the aims of the programme.

Suggestions for Further Research

In accordance with the view of the researchers, the following three suggestions for further research which are appropriate for this title are:-

(i) The level of MJSC students’ interest in reciting

Based on the analysis report in Chapter 4, most of the research questions have in response, moderate and weak student mean levels. If reference is on the MJSC students’ backgrounds, they come from various differing backgrounds. Some have primary and secondary religious school educational backgrounds. On the other hand, there are also those without any religious school educational backgrounds. This can become the cause factors why objectives were not achieved because the absence of the religious school experience could cause them not to be interested in reciting. Even though there are students who have the religious school experience, however their mental and emotional levels are not ready because of their assumptions that the MJSC system of education does not require reciting the Quran.
already. It is suggested that other researchers seek the truth in this assumption in relation to the students’ level of interest in reciting.

(ii) Contributory factors in Quran recitation achievement among MJSC students

Most MJSC students have high study skills in the field of science and mathematics. Studies to seek contributory factors in recitation achievement can also be conducted because results of this study found that students from MJSC SEP and non MJSC SEP have differences in their planning to recite. These differences may arise because of academically high cognitive level factors which could also contribute towards the success of a programme. The teachers concerned or other researchers could seek out factors which contribute to the success of a MJSC student in reciting.

(iii) MJSC Ulul Albab students’ recitation strategies

The report in Chapter 4 showed that most students were still weak in formulating strategies to recite and were not able to strike a balance between reciting and academic learning. Nevertheless, this issue did not arise in MJSC Ulul Albab. Based on the examination achievement report from the MARA Evaluation and Examinations Unit 2013, the researchers found that students from MJSC Ulul Albab had good recitation and academic achievements as compared to MJSCs that were not Ulul Albab. One of the factors of achievement of MJSC Ulul Albab in reciting was the students’ mental preparedness to recite the Quran. Therefore, teachers or other researchers could study strategies employed by MJSC Ulul Albab students so that it can be used as an example by students from MJSCs that are not Ulul Albab. Studies can be conducted from all angles such as the role of the school management and administrator, the teachers and students, themselves.

CONCLUSION

Every weakness can be overcome if the weakness factor is found and resolved by the responsible party. The successful implementation of a programme is through the efforts of all parties involved. The school management and administrator, teachers, and students need to play their roles so that all flaws in programme implementation can be alleviated. Parents are also not exempted from this issue. Therefore, a more comprehensive study is required to secure consistent results.

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DEVELOPMENT AND EVALUATION OF CHILD PSYCHOLOGICAL WELL-BEING (CPW) PROGRAM USING THE PLAY METHODS FOR PRIMARY SCHOOL CHILDREN

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Abstract

The aims of this study were to develop and evaluate a CPW program for primary school children in Malaysia. The program encompassed eight (8) activities were developed based on the play methods and to strengthen each activity, researchers use the Six Factor Model Psychological Well-Being by Ryff (1989). The design method used in this study involved an experimental design approach involving pre-test and post-test. The instruments used to determine the level of child psychological well-being is Scales of Psychological Well-Being by Ryff and Keyes (1995). The sample of the study comprised 123 children from a primary school. Independent t-tests analysis were conducted to identify the differences in psychological well-being of children between the treatment and control groups. Through the pre-test, the children in the treatment and control group has a similar level of psychological well-being, while in the post-test showed increased levels of psychological well-being in the treatment group. These findings proved that CPW program has an impact on child psychological well-being. Implications of the findings are discussed.

Keywords : Child Psychological Well-Being, Play Methods, Child Counseling, Psychological Well-Being

1. INTRODUCTION

Based on previous studies, in Malaysia the issues of children well-being is not be given special attention by the public. This matter needs to be emphasized because Malaysia is a country that has a dense population of about 29,947.6 million, of this total, 7,799 million (26%) were children aged from 0 to 14 years (Statistics Department of Malaysia, 2013). Based on these statistics show a quarter of the population is comprised of children. This is a challenge to the state in the next generation of potential catalysts to bring the State towards progress. Hence, focus and sensitivity to the well-being of children should be emphasized especially in terms of psychology, as psychological well-being is a way of life...
towards a balance between the physical, mental and spiritual well-integrated to achieve optimum life and can be achieved by individuals (Myers et al., 2000). Therefore, the school is the best location in the building talents, abilities, potential, interests and personality of children (Lau, 2011). Accordingly, the module or program, which aims to increase this matter is very important, this fact supported some previous findings (eg., Lau et al., 2011; LeBlanc & Ritchie, 2001; Hancock, 2011; William et al., 2003; William et al., 2010). In respect of interest, the CPW Program developed by following the correct program development procedure and based on strong theory can be used in the schools to help increase the level of child psychological well-being in Malaysia.

2. CPW PROGRAM

CPW program carried out by 8 sessions included an introductory session and termination of each week of the session will be held. The overall program duration is 20 hours and each session is 2 hours 30 minutes depending on the activity being undertaken. The program can accommodate the number of participants to about 20 -30 students from primary school. This program can be implemented in group counseling in a classroom setting or a small hall. The aims of Psychological Well-Being Program is to provide opportunities for students - primary school ranging from children to improve the psychological aspects that include cognitive, emotional and behavioral and increased life satisfaction and self-esteem through structured play to generate the skills and knowledge through the participation program.

To develop the program content, the researcher used the Six Factor Model Psychological Well-Being by Ryff (1989). For the systematic development of the program, the researcher used the instructional design model by Heinich, Molenda, Russell dan Smaldino (2002) and Russell model (1974). Both models were chosen because they suggest a systematic approach in the development process. The main objective of the CPW program is to help children: (a) achieve psychological well-being through self-acceptance, (b) achieve psychological well-being through autonomy, (c) achieve psychological well-being through positive relationships with others, (d) achieve psychological well-being through controlled environment, (e) achieve psychological well-being through life's purpose and (f) To achieve prosperity through the development of self-psychology.

3. CPW PROGRAM DEVELOPMENT NEEDS

For centuries various mechanisms identified to address mental disorders in order to ensure the psychological well-being can be achieved among others by implementing various programs to promote health (Li et al., 2012). However, the programs implemented over the short term in nature and focuses on children who have a chronic problem alone (Hancock, 2011). Most children of school level often experience various emotional and behavioral problems as a result of the collapse of the family system, modernization and urbanization. Thus primary school children should be given early exposure to levels of psychological well-being at optimal levels. The study conducted on a group of American students have children
approaching their teens who actively seek their identity usually build a high identity, optimism, high self-esteem, lack of feeling useless and less delinquency behavior (Philips & Pittman, 2007). In addition, the selections of sample in common among children due to interaction study participants at each other. This is because previous studies show that children learn from imitation and the relationship with the environment. Similarly, a study conducted by Finstuen (2010) using the experimental program on the effect of art activities on self-concept and psychological well-being that the level of anxiety, stress and behavioral disorders among children could be reduced after the program ends.

4. DEVELOPMENT OF CPW PROGRAM

4.1 Systematic Procedures

The instructional design model by Heinich et al. (2002) is a comprehensive integration model in construction of program (Smaldino et al, 2005). This model was chosen in order to use an appropriate approach within the Malaysia context (Loy, 2011). Whereas, the Russell model (1974) acts as a complete to model by Heinich et al. (2002). From modification of both these models, formed four phases of the construction process program: 1) Analyzing the needs of children and stated objectives of the program, 2) Design of program content, 3) Confirmation of experts and the validity of the program’s achievements, and 4) Try and reliability program. Figure 1 shows the modification:

![Diagram of Program Development Procedure]

Fig. 1. Program development procedure
4.2 Theoretical Foundation

To strengthen the development of CPW program, researcher using the Six Factor Model Psychological Well-Being by Ryff (1989) as the basis, particularly in terms of content, structure, and sequence of program. This model is very important because it is the cornerstone of the strength CPW program. Ryff (1989) have built a model of psychological well-being to integrate some components of the theory of Maslow’s concept of self-perfection, the full functionality of Rogers, Jung formulation concepts individuality, Allport maturity concept, Erikson’s psychosocial stage, the basic trend of Buhler concept, the executive personality Neugarten and the concept of mental health Jahoda (Ryff 1989a, 1995; Ryff & Keyes, Ryff & Singer, 1995 and 1997). Based on this theory, Ryff (1989, 1995 & 2008) conceptualize psychological well-being in six components of self-acceptance, positive relations with others, purpose in life, autonomy, environmental mastery and self-development. This model suggests that the full dimensions related positively related functionality (Norsayyidatina & Lau, 2015; Zainal, 2012).

4.3 Play Activities

To achieve the purpose of the study, play activities used are based on concepts such as games, experiential, group-work, learning therapy, and arts. Each play activity, which was develop in accordance with the six-factor model by Ryff (1989). To have appropriate activity, researchers did some interviews with the relevant communities and stakeholders such as counselor, lecturer, and teacher. In addition, the researchers also refer to previous studies. Table 1 shows the play activities, and justification:

<table>
<thead>
<tr>
<th>Ryff Model (1989)</th>
<th>CPW Program</th>
<th>Play Activity</th>
<th>Justification</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>Activity 1 (Nice to meet you)</td>
<td>Drawing</td>
<td>Drawing is non-verbal communication methods used by children to express something (Crissa et al., 2010)</td>
</tr>
<tr>
<td>Self-acceptance</td>
<td>Activity 2 (Shh ... It’s Secrets)</td>
<td>Label cards</td>
<td>Experiential activity are powerful means to stimulate awareness and can be used to help individual confront and overcome bias (Pedersen, 2000)</td>
</tr>
<tr>
<td>Autonomy</td>
<td>Activity 3 (Young Doctors)</td>
<td>Debate</td>
<td>Learning therapy are a training methodology aiming to provide a model intervention as well as to create personal awareness and self-reflection (Jordans et al., 2003)</td>
</tr>
<tr>
<td>Positive Relation</td>
<td>Activity 4 (Friend but friendly)</td>
<td>Drawing map</td>
<td>Group-work is activates the individuals and stimulates discussion among each other (Jordan et al., 2008)</td>
</tr>
<tr>
<td>Environmen tal Mastery</td>
<td>Activity 5 (Dream world)</td>
<td>Collage</td>
<td>Collage is the best way to promote creativity, critical thinking, and effective communication among children (Triada et al., 2012)</td>
</tr>
</tbody>
</table>
5. OBJECTIVES OF THE STUDY

This study has three objectives:

1) To develop a CPW program for primary school children.
2) To evaluate the CPW program.
3) To prove that the play methods is effective in improving the psychological well-being of children.

6. RESEARCH METHOD

6.1 Research Design, Procedure and Instruments

The research method used in this study was based on a quantitative approach carried out through an experimental design. This design was chosen because the study sample was 123 children aged 11 years (61 boys and 62 girls) of primary schools in Selangor region are selected using the random methods (Creswell, 2008). After going through the process of sample selection, treatment (61 children) and control (62 children) groups were formed, each group will be involved in the pre-test to determine the level of psychological well-being before treatment (CPW program) is given to the treatment group. After the treatment, the post-test conducted on the treatment and control groups to identify differences in changes in the level of psychological well-being. Next, the average difference between pre-test and post-test is obtained for the treatment group and the control group, which was to determine whether treatment with CPW program produce the effect of changes compared with the control group that did not receive treatment through the CPW program. To assess the level of psychological well-being in the pre-test and post-test, the researchers used the Scales of Psychological Well-Being by Ryff and Keyes (1995).

<table>
<thead>
<tr>
<th>Purpose of Life</th>
<th>Activity 6 (Let's go on vacation)</th>
<th>Planning of budget vacation</th>
<th>Games as effective as other methods in facilitating students’ learning of subject matter and are more effective aids in helping students to retain what is learned (Kim &amp; Lyons, 2003)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-Developmen t</td>
<td>Activity 7 (Beautiful as ever)</td>
<td>Explore the self-values</td>
<td>Role playing game is an activity favored by children because they can be expressed, and can pretend to be like adults when playing (Elkind, 2008)</td>
</tr>
<tr>
<td>Activity 8 (My experience)</td>
<td>Discussion</td>
<td>Reflection methods can build up positive psychology children (Chiung &amp; Yu, 2012)</td>
<td></td>
</tr>
</tbody>
</table>
6.2 Sampling

Location studies identified for the purpose of this study is a primary school in the district of Gombak in Selangor, Malaysia were selected from 10 list of primary schools listed by the researchers based on several criteria: i) accessibility, ii) the cooperation of the school administration, iii) manageability, iv) knowledge and experience in the field of school counselors, and v) the school timetable (Meredith et al., 2003). The populations of study were children aged 11 years in Malaysia. Whereas, the sample is 123 children of primary schools in Selangor, Malaysia. This sample was chosen because, according to the theory of cognitive development by Piaget, children at this age can think abstractly, they are more flexible thinking, logical, and structured. They also can accept other people's opinions are different (Rohani, 2001).

7. ANALYSIS AND FINDINGS

Mean and standard deviation were used in the analysis study to determine the psychological well-being children between the treatment and control groups. Table 2 shows the results of the analysis:

Table 2: The Mean And Standard Deviations Of Psychological Well-Being Children Between Treatment and Control Group

<table>
<thead>
<tr>
<th>Variables</th>
<th>Group</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Psychological Well-being</td>
<td>Treatment</td>
<td>112.54</td>
<td>15.337</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>113.00</td>
<td>13.271</td>
</tr>
</tbody>
</table>

Table 2 shows psychological well-being of the treatment group (mean = 152.96), an increase higher than the control group (mean = 118.54). While the control group psychological well-being also increased from a mean score of 113 on the pre-test.

8. DISCUSSION

The significant differences between the pre-test and post-test results for both groups indicate that the CPW program was effective in increasing the psychological well-being children. The results of this study are in line with the previous findings of Schousboe (2013) that it is difficult to separate the kids and play, learning and development as it moves along.
Whereas, according to Goldstein (2012), playing a reflection of fun, and enhance basic needs, contribute to the development of physical, social, emotional and psychological well-being of children.

Increasing psychological well-being children after receiving treatment with CPW program developed shows the Six Factor Model Psychological Well-Being by Ryff (1989) can be practiced, this is because the development of CPW program based on it. Increased psychological well-being in the treatment group showed activity (2) and (7) using the experiential concept affect children's self-acceptance and self-development. Whereas, activity (3) that uses the concept of learning therapy shows good agreement to increase the autonomy of the child. Activity (4), which uses the concept of group-work, is seen able to form positive relationships children. Environmental Mastery component psychological well-being is seen can be increased using the concept of structured games (activity 5). For the concept of the game is seen is great for activities (6) in improving child purpose of life. The increase proved effective CPW program as an training in improving psychological well-being children.

The benefits of CPW program are useful to the school counselor the program provides guidelines on the elementary school counselors to practice the play method to help improve psychological well-being of children in primary schools. Development of CPW program based on a solid theoretical, systematic and activities appropriate to the age of the child is also suitable to be implemented in order to achieve the purposes of guidance and counseling services for primary school children.

Hopefully, the CPW program of this kind would be embraced by the relevant stakeholders (i.e., policymakers and the decision makers, course coordinators or children educators, parents, teachers, school counselors, and school administrators) in earnest to foster the psychological well-being children in Malaysia.

9. RECOMMENDATIONS

Following the preliminary results, the impact of CPW program for the increase psychological well-being children, the researchers proposed three recommendations as follows:

1) Conducting a delayed post-test to see an increase Psychological well-being can be maintained or not.

2) Conducting qualitative research to support the findings effects of CPW program.

3) Promoting CPW program to the school counseling practitioners in the development of child psychological well-being so that more research should be conducted on a larger scale in the context of Malaysia.

10. CONCLUSION
In this study, the researchers have demonstrated that a CPW program are effective in improving the psychological well-being children, and suitable for implementation in the context of Malaysia. Thus, the module reported in this study will act as a catalyst for more researches on children psychological well-being specifically. In short, the lessons learned from this study is that it will encourage school counselors to adopt such an approach to developing a range of programs that help improve the psychological well-being of the child, which benefits counselor profession, children, and society.

11. ACKNOWLEDGEMENT

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ABSTRAK

Kajian ini dijalankan untuk mengkaji persepsi anggota Angkatan Tentera Malaysia (ATM) yang bakal bersara terhadap pemilihan kerjaya dalam bidang pendidikan. Tujuan kajian ialah untuk menentukan tahap kecenderungan memilih profesion pendidik sebagai kerjaya kedua. Kajian kuantitatif ini menggunakan borang soal selidik yang melibatkan seramai 297 anggota ATM pelbagai pangkat yang sedang mengikuti Program Latihan Peralihan Sesi 2015/2016 di Perbadanan Hal Ehwal Bekas Tentera (PERHEBAT), Sungai Buloh. Keputusan kajian mendapati bahawa sebanyak s = 239 responden iaitu (80.4%) menunjukkan kecenderungan untuk memilih kerjaya sebagai pendidik sebagai kerjaya kedua mereka. Sehubungan dengan itu, datatan kajian ini diharap dapat menyediakan data empirikal yang kukuh kepada pihak Kementerian Pendidikan Malaysia (KPM) dalam mempertimbangkan calon pendidik dari kalangan bekas anggota tentera di institusi pendidikan seliaan KPM di pihak PERHEBAT, menambah baik program latihan peralihan sejajar dengan permintaan daripada anggota ATM sendiri.

Kata Kunci: Veteran ATM, bersara, pemilihan kerjaya, bidang pendidikan, kerjaya kedua

PENGENALAN


Sewajarnya, peluang meneroka kerjaya baru terbuka luas. Hal ini disebabkan Veteran ATM memiliki kemahiran, kepakaran dan pengalaman yang berguna untuk pembangunan kerjaya mereka. Malah, pengalaman dan disiplin diri yang tinggi meletakkan mereka sebagai sumber modal insan yang unik dan lain dari yang lain. Justeru, peluang kerjaya dalam bidang selain dari bidang keselamatan sebagai contoh bidang pendidikan hendaklah digalakkan dan diberikan perhatian oleh bakal-bakal Veteran ATM. Peluang yang lebih luas hendaklah dibuka oleh pihak Kementerian Pendidikan Malaysia (KPM) dengan syarat khas dan kriteria tertentu yang memudahkan laluan kerjaya ke bidang pendidikan ini. Contohnya di Amerika Syarikat, Kementerian Pendidikan Amerika Syarikat telah melaksanakan program-program seperti *Alternative Teacher Certification* (ATC) dan *Troops To Teacher* (TTT) yang memudahkan dan membuka laluan kerjaya dalam pendidikan kepada bekas tentera (Owings et al., 2015).

Seterusnya, kertas kerja ini membincangkan tentang beberapa sorotan kajian lampau mengenai kerjaya kedua bagi Veteran ATM di Malaysia dan kerjaya kedua veteran tentera di bidang pendidikan dari perspektif dalam dan luar negara.

**SOROTAN KAJIAN**

**Sorotan Kajian Tentang Kerjaya Kedua, Veteran ATM di Malaysia**


Sorotan Kajian tentang Kerjaya Kedua, Veteran Tentera Dalam Bidang Pendidikan

Di Malaysia, kajian secara empirikal terhadap Veteran ATM yang melibatkan diri dalam kerjaya pendidikan amatlah terhad. Setakat ini, kajian yang memfokuskan secara langsung terhadap kerjaya bidang pendidikan oleh Veteran ATM adalah masih kurang. Kebanyakan kajian lebih menumpukan kepada kajian terhadap isu-isu pengurusan persaraan, program peralihan kerjaya, latihan kemahiran, kompetensi mengurus kerjaya dan pembangunan keusahawanan dalam kalangan Veteran ATM.


Sejarah penglibatan bekas tentera dalam bidang pendidikan di Amerika Syarikat bermula semenjak tahun 1958 lagi. Pada tahun tersebut, berlaku kebimbangan terhadap guru sains dan matematik yang berkelayakan di sekolah menengah. Bagi mengatasi ini,
Public Management Research Institut (PMRI) telah menjalankan kajian terhadap pegawai-pegawai tentera yang bersara dan mendapati bahawa tindakan awal perlu dilakukan iaitu menarik perhatian bekas tentera ini mengisi jawatan guru, mewar-warkan maklumat kekosongan jawatan dan memudahkan laluan dengan penyediaan latihan perguruan khas (Parker, 1992).


Pada tahun 1990 pula, universiti, kolej dan sekolah-sekolah di negeri California telah berusaha menambah bilangan guru yang berkelayakan. Program Alternative Certification (AC) dijalankan di Universiti San Diego dan Universiti San Francisco untuk bekas tentera yang mencari kerjaya kedua sebagai guru menjalani latihan perguruan. Pada penghujung tahun 1992, National Center for Education Information (NCEI) telah menjalankan kajian tinjauan dalam kalangan anggota tentera yang sedang berkhidmat terhadap minat menjadi guru. Hasil kajian mendapati 97% berminat untuk mengajar dan lebih 53% telah merancang untuk bekerja dalam bidang pendidikan dalam tempoh lima (5) tahun lagi (Feistritzer, 1992).


Pada 30 March, 1998, NCEI bersama-sama jawatan kuasa TTT, negeri Washington telah menjalankan penilaian terhadap program TTT. Sebanyak 2,139 borang soal selidik telah diposkan kepada guru-guru bekas tentera yang telah mengikuti program TTT dan sebanyak 1,171 soal selidik telah dikembalikan semula. Hasil kajian tersebut mendapati bahawa 90% guru dari bekas tentera terdiri daripada golongan lelaki dan ini menambahkan bilangan guru lelaki yang pada masa itu didominasi oleh 74% guru wanita keseluruhannya.
Selain itu, guru-guru dari program TTT juga meningkatkan bilangan guru dari etnik lain selain guru berkuit putih yang mewakili sebanyak 29%. Namun, dapanan yang penting ialah kajian menunjukkan bahawa sebagi yang paling utama guru-guru dari Program TTT menjadi guru kerana faktor keazamanan yang tinggi untuk bekerja dengan orang muda (Feistritzer et al., 1998).

Pada tahun 2005, NCEI telah menerbitkan laporan khas iaitu Profile of Alternate Route Teachers (AR). Laporan tersebut menyatakan hampir separuh individu yang menyatui AR atau laluan alternatif untuk mendapatkan sij rajkun mengajar terdiri daripada golongan pekerja bukan bidang pendidikan dan dari peratusan itu, 9% terdiri daripada golongan bekas tentera yang telah mengikuti program TTT (Feistritzer, 2005).

Pada masa kini, lebih 17,000 bekas tentera telah mencuburi bidang pendidikan sebagai kerjaya kedua mereka (Weisenstein, 2013). Keadaan ini dilihat sebagai satu usaha yang positif dalam memenuhi permintaan terhadap guru-guru yang berkualiti, menampung pertambahan bilangan pelajar setiap tahun, meramaikan bilangan guru lelaki dan meningkatkan lagi penyertaan golongan minoriti yang bukan berkuit putih sebagai guru (Owings et al, 2015). Oleh sebab itu, NCEI telah membangunkan laman sesawang bermula bulan Jun, 2012 untuk menarik lebih ramai individu yang berminat menjadi pendidik sebagai kerjaya kedua, mengikut program persediaan perguruan selama sembilan (9) bulan (Laman Sesawang www.teach-now.org).

DATA DAN METODOLOGI KAijn

Reka Bentuk Kajian, Populasi dan Sampel

Kajian ini merupakan kajian tinjauan yang menilai tahap persepsi pemilihan kerjaya bidang pendidikan dalam kalangan bakal Veteran ATM apabila mereka meninggalkan perkhidmatan ketenteraan. Kajian ini diharap dapat membuat generalisasi kepada populasi melalui analisis dekskriptif. Objektif kajian ialah untuk menentukan tahap kecenderungan memilih kerjaya profesio pendidik sebagai kerjaya kedua, bakal Veteran ATM.

Populasi dalam kajian ini ialah bakal Veteran ATM seramai 1,248 anggota yang sedang mengikuti Program Latihan Peralihan sesi 2015/2016 di PERHEBAT, Sungai Buloh, Selangor (PERHEBAT, 2016). Berdasarkan jadual, Krejie dan Morgan (1970), bilangan populasi (N) ialah 1,300, bilangan sampel (s) yang dicadangkan ialah 297 orang. Memandangkan bilangan peserta dalam Program Peralihan hampir dengan 1,300, pengkaji menentukan bilangan sampel yang perlu dikaji mengikut saranan Krejie dan Morgan (1970) ialah seramai 297 responden (s).

Instrumen Kajian

Kajian ini menggunakan satu set borang soal selidik yang mengandungi 19 item. Bahagian A, terdiri daripada Sembilan (9) item berkaitan latar belakang responden. Bahagian B pula terdiri daripada 10 item berkenaan kecenderungan sebagai pendidik atau tenaga pengajar. Kesemua 19 item merupakan item berstruktur yang berbentuk soalan atau item tertutup. Format soalan tertutup ini dipilih pengkaji untuk memudahkan responden
memilih jawapan kerana dilengkapi dengan dua (2) atau lebih pilihan jawapan (Othman, 2013).

**Kajian Rintis**

Pengkaji menjalankan kajian percubaan ini untuk memastikan kebolehpercayaan item, mengesahkan kesesuaian soal selidik dan melihat pelaksanaan prosedur sebenar terhadap persekitaran kajian (Fauzi et al., 2014). Dapatan data kajian rintis dianalisis menggunakan statistik deskriptif. Teknik statistik deskriptif digunakan untuk meringkaskan data yang dikumpul, mudah dipresentasikan dalam bentuk graf, jadual dan pemerihalan berangka seperti min, sisihan piawaian dan kekerapan atau peratusan (Mohd Lazim & Wan Muhammad Amir, 2013).

Hasil kajian rintis mendapat seramai 23 daripada 30 anggota iaitu 76.6%, mempunyai kecenderungan memilih kerjaya sebagai pendidik. Daripada 23 anggota tersebut, 1 anggota (3.3%) Sangat Setuju, 18 anggota (60%) Setuju dan 4 anggota (13.3%) Sedikit Setuju, cenderung memilih kerjaya ini. Data kekerapan dan peratusan ini menunjukkan bahawa kajian sebenar boleh diteruskan dan item-item soal selidik bersesuaian dengan responden.

**ANALISA DATA DAN DAPATAN**

Ujian statistik deskriptif dijalankan untuk mendapatkan frekuensi dan peratusan menggunakan perisian *Statistical Package of Social Sciences* (SPSS) versi 22. Jadual 1 menunjukkan maklumat demografi bagi 297 responden. Dari segi jantina, bilangan lelaki lebih ramai iaitu 268 anggota (90.2%), manakala bilangan perempuan sangat sedikit iaitu hanya 29 orang (9.8%). Dari segi umur, kumpulan terbesar terdiri dari umur 41 hingga 45 tahun iaitu 126 anggota (42.4%) manakala kumpulan umur terkecil ialah dari umur 56 hingga 60 tahun iaitu 2 anggota (0.7%). Anggota berbangsa Melayu paling ramai ialah 261 orang, diikuti lain-lain bangsa (Bumiputera Sabah dan Sarawak) iaitu 25 orang (8.4%), kaum India, 6 orang (2.0%) dan paling rendah ialah kaum Cina iaitu 5 orang (1.7%).

Seterusnya, anggota yang memiliki Sijil Pelajaran Malaysia (SPM) dan SPM Vokasional (SPMV) merupakan kelayakan akademik yang teramai iaitu 199 anggota (67%) manakala masing–masing, seorang anggota (0.3%) memiliki Sijil Tinggi Agama Malaysia (STAM) dan ijazah sarjana. Hanya 12 orang (4.0%) terdiri dari anggota berpangkat Pegawai manakala anggota LLP merupakan anggota terbesar sebagai responden iaitu 285 orang (96%). Anggota-anggota ini mewakili tiga (3) cabang perkhidmatan iaitu Tentera Darat Malaysia (TDM) seramai 206 orang (69.4%), Tentera Udara Diraja Malaysia (TUDM) seramai 49 anggota (16.5%) dan Tentera Laut Diraja Malaysia seramai 42 anggota (14.1%). Kebanyakan anggota memilih untuk bersara wajib pada usia perkhidmatan 22 tahun ke atas iaitu seramai 155 orang (52.2%) dan diikuti seramai 87 orang (29.3%) pada usia perkhidmatan 21 tahun. Selain itu, anggota paling ramai bersara pilihan pada usia perkhidmatan 15 tahun seramai 23 orang (7.7%) dan paling sedikit iaitu seorang (0.3%) pada usia perkhidmatan 11 tahun.
Bagi analisis deskriptif di Bahagian B, item pertama (no. 1) merupakan analisis terpenting dalam kajian ini. Dapatan kajian mendapati bahawa 80.4% iaitu 239 anggota cenderung memilih kerjaya pendidik/ tenaga pengajar. Dari peratusan itu, 8.5% (25 orang) memilih Sangat Setuju, 48.8% (145 orang) memilih Setuju dan 23.2% (69 orang) memilih Sedikit Setuju. Hal ini menunjukkan peratus yang agak tinggi iaitu melebihi 80% anggota cenderung memilih kerjaya ini. Maka, tahap kecenderungan keseluruhan dalam kajian ini ialah berada pada frekuensi dan peratusan yang paling tinggi.

Selain itu, pengkaji juga mendapati tren memilih kerjaya kedua di sektor kerajaan menunjukkan peratusan tertinggi iaitu 49.8% (148 orang) hampir separuh daripada jumlah responden keseluruhan berbanding sektor swasta hanya 12.5% (37 orang). Perbezaan yang agak ketara ini disumbangkan juga oleh kalangan anggota yang bersikap tidak pasti untuk
memilih antara sektor kerajaan atau swasta yang menyumbang peratusan sebanyak 37.7% (112 orang). Jelaslah bahawa bakal Veteran ATM ini lebih cenderung ingin bekerja dalam sektor kerajaan berdasarkan frekuensi dan peratusan yang menunjukkan hampir separuh responden dan hampir 50% memilih sektor ini. Ini kerana responden sudah terbiasa dengan budaya kerja sektor kerajaan dan pendapatan bulan serta faedah perkhidmatan yang disediakan pihak kerajaan.

Seterusnya, dapatan kajian juga menunjukkan responden lebih berminat untuk bertugas di Kolej Vokasional 16.8% (50 orang) diikuti Kolej Komuniti 13.5% (40 orang) dan sekolah rendah 9.1% (27 orang). Walaupun ketiga-tiga institusi ini menjadi pilihan bakal Veteran ATM tetapi peratusannya agak rendah. Hal ini disebabkan hampir separuh (46.1%) bakal Veteran ATM tidak pasti dalam memilih tempat pilihan bertugas. Maka, pengkaji dapat menyatakan bahawa peratusan untuk bekerja di institusi selain KPM (sekolah rendah, sekolah menengah, kolej vokasional dan IPG) berada pada tahap sederhana iaitu 35% berbanding bukan institusi KPM (kolej komuniti dan lain-lain institusi) iaitu 15.5% dan responden yang bersikap berkecual (tidak pasti) iaitu 46.1%. Peratusan yang agak tinggi memilih sikap berkecual kerana kurangnya pendedahan terhadap perkembangan institusi pendidikan dalam negara yang semakin bertambah dan keadaan responden yang hanya berada di dalam ruang lingkup dunia ketenteraan. Justeru itu, jika responden diberikan pencerahan lebih mendalam mengenai institusi-institusi pendidikan yang ada pada masa kini akan membantu responden semasa mengisi borang soal selidik.

Selanjutnya, analisis data juga mendapati tiga (3) jawatan pekerjaan yang menjadi pilihan bakal Veteran ATM ialah sebagai Guru Vokasional dan Teknik (20.5%), Guru Disiplin (17.2%) dan jawatan pentadbiran (13.5%). Jawatan Guru Mata Pelajaran merupakan pilihan yang paling rendah iaitu sekadar (2.0%). Pengaruh budaya kerja yang berorientasikan kerja-kerja teknikal dan vokasional, pengurusan pentadbiran serta pengamalan disiplin yang tinggi dalam ketenteraan dilihat sebagai faktor yang menyebabkan ketiga-tiga jawatan ini menjadi pilihan utama berbanding guru mata pelajaran yang lebih bersifat akademik dan memerlukan kelayakan akademik tertentu. Jadual 2, di bawah menunjukkan frekuensi dan peratusan bagi tahap kecenderungan sebagai pendidik, sektor pekerjaan pilihan, institusi bertugas pilihan dan jawatan pekerjaan pilihan bakal Veteran ATM.

**Jadual 2: Maklumat Tahap Kecenderungan Memilih Kerjaya Pendidik**

<table>
<thead>
<tr>
<th>Tahap Kecenderungan Menjadi Pendidik</th>
<th>Frekuensi (n)</th>
<th>Peratus (%)</th>
<th>Jenis Sektor Institusi</th>
<th>Frekuensi (n)</th>
<th>Peratus (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sangat Tidak Setuju</td>
<td>6</td>
<td>2.0</td>
<td>Milikin Kerajaan</td>
<td>148</td>
<td>49.8</td>
</tr>
<tr>
<td>Tidak Setuju</td>
<td>52</td>
<td>17.5</td>
<td>Milikan Swasta</td>
<td>37</td>
<td>12.5</td>
</tr>
<tr>
<td>Sedikit Setuju</td>
<td>69</td>
<td>23.2</td>
<td>Tidak Pasti</td>
<td>112</td>
<td>37.7</td>
</tr>
<tr>
<td>Setuju</td>
<td>145</td>
<td>48.8</td>
<td>Jumlah</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sangat Setuju</td>
<td>25</td>
<td>8.4</td>
<td>Jumlah</td>
<td>297</td>
<td>100</td>
</tr>
</tbody>
</table>

**Jawatan Pekerjaan**

**Institusi Pilihan**
PERBINCANGAN

Dapatan kajian menunjukkan tahap kecenderungan menjadi guru vokasional dan teknik (20.5%) adalah yang tertinggi. Justeru itu, dalam usaha pihak kementerian mengatasi isu kekurangan guru-guru aliran vokasional dan teknik di Kolej Vokasional, Sekolah Teknik dan Sekolah Harian bagi subjek elektif kemahiran dapat diatasi dengan menawarkan jawatan ini kepada bakal Veteran ATM. Keadaan ini selari dengan hasrat pihak KPM sendiri yang pada masa kini telah membuat hebatan iklan melalui laman web KPM mengenai pengambilan guru vokasional secara interim di kolej-kolej vokasional bagi ambilan tahun 2016 bagi calon-calon bukan dari ijazah pendidikan tetapi digalakkan kepada calon yang memiliki Sijil Kemahiran Malaysia (SKM) dan pengalaman bekerja (Kementerian Pendidikan Malaysia, 2016). Cuma, pertimbangan khas wajar diberikan kepada calon bakal Veteran ATM yang tidak memiliki ijazah agar diberikan laluan khusus dengan mengambil kira pengalaman bekerja dalam ATM.

Selain itu, peluang sebigeni tidak terhad kepada jawatan tersebut sahaja kerana dapatan kajian menunjukkan mereka juga cenderung untuk memilih menjadi guru disiplin (17.2%). Pertimbangan juga boleh dibuat oleh pihak KPM dengan menwujudkan jawatan khas seperti Guru Integriti yang berperanan dalam pemantapan dan pemulihan disiplin pelajar dalam usaha membedakan salah laku disiplin pelajar dan mengurangkan kes-kes juvana (Johan Jaaffar, 2014). Usaha yang telah dijalankan oleh Kerajaan Britain wajar dijadikan contoh kerana menawarkan bekas tentera menjadi guru untuk membedakan gejala disiplin yang berleluasa di sekolah terutamanya di bandar-bandar besar dan sebagai model ikutan disiplin diri kepada para pelajar mereka (BBC, 2008).

Maka, berdasarkan tahap peratusan kecenderungan memilih kerjaya sebagai pendidik yang tinggi iaitu 80.4% dalam kajian ini, pihak KPM wajar membuka ruang kepada bakal Veteran ATM untuk menawarkan peluang pekerjaan di institusi pendidikan di bawah KPM. Berbekalkan pengalaman, kepakaran dan disiplin yang tinggi, bakal Veteran ATM mampu menjadi modal insan yang berguna dalam pembangunan pendidikan negara.

Selain itu, dari aspek kelayakan akademik, dapatan kajian mendapati (12.1%) mempunyai sijil am/ SKM, diploma (11.8%), ijazah sarjana muda (2.7%) dan ijazah sarjana (0.3%) membolehkan bakal Veteran ATM ini dipertimbangkan sebagai calon laluan khas

Akhir sekali, pihak PERHEBAT hendaklah mula merangka program khusus dalam bidang pendidikan kerana dapatan kajian ini iaitu 80.4% cenderung memilih kerjaya sebagai pendidik atau tenaga pengajar. Pihak PERHEBAT boleh menjalankan kerjasama dengan Institut Pendidikan Guru (IPG) dalam merangka program kursus pendidikan atau menghantar bakal Veteran ATM mengikuti kursus-kursus pendidikan di IPG seluruh Malaysia. Selari dengan matlamat ini, pihak IPG sendiri mungkin boleh mempertimbangkan untuk melaksanakan Program Khas khusus untuk bakal Veteran ATM bagi mendapatkan sijil atau diploma pendidikan dan ini, sekaligus membolehkkan mereka di tempatkan mengajar di sekolah-sekolah kerajaan di seluruh negeri. Kejayaan di Amerika Syarikat perlu dicontoh kerana semenjak tahun 1994, Kementerian Pertahanan Amerika Syarikat telah membiayai Program TTT yang dijalankan di universiti-universiti tertentu bagi membolehkan bekas tentera mereka memperolehi sijil mengajar alternatif (Owings et al., 2015). Kini, lebih 17,000 bekas tentera Amerika telah mengajar selepas mengikuti Program TTT tersebut (Weisenstein, 2013).

**KESIMPULAN**


Pengkaji juga mencadangkan agar diperbanyakkan kajian pemilihan kerjaya dalam bidang pendidikan. Hal ini kerana, kajian-kajian lepas lebih tertumpu kepada pengurusan persaraan, tahap kompentensi mengurus persaraan dan latihan peralihan persaraan bakal Veteran ATM. Cadangan kajian lanjut khususnya kajian pemilihan kerjaya dalam bidang pendidikan di kalangan anggota ATM yang masih aktif dalam perkhidmatan dan Veteran ATM yang telah meninggalkan perkhidmatan ketenteraan. Selain itu, kajian pemilihan kerjaya juga boleh dilakukan terhadap Veteran ATM yang tidak berpencen (pencen pilihan).

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ABSTRAK

Kajian ini dijalankan untuk meneliti kualiti graduan Program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) berdasarkan pandangan majikan daripada segi kemahiran dan potensi graduan. Selain itu juga, keberkesanan program yang dilaksanakan dikaji dengan membandingkan aspek kurikulum, ko kurikulum, kemahiran ICT, kemahiran bahasa dan kemahiran insaniah semasa graduan dalam pengajian dengan semasa graduan bekerja.

Kajian tinjauan digunakan dalam kajian yang melibatkan 66 orang graduan, dan 24 orang majikan yang dipilih secara persampelan bertujuan. Dapatan kajian yang diperoleh daripada majikan menunjukkan bahawa kualiti graduan bagi aspek kemahiran dan potensi berada pada tahap yang tinggi. Kajian juga mendapati bahawa tidak terdapat perbezaan yang signifikan semasa graduan dalam pengajian dengan semasa graduan bekerja dalam aspek kokurikulum, teknologi maklumat dan kemahiran insaniah. Namun, terdapat perbezaan yang signifikan bagi aspek kurikulum dan kemahiran bahasa. Prestasi graduan selepas bergraduat dalam aspek kurikulum didapati lebih baik dibandingkan dengan prestasi semasa pengajian mereka di university. Sebaliknya, graduan didapati menunjukkan kemahiran bahasa yang lebih baik di university berbanding dengan apabila mereka bergraduat. Pelan tindakan yang komprehensif meliputi aspek pengambilan pelajar, pengendalian program dari segi pengetahuan, kemahiran, kepimpinan, perancangan kerja dan tugas yang menjurus kepada aspek aplikasi harus diterjemahkan dalam program ini.

Kata kunci: penilaian, pelaksanaan, Bimbingan dan Kaunseling, kemahiran, potensi.

PENGENALAN

membina sendiri kurikulum yang akan digunakan sebagai panduan pengajaran pensyarah di IPTA. Semasa kurikulum dibina, individu yang terlibat dalam pembinaan kurikulum ini digalakkan untuk merujuk dan mencari maklumat daripada pelbagai sumber sama ada tesis, buku, laporan-laporan kerjaan atau polisi-polisi yang berkenaan agar dapat membina kurikulum yang baik dan teratur di mana sangat berguna dalam pengajaran pensyarah sebagai panduannya. Hal ini jelas menunjukkan bahawa kurikulum yang berkesan akan dapat melahirkan graduan yang berkuat dan berdaya saing.


(a) Memahami prestasi, meningkatkan standard atau kualiti dan cabaran semasa dalam sistem pendidikan
(b) Merapatkan jurang pencapaian, menggalakkan perpaduan dalam kalangan murid serta memaksimumkan keberkesan sistem
(c) Mewujudkan visi dan aspirasi yang jelas untuk sistem pendidikan dan setiap murid dalam tempoh 13 tahun akan datang sehingga tahun 2025
(d) Menggariskan program transformasi yang menyeluruh untuk sistem pendidikan, termasuk perubahan utama dalam Kementerian Pendidikan Malaysia yang membolehkan sistem ini memenuhi permintaan baharu
(e) Peningkataan jangkaan sistem pendidikan serta menyokong transformasi perkhidmatan awam.

Inspirasi ini merupakan cabaran besar kepada semua universiti dalam melahirkan guru yang terlatih, berkualiti dan boleh dipasarkan. Ini kerana guru yang berkualiti bukan sahaja dilihat dari aspek pencapaian akademiknya tetapi juga keupayaannya mengaplikasikan teori dalam situasi sekolah yang sebenar (Nweke, 1998).

Menurut Mohd Mustamam (2010), UPSI menghadapi cabaran yang besar dalam menghasilkan guru yang berkualiti dan terlatih. Menurutnya juga, kualiti pendidikan tidak akan dapat ditingkatkan jika kualiti pendidikan guru tidak diperbaiki. Hasil dapatan kajian menunjukkan dalam menghasilkan graduan yang berkualiti, UPSI perlu menitikberatkan beberapa aspek seperti kemudahan riadah dan juga masa kuliah. Selain itu, pihak majikan mencadangkan graduan diberikan latihan orientasi mengikut bidang kerja bukan guru bagi penambahbaikkan kebolehpasaran dan keterampilan graduan tersebut. Menurutnya lagi, Graduan UPSI perlu menyertai seminar dan kursus nilai tambah serta mengambil bahagian secara aktif dalam memberikan pandangan, berani mencuba dan komited bagi meningkatkan kemahiran insaniah. Program yang diaturkan kepada graduan UPSI juga mestilah lebih menjurus kepada pendedahan pasaran kerja bukan guru supaya graduan lebih berfikiran terbuka dalam memilih bidang pekerjaan. Hasil daripada kajian ini juga mendapati graduan UPSI kurang keyakinan untuk mengajar di tingkatan tertinggi bagi kursus
Sebahagian kecil responden sahaja yang yakin untuk mengajar pada tahap matrikulasi.


Menurut Abdul Rahim dan Syazrina (2010) juga, kurikulum yang dibina sepatutnya dapat menyediakan pengetahuan dan kemahiran yang diperlukan untuk memberi peluang kepada individu mengembangkan bakat mereka, minat dan keinginan seseorang itu tanpa sebarang sekatan. Jadi aspek seperti tempoh pengajaran dan pembelajaran yang diperuntukkan untuk sesuatu kurikulum, kandungan dan silibus kurikulum, kaedah
pengajaran yang dilaksanakan dan bahan pengajaran yang digunakan perlu diambil berat
dan dirancang dengan sistematik dalam merekabentuk sesuatu kurikulum itu. Ishak,
Rahmah dan Robiah (2008) juga menyatakan pendidikan dan kemahiran yang diperoleh
siswazah dari institusi pengajian tinggi merupakan aspek penting dalam memenuhi
kehendak pekerjaan pada masa kini. Hal ini akan menjadi mudah apabila pendidikan yang
diterima seiring dan sepadan dengan tuntutan pekerjaan tersebut. Menurutnya juga
pencapaian dalam bidang akademik semata-mata tidak akan menjamin siswazah itu
memperoleh pekerjaan. Banyak aspek lain yang perlu di beri perhatian.

Keraguan terhadap perlaksanaan program pendidikan timbul apabila jumlah bakal
guru yang mendapat tawaran mengajar adalah tidak sama dengan jumlah yang telah
dipanggil untuk temuduga. Graduan guru yang gagal dalam temuduga adalah kerana tidak
memenuhi beberapa elemen yang dinilai iaitu pengetahuan, keupayaan berfikir, kemahiran
komunikasi dan kemahiran menyelesaikan masalah (Johari, 2012).

Kajian Penilaian Pelaksanaan Program Ijazah Sarjana Muda Pendidikan, Fakulti
Pendidikan Dan Pembangunan Manusia didasari oleh Model penilaian CIPP Stufflebeam
(1994) yang diubahsuai dari empat dimensi utama iaitu konteks, input, proses dan produk.

Kajian ini hanya mengkaji bahagian Dimensi Proses dan Dimensi Produk. Proses yang
dikaji meliputi pengetahuan dan kemahiran yang dinilai oleh penilai luar. Penilai luar
merupakan majikan dan rakan sekerja graduan program FPPM. Pengetahuan yang diterima
oleh graduan dalam program di FPPM yang diterima oleh graduan dalam program di FPPM yang dikaji merangkumi aspek kurikulum, kokurikulum, maklumat kerjaya, pengajaran dan pembelajaran, dan penilaian semasa pengajaran dan pembelajaran. Kemahiran yang dikaji pula meliputi kemahiran teknologi dan ICT, kemahiran bahasa dan kemahiran insaniah. Produk pula dinilai oleh graduan program FPPM itu sendiri. Aspek yang dinilai merangkumi pengetahuan dan kemahiran. Pengetahuan yang diterima oleh graduan dalam program di FPPM yang dikaji merangkumi aspek kurikulum dan kokurikulum, Manakala kemahiran yang dinilai merangkumi maklumat kerjaya, pengajaran dan pembelajaran, dan penilaian semasa pengajaran dan pembelajaran.

Pogram Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) merupakan
program yang dibina untuk melahirkan kaunselor yang akan berkhidmat di sekolah. Dengan
adanya kuota satu kaunselor untuk 500 orang pelajar sekolah, keperluan kaunselor sekolah
semakin meningkat bermula pada tahun 2002. Program Ijazah Sarjana Muda Pendidikan
(Bimbingan dan Kaunseling) yang ditawarkan oleh Fakulti Pendidikan dan Pembangunan
Manusia dirancang berdasarkan piawaian yang ditentukan oleh Lembaga Kaunselor
Malaysia (LKM). Hal ini adalah penting bagi memastikan graduan yang dilahirkan
merupakan graduan yang kompeten dalam bidang kaunseling. Selain itu juga, graduan
terdapat juga boleh mendapat pengiktirafan daripada LKM dengan memperoleh kaunselor
berdaftar selepas mereka bergraduat. Pengiktirafan diberikan kepada graduan yang telah
lulus dalam kursus mengikut komponen yang ditetapkan serta mempamerkan personaliti
dan pengetahuan yang baik di dalam proses temuduga yang diadakan.
Obey (1998) telah menjalankan kajian bagi mengenalpasti persepsi pentadbir sekolah dan guru-guru terhadap pelaksanaan perkhidmatan bimbingan dan kaunseling di sekolah-sekolah menengah di bahagian Kuching dan Samarahan. Kajian ini berfokus kepada (1) Pengetahuan dan pengalaman pentadbir sekolah dan guru-guru tentang perkhidmatan bimbingan dan kaunseling yang wujud di sekolah; (2) Persepsi pentadbir sekolah dan guru-guru terhadap 10 perkhidmatan dalam perkhidmatan bimbingan dan kaunseling; (3) Persepsi pentadbir sekolah dan guru-guru terhadap perlaksanaan 10 perkhidmatan dalam perkhidmatan bimbingan dan kaunseling; (4) Persepsi pentadbir sekolah dan guru-guru terhadap perlaksanaan aktiviti bimbingan dan kaunseling kerjaya di sekolah. Sampel kajian terdiri daripada 40 orang pentadbir sekolah dan 100 orang guru daripada 10 buah sekolah menengah. Dapatan kajian dianalisis menggunakan perisian SPSS dan menggunakan kaedah statistik deskriptif (min, frekuensi dan peratusan) dan statistik inferensi (ujian-t).

Dapatan kajian menunjukkan 92.7 peratus daripada pentadbir sekolah dan guru mempunyai pengetahuan tentang perkhidmatan bimbingan dan kaunseling. Mereka juga mempunyai persepsi positif terhadap 10 perkhidmatan bimbingan dan kaunseling, serta perlaksanaan perkhidmatan-perkhidmatan tersebut. Skor-skor yang diperolehi adalah di antara 3.14 hingga 4.23 iaitu ditahap agak berkesan dan sangat berkesan. Namun begitu, terdapat juga pentadbir sekolah dan guru mempunyai persepsi negatif terhadap beberapa perkhidmatan dalam perkhidmatan bimbingan dan kaunseling di mana min skornya adalah di antara 2.86 hingga 2.96 iaitu perkhidmatan tersebut tidak dilaksanakan dengan berkesan. Analisis ujian-t menunjukkan tidak wujud perbezaan persepsi yang signifikan di antara pentadbir sekolah dan guru terhadap perlaksanaan 10 perkhidmatan dan aktiviti-aktiviti berkenaan.


Dapatan kajian mendapati bahawa secara keseluruhannya, terdapat jurang antara prestasi sebenar para graduan dengan jangkaan para majikan bagi semua ciri kebolehpasaran yang dikaji dengan ciri kebolehpasaran membuat keputusan dan penyelesaian masalah merupakan ciri yang mencatatkan jurang terbesar. Di samping itu, majikan juga menganggap bahawa graduan yang masih kurang aktif dalam aspek berfikir
seperti bijak mencari alternatif bagi membaiki prestasi organisasi dan kemahiran komunikasi dan interpersonal seperti dapat menyampaikan pandangan yang dapat meyakinkan orang lain. Dalam kajian ini, pemilihan calon pekerja yang diberi keutamaan tinggi oleh majikan adalah dalam bidang perbankan, diikuti kejuruteraan dan komunikasi manakala bidang pengajian Islam, pendidikan dan teknologi komputer merupakan bidang pengajian yang paling kurang diberi keutamaan. Dari segi kriteria pemilihan calon graduan, majikan meletakkan aspek keperibadian dan sahsiah diri sebagai kriteria paling penting dalam pertimbangan untuk mengisi jawatan di organisasi mereka diikuti keyakinan diri dan penampilan diri.


Fakulti ini mempunyai visi untuk menjadi fakulti yang cemerlang dalam kepimpinan pendidikan dan pembangunan manusia bagi melahirkan graduan yang peka dan berwibawa dalam menerajui pendidikan. Manakala misi fakulti adalah untuk menjana dan menatar ilmu melalui bidang pendidikan, pengajaran, penyelidikan, perundingan dan khidmat masyarakat dalam konteks pembangunan manusia selaras dengan visi dan misi universiti.

Universiti dan Fakulti ini juga menerusi pelaksanaan program Ijazah Sarjana Muda Pendidikan menggariskan lima konstruk yang wajib dipenuhi oleh setiap graduan. Konstruk tersebut adalah Kurikulum, Ko-kurikulum, Kemahiran ICT, Kemahiran Bahasa dan Kemahiran Insaniah. Kelima-lima konstruk ini merupakan konstruk yang bersepadu dalam melahirkan graduan yang berkesan bukan sahaja dalam aspek kurikulum tetapi pembangunan insan yang holistik dan seimbang dalam aspek kemahiran seperti ICT, Bahasa dan Insaniah. Universiti dan Fakulti menyediakan bahan aspek teori dalam kurikulum perlu di perteguhkan dengan kemahiran seperti ICT dan Insaniah. Ianya juga selaras dengan hasrat Kementerian Pendidikan Tinggi Malaysia untuk meningkatkan kebolehpasar dalam kalangan graduan universiti di Malaysia. Ini adalah kerana ianya merupakan kriteria penting yang dicari oleh sesebuah organisasi pada hari ini. Kementerian Pendidikan Tinggi Malaysia mendefinisikan Kemahiran Insaniah merangkumi pencapaian akademik seperti nilai positif, kualiti kepimpinan, kerja berpasukan, kemahiran komunikasi dan pembelajaran sepanjang hayat (KPT, 2006). Kementerian Pendidikan Tinggi Malaysia juga menggariskan misi untuk pelajar meningkatkan kemahiran insaniah untuk melahirkan modal insan yang berkualiti,
berpengetahuan, kompetetif, inovatif dan kreatif dalam memenuhi kehendak industri dan masyarakat. Kemahiran insaniah seperti perhubungan dengan masyarakat, komunikasi, kemahiran tingkah laku sosial dan kemahiran kognitif merupakan atribut yang diperlukan oleh majikan dalam menilai permohonan kerja pemohon (Hamid, 2009).


Untuk satu-satu institusi pengajian tinggi, Khadijah Rohani (2002) telah menjalankan kajian pengesanan graduan di Universiti Pendidikan Sultan Idris. Kajian ini adalah atas keperluan menyediakan maklumat berkaitan sebagaimana yang diperlukan oleh JPT yang mengendalikan kajian pengesanan graduan yang melibatkan seluruh IPTA di Malaysia. Namun sangat sedikit maklumat tentang proses yang sistematis untuk menilai impak dan keberkesanan sesuatu program pendidikan. Beberapa perkara penting yang perlu diambil kira dalam penilaian program pendidikan termasuk:

i. Bagaimanakah satu program pendidikan berfungsi untuk memastikan penjajaran yang betul kepada pelajar, guru, ibu dan keperluan negara?

ii. Bagaimanakah pendidik guru menilai keberkesanan program dan impaknya terhadap pelajar?

iii. Bagaimanakah pendidik guru memodelkan penggunaan proses pembelajaran sistematis dan menggunakan data dalam membuat keputusan.

Dengan menggunakan Model pengajaran Analysis-Design-Implement-Evaluate (ADDDIE), reka bentuk pengajaran, pendidik guru dengan berkesan mempamerkan pulangan yang dijangka bagi keperluan negara.


Program Diploma Lepasan Ijazah (DPLI) juga turut dikaji memandangkan DPLI merupakan salah satu program yang melahirkan para guru di Malaysia. Kajian yang dijalankan oleh Ghazali dan rakan-rakan (2011) mendapati aspek kesesuaian program (DPLI)
di Institut Pendidikan Tinggi Awam berada pada tahap sederhana tinggi dan memerlukan penambahbaikan yang berterusan. Aspek keberkesanan program mengikut persepsi pensyarah berada pada tahap yang tinggi dan ianya mengekalkan perimbangan yang sedia ada dalam program, manakala persepsi daripada guru dan pentadbir sekolah adalah sederhana tinggi dan memerlukan penambahbaikan yang berterusan. Manakala daripada aspek kecekapan program berada pada tahap tinggi mengikut persepsi pensyarah dan ia diinterpretasikan sebagai tinggi dan mengekalkan perimbangan yang sedia ada dalam program. Akhir sekali daripada aspek ekonomi, kajian menunjukkan majoriti universiti yang melaksanakan program DPLI menyatakan penjimatan yang dibuat terhadap program DPLI tidak memberi kesan kepada aktiviti, hasil dan juga produk program DPLI. Berdasarkan kerangka konsep yang dibina dapatlah dirumuskan bahawa hanya aspek kesesuaian program DPLI sahaja yang perlu diberi penambahbaikan.


kaunselor ialah pengetahuan, kefahaman dan penggunaan teori dalam sesi kaunseling yang dijalankan.


Kejayaan kaunselor dalam menjalankan tugas-tugas kaunseling amat bergantung pada jenis latihan yang diterimanya (Abdul Halim Othman, Md. Shuaib Che Din dan Sapora Sipon, 2010). Perancangan yang rapi dan menambahbaikan latihan kepada kaunselor pelatih dari semasa ke semasa amat penting untuk melahirkan kaunselor yang berwibawa. Antara cadangan yang diberikan ialah kurikulum yang dirancang hendaklah fleksible dan bersifat dinamik untuk memenuhi keperluan semasa. Selain itu, pengambilan pelajar hendaklah berdasarkan bukti bahwa calon pelajar mempunyai minat, dan kebolehan dalam kaunseling. Sepanjang program latihan, pelatih dipantau termasuk semasa menjalani praktikum dan internship. Tenaga pengajar hendaklah terdiri daripada mereka yang berkelayakan, mempunyai masa yang mencukupi untuk menjalankan penyeliaan yang teliti.

Manakala, keseluruhan hasil analisis dalam kajian yang dijalankan oleh Mohd Rizal dan Muallimah (2010) menunjukkan majoriti guru Pendidikan Khas menghadapi permasalahan, terutamanya dalam permasalahan yang berkaitan teori pengajaran dan kemahiran amali, diikuti masalah kurang pengetahuan dan kemahiran dalam mengajar matapelajaran Kemahiran Hidup, kesukaran mendapat kerjasama daripada ibu bapa pelajar dan permasalahan yang akhir berkaitan kemudahan fizikal dan bahan pengajaran untuk matapelajaran kemahiran hidup. Tujuan kajian ini dijalankan adalah untuk mengkaji masalah-masalah yang di hadapi oleh guru-guru Pendidikan Khas program Integrasi dalam pengajaran dan pembelajaran kemahiran hidup. Soal selidik di gunakan sebagai instrumen kajian yang diedarkan kepada sampel yang terdiri daripada sejumlah 33 orang guru yang mengajar di 13 buah sekolah menengah harian biasa, Daerah Kota Tinggi, Johor. Analisis kajian di buat berdasarkan kekerapan, peratusan dan min dengan menggunakan perisian Statistical Package for The Social Services (SPSS) versi 12.0.

Oleh itu, kajian ini dijalankan untuk mengetahui kualiti graduan Pendidikan (Bimbingan dan Kaunseling) yang bergraduat daripada tahun 2010 hingga 2013. Selain itu,
kajian ini juga mengkaji pelaksanaan program Pendidikan Bimbingan dan Kaunseling dalam melahirkan graduan yang inovatif dan kreatif di UPSI.

**METODOLOGI**


Populasi kajian ini adalah graduan UPSI dari tahun 2010 hingga 2013. Subjek kajian merupakan graduan UPSI dari tahun 2010 hingga 2013 daripada program Pendidikan Bimbingan dan Kaunseling yang mempunyai pelbagai latar belakang termasuklah jantina, Bidang Major dan Minor, Tahun Bergraduat, CGPA, Tahun mula bekerja, Mata pelajaran yang diajar, jawatan yang dipegang dan anugerah yang diterima.

Kajian ini menggunakan soal selidik sebagai alat kajian bagi mengumpul data daripada responden. Penggunaan soal selidik dapat mengukur ketepatan mengenai subjek terhadap soalan yang diberi. Soal selidik ini mengandungi dua set soal selidik iaitu kepada graduan, dan majikan. Kajian yang dijalankan adalah ke atas program Pendidikan Bimbingan dan Kaunseling. Soal selidik graduan bagi Program Pendidikan Bimbingan dan Kaunseling mempunyai 4 sub skala. Sub skala 1 pendidikan, sub skala 2 kurikulum, sub skala 3 nilai dan sub skala 4 kepimpinan. Sub skala 2 iaitu kurikulum mempunyai 4 bahagian iaitu ilmu pengetahuan, kemahiran bimbingan dan kaunseling, pengajaran dan pembelajaran dan penilaian. Soal selidik majikan mempunyai 3 sub skala, Sub skala 1 penilaian majikan, sub
skala 2 nilai dan sub skala 3 kepimpinan. Sub skala 1 penilaian majikan mempunyai enam bahagian iaitu sikap, kemahiran bimbingan dan kaunseling, pengajaran dan pembelajaran, pengetahuan isi kandungan, pengurusan perkhidmatan bimbingan dan kaunseling dan kemahiran komunikasi. Soal selidik rakan sekerja juga mempunyai 3 sub skala. Sub skala 1 penilaian rakan sekerja, sub skala 2 nilai dan sub skala 3 kepimpinan. Sub skala 1 penilaian rakan sekerja mempunyai enam bahagian iaitu sikap, kemahiran bimbingan dan kaunseling, pengajaran dan pembelajaran, pengetahuan isi kandungan, pengurusan perkhidmatan bimbingan dan kaunseling dan kemahiran komunikasi.


Sebanyak 30 soal selidik telah diedarkan untuk menguji kebolehpercayaan kesemua item yang terlibat. Dapatkan kajian bagi kebolehpercayaan instrumen menunjukkan bahawa koefisien Cronbach Alpha secara keseluruhan bagi graduan, majikan dan rakan sekerja ialah 0.88 bagi kajian rintis. Analisis menunjukkan bahawa nilai pekali kebolehpercayaan (Reliability Cronbach’s Alpha) bagi instrumen yang digunakan dalam kajian rintis Program Pendidikan Bimbingan dan Kaunseling, adalah tinggi. Kajian kebolehpercayaan kajian rintis mengikut peniaian oleh graduan adalah nilai alpha= 0.883, rakan sekerja nilai alpha= 0.898 dan majikan nilai alpha= 0.885. Soal selidik ini mempunyai nilai pekali Alpha Cronbach 0.888. Sehubungan dengan itu, menurut Mohd Majid (1990) dan Alias (1992), sesuatu instrumen yang mempunyai kebolehpercayaan yang tinggi, juga mempunyai kesahan yang tinggi. Ini bermakna, instrumen kajian ini adalah sah dan boleh digunakan ke atas responden guru Bimbingan dan Kaunseling. Skala Likert 4 mata digunakan untuk mengukur reaksi sangat setuju, setuju, tidak setuju dan sangat tidak setuju.

Analisis kuantitatif ialah proses mempamerkan data dan mentafsirkan data kuantitatif. Data dipamerkan dengan meringkaskan data dan digambarkan dengan pelbagai cara. Data soal selidik yang dikumpul disemak terlebih dahulu untuk memastikan setiap responden menjawab soal selidik mematuhi arahan dan keperluan yang telah ditetapkan dalam kajian. Data yang diperolehi kemudiannya dianalisis dengan menggunakan perisian SPSS. Analisis data ditunjukkan dalam jadual kekerapan dan peratusan atau skor min.

Di samping itu pula, Bahagian B soal selidik graduan pula terdiri daripada 7 item. Bahagian C hingga Bahagian E terdiri daripada 83 item yang mengumpul maklumat bagi mengenal pasti aspek kurikulum, kokurikulum, Teknologi maklumat, kemahiran bahasa dan
kemahiran insaniah. Bahagian F soal selidik pula mengandungi bagi mengenalpasti aspek pengetahuan yang diaplikasi dalam pekerjaan hasil pengajian di UPSI yang terdiri daripada 21 itema dan bahagian G mengenal pasti kemahiran dalam bidang yang diaplikasi selepas pengajian mengandungi 30 item. Data akan dianalisis dengan menggunakan statistik deskriptif dengan melaporkan skor min dan sisihan piawai. Min ialah skor purata bagi satu set data. Min mengambil kira semua skor dalam set data dan merupakan nilai yang paling tepat mewakili set data tersebut (Steinberg, 2008 dalam Noraini, 2010). Manakala, sisihan piawai ialah punca kuasa dua varian dan merupakan min sisihan satu set skor daripada min. Sekiranya tiada perbezaan antara skor dan min, maka nilai sisihan piawai ialah 0. Jika taburan skor adalah besar, maka sisihan piawai juga lebih besar. Lazimnya, sebahagian besar skor dalam satu set data akan berada dalam lingkungan satu sisihan piawai dari min, sama ada melebihi min atau kurang dari min.

Seterusnya bahagian ini membincangkan dapatan deskriptif nilai min aspek majikan dan rakan sebaya yang meliputi komunikasi dan interpersonal, membuat keputusan dan penyelesaian masalah, penggunaan ICT (teknologi maklumat), Peracangan kerja, kemahiran berfikir dan Etika dan nilai. Bagi mengetahui penilaian majikan dan rakan sekerja terhadap graduan nilai min bagi setiap pemboleh ubah yang dikaji, pengkaji mengkategori dan menginterpretasikan skor min ke dalam empat tahap penilaian seperti yang dipamerkan dalam jadual di bawah ini. Untuk mengukur tahap penilaian majikan dan rakan sekerja dikelaskan kepada empat markat skor min dengan empat tahap penilaian iaitu sangat rendah, rendah, sederhana, tinggi dan sangat tinggi.

<table>
<thead>
<tr>
<th>Skor Purata</th>
<th>Interpretasi</th>
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<tr>
<td>0.00 hingga 1.00</td>
<td>Sangat Rendah</td>
</tr>
<tr>
<td>1.01 hingga 2.00</td>
<td>Rendah</td>
</tr>
<tr>
<td>2.01 hingga 3.00</td>
<td>Sederhana</td>
</tr>
<tr>
<td>3.01 hingga 4.00</td>
<td>Tinggi</td>
</tr>
</tbody>
</table>


Pelan Induk Pembangunan Pendidikan (PIPP)

Kedua-dua analisis berdasarkan ukuran kecenderungan memusat (peratusan dan min) dan ukuran serakan (sisihan piawai) ini dibuat bagi menganalisis maklumat demografi serta melihat tahap penilaian yang dikaji. Manakala, statistik inferensi menggunakan Analisis Ujian–t untuk melihat perbezaan kemahiran dan pengetahuan semasa dan selepas
menamatkan pengajian di UPSI. Dalam kajian ini, untuk mendapatkan hasil bagi hipotesis H₀₁ dan H₀₅ analisis Ujian -t telah digunakan.

**DAPATAN KAJIAN**

Dapatan kajian dan analisis data dilaporkan berdasarkan soalan kajian yang dibina dalam kluster Pendidikan Bimbingan dan Kaunseling. Terdapat dua dapatan kajian yang dikemukakan iaitu pertama, Persepsi majikan terhadap kualiti graduan program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling); dan kedua, Pelaksanaan program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) terhadap kerjaya graduan.

Seramai 66 orang graduan telah memberi respons kepada kajian ini. Menurut Jadual 4.1, didapati majoriti adalah graduan perempuan (69.7%), yang mempunyai kelulusan minor dalam Bahasa Melayu (22.7%), bergraduat pada tahun 2013 (60.6%), dan memperoleh PNGK antara 3.5 hingga 3.74 (45.6%). Majoriti responden pernah menerima anugerah dekan semasa berada di UPSI (22.8%), dan kini berkhidmat sebagai Guru Bimbingan dan Kaunseling di sekolah (60.6%), dan pernah menerima Anugerah Perkhidmatan Cemerlang (21.3%).

Hanya 24 orang majikan yang telah memberikan respon terhadap graduan. Didapati majoriti adalah pengetua sekolah (16.7%), mempunyai pengalaman dalam pendidikan antara 11 hingga 20 tahun (23.4%), dan mengenali graduan sekurang-kurangnya 3 tahun.

**Persepsi Majikan Terhadap Kualiti Graduan Program Ijazah Sarjana Muda Pendidikan (Bimbingan Dan Kaunseling)**

Persepsi majikan terhadap kualiti graduan program Ijazah Sarjana Muda Pendidikan (Bimbingan dan Kaunseling) Fakulti Pendidikan dan Pembangunan Manusia dilihat daripada dua konstruk iaitu kemahiran dan potensi masa hadapan graduan. usan analisis ini dibuat berdasarkan lapan aspek pengalaman bersama graduan UPSI di sekolah yang dikaji iaitu komunikasi dan interpersonal, membuat keputusan, ICT (teknologi maklumat), kepimpinan, kerja berpasukan, perancangan kerja, kemahiran berfikir dan etika dan nilai. Analisis dibuat berdasarkan dapatan min, sisihan piawai, dan peratusan tahap pengalaman bersama graduan UPSI. Dapatan menunjukkan kesemua aspek yang dikaji berada pada tahap pengalaman yang baik. Secara keseluruhan, pengalaman bersama graduan pada tahap yang baik bagi aspek komunikasi dan interpersonal (min= 3.80; sp= 0.21381), membuat keputusan dan penyelesaian masalah (min=3.75; s.p= 0.08909), ICT (teknologi maklumat) (min=3.75; s.p= 0.00000), kepimpinan (min= 3.67; sp= 0.35635), kerja berpasukan (min= 3.63; s.p= 0.40089), perancangan kerja (min= 3.70; sp= 0.32071), kemahiran berfikir (min=3.50; s.p= 0.53452) dan etika dan nilai (min= 3.90; s.p= 0.10690). Secara keseluruhan pengalaman majikan yang terdiri daripada pengetua, penolong kanan dan ketua bidang berkaitan dengan aspek penilaian kemahiran masih pada tahap yang baik.

**Jadual 4.4** ** Min, Sisihan Piawai dan Tahap Pengalaman Bagi Lapan Aspek**

Penilaian Kemahiran oleh Majikan
Rumusan analisis ini dibuat berdasarkan tiga aspek potensi masa hadapan iaitu potensi sebagai pemimpin, potensi sebagai dalam bidang motivasi dan potensi dalam bidang ICT (Teknologi Maklumat). Analisis dibuat berdasarkan dapatan min, sisihan piawai, dan tahap pengalaman bersama graduan UPSI bagi aspek potensi masa hadapan. Dapatan menunjukkan aspek yang dikaji berada pada tahap potensi masa hadapan yang baik iaitu potensi sebagai pemimpin (min=3.63; s.p=0.40089), potensi dalam bidang motivasi (min=3.50; s.p=0.00000) dan potensi dalam bidang ICT (teknologi maklumat) (min=3.13; s.p=0.13363). Secara keseluruhannya, pengalaman majikan yang terdiri daripada pengetua, penolong kanan dan ketua bidang berkaitan dengan aspek potensi masa hadapan graduan ISMP (Bimbingan dan Kaunseling) masih pada tahap yang baik.

Jadual 4.5  Min, Sisihan Piawai dan Tahap Bagi Lapan Aspek Potensi Masa Hadapan Berdasarkan Persepsi Majikan

<table>
<thead>
<tr>
<th>Aspek</th>
<th>Min Keseluruhan</th>
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</thead>
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<td>Potensi dalam bidang motivasi</td>
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<td>Potensi dalam bidang ICT</td>
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<table>
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<th>Sisihan Piawai</th>
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<tr>
<td>Min Keseluruhan</td>
<td>3.42</td>
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<td><strong>Baik</strong></td>
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</tbody>
</table>

**CONFERENCE PROCEEDING**

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Pelaksanaan Program Ijazah Sarjana Muda Pendidikan Bimbingan Dan Kaunseling Berkesan Kepada Kerjaya Graduan

Jadual 4.9 menunjukkan analisis perbandingan ujian pra semasa pengajian di UPSI bagi aspek kurikulum (akademik) dan ujian pos kurikulum (pengetahuan yang dialplikaskan dalam pekerjaan). Didapati terdapat peningkatan bagi dua aspek yang dikaji iaitu aspek Kurikulum dan Kemahiran Bahasa, manakala tiada perbezaan bagi tiga aspek yang lain iaitu Kokurikulum, Kemahiran Teknologi Maklumat, dan Kemahiran Insaniah.

Dapatan kajian menunjukkan terdapat peningkatan aspek kurikulum selepas graduan tamat belajar di UPSI berbanding prestasi aspek kurikulum graduan semasa belajar di UPSI Program ISMP (Bimbingan dan Kaunseling) (t= 2.025, p< .05). Nilai min praujian (M=3.13, SD=0.34) adalah lebih rendah dibandingan dengan nilai min posujian (M=3.30, SD=0.69).

Bagi aspek Kemahiran Bahasa, analisis perbandingan ujian pra semasa pengajian di UPSI (akademik) dan ujian pos (pengetahuan yang dialplikaskan dalam pekerjaan) menunjukkan terdapat pengurangan prestasi aspek Kemahiran Bahasa selepas tamat belajar di UPSI berbanding prestasi aspek Kemahiran Bahasa pelajar semasa belajar di UPSI Program ISMP (Bimbingan dan Kaunseling) (t= 4.889, p< .05). Nilai min praujian (M=3.03, SD=0.43) adalah lebih tinggi dibandingan dengan nilai min posujian (M=2.08, SD=0.48).

Analisis perbandingan ujian pra bagi aspek kokurikulum semasa pengajian di UPSI (akademik) dan ujian pos (pengetahuan yang dialplikaskan dalam pekerjaan) menunjukkan tiada perbezaan prestasi aspek kokurikulum semasa berada di UPSI dengan prestasi kokurikulum selepas tamat belajar di UPSI Program ISMP (Bimbingan dan Kaunseling) (t= 0.377, p> .05).

Bagi aspek Kemahiran Teknologi Maklumat (ICT), analisis perbandingan ujian pra semasa pengajian di UPSI (akademik) dan ujian pos (pengetahuan yang dialplikaskan dalam pekerjaan) menunjukkan tiada perbezaan prestasi aspek Kemahiran Teknologi Maklumat (ICT) semasa berada di UPSI dengan prestasi Kemahiran Teknologi Maklumat (ICT) selepas tamat belajar di UPSI Program ISMP (Bimbingan dan Kaunseling) (t= 0.374, p> .05).

Begitu juga bagi aspek Kemahiran Insaniah, analisis perbandingan ujian pra semasa pengajian di UPSI (akademik) dan ujian pos (pengetahuan yang dialplikaskan dalam pekerjaan) menunjukkan tiada perbezaan prestasi aspek Kemahiran Insaniah semasa berada di UPSI dengan prestasi Kemahiran Insaniah selepas tamat belajar di UPSI Program ISMP (Bimbingan dan Kaunseling) (t= 1.516, p> .05).

<table>
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<th>SD</th>
<th>t</th>
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<tbody>
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<td>.047</td>
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Jadual 4.9 Perbandingan Nilai Min Ujian Pra dan Pos Serta Nilai Ujian-t
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</tr>
<tr>
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<td>Maklumat (ICT)</td>
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</tr>
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<tr>
<td><strong>Kemahiran Insaniah</strong></td>
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<td>Pra</td>
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<tr>
<td>Pos</td>
<td>3.4848</td>
<td>.45583</td>
</tr>
</tbody>
</table>

Justeru, dapat dirumuskan bahawa program yang ditawarkan di FPPM adalah program yang diperlukan di sekolah dan majoriti graduan dapat menunjukkan pengetahuan dan kemahiran yang positif.

PERBINCANGAN


yang diperoleh adalah lebih tinggi dibandingkan dengan aspek pengetahuan. Perkara ini mungkin berlaku memandangkan aspek aplikasi dalam agama dilakukan secara berterusan dan dapat meningkatkan kemahiran mereka dalam proses menolong menurut perspektif Islam.

**IMPLIKASI DAN CADANGAN**

Penilaian graduan UPSI untuk program Bimbingan dan Kaunseling adalah berdasarkan maklum balas graduan mahupun majikan. Secara keseluruhan, program telah berjaya mencapai objektif program yang disasarkan. Kekuatan program didapati terletak pada pelaksanaan program yang dijalankan, kemahiran yang diterapkan sehingga majikan dan rakan sekerja mempunyai pandangan yang positif terhadap kemahiran dan potensi graduan. Kesemua data, iaitu data survey dan juga temubual menunjukkan bahawa graduan dapat melaksana tugas dengan baik.


Secara keseluruhan tugasan kursus mendorong dan membantu graduan untuk bersedia dengan situasi sebenar di samping memupuk semangat kerjasama, semangat berpasukan dalam kalangan pelajar dan seterusnya membina kecerdasan emosi mereka. Adalah dicadangkan agar tugasan kursus dikaitkan sepenuhnya dengan aspek psikologi pelajar dengan aktiviti outdoor digabungkan untuk pembinaan aspek kognitif dan emosi serta kemahiran berfikir aras tinggi.

Setiap kelemahan dan kekurangan yang dikenal pasti perlu diambil tindakan yang sewajarnya oleh pihak institusi. Tindakan susulan terhadap graduan yang tidak dapat memenuhi tugas dan tanggungjawab sewajarnya memerlukan bantuan professional. Pihak sekolah boleh merujuk kepada pihak university untuk tindakan selanjutnya.

KESIMPULAN

Objektif kajian ini adalah untuk melihat keberkesanan program yang ditawarkan di fakulti. Berdasarkan laporan kendiri graduan, didapati graduan mempunyai pengetahuan yang lebih tinggi berbanding aspek kemahiran. Dapatan maklum balas majikan juga menunjukkan maklumbalas positif terhadap graduan UPSI. Hal ini menunjukkan bahawa kedua-dua data tersebut berjaya ini saling memperkukuh antara satu dengan yang lain bagi membuktikan keberkesanan program yang ditawarkan di UPSI.

Hasil yang diperoleh daripada kajian ini menunjukkan beberapa objektif kajian yang dikemukan dapat dicapai dan setiap satunya menunjukkan satu perkembangan yang positif dari tahun ke tahun. Kajian ini menunjukkan bahawa profil profesional dan kualiti graduan program Ijazah Sarjana Muda Pendidikan Awal Kanak-kanak, Pendidikan Khas, dan Pendidikan Bimbingan dan Kaunseling UPSI dari tahun 2010 hingga 2013 dapat diketahui dan ini menunjukkan bahawa graduan UPSI merupakan graduan yang sentiasa mengorak langkah ke arah yang lebih maju. Pelaksanaan program yang dijalankan bagi melahirkan graduan yang kreatif dan inovatif serta melihat kepada faktor-faktor yang mempengaruhi perlakuan program Pendidikan Awal Kanak-kanak, Pendidikan Khas, dan Pendidikan Bimbingan dan Kaunseling menunjukkan satu pengaliran ilmu yang baik dalam diri graduan UPSI selepas bergraduat.

Berdasarkan kajian yang telah dijalankan, hasil kajian menunjukkan profil profesional graduan program Pendidikan Awal Kanak-kanak, Pendidikan Khas, dan Pendidikan Bimbingan dan Kaunseling UPSI dari tahun 2010 hingga 2013 adalah baik dan memberangsangkan. Persepsi majikan terhadap kualiti graduan program Ijazah Sarjana Muda Pendidikan Fakulti Pendidikan UPSI juga menunjukkan persepsi yang positif dan disambut baik oleh majikan secara keseluruhan mereka dan menunjukkan bahawa segala peralasaanaan program yang ditawarkan kepada graduan UPSI adalah satu program yang dapat membina kerjaya, kemahiran, pengetahuan dan pengalaman dalam diri seseorang graduan. Oleh yang demikian, kajian yang dijalankan ini membuktikan UPSI merupakan sebuah institusi yang masih gah dalam membentuk dan melahirkan graduan yang berkualiti dalam mutu pendidikan di negara ini.
RUJUKAN


CREATIVITY CHARACTERISTICS IN TEACHING STUDENTS WITH LEARNING DISABILITIES AMONG PRE-SERVICE TEACHER IN UPSI

*Norfishah Mat Rabi¹, Mohd Nasir bin Masran²
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Due to developmental delay in cognitive, affective, psychomotor, language, and other aspect of difficulties, students with learning disabilities having a lot of problems in learning process. So, teaching student with learning disabilities is quite challenging for pre-service teachers. To be a teacher in Special Education, they should have creativity in teaching especially in implementing teaching activity and using teaching resources. Thus, to understand better how creative are they when teaching students with learning disabilities, this study is carried out to identify to what extend pre-service teachers have the creativity characteristics based on Torrance creativity elements that include fluency, originality, flexibility and elaboration in teaching. A total of 24 respondents were selected purposively based on the pre-service teachers placement in selected schools. A qualitative case-study was conducted and data was collected using recorded observation, interview and document analysis. The findings indicate that respondents with creativity characteristics is higher in the aspects of (1) fluency, (2) elaboration, (3) originality and (4) flexibility. For the frequency of creativity characteristics, it was found that respondents have the highest frequency characteristics in (1) fluency, followed by (2) originality, (3) flexibility and (4) elaboration. The implication of the study conducted is important for the nation development because creativity is among the human capital aspect that is important since the future economy depends on citizens with creative and innovative minds.

Keywords: characteristic, creativity, learning difficulty, pre-service teacher
1. Introduction

Creative thinking is an important survival skill for 21st century. We need this skill to help us face challenges in life, adapt and develop ourselves in education, business and life as a whole. (Carson, 2010). An individual who shows high creativity is more marketable and considered having special ability by employer. Creative thinking which is related to flexibility and successful adaptation to everyday life is considered an entrepreneurship (Amabile, 1997). Creativity is considered as one of the important aspects of future skills since the future economy depends on creative and innovative citizens. Therefore, many countries such as China, Hong Kong, Taiwan, Japan, Singapore and not forgetting Malaysia, have provided specific programmes in their education systems to increase creativity among students. Educationists are seen to intensify their teaching focus to creativity and innovation especially in the teaching of Science which is considered as the best medium to realize the effort (Kelly & Littman, 2000; Sternberg et al., 2005). This area was not given attention causing inability in students to apply knowledge and think critically outside academic context.

The insistence towards creativity is an issue in universal discussion in this world since creativity influence economic activities globally (Craft, 2003). School or higher institution of learning is the place to instill creativity for the future generation. Torrance (1979) stated that if a country wants to change its education system to a creative one, the teachers have to be creative first. Creativity is a factor that drives the development of a country. Gustina and Sweet (2014) study proved that there are six reasons why creativity is important. Firstly, economy value, government’s priority, education, reference, productivity, and administration. Therefore, human capital development for a country is through providing its students with knowledge and creativity in various fields of education. (Lin, 2011; Shaheen, 2010).

Teachers play vital role in encouraging students' creative thinking through suitable approaches in the classroom (Kleiman, 2008; Livingston, 2010; Young, 2009). Several researchers in creativity had summarized three main aspects about creativity in the classrooms. They are creative teaching (Gibson, 2010), teaching creativity (Jeffrey & Craft, 2004), and creative learning (Lucas, 2001). According to Craft (2006), teaching creatively means using imaginative approaches to make learning interesting and effective. Teachers must not only know creative teaching approaches but also create creative learning environment. In school, teachers need to use creativity to achieve learning objective and also to attract students' attention to learn not only in the process aspect, but also verbal, visual, auditory and kinesthetic resources and products. In fact Johansson (2004) also suggested that students should be encouraged to collaborate with other students in their learning activities so that they can be more creative. Creativity influence teaching especially for Special Education students with multiple disabilities. To be a creative teacher, creativity must be inculcated. This is explained by Sternberg (2006) that educational programme should not only focus at enhancing creativity but also focusing at students’ existing potential creativity. As pre-service teachers, the training duration is the best time for the them to
develop creativity, apply the characteristics of creativity that they possess, produce creative products, and create creative teaching and learning environment. Apart from having the opportunity to use teaching skills, pre-service teacher can sharpen their creative abilities that they may not have the opportunity to show. A creative teacher will transform past ideas for improvisation and produce a more attractive new product (Starko, 2014). If a lecturer wants to encourage creativity and to show creativity intelligence among students, the creative thinking aspect should be included in assignments and tests (Sternberg, 2006). Study by Scott et. al. (2004) has proven that divergent thinking, problem solving, and creative attitude are most effective creative exercise. According to Scott, Leritz dan Mumfords (2004), creativity can be trained. Creativity training programme can be conducted based on idea generating exercise, imaginative exercise, cognitive exercise and thinking skills exercise. Nevertheless, it is quite difficult to evaluate individual’s creativity based on creative assignments and creative products because creativity is subjective.

How does a creative person looks like? According to Starko (2014), creativity is seen in a creative individual and products that show creative characteristics. In this case, firstly, creativity involves new product (idea, arts products, innovation and others). To be creative, the idea and product must be something new. Secondly, creativity should include suitability of resource or idea that can be referred to in the cultural context. The concept of creativity differs among culture (Kaufman & Sternberg, 2006; Lubart, 2010). It involves individual, spiritual values or a Nation’s development. Therefore, teachers need to see students' background when producing creativity taking into account various social aspects and cultural value. It is possible that a teacher’s creative idea is not suitable with the individual’s ability and learning style. A creative person has metaphorical thinking, problem solving skill, able to self-evaluate and self-assess, logical thinking, and high rate of visualization (Starko, 2014; Ward & Kolomyts, 2010). They can generate ideas, make inference, relate, predict, make hypothesis and analogy, and synthesize. For problem solving, the creative process involves activities such as recognizing problem, interpret problem, application of existing knowledge to handle problems until problems are solved. So creativity is a mental activity to produce new, extra-ordinary and unique ideas (Beghetto & Kaufman, 2010). Some creative abilities can be learned by building new knowledge based on old ideas (Runko, 2007). Some of the techniques use to encourage creativity is idea generation and divergent thinking (Sternberg, 2006). Divergent thinking comprise fluency (ability to generate many ideas), flexibility (ability to generate many types of ideas or ideas from many different perspectives) and elaboration (ability to add information to improve ideas) (Ward & Kolomyts, 2010).

Preparation to be a teacher involves a lot of process. Apart from receiving knowledge theoretically, one has to attend practical training as a pre-service teachers’ in school. In order to enhance the teaching profession, pre-service teachers’ should equip themselves with knowledge and teaching skills before they are offered to be qualified and quality teachers. In teaching students with special needs, creativity needs to be given attention by pre-service teachers’ because teaching students with special needs differs from teaching the normal students. Westby and Dawson (1995) found that creative persons are impulsive, emotional, and opportunists. Whereas, less creative persons are very dependable, appreciative and good natured. But creativity can be influenced by activities carried out.
Gardner (2007) stated that five activities that requires creative individual to do are problem solving, produce concept or theory, create product, achievement style, and show great and unique achievement. A creative individual is good at solving spontaneous or existing problem and produce relevant ideas to overcome problem. Problem solving involves intelligence in the thinking process to make decision. Individual's creativity can be evaluated based on the ability to produce new concept or theory based on situations. To stimulate creativity, a teacher must encourage students to think laterally and associate different ideas. Lateral thinking means solving problems by using imaginative ideas (not using logic or normal thinking) until various superb and effective approaches are achieved. Lateral thinking is one way of solving problems by using imaginative ideas and not by logical or traditional thinking (Edward de Bono, 1992). It is a thinking that emphasizes multiple answers and can be used to get away from old ideas that have been practiced before. They must be able to translate and use learning in new context, look at things from various perspectives and test with different approaches in problem solving. For product creation, unique and original idea is produced from creative thinking process that involves old ideas for improvisation and making new attractive (Starko, 2014). According to Wright (2010), creative process involves seven steps that is, findings and problem solving, flexibility, fluency, elaboration, transformation, objectivity and selectivity and aesthetic appreciation. Findings and problem solving is related to finding and exploring information, and alternative approach to problem. The flexibility process refers to taking different approaches towards problem, thinking for ideas in various ways or looking at problem in a different perspective. The fluency process is producing ideas for open questions or problems, for example a story on poster picture. The elaboration process involves increase of detail ideas by developing, elaborating and improvising ideas, such as verbal explanation on life in the sea.

Basically, creativity models can be used to explain creativity process that aim to identify and measure components to produce creativity. Studies on creativity can be conducted based on several creativity models (Lubart, 2001; Scott, Leritz, & Mumford, 2004). Torrance Framework for Creative Thinking (TFCT) (Torrance,1979) is one of the creativity tests based on fluency, flexibility, originality and elaboration (Kim, 2006; Torrance, 1979, Wright, 2010). With reference to the test, researchers in creativity field have divided the creativity characteristics into several components such as original ideas, frequency of relevant ideas (fluency), categorical ideas (flexibility), elaboration of ideas (elaboration) and others (Scott et al., 2004; Torrance, 1999). In fact, most researchers evaluate creative process based on fluency, flexibility, originality, and elaboration (Kuan Chen Tsai, 2014, Plucker & Renzulli, 1999; Sternberg & O’Hara, 1999; Vincent, Decker, & Mumford, 2002). A cognitive style of divergent or associational thinking (Mednick, 1962) is sometimes called originality (Eysenck, 1993). The responses are subsequently scored on objective scales measuring assumingly different dimensions of creative ability, traditionally fluency (number of responses), flexibility (number of different categories covered by the responses), originality (statistical infrequency of the responses) and elaboration (amount of details given). Creativity is always being referred to the humanistic theory. The humanistic theory pushes what we need to be encouraged to advance creatively, regardless of the challenges. It is not the suppression of creativity that makes us creative but the encouragement that
makes us creative. The major tenet of humanistic theory is that humans have six basic needs. These needs need to be met before we can thrive. Once these needs are met we can reach self-actualization and are now free and comfortable enough to express ourselves in a creative manner. This theory argues that environment is not a factor in creativity because if the person is able to meet the six basic needs they can then tend be creative. Creativity is central to our growth and learning processes and as such help us to advance ourselves within society. Believers of this theory believe self-actualization allows us to live a meaningful life and break out of social and cultural control becoming an individual rather than just another face in the crowd. It is argued that our main motivation for creativity is to compensate for a perceived physical or intellectual disability.

Convergent and Divergent Thinking (CDT) is a theory about the way some people view a problem and come up with a solution. Ideas of CDT are supported by Sternberg (2006). Convergent thinkers tend to concentrate their thoughts down the path of a single solution. Divergent thinkers on the other hand bring forth multiple solutions to each project. At the beginning of the creative process, divergent thinking generally occurs. We could generate many different possible solutions to the problem through brainstorming, creating art works, free writing, or mind mapping. Once we have generated enough different solutions to the problem we then go into convergent thinking mode. At this stage we use our convergent thinking to examine what we know about the problem and begin to whittle down the solutions we have come up to generate a single solution that is best for the problem at hand. We look at each solution we come with previously and look at the things we know about the problem and how each solution we come with impacts on these facts. Do they fit? If not the solution is put aside and we will examine the next solution. By using both forms of thinking together we come up with as many solutions as possible to the problem at hand then narrow it back down to the solution we will use for our project. These two forms of thinking should be used together at the same time, rather in different stages of development. For example if convergent thinking was used during a brainstorming session new ideas would be squashed because they do not allow for this aspect or that aspect before they even get a chance to fully developed. Rather divergent thinking should use first to create many ideas and to further develop each of these ideas. Then convergent thinking should be used to narrow the solutions down to one or just a few for further development. The cognitive approach to creativity takes place in two main phases. The first phase is a generating phase during which we come up with ideas or pre-inventive structures we feel may help obtain solutions to a problem. This is then followed by the exploratory phase during which we use the ideas, thoughts and pre-inventive structures we came up with in the first phase to come up with ideas to solve that problem. We explore ways we can use these thoughts to create a solution to the original problem. Simple brainstorming for example, will begin with a brainstorming session to generate ideas as well as restrictions and other considerations. Afterward we then move onto exploring ways to implement these ideas till we settle on a suitable solution to the original problem. The relationship of individual differences in creativity to individual differences in cognitive abilities, such as intelligence, is still discussed. Indeed, any possible relationship between creativity and intelligence has been proposed (Sternberg & O'Hara, 1999). In one extreme version,
creativity and intelligence are regarded as totally independent, a position especially taken by some cognitive psychologists with strong focus on the creative process (Weisberg, 1992, 1999). These authors see creativity as a mental operation accessible to everyone, only dependent on domain-specific knowledge (i.e. the amount of exposure to and expertise in a given field) and deliberate practice. Their position therefore denies not only the influence of intelligence, but of any individual difference beyond knowledge and motivational factors, on creativity. According to Starko (2014), creativity influenced by cognitive, affective, motivational and social environment aspects. The most important aspect of creativity is cognitive and affective. The creativity element in cognitive aspect involves general or specific knowledge, perception, originality, complex view such as analysis, integration and using different idea or concept, open mindedness, and creativity awareness (Beghetto & Kaufman, 2010).

Several studies have explored creativity in different characteristics. Feist (1998) concluded that creative people are more autonomous, introverted, open to new experiences, norm-doubting, self-confident, self-accepting, driven, ambitious, dominant, hostile, and impulsive. Yet, creative people in art and science do not completely share the same unique personality profiles: Artists are distinguished more by their emotional instability, coldness, and their rejecting group norms than are scientists. Most reviews of creativity and personality, like Feist (1998) focus on creative achievement. It surely is convincing to see eminence or recognized creative products as the purest criteria of creativity. But creative achievement in a field, let alone eminence or genius, is without doubt synergistically determined by more than just a disposition towards creativity (Eysenck, 1993, Feist, 1998; Sternberg & Lubart, 1991). Nevertheless, does the learning process in the university be to produce creative and innovative teachers? To what extent pre-service teachers’ undergoing teacher training in the university has creative skills to teach students in school? Hence, to understanding the creativity of pre-service teacher in teaching practicum in schools, four objectives and four research questions have been designed to carry out the study due to fluency, originality, flexibility, and elaboration in teaching.

2. Research Methods

This study was conducted for a duration of 12 months. This qualitative case study uses observation, interview and document analysis for data collection. For observation, the instrument used was video recording, and observation notes, interview questions, and analyzing teaching aids used during teaching. Data collection for observation and interview involves the respondents only. Data is collected during teaching and learning session comprising set induction teaching steps and conclusion. Every activity conducted is observed information is jotted down based on the creativity characteristics comprising four creativity elements that is, fluency, originality, flexibility and elaboration. The respondents is Semester 7 students undergoing teaching practicum for a period of 16 weeks in selected schools. A total of 24 respondents were selected using purposive sampling based on the
pre-service teachers’ allocation in schools with Special Education Integration Programme. The respondents selected in this study were from eight schools. The subjects taught by the respondents were Malay language, Mathematics, Living Skills (Cookery, Sewing, Agriculture), Arts Education, Islamic Education, and Science. From the total 24 samples, the Subjects teaching Malay language is 20.83%, Mathematics 16.67%, Science 8.33%, Arts Education 8.33%, Living Skill Sewing 12.50%, Living Skills Cookery 16.67%, Living Skills Agriculture 8.33%, and Islamic Education 8.33%.

3. Analysis Results

This study adapts Torrance Framework for Creative Thinking creativity characteristics that contains Fluency, originality, flexibility and elaboration characteristic (Kim, 2006; Torrance, 1979). Creativity cannot be seen with the naked eye but can be evaluated by observing an individual. This is explained by Starko (2014) that creativity is seen in creative individual and materials that have creative characteristics. In this context, firstly, creativity involves new product (idea, arts product, innovation and others). To be creative, the idea and product must be new and can be tested (Sternberg, 1999). Clearly, creativity is related to the ability to produce new product or idea (Lubart, 2010; Sternberg & Lubart, 1991).

Based on observation, interview and official document analysis, the finding shows that the respondents show different characteristics of creativity and the findings is reported based on three research questions.

3.1 Fluency

Creativity characteristics in fluency refer to the competency in producing idea to solve problems, increase understanding and remember information. Data is collected by observation and video recording. The research findings show that three respondents can produce ideas to solve problem in teaching spontaneously, 17 respondents have creativity characteristics in fluency able to produce ideas to increase students’ understanding and 19 respondents had successfully produce ideas to remember information. Overall score found that the respondents frequency in producing ideas to solve problems was 3 times, frequency in producing ideas to increase understanding was 19 times and frequency in producing ideas to remember ideas was 44 times.

<table>
<thead>
<tr>
<th>Number</th>
<th>Fluency characteristics</th>
<th>Observation (%)</th>
<th>Interview (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Problem solving</td>
<td>7.69</td>
<td>4.55</td>
</tr>
<tr>
<td>2</td>
<td>Remember</td>
<td>43.59</td>
<td>28.79</td>
</tr>
</tbody>
</table>

Table 1: Creativity Characteristics in Fluency
The finding shows that 7.69% respondents are creative in solving students’ problem, 43.59% can produce creative ideas to assist students to remember previous lessons and 48.72% had successfully produce ideas to understand information delivered. Whereas for frequency, the interview data shows that 4.55% respondents use creativity to solve problems, respondents frequency to use creativity in producing ideas to assist students understand the subject content is 28.79% and respondents frequency using creativity to assist students to remember information and subject content learned is 66.67%.

### 3.2 Originality

The second creativity characteristic is originality. It refers to unique and outstanding original ideas. The information is synthesized in a new form. The finding shows that eight respondents were able to generate unique ideas and four respondents were able to generate original ideas. Frequency score shows that ability to generate unique ideas is 22 times and ability to produce original idea is 5 times.

<table>
<thead>
<tr>
<th>Number</th>
<th>Originality</th>
<th>Observation (%)</th>
<th>Interview (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unique idea</td>
<td>66.67</td>
<td>81.48</td>
</tr>
<tr>
<td>2</td>
<td>Original idea</td>
<td>33.33</td>
<td>18.52</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

For originality characteristic, observation and analyzing video recording shows that 66.67% respondents could generate unique idea and 33.33% could generate original ideas. For original frequency characteristic, data analysis for interview shows that respondents frequency in generating unique ideas in teaching is 81.48% and respondents frequency to produce original ideas is 18.52%.
3.3 Flexibility

The third creativity is flexibility that relates to production of various ideas in thinking that involves the ability to innovate creativity from multiple aspects. It was found that seven respondents show that the flexibility characteristic in this study is 8 times for teaching strategy, 2 times for different views and once for flexibility in innovating ideas.

Table 3: Creativity Characteristic in Flexibility

<table>
<thead>
<tr>
<th>Number</th>
<th>Flexibility</th>
<th>Observation (%)</th>
<th>Interview (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Different strategy</td>
<td>66.67</td>
<td>72.73</td>
</tr>
<tr>
<td>2</td>
<td>Different view</td>
<td>22.22</td>
<td>18.18</td>
</tr>
<tr>
<td>3</td>
<td>Innovation</td>
<td>11.11</td>
<td>9.09</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
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</table>

For flexibility characteristic, the respondents had creativity in producing various ideas in thinking that involves the ability to innovate creativity from various views, approaches and strategies. Data analysis shows that 66.67% respondents are creative in using different strategies in teaching, 22.22% respondents are creative in using different approaches, and 11.11% are creative in innovating teaching techniques. For flexibility characteristics, the respondents frequency in using different strategies in teaching is 72.73%, the respondents frequency to generate different view is 18.18% and frequency in innovating teaching is 9.09%.

3.4 Elaboration

The fourth creativity characteristic is elaboration. It refers to the process of idea development through detail elaboration that will increase interest and understanding in learning a topic. This is related to the ability to develop ideas and make them more interesting. The finding shows that 17 respondents have creativity that can develop ideas through detail explanation to enhance students’ interest and understanding. Overall, the respondents frequency score found that 46 times elaboration characteristic have been produced successfully.
Table 4: Creativity Characteristic in Elaboration

<table>
<thead>
<tr>
<th>Number</th>
<th>Elaboration</th>
<th>Observation (%)</th>
<th>Interview (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Detail explanation to arouse interest</td>
<td>41.18</td>
<td>43.48</td>
</tr>
<tr>
<td>2</td>
<td>Detail explanation for understanding</td>
<td>58.82</td>
<td>56.52</td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Observation finding shows that respondents creativity in elaboration involves development of ideas in activity through detail explanation that can increase interest and understanding in learning a topic. It was found that 41.18% use creativity to give detail explanation to attract students’ interest and 58.82% used creativity to give detail explanation for students to understand subject content. For frequency of elaboration 43.48% respondents give detail explanation to attract students’ interest and 56.52% respondents give detail explanation to enable students to understand teaching.

Overall, the findings show that the number of creative respondents is higher in fluency (50.65%), second, is elaboration (22.08%), third is originality (15.58%) and fourth is flexibility (11.69%). For frequency of Creativity characteristic, it was found that 44.00% respondents have frequency in fluency in teaching, 18.00% have 7.33% frequency in originality and 30.67% have frequency in elaboration. Figure 1 shows the comparison of creativity characteristic in fluency, originality, flexibility and elaboration.

![Comparison of Subjects Creativity Characteristic](image_url)

Fig. 1  Comparison of Subjects Creativity Characteristic
4. Discussion

The study has proven that most UPSI’s pre-service teachers have fluency in producing ideas to solve problems, increase understanding and remember information learned. The finding is supported by study conducted by Westby dan Dawson (1995) that state a creative individual has metaphorical thinking, has skills in problem solving, self-evaluate and self-assess, logical thinking, and has high visualization rate. A creative individual always strive to solve various problems or able to produce something new and useful in specific areas from time to time (Ainon, 2008). Fluency is the ability to think about various ideas spontaneously. Fluency ia also seen from the context of delivering systematic information with language that is easily understood. To deliver ideas fluently one needs creativity. In fact Gardner (1993) stated that a creative individual will, from time to time, tries to solve problems, or strive to produce something new and useful in specific areas. Fluency in delivering ideas prove a person’s creativity and this can be identified based on several characteristics such as fluency in comparing, changing, counting, giving definition, explaining, labeling, identifying, listing, matching, naming, designing, paraphrasing, predicting and summarizing. Torrance and Ball (1984) and Torrance, (1990) has proven that the more ideas given by an individual, the higher his or her competency and fluency. An idea is the result of creative thinking that is important to assist an individual to make decision, solve problem and generating abstract and concrete ideas (Yee et al., 2011). In fact, Sternberg (1999) stated that learning based on problem solving is one of the activities that can stimulate creativity. In problem solving activity, information and ideas are collected, arranged and analyzed to get the solution for the problem.

The second creativity characteristic that is most prominent among pre-service teachers are elaboration. This finding is supported by Ward and Kolomyts (2010) that by mastering elaboration characteristic a person is able to add information and improve ideas. Elaboration is a process of developing ideas by detail explanation that can increase interest and understanding in learning a certain topic. This is related to ability in developing ideas and adding ideas to be more interesting. In this study, the elaboration elements comprise assessment, critics, setting, evaluation, grading, judgment, measurement, selection and test. Apart from the potential to stimulate active learning, creativity is also able to assist students to elaborate concepts or ideas and attract students, and thus produce meaningful learning (Elliot et al., 2000).

For originality characteristics, the finding shows that only one third of the respondents demonstrate creativity in producing original, unique or outstanding ideas. This involves thinking ability that can produce new, unique and interesting ideas. This is confirm by Starko (2014) that an individual who always give original ideas normally able to give creative ideas. Creativity in teaching means teacher using imaginative approaches to make learning more interesting, effective, fun and liked by students. This is related to ability to create and produce or in new form through imagination skill (Craf, 2006; Gustina & Sweet, 2014). However, new finding shows that teacher trainees lack unique and original ideas to generate new ideas. Whereas creativity is a thinking process that helps to assist a person in
producing new ideas (Green, 2001). Pre-service teachers also lack ability in synthesizing. Synthesizing skills combine ideas, elements, items and separate matters to produce a comprehensive picture in the form of statements, essay, arts and artifacts. This finding is supported by Westby and Dawson (1995) study that proved creativity can be seen in ability to synthesize ideas. A creative individual can synthesize many ideas spontaneously. This skill is used when a person wants to find new ideas or alternatives. In fact Aimon and Abdullah (1999) stated that by having in depth knowledge in a certain field, a person can produce original and useful. Knowledge and useful ideas encourage creativity in producing types of ideas that is outside the norms of a particular field. Creativity is a mental activity to produce new, outstanding and unique ideas (Beghetto & Kaufman, 2010).

Characteristic of creativity that is the least mastered by pre-service teachers is flexibility. This characteristic is related to the ability to produce multiple ideas in thinking. It involves the ability to adapt creativity by looking at things from various perspectives and different strategies and approaches. According to Jeffrey and Craft (2004), teaching creatively means using imaginative approaches to make learning more interesting and effective. In the flexibility context, a creative individual can change ideas, instruct, differentiate, use, interject, translate and predict. Creativity is a mental activity to produce new, unique and outstanding ideas (Beghetto & Kaufman, 2010). The production of new and unique ideas is related to cognitive and non-cognitive skills. This shows flexibility is able to produce a certain idea or different answer and look at problems creatively as a new assignment. A creative individual has flexibility characteristic that can face whatever changes and challenges. However, if an individual lacks creativity, flexibility does not exist in that person. Therefore to get in-depth knowledge, a person needs to mingle with people with different knowledge (Johansson, 2004). By this way, they can generate ideas, different views and thinking that can generate creativity. The study by Kuan Chen Tsai (2014) has proven that fluency, flexibility and originality is more accurate in evaluating creativity achievement. Ideas that have the tendency to be similar can be combined and integrated in new presentation in order to understand a matter more clearly.

5. Conclusions

Basic creative characteristic is they to produce ideas, new methodology and problem solving. There are several basic characteristics of a creative individual. Among others is having the ability to think and play with ideas, concepts, symbols, words and numbers where creativity functions to see outstanding relationship between those matters. Therefore, a creative individual will think of various perspectives that have the possibility to solve problems. A creative individual has the ability to think from different perspectives. They also have the in-born ability to change existing methodology or approaches. Usually a creative individual can generate outstanding or unique ideas. A creative individual prefers challenges than smoothness and prone to complex task than moderate. Creativity also encourages individuals to have interests in multiple areas and enjoy life from various perspectives. The characteristics needed for creativity are ready to be independent in thinking, does not give easily give up, able to communicate well, more interested in concept,
inclination to learn various knowledge, humorous, accept new ideas and clear objective in life (Sternberg, 1999). Many creative individuals have side characteristics that make them difficult to mix around with other people and have disorder life. Therefore, a creative individual will look strange, not bothered about other people, proud and less sociable.

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References


ENCOURAGING STUDENTS’ ACADEMIC ACHIEVEMENT THROUGH PROBLEM-BASED LEARNING

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Abstract

Problem-Based Learning (PBL) aims, among other things, to increase students’ active learning and decrease their experience of passive learning which occurs in lectures. The focus of this study is on PBL methodology and academic achievement; this is because academic achievement is a core learning process and it also involves a problem solving process. This study employed a quasi-experimental design, where 45 students undertaking a B. Ed (Economics) were randomly assigned to the experimental (n = 23) and control groups (n = 22). The former were instructed using the PBL method while the control group used the traditional learning method. The analysis focused on comparisons between the PBL and traditional learning groups in respect of their Academic Achievement Test (AAT), a series of one-way between groups analysis of covariance (ANCOVA) tests, where pre-AAT was used as a covariate when looking at differences between the PBL and TL groups in mid- and post-AAT. For the effects of PBL on students’ academic achievement as measured by an instrument, the AAT showed at baseline no differences exist between two groups. At mid-intervention and post-intervention test the PBL method yielded significantly higher Achievement scores, therefore indicating better students’ academic achievement. It concluded the finding of the study supported the positive effects of PBL toward students’ performance in academic on Business Education in Malaysia. The students and lecturer also have a positive preferences and perceptions toward the PBL implementation.

Keywords: Problem-based learning; academic achievement; Business education
1.0 Introduction

PBL is defined as the learning that results from the process of working towards the understanding or resolution of a problem (Barrows & Tamblyn, 1980). Conventionally, Business Education programs normally use the one tier teaching method – teacher-centred approaches such as lectures and tutorials. Instructors periodically give lectures to disseminate knowledge and by the end of a study session or semester, an assessment is made of student performance, mainly based on examination. This is regarded as an important step in which students recall what they already know about a topic (Barrows & Tamblyn, 1980) to give them a context for learning (Norman & Schmidt, 1992; Schmidt, 1983). The current Business Education system in Malaysia has occasionally seen some variations in modes of performance assessment, but these have usually been limited to case studies, report submissions and presentations which do not depart from a teacher-centred approach (Md. Zabit, 2013). Some possibilities for strengthening the process of teaching and learning in higher education could involve taking advantage of educational technologies and the promotion of more student-centered learning, as these could lead to more functional graduates (Radin Omar, 2011). Relevant to this is the Ministry of Higher Education’s (MOHE) target of increasing the percentage of graduates in relevant employment six months after graduating from 74.1% to 78%. For that, all universities would focus on strengthening student-centered learning approaches such as: Outcome Based Education (OBE), PBL, Modular Approach and Case Studies in order to transform the students to outstanding individuals. From our understanding, to remain competitive in these times of changing educational needs, Malaysia must generate high value-added capabilities of higher institutional graduates. As such, education institutions, including higher education institutions must produce confident students who can act to solve a problem, and then make a good decision.

1.1 Teaching Business Education in Malaysia

The criticism over the quality of Malaysian higher education among the graduates of Business Education could be symbolized by the critical feedback given by a prominent historian and local academician, Emeritus Professor Dr. Khoo Kay Khim, who said the current education system causes significant problems in assessing the quality of graduates. He argued that lecturers and educators should not inform the students or provide tips about what would appear in the examination or how to answer questions; students should have to analyse the problems for themselves (New Straits Times, 2008, June 23).

According to Ng (2008), similar concerns have driven educational reforms in nations around the globe. For example, when our neighbour, Singapore prepared to overhaul its assessment system, their Education Minister, Tharman Shanmugaratnam, noted:

We need less dependence on rote learning, repetitive tests and a ‘one size fits all’ type of instruction, and more on engaged learning, discovery through experiences, differentiated teaching, the learning of life-long skills, and the building of character, so
that students can... develop the attributes, mindsets, character and values for future success (Ng, 2008; p. 10).

Generally, PBL is found to have positive values which are effective in teaching and learning process, and become an alternative to the traditional methods of teaching and learning. The findings of previous studies have shown that through PBL, students are able to maintain information and ideas in the classroom for a longer time and without prejudice issues of syllabus content or subject. In addition, these studies also reveal that performance on achievement tests is either similar, if not better than the achievement where non-PBL approaches where used. It proves that PBL is geared towards becoming one of the best alternatives to the traditional pedagogy.

1.2 PBL learning and academic achievement

PBL existed as a methodology long before it was introduced as formal classroom concept (Boud & Feletti, 1991). The origin of PBL can be traced to the progressive movement, especially to Dewey’s (1944) belief that teachers should teach by appealing to the students’ natural instincts to investigate and create. This learning approach had spread to medical schools in North America, Europe, and Australia by the early 1980’s and has since been adopted by schools of engineering, architecture, social work, law, and nursing among others (Boud & Feletti, 1997).

According to the McMaster model (Barrows & Tamblyn, 1980), the PBL method involves three phases: revealing problem scenarios; finding information; and discussing and applying new knowledge to the problems. Many studies have supported the effectiveness of the PBL approach on students’ academic achievement (Tan & Ng, 2008; Yuan et. al., 2008; Major & Palmer, 2012; Chin & Chia, 2000; Neo & Neo, 2001; Ward & Lee, 2002; Kivela & Kivela, 2005; Yuan, et al, 2008; Masek & Yamin, 2012), but these studies are mainly in the field of science and technology, especially in the fields of medicine, nursing, the sciences, hospitality and engineering. The present study seeks to occupy a research space by applying PBL to critical thinking in Business Education. Tan and Ng (2006) stated that PBL premises on its emphasis of active learning through solving ‘real-world’ problems as well as its multi solution approach is likely to have an advantage if positioned as a pedagogical strategy for entrepreneurship education. Yuan et al. (2008) provided an explanation that PBL approach, in the context of nursing education actually increased students CT skill more than the lecture approach. They also examined the effect of PBL on nursing students’ CT skills. They concluded that PBL students’ CT skills did not appear to show significant great development in relation to the deduction, inference and evaluation subscale scores. This argument does not stand up, for many students, the types of active learning like PBL requires is and an unusual experience. One method for assisting students in their learning understanding of the PBL process is to ask them to reflect on the experience of PBL at key points in the process (Major & Palmer, 2001). This method allows students to analyze and find the solution to a problem rather than simply applying methods that already known. Learning
begins with a problem to be solved, and the problem is posed is such way that students need to gain new knowledge before they can solve the problem.

PBL helped to promote deep approaches of learning instead of surface approach (Dochy et al., 2003; Biggs, 2003). According to Kivela and Kivela (2005) and Du (2006) after exposure to PBL methods, students demonstrated that they were able to take a more proactive role in their learning, they more readily develop self-management skills in term of their own learning (Maddocks, 2004) and more self-directed in their learning activities. Similarly the students talked about learning in PBL as being both fun and hard at the same time (Salleh et al, 2007; Barret, 2009). For example, group activities rated the highest out of the classroom activities that the students participated in. Qualitative feedback from the students also showed that they valued communicative and interactive learning activities more than the traditional lecture-led method of learning (Kivela & Kivela, 2005).

Additionally, Savin-Baden (2003) believed that PBL helped to develop criticality of learners and the students may be better able to integrate basic science knowledge into the solutions. A recent development in tertiary education involves the application of PBL as a curricular vehicle to develop student talent. According to Brownell and Jameson (2004), PBL has been used for a decade in one graduate management program. PBL capitalizes on synergies among cognitive, affective and behavioural learning. Although Management Education usually privileges cognitive learning, affective learning is equally important. Perhaps it is true that by focusing on real-world problems, PBL helps students appreciate multiple perspectives, recognize non-rational elements of decision making, and confront ethical quandaries. This does indicate that PBL is an effective method to encourage students to analyze and think critically. And it is hoped that by thinking critically, the students would not simply imitate existing Business Education methods, but would create and pioneer new approaches.

From this PBL review discussion, the types of problems and how these problems should be solved can influence students’ thinking and how they gain knowledge. Specifically, problem and problem solving process are the main characteristics in PBL. Therefore, it can be used to explain both issues. Boud and Feletti (1994, p. 17) stated that the advantage of PBL is to help Business Education students to develop the ability for self-directed learning (SDL) in order to cope with the ever changing and increasing body of knowledge they will need to succeed as professionals.

2.0 The Present Study

2.1 Aims

This research focuses on the implementation of PBL methods among lecturers to improve students’ academic achievement using PBL methodology.

2.2 Research questions

i. Does PBL influence students’ academic achievement on Business Education?
ii. What are Business Education students’ perceptions about the PBL implementation?

2.3 Setting and participants

The intervention in this study was administered at the Faculty of Business and Economics, Sultan Idris Education University, Malaysia. The convenience sample comprised a group of final semester students undertaking the B. Ed (Economics). Students were randomly assigned into two different groups: PBL, the experimental group (n=23) and TL, the control group (n=22).

2.4 Data collection, instruments and procedures

The instrument used to measure the students’ performance in PEA3063 – Population Economics and Policy before and after the end of the experimental period [(week 7) – mid-semester examination and one week after end of intervention (week 15) - final semester examination] based on the knowledge which they have gained during the experiment. The questions for the pre-test were multiple choice and they contained 40 questions covering the Fundamental of Economic (Microeconomics and Macroeconomics) that was undertaken by the respondents in the previous semesters. The Fundamental of Economics test was developed by the subject lecturer specifically for this work. The main purpose of administering this pre-test was to investigate students’ prior knowledge in basic of Economics for both groups before intervention.

The questions for the mid-intervention test are in the form of a short essay and structured questions such as; list, ranking, scale etc. Generally this questions form part of the mid-semester examination which included five topics of the subject syllabus (half of the syllabus – starting from week 2 until week 6).

The questions for the final semester test were designed by the subject lecturer with the help for the validity of the test content also from the expert on Population Economics and Policy. The mean scores were used to compare the performance of the PBL group and the TL group. This Achievement Test was developed with the help of subject lecturer. The test was in the form of criteria reference test based on the Bloom’s Taxonomy (low cognitive or high cognitive). While designing this final test, the subject lecturer had referred to various sources like the PEA 3063 – Population Economics and Policy syllabus, main book reference, additional book reference, Internet and previous semester test. The test specifications table had been constructed based on 40% on knowledge level and comprehension, while another 60% is based on the application, analysis and synthesis of thinking skills. The instrument contained 40 multiple choice items, 10 structure questions and 3 essay questions.

In order to explore students’ perceptions, the “PBL Self-Assessment Questionnaire” was administered to the students in the experimental group. For the closed-questions a five-point Likert Scale was used, from Strongly Agree, to Strongly Disagree. Items were coded as relating to overall preferences and perception of PBL, benefits of PBL, motivation, effects of PBL on problem solving and thinking skills, and students’ response toward thinking
skills on PBL method. Students were also asked to respond to the open-ended question, “please give your opinion as to how to improve the PBL method that you have already experienced”.

The Lecturer Questionnaire contained open-ended questions regarding the suitability of using PBL in teaching. Responses were coded according to themes that emerged during the analysis.

2.5 Data analysis

To answer the Research Question 1; Does PBL influence students’ academic achievement on Business Education?, an independent-sample t test was conducted to compare the two groups’ academic achievement at pre-test, mid-intervention test and post-test. To support the results from an independent-sample t test, further analysis was conducted. It was decided that the researcher would conduct a series of one-way between groups analysis of covariance (ANCOVA) tests, where pre-AAT was used as a covariate when looking at differences between the PBL and TL groups in mid- and post-AAT. To test this, SPSS treated the scores on the prior-test as a covariate to control for pre-existing differences between the groups. Preliminary checks were conducted to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, and reliable measurement of the covariate.

The Student Questionnaire was analysed using descriptive statistics such as frequencies, percentage and mean (standard deviation). In analysing the responses to the open-ended question, the researcher made some changes and amendments regarding the terminology and translated into English the Malay language used by participants in the final report.

3.0 Results and Discussion

The effectiveness of PBL toward students’ academic achievement

As shown in Table 1, there was no significant difference between the PBL and the TL groups regarding the students' AAT at pre-test. Whereas, significant differences in academic achievement were found between two groups at mid-intervention test and post-test. The PBL students’ scored significantly higher in the mid-intervention test (M=74.30, SD=4.17) compared to TL group (M=68.50, SD=3.34). Similarly, in the post-test to (M=78.97, SD=5.80) compared to (M=71.05, SD=3.11), [t = 5.66, df=43, p=0.001 (two-tailed)]. These results conclude that, while at baseline (before intervention) no difference exist between the two groups, at mid-intervention and final intervention the PBL method is associated with significantly higher Achievement scores, therefore, better students’ academic achievement.
Table 1: Students’ academic achievement (mean and SD) at pre-test, mid-intervention test and post-test

<table>
<thead>
<tr>
<th>AAT*</th>
<th>PBL (n = 23) Mean (SD)</th>
<th>TL (n = 22) Mean (SD)</th>
<th>Mean difference</th>
<th>t-value (df)</th>
<th>Sig. (2 tailed)</th>
<th>Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td>74.65 (2.17)</td>
<td>74.40 (5.94)</td>
<td>0.243</td>
<td>0.184 (43)</td>
<td>0.855</td>
<td>n.s</td>
</tr>
<tr>
<td>Mid-Intervention</td>
<td>74.30 (4.17)</td>
<td>68.50 (3.34)</td>
<td>5.804</td>
<td>5.133 (43)</td>
<td>0.001</td>
<td>Sig.</td>
</tr>
<tr>
<td>Post-test</td>
<td>78.97 (5.80)</td>
<td>71.05 (3.11)</td>
<td>7.91</td>
<td>5.66 (43)</td>
<td>0.001</td>
<td>Sig.</td>
</tr>
</tbody>
</table>

Note: Each type of AAT is different in term of contents, difficulties index, weighted average and therefore scores on the tests conducted at the different time points are not directly comparable.

A one-way between groups analysis of covariance (ANCOVA) was conducted to compare the effectiveness of two different groups of interventions on their academic achievement at mid-intervention test and post-test. The scores in the pre-test were treated as a covariate. The use of well-chosen pre-test covariates can help the researcher reduce the confounding influence of group differences. The independent variable was the type of intervention or intervention group (PBL and TL). The dependent variable consisted of scores on the mid- and post-intervention tests on AAT, with the respective AAT pre-test used as the covariate in this analysis.

Before the analysis was conducted, preliminary checks were completed to ensure that there was no violation of the assumptions of normality, linearity, homogeneity of variances, and reliable measurement of the covariate. Analysis from Levene’s test showed a Sig. value of .21, which is much larger than the cut-off value of .05. After adjusting for prior-test scores, there were significant differences between the two groups (PBL and TL) on mid-intervention AAT test \(F(1, 43)=30.93, p=.001,\) partial eta square =.424. Looking at the means and SD for mid ATT from this analysis, PBL (74.3, SD=4.17) scored slightly higher than the TL group (M= 68.5, SD=3.35), even after controlling for pre-AAT.

Similarly, after adjusting for prior-test AAT scores, there were significant differences in AAT between the PBL and TL groups) on post-test scores \(F(1, 43) = 43.73, p = .001,\) partial eta square =.51. Looking at the means and SD for post-ATT from this analysis, PBL (79, SD=5.8) scored slightly higher than the TL group (M=71.1, SD=3.1), even after controlling for pre-AAT. These results show that even after controlling for any potential differences in academic achievement before the intervention, there were still differences at mid-and post-tests between the two groups, PBL versus TL.
As already shown in the analysis of data, the students in PBL group showed higher achievement compared to the TL group in the AAT. It appears that the students in PBL group were able to make use of the subject contents learned and the information search activity also increased their understanding of the concepts learned. This is in line with the findings of previous studies whereby it was found that the PBL method was able to produce positive results for the courses including the Business subjects (Gabr & Mohamed, 2011; Kimberly et al, 2006; Martin et al., 2008; Sahin, 2010). On the other hand, the students in the TL group showed the opposite performance. At the pre-test stage, the achievement of two groups was almost equivalent. While there was an improvement in achievement in the PBL group, the TL group did not show an overall improvement. It is possible that students in the TL group, still bound by the rote-learning are less likely to apply teaching and learning, are more involved high-level thinking such as analysis, problem solving and descriptive, especially for the end of the study subjects such as PEA3063 – Population Economics and Policy course. The increase in PBL students’ performance in this study supports the research assumptions;

a. To solve the population economics and policy problem, the students must use declarative knowledge of the subject with analytically and creatively. Thereby, it will increase the students understanding toward the learning topics or subject.

b. The students were actively involved in problem solving process, where the knowledge was always applied to new situations. Therefore, the more involved the students were in the problem solving process, the more often students had to think about the topics or subject. It is anticipated that this process also increases students’ understanding of the topics or subject.

Evidence gathered from the survey of students’ views indicated that the success of PBL was partly due to the emphasis on problem solving strategies and processes in the subject of population economics and policy learning. The students have a chance to monitor the processes and discussions, generate hypotheses, analyze, predict, summarize and record the outcomes and think further about the solutions. This is in line with findings from Smith (2005) that support that such problem solving processed are relevant and should be used in teaching and learning in business subjects in particular.

The learning processes were quite different in the TL group. These students were taught mainly through lectures and tutorials and, therefore, might be described as rather passive learners. They were still being taught with the culture of individual learning, without making use of group discussions. It is anticipated that this results in fewer opportunities to develop CT skills among the students. As Kember (1996) and Frost (1996) support, the use of lectures or conventional learning methods does not enable a change in the students’ early perceptions about where knowledge is coming from (the tutor through a lecture or tutorial versus their engagement with discussions or debate with other learners). On the other hand, the learning and teaching approaches used in the PBL group require the students to understand in depth and utilize the contents of the main topics of the subjects. This then becomes the basis of problem-solving skills enabling the students in this group to
become more skilled in utilizing and understanding the contents of Population Economics and Policy compared to students in traditional group.

The PBL method is consistent with the constructivist approach where students actively build their own knowledge through group discussions, interactions and the search for information. On the other hand, traditional students have less chance to explore and built their own knowledge, as knowledge is “transmitted” by the tutors, which produces different levels understanding of subject content (not as deep). This difference is also caused by rote learning in TL and higher order thinking implementation in PBL method. This might explain some of the significant difference in achievement between the PBL and the traditional group. This finding is consistent with other studies done by (Folashade & Akinbobola, 2009; Mokhtar et al., 2010; Selcuk, 2010; Yaman & Yalcin, 2005), all pointing in the direction of how the use of problem solving strategies can improve student achievement especially in higher order thinking question and problems (based on Bloom’s Taxonomy). This finding is also in line with the Hierarchy of Learning identified by Gagné (1965) which classified the problem solving activity as a higher level of learning.

Based on the study by Schmidt (1984), problem analysis processes take place in small group discussions and stimulate the existing knowledge and, therefore, it becomes easier for students to assimilate, understand and memorize new information. According to Gijselaers and Schmidt (1990), the frequency of cognitive processes causes the knowledge to become reinforced in the long-term memory and this leads to in-depth learning. This in-depth learning is also reinforced when the idea or information is presented in a more meaningful context. The situational cognitive process which occurred in the PBL group discussions students had in this study created a more meaningful learning context and provided encouragement to acquire and look for new ideas and information which may be needed to solve the existing problem.

Gijselaers and Schmidt (1990) also agree that learning can also occur when the student faces a cognitive conflict based on previous learning experiences or the current learning situation. This conflict leads the student to apply self-directed learning or work with their friends in the group to solve the problem using information searching, discussion and brainstorming to get the best results.

At the beginning of the intervention, as some students reported, they did not appear to be used to the implementation and solving of case studies using PBL. However, after they had been given time and a briefing on how to use PBL, this seemed to help them to identify and solve the problem. When the learning of PEA3063 – Economics Population and Policy was related to everyday situation and current issues, the students in the group were motivated to learn (Gabr & Mohamed, 2011; Naznin et al, 2008). The guidelines and explanation given to the students in the early intervention had helped them to apply and to organize the steps on how to solve the problem effectively. This in turn helped the students to think continuously, systematically and critically. The lecturer or facilitator also played a part in assisting and providing stimulation to the students especially in understanding the questioning concept in PBL. As such, the students were able to acquire new concepts and
knowledge via the solving of problems. They were able to apply existing knowledge and current knowledge in finding the answers and solving the problems given.

For a PBL group to work effectively, every member should be involved in the problem solving process. Even though some members’ contribution might be small, it can still be very useful to them in the discussion session whereby they have to explain and justify the suitability of the ideas. According to Moust et al (1986), the students have to explain covertly although they may seem passive at first and this is supported by Geerlings (1995), who stated that if the students learned in a problem-based environment, they would need to participate actively to process ideas or information based on the problem itself.

As stated by Schmidt and Moust (2000), students in a PBL environment would adapt their existing knowledge to the problem presented and then try to solve and provide a logical explanation. According to De Grave et al (1996) a change of concept (theory building, and to a lesser extent, data exploration and meta-reasoning) also occurs in PBL due to the suggestions and opinions given by the members in the discussion group. Due to this, PBL has been identified as being able to maintain knowledge for longer compared to TL. Even though the effects on their learning might not be as evident at the beginning, PBL effects on student learning become more evident when they are able to process the information and ideas more effectively and in detail.

Another effect of the PBL implementation is related to the fact that the students were able to identify any gaps in their knowledge and they tried to fill them in by using information search and ideas from many sources. According to Du (2006) and (Silen, 2009), active learning in PBL leads to self-directed learning. The need for problem solving leads the students to integrate their existing knowledge with new knowledge acquired through information or ideas searched. Using this method, the students not only learn using facts but they are also involved in looking for relevant information and ideas for solving the problems. Indirectly, deep-learning is stimulated to develop the students’ ability to draft and organize declarative knowledge in the subject that they are studying.

3.2 Qualitative data: perceptions of the students

The findings from the student questionnaire showed that students reported that learning through PBL was easier than learning by the conventional methods; students also reported that they enjoyed this learning method. Additionally, when they were introduced to a new challenging environment and methodology of learning like PBL, they felt uneasy and a bit overwhelmed, but learning through PBL was reported to be more fun.

The lecturer agreed that “PBL is a good method because this method encourages the students to use thinking skills in the learning process”. He also indicated that: “PBL is more focused on students’ diligence and attention to solve and handle the given problems” and that “PBL helps to make the students less bored. They need to become always aware, and it is more effective to study either individually or in groups”. This point is also supported by comments from one of the students:
Through PBL we can present our ideas without any constraints and obstructions. We are free to voice out our opinions. Not afraid of mistakes or criticism from lecturers. Furthermore this method is more fun. (Student A)

Statements suggested that in the early stages, adjusting to PBL created some problems for some students, but that overall they eventually came to enjoy doing the activities and working in discussion groups.

Not sure what to do at first stage. But the lecturer was nice and knew how to get us interested. It became quite fun...in the normal class we just listened to what the lecturers said while copying the notes. But with this method we had to do on our own. We had to search for something ourselves. We had to discuss in the group. In this way, we know what to do and what to answer. This was a challenge to us! (Student C)

In general, students who were involved in the PBL method felt that they were encouraged to think and they believed that their thinking skills had improved after experiencing this method of instruction.

The students also experienced meaningful interactions with their group members on how to solve problems, to discuss, to explain their ideas and present them to other group members. This was because they managed to use their critical thinking to generate related ideas in solving their course problems; this finding aligns with that of Suleiman (2011). Additionally, some of the Business Education students said that these learning activities helped them to think in terms of cause and effect for every problem they considered, a point also made by Sulaiman (2011). Thus, it seems that PBL appeared both useful and enjoyable to the students, even though it was a new approach and difficult at the early stages, and that PBL was able to foster and attract students to become active learners.

In this study, the PBL tasks were implemented only within the specific groups. The following statements indicate not only that the students were enthusiastic but also that they felt it would be useful to extend the activities among groups to facilitate transference of knowledge.

...if we have been given an opportunity to discuss not only among members of the group, but with other people. With this new approach, we did not get bored...(Student B).

I hope the activity is not 100 percent with friends in this group. If possible, let us do the activities with friends in the other groups...then we can get many ideas, many approaches to solve the problem of how the lecturers want to...furthermore, we have a fun time when we present the results (Student C).

One student even suggested that the approach could be extended beyond the specific subject:

I think this method has to be applied widely. Not only in this subject. Maybe for all courses even though it may be hard in the beginning, even better if we can do it across
the faculty or stream. Not only in certain subjects. The university has to think about this. (Student D)

The opportunities and use of PBL as a teaching and learning methodology are wide and it could prove to be a time-saving method to combine a number of topics or issues in one PBL problem. For example, a case study involving issues related to birth and population rate could be combined with population mortality, potentially leading to greater awareness not only of both issues, but of how they relate to another.

Other suggestions made by students to improve the process also indicate their engagement with the process. For example:

Maybe it would be possible if the assignments are given much earlier. Not during class time...even better if they are uploaded in MyGuru (UPSI e-learning portal). A week or maybe two weeks ahead! So that when we enter the class we have an idea of what to do and we can give better commitment and finish our tasks better. (Student C)

...although the lecturer sometimes had explained in detail what we had to do, it was not enough. This was the first time we had been exposed to the PBL approach in detail, before this we only heard what PBL was? If possible we need enough time to do the report...because we also need to do for other subjects as well! (Student F)

Clearly, this shows that students need more time to adapt the required procedures of PBL. The lecturer involved in this study clearly realized this:

The students need quite a lot of time to solve the activities given. It’s a pity for them because they complained that they have a lot of tasks for other subjects...but they said that they are interested and happy with the method. Only they didn’t have much time. That’s what they said...

3.3 Qualitative data: Perceptions of the lecturer

The lecturer involved in conducting the PBL sessions also had the same opinions with students in relation to time constraints:

... easier if the topic of the syllabus was consolidated in the case studies during given to the students. They will be able to learn and resolve the issues in a single task only. But, I had a problem, maybe how to get the ideas to create and repair the case studies. I also faced time constraints while preparing this case study.

In fact, if studied in depth, PBL can be used to coordinate various subjects, which can be combined and taught or presented simultaneously. Through this approach, students continued to apply content knowledge and skills in advance without depending on the lecturer to present and explain content and skills. For example, the syllabus content of the topic or subject can be combined with problem-solving skills or thinking skills.
The lecturer had a good impression towards the PBL implementation. The lecturer felt that students in the PBL group became more responsible and actively involved in the learning process, and reported that students used their mental and physical abilities in the PBL activities and gained intra-personal and inter-personal skills. However, the intervention still used the detailed and compact syllabus of the original Population Economics and Policy course and was more focused towards an assessment based on examination. The effect could be that the lecturer/facilitator was forced to finish their syllabus. In addition, the implementation of the study was only during the semester (14 weeks) and this could be considered both quite short and a considerable time constraint.

The lecturer also shared the suggestion that they needed more training regarding the PBL implementation and process to make sure this approach could be implemented properly and effectively. This implies that the lecturer should also be given enough time to design or create the case studies to be used by the students. This would also enable the lecturer/facilitator to more fully appreciate the implementation of the PBL method.

According to the lecturer, the students need to have early preparation and basic background knowledge before the implementation of PBL. The students’ share a common perception and experience of rote learning via the conventional approach. Therefore, in the early stage of PBL implementation, students take time to become accustomed to this learning method. If this barrier can be avoided, perhaps a better result could be achieved.

Overall, with suitable and sufficient training for the lecturer and students, it seems that PBL methods can be used to stimulate students’ CT skills and actively involve them in the learning process.

4.0 Conclusion

The researchers believe this was the first study in a Malaysian context to explore the effectiveness of integrating PBL in a Business Education program. The findings suggest that the students took the opportunity through a PBL approach to improve their academic achievement, develop inter-personal and intra-personal communication skills, and learn how to deliver their own opinions and judgments effectively. These are important characteristics for life in the modern world. Based on these indications, the research and the results of this study may act as a point of reference and guideline for the implementation and the effectiveness of the PBL approach in related studies on student academic achievement in Business Education programs. Doing so would contribute to the Malaysian government’s plans to produce a highly skilled workforce with excellent academic achievement and performance. It concluded the finding of the study supported the positive effects of PBL toward performance in academic on Business Education in Malaysia. The students and lecturer also have a positive preferences and perceptions toward the PBL implementation.
References


ABSTRACT

Everyone should have a certain manner to communicate with other people so that their needs can be met and shared with others. Social skills must be nurtured at an early stage so that their children can interact well when adulthood among community. Implementation of social skills in early childhood can reduce problematic behavior. Therefore, this study aimed to investigate the effect of the implementation of social skills among preschool children in preschool Ministry of Education. Social skills are taught based on modules that have been adapted from the module developed by The Center on the Social and Emotional Foundations for Early Learning (CSEFEL) Module. This study used quantitative research design methods and the instruments used is the Preschool Kindergarten Behavior Scale (PKBS). Sample of 3 preschool teachers and 40 preschool children aged between 5 to 6 years old. The descriptive analysis and statistical t-test in SPSS 17.0 software was used to generate quantitative data. In conclusion, the implementation of social skills performed by preschool teachers are suitable for children aged 5 to 6 years old. Therefore, this study has the potential to contribute towards increasing the social skills in preschool children.

KEYWORDS: Social Skills, Preschool, Behavior

INTRODUCTION

Social skills are very important in human life and learned since childhood. When a student can understand the needs, feelings and views of others, using social skills in interaction and resolve conflicts that occur during class activities, meaning that they have built a social skills (Kurikulum Standard Prasekolah Kebangsaan, 2010). At ages 3 to 6 years old, the social environment influence the development of preschool children, especially in social development (Nordin, 2012). Children at this stage, needs to mingle and interact with others in their social environment. During interact, children who lack social skills will disrupt other children (Podrás, 2007). Often children who disturb other children will exhibit problems in their behavior like hitting or kicking. This is often considered more common among children but the problem of this behavior can affect the learning and social development of children (Alatupa, 2011). Thus, the process of building social skills must be nurtured continuously in themselves with opportunities, interaction and social features available to peers, family and culture (Guralnick, 2010) since they were in preschool.
PREVIOUS STUDIES

Children who have the social skills that are effective and appropriate can discuss in the context of complex social interactions with the appropriate skills and achieve personal goals effectively (Brown & Conroy, 2011). Conversely, children who lack social skills in preschool are less prepared academically, show some social and behavioral problems in school and exhibit academic and social problems for a long time (Bornstein, Hahn & Haynes, 2010).

Past studies have shown that there is a prevention and intervention program that proved suitable for teachers to improve their social skills and reduce behavioral problems in children. The Incredible Years Program Series (Incredible Years 2007) is among the programs that have been proven effective in improving children’s social skills and reduce behavior problems in the classroom. A total of 159 children diagnosed with behavior problems (Webster-Stratton, Reid & Hammond, 2004). This study compares the training of children and parents who use and do not use the program The Incredible Years Series. Teachers who receive program The Incredible Years Series is available with more praise, consistent and confident to care for children than teachers from the control group. In addition, children from classes with teachers who receive program The Incredible Years Series also less aggressive with peers and more cooperative. Children can solve problems in class activities with the help of teachers who have high social skills. Teachers can guide children to develop social skills in the classroom and can lead the children to higher social skills.

Zamri & Awang (2008) conducted a study to identify the level of development of Bahasa Melayu (BM) in preschool children and their impact on the social behavior of preschool children are. The case study design using a combination of these explanatory conducted in a preschool Annex in Sarawak. A total of 48 pre-school children represent the ethnic Malay, Iban and Bidayuh made the study participants. Quantitative data obtained through the questionnaire scale observations of teachers and frequency. A total of 30 items of language development is built on learning outcomes in the National Preschool Curriculum. Observations were carried out on two types of social behavior, namely behavior prosocial (helping construct, share and coax), and antisocial behavior (constructs aggressive, disruptive and opt-out). The study found that children show levels of prosocial behavior frequency higher than antisocial behavior. Through the development of Malay appropriate, pre-school children can be educated to better interact and build social skills more effectively.

OBJECTIVE

The aspects that being focus on this study are as follows:

(i) review the effectiveness of Social Emotional Competence Module toward preschoolers in terms of social skills.

RESEARCH QUESTION

Here is the question of research to achieve the objectives of this study:
(I) To what extent Social Emotional Competence Module effectiveness of preschool children from the aspect of social skills?

HYPOTHESIS

In this study, the null hypothesis was tested at significant level of 0.05.

Ho1 There is no significant difference in mean scores before and after the implementation of Social Emotional Competence module.

STUDY SAMPLE

The sample consists of three preschool teachers and 40 preschool children from three preschool Ministry of Education, district of Batang Padang, Perak.

METHODOLOGY

In this study, teachers implement Social Emotional Competency Module for three months. Assessing the effectiveness of the implementation of Social Emotional Competency Module is made using instruments that have been modified from the Behavioral Assessment Form Children of Preschool and Kindergarten Behavior Scales, version 2 (PKBS-2, Merrell, 2002). Assessment is carried out twice, before and after the implementation of Social Emotional Competence Module conducted by three preschool teachers involved up to 40 children. The evaluation of the effectiveness of Competence Module socio divided into two subscales in the PKBS-2, Part A of social skills which contains 34 items. Statistical t-test was used to assess the effectiveness of Social Emotional Competence Module before and after the implementation.

FINDINGS

The findings of this study was to answer the questions: (i) the effectiveness of the implementation of the social skills of preschoolers? Data obtained from 40 children through questionnaires completed by three preschool teachers.

Assessing The Effectiveness Of The Implementation Of The Social Skills Of Preschool Children

Assessing the effectiveness of the implementation of social skills was based on the assessment form Child Behaviors of Preschool & Kindergarten Behavior Scales, version 2 (PKBS-2, Merrell, 2002). Assessment is carried out twice, before and after the
implementation of social skills and had been done by three preschool teachers involved up to 40 children. The evaluation of the effectiveness of the implementation of social skills divided into subscales in PKBS-2, Part A of social skills which contains 34 items. Statistical t-test was used to evaluate the efficacy before and after the implementation of social skills.

There are three subscales in terms of social skills of cooperation, interaction and social skill. The researchers conducted a t-test to determine whether there is a significant difference between mean scores before and after the implementation of social skills. The effectiveness of the implementation of social skills can be explained by t-test. Table below describes the related matters.

The results of the analysis using t-test showed a significant difference, \( t(78) = 11.41, \) \( p < 0.05 \) for the overall social skills based on before and after the implementation of social skills. The mean difference between the types of samples showing an increase of 37.78 which means there is an increasing social skills demonstrated by the children after the implementation of social skills.

Table 1 Comparison of the mean overall social skills before and after the implementation of social skills

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Min</th>
<th>SP</th>
<th>Dk</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>40</td>
<td>107.10</td>
<td>14.31</td>
<td>78</td>
<td>11.41</td>
<td>0.00</td>
</tr>
<tr>
<td>After</td>
<td>40</td>
<td>144.88</td>
<td>15.30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The results of the analysis using t-test showed a significant difference, \( t(78) = 16.11, \) \( p < 0.05 \) for social collaboration based on before and after the implementation of social skills. The mean difference between the types of samples showing an increase of 7.13 which means there is an increased social cooperation shown by the children after the implementation of social skills.

Table 2 Comparison of social cooperation min before and after the implementation of social skills

<table>
<thead>
<tr>
<th>Groups</th>
<th>N</th>
<th>Min</th>
<th>SP</th>
<th>dk</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>40</td>
<td>40.38</td>
<td>5.27</td>
<td>78</td>
<td>11.16</td>
<td>0.00</td>
</tr>
<tr>
<td>After</td>
<td>40</td>
<td>53.45</td>
<td>5.21</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( k<0.05 \)
The results of the analysis using t-test showed a significant difference, $t(78) = 9.26$, $p < 0.05$ for social interaction based on before and after the implementation of social skills. The mean difference between the types of samples showed a rise of 12.43 which means there is an increased social interaction shown by the children after the implementation of social skills.

Table 3 Comparison of social interaction min before and after the implementation of social skills

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Min</th>
<th>SP</th>
<th>dk</th>
<th>t</th>
<th>sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>40</td>
<td>31.20</td>
<td>5.69</td>
<td>78</td>
<td>9.26</td>
<td>0.00</td>
</tr>
<tr>
<td>After</td>
<td>40</td>
<td>43.63</td>
<td>6.30</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$p < 0.05$

The results of the analysis using t-test showed a significant difference, $t(78) = 10.03$, $p < 0.05$ for social abilities based on before and after the implementation of social skills. The mean difference between the types of samples showed an increase of 12.27 which is an increase of social abilities shown by the children after the implementation of social skills.

Table 4 Comparison of the mean ability to socialize before and after the implementation of social skills

<table>
<thead>
<tr>
<th>Groups</th>
<th>n</th>
<th>Min</th>
<th>SP</th>
<th>dk</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before</td>
<td>40</td>
<td>35.53</td>
<td>5.34</td>
<td>78</td>
<td>10.03</td>
<td>0.00</td>
</tr>
<tr>
<td>After</td>
<td>40</td>
<td>47.80</td>
<td>5.61</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$p < 0.05$

CONCLUSION

In this study, the implementation of social skills has been shown to enhance the social skills of preschool children. These findings are also supported by the Webster-Stratton, Reid & Hammond (2001, 2004) and Zamri & Awang (2008). The preschool teachers are encouraged to teach social skills in their teaching and learning because it can be a new experience for them, especially in terms of social skills and thus can achieve the objectives of the National Pre-School Curriculum Standard which are capable of interacting with others, respect for the feelings and rights of others and thus form positive relationships with adults and peers.
REFERENCES


The significance of Kinaesthetic Learning in supporting lecture style of teaching: Enhancing the AWKO students’ understanding of the Standard Marine Communication Phrases (SMCP)

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Abstract

The English language is the lingua franca of the maritime industry. On board of merchant ships, the Standard Marine Communication Phrases (SMCP) are primarily used for safe navigation, safe operations and standardization of communication in ship to ship and ship to shore safety communications. To support the industry, the teachings of SMCP have already been in place at the Akademi Laut Malaysia (ALAM) since 2008 especially in deck officers’ programme under the Pre Sea Nautical Studies department. This paper highlights the need to improve teaching delivery by integrating student-centred approach such as the Kinaesthetic learning. Two experiments were conducted on the first batch of 10 AWKO students learning SMCP and VHF Radio Communications. The first experiment which was done via lecture mode resulted in a total mean score of 3.375. Meanwhile, the second experiment which was conducted via kinaesthetic learning activities recorded a higher mean score of 4.295. The results highlight the significance of Kinaesthetic learning not only in supporting normal teaching but more in enhancing students’ understanding. The paper concludes with strong emphasis on the need to integrate other effective learning strategies and methods like the Kinaesthetic learning in order to enhance students’ understanding and thus achieve all learning objectives.

Keywords: Maritime English, Standard Marine Communication Phrases (SMCP), Kinaesthetic learning, AWKO (Advanced Watch-keeping Officers), VHF (Very High Frequency Radio), lecture style, student-centred

Introduction

There have been fewer studies on the effectiveness of lesson delivery in Maritime Education and Training Institutions (METs) worldwide. Even though maritime authorities, administration and educationists have made tireless effort in ensuring the teaching and learning at METs comply with the STCW 1978 Codes, Gabrielle and Holland (2015) discover that it was actually the responsibilities of each MET institution to ensure their trainer’s
competence, as specified by IMO (International Maritime Organization). Accordingly, educationists and maritime educators have also called for more studies to be conducted especially in improving the standards of delivery and content, improving students’ understanding and competency and finally, integrating contemporary methods into teaching. As academic excellence leads to the certification of seagoing professionals for both Nautical Studies and Marine Engineering graduates by the Marine Department of Malaysia, maritime educators and educationist must take serious consideration of the effectiveness of lesson delivery. This is because the quality of graduates entering the maritime sector’s job market in Malaysia reflects the quality of education that they receive from METs especially the Akademi Laut Malaysia (ALAM).

This research provides an insight into the teaching of Maritime English especially the effectiveness of Kinaesthetic learning activities in enhancing students’ understanding of the Standard Marine Communication Phrases (SMCP) at the Akademi Laut Malaysia (ALAM). It also aims to highlight the need of all trainers to integrate other student-centred techniques in their existing style of teaching. Kinaesthetic learning as highlighted in this paper is one of many contemporary teaching methods which could make teaching more engaging thus maximize learning.

Literature Review

Major and Palmer (2001) assert that traditional classroom instruction which is commonly known as typical lecture type often involves mass projection of information in a fast pace delivery. Consequently, students are often passive in classroom with minimal involvement in the actual learning process. Hence, for understanding, students mostly rely on lecture notes, memorization and repetition, which are not enough to conceptualize what has been actually taught to them. They actually need more engaging methods to learn in this ever-demanding education system.

Students of traditional programs usually perceive their training sessions or ‘lectures’ as boring and monotonous, as claimed by Major and Palmer (2001). Accordingly, Major (1999) argues that course assessments such as summative examinations may not be very effective to evaluate competency topics such as the SMCP and VHF radio communications as they rely only on writing rather than speaking which is the primary learning objective. Worthen (1993) emphasizes that engaging students in practical activities such as Kinaesthetic learning enables trainers to evaluate important learning experience as students get to ‘perform the actual or simulated significant tasks’ (p.5). This involves speaking and expressing oneself while involving with the tasks and activities. The research of Noble (2015) indicates that the teaching of SMCP in class is ‘boring and monotonous’ (p. 142). This is attributed to the lecture style used by trainers with less emphasis on role-plays, demonstrations, drills and other activities which could enhance students’ participation and learning.
The rapid development in cognitive science research in education has shed some lights on the nature of teaching and learning. Cross (1999) discovers that learning together and active participation in classroom especially communicative tasks contribute more to understanding. This is due to the fact that students actually learn through ‘making cognitive, social and experiential connections’ (p. 6) thus get directly involve with the learning objectives in the forms of pair work, group tasks and individual expressions. In conjunction with this, Pike and Sivilotti (2007) define this active approach as Kinaesthetic learning which means a ‘pedagogical tool involving physical movement by students’ (p. 1). Furthermore, Kinaesthetic learning is actually an active process in which students learn by carrying out physical activities i.e. hands-on, rather than listening passively to lectures (Reid, 1987; Gilakjani, 2011). A study by Wehrwein et al. (2007) discovers that the use of more than one sensory mode in the presentation of learning materials as being practiced in the Kinaesthetic learning, enables students to be more attentive and focused in class thus improve their understanding.

Cuaresma (2008) suggests trainers to use combinations of approaches in order for the students to improve their performance and understanding on the lessons. In other words, trainers and lecturers may not just resort to lecture style to impart their knowledge; they need to integrate other approaches as well. If students have control over their own learning process as in Kinaesthetic leaning, they may be able to enhance their own learning (Gilakjani & Ahmadi, 2011). This finding is further supported by Dunn & Dunn (1978) who state that when the students are taught in the way that they can easily relate, they will be able to perform well, be more efficient and show positive attitudes towards their learning.

In the context of teaching Maritime English to future ship officers as in the AWKO class, students are required to build solid foundation in the English language itself in order for them to communicate effectively and to conduct ships’ operations safely. These students shall communicate effectively and improve their accuracy and fluency in English especially in the SMCP (on-board phrases and external communications). This is due to the fact that part of their duties at the bridge (ship’s command centre) is to handle ship to ship and ship to shore communications as well as communicating with multinational crew members. The students have to master the English language itself, the SMCP and professional vocabulary and skills to be used in their maritime working environment.

In the regulating body’s point of view, in this case, the IMO and the Marine Department of Malaysia, communicative competence of deck and engineering officers has further been emphasized by the 2010 Manila Amendments of the STCW as a means to promote safety at sea and contribute to cleaner oceans (Cole and Trenkner, 2012). This is a continuation to the historical decision of IMO whereby in 2001, the Standard Marine Communication Phrases (SMCP) have been formally adopted and regulated. This was followed by the development of the Maritime English Model Course 3.17 in 1999 and was further amended in 2009 and 2015. The STCW Codes prescribe the use of English in both oral and written communication and thus further recommend the use of the IMO Standard Marine Communication Phrases (SMCP) for all navigation and engineering officers as well as
all the crew members on board [Cole and Trenkner, 2012]. All in all, SMCP and VHF communications have already been included as part of competency in the STCW Codes 1978, as amended.

Statement of Problem

There has not been a single study focusing on the contributions and importance of the Kinaesthetic learning especially in supporting lectures and learning at the Akademi Laut Malaysia (ALAM) and even in Maritime Education and Training institutions. As lectures and facilitations in classrooms have been regarded as the most common ways of lesson delivery, their effectiveness need to be further clarified. In addition, with the advent of other emerging teaching approaches such as the Communicative Approach and Blended Learning, authorities should therefore prioritize on their integration into teaching and learning processes.

There are also fewer studies on classroom facilitations of the SMCP conducted by IMLA (International Maritime Lecturers Association) under its sub-committee IMEC (International Maritime English Conference). Hence, in order to gain more insights into the effectiveness of classrooms teaching, a preliminary research should be conducted. A research into this matter shall also highlight the need for MET institutions and trainers to emphasize on pedagogy and andragogy so as to further improve the quality of teaching and assessments. This complies with the aspiration of IMO Model course 3.17 which requires trainers of Maritime English to use a combination of teaching approaches and strategies so as to promote ‘fluency’ and ‘accuracy’ in class.

Research Questions

The research questions of this study are formulated as follows:

1. What is the level of understanding of AWKO students on SMCP and VHF Radio Communications after lecture and facilitations have been conducted?
2. What is the level of confidence of AWKO students on SMCP and VHF Radio Communications after lecture and facilitations have been conducted?
3. Which topics within SMCP and VHF Radio Communications that are difficult to AWKO students?
4. What is the level of understanding of AWKO students on SMCP and VHF Radio Communications after kinaesthetic activities have been conducted?
5. What is the level of confidence of AWKO students on SMCP and VHF Radio Communications after Kinaesthetic activities have been conducted?
6. Which topics within SMCP and VHF Radio Communications that are difficult to AWKO students after Kinaesthetic activities have been conducted?
Research Design

This study was conducted via two surveys which used self-administered questionnaire to obtain quantitative data from respondents. The respondents consist of 10 students from the preparatory course for Advanced Watch-Keeping Officers at the Akademi Laut Malaysia for 2016. This course was conducted for 26 weeks in which successful candidates shall qualify for the oral examination with the Marine Department of Malaysia in order to obtain 3rd Class Certificate of Competency for Officer in Charge of Navigation on vessels of 500 Gross Tonnage or more on Unlimited Voyage. The topics of experiment which were SMCP and VHF Radio Communications had been integral parts of the Maritime English subject under the Standard of Training and Certification for Watch-Keeping (STCW) mandatory requirements. The weightage of the topics in the subject is 50% from the overall syllabus of Maritime English. The details of the questionnaire used in the two surveys were shown in Table 1.

Table 1. Description of the survey instrument

<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
<th>No. of Items</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>A Demographic data</td>
<td>Respondents were asked for their background information such as gender, age, course, sponsorship, frequent route served at sea and most common type of ship served.</td>
<td>6</td>
<td>Self-constructed</td>
</tr>
<tr>
<td>B SMCP in general</td>
<td>This section aims to answer research questions: RQ 1 &amp; R2 (Experiment 1) and RQ 4 &amp; RQ 5 (Experiment 2). Likert scale ranging from 1 to 5 is used.</td>
<td>12</td>
<td>Self-constructed</td>
</tr>
<tr>
<td></td>
<td><strong>Likert-point</strong></td>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Disagree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Moderate</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>Agree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Strongly Agree</td>
<td></td>
</tr>
<tr>
<td>C SMCP VHF Radio Communications Message Markers</td>
<td>This section aims to answer research question: RQ 3 (Experiment 1) and RQ 6 (Experiment 2). Likert scale ranging from 1 to 5 is used.</td>
<td>12</td>
<td>Self-constructed</td>
</tr>
<tr>
<td></td>
<td><strong>Likert-point</strong></td>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>Strongly Disagree</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Disagree</td>
<td></td>
</tr>
</tbody>
</table>
All 30 questions in the questionnaire were self-constructed and a reliability test on all questions was done by using Cronbach’s Alpha of the SPSS software. It is important to note that the reliability of the items in this study was confirmed by computing the Cronbach’s Alpha in which, Nunnally (1978) recommended a minimum alpha 0.7 for basic research’s reliability. Table 1 shows the Cronbach’s Alpha of all questions exceeds the minimum Alpha of 0.7 as suggested by Nunnally (1978). The results show that all questions in the questionnaire have a value of 0.887 of Cronbach Alpha which falls in the very high reliability level between 0.50-0.90 scales. Therefore, it can be summarized that there is a high level of reliability in all self-constructed questions used in this research based on the Alpha value obtained.

Table 2. Reliability statistics for all questions in questionnaire

<table>
<thead>
<tr>
<th>Cronbach’s Alpha</th>
<th>No. of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.887</td>
<td>30</td>
</tr>
</tbody>
</table>

The questionnaire set consists of 30 questions and it is divided into 3 sections namely Section A, Section B and Section C. Section A uses multiple choice format for obtaining demographic data from respondents in 6 questions. Section B (12 questions) and C (12 questions) are used to obtain respondents’ opinions on the teaching of the SMCP and VHF communications based on 5 point Likert Scale. The 5 point Likert Scale ranges from “Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree”.

The respondents comprised of 10 students enrolled in the Advanced Watch-Keeping Officers (AWKO) who have recorded their 36 months of sea service on board various merchant ships. This training course is conducted for 26 weeks which leads to 3rd Class Certificate of Competency for Officer in Charge of Navigational Watch on Ships of 500GT or more on Unlimited Voyage.

Research Procedures

To complete this study, 2 experiments were conducted with 1 survey at the end of each. The 2 experiments were labelled as Experiment 1 and Experiment 2. Experiment 1 refers to Lectures and Facilitations which took 9 hours of classes while Experiment 2 refers...
to Kinaesthetic Learning activities which took only 2 hours. Both lessons had focused on the same topics which were SMCP and VHF Radio Communication (Ship-to-ship). Both lessons were conducted by the researcher as the Subject Matter Expert for Maritime English.

In Experiment 1, respondents were introduced to the fundamentals of SMCP and VHF Radio Communication through PowerPoint slides (lecture mode). The topics taught within the lesson were ‘IMO SMCP Alphabets, Numbers and Phonetics’, ‘Address & Identify’, ‘9 Stage in Marine VHF Radio’, ‘Message Markers’ and ‘Distress, Urgency and Safety Routine communications’. The basics, structure, sample transcripts and audio examples of each topic had been included in the PowerPoint slides for better understanding and conceptualization by every respondent. Moreover, the researcher had taken the necessary initiatives to explain, guide, elaborate and demonstrate all lessons to respondents. The total 9 hours of Experiment 1 took 3 weeks to complete as it was conducted during normal contact hours of Maritime English class for AWKO course with the allocation of 3 hours per week. In between, respondents were reminded to read again the lecture notes and also study them for better understanding. There were small discussions in class as respondents asked questions pertaining to the topics in the experiment. All questions were answered by the researcher accordingly. At the end of Experiment 1, respondents answered the survey questionnaire which aimed at evaluating their understanding and confidence as a result of lecture based classes. Most importantly, the purpose of this survey was to evaluate the effectiveness of lecture in teaching the SMCP and VHF Radio Communications. Figure 1 and 2 below show the procedures of this research.

In Experiment 2, which was conducted two weeks after Experiment 1; respondents were not taught, reminded or revised on SMCP and VHF Radio Communications. Upon starting class, the researcher began conducting activities of Kinaesthetic learning in which respondents took active part in them. The session started with a warm-up activity on Phonetics, Alphabets and Numbers of IMO SMCP. Then it was continued with Ship’s Call Signs, Address and Identify, 9 stages of VHF Radio Communications and ended with Distress, Urgency, Safety and Urgency Messages. At the end of the 2 hour session, respondents were required to answer the same survey questionnaire in order to measure their level of understanding and confidence, particularly after undergoing student-centred activities as emphasized by the Kinaesthetic learning.
Demographic Information of Respondents

Table 3 below presents demographic information of all 10 respondents in this research. From the table, it is known that all respondents in the study were male (10 persons, 100%). The majority of respondents were in the age range of 27-29 years old with 8 persons (80%). Another 2 respondents belonged to the age group of 24-26 years (20%). All respondents were full-time students of the Advanced Watch-Keeping Officers’ course (AWKO).

Table 3. Demographic data of respondents

<table>
<thead>
<tr>
<th>Demographic information</th>
<th>n</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Female</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>24-26 years</td>
<td>2</td>
<td>20%</td>
</tr>
<tr>
<td>27-29 years</td>
<td>8</td>
<td>80%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Level of Studies</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AWKO</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Sponsors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MISC Berhad</td>
<td>9</td>
<td>9%</td>
</tr>
<tr>
<td>Self-paid</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Total</td>
<td>10</td>
<td>100%</td>
</tr>
<tr>
<td>Types of Ships</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNG/LPG</td>
<td>7</td>
<td>70%</td>
</tr>
<tr>
<td>Product Tankers</td>
<td>1</td>
<td>10%</td>
</tr>
<tr>
<td>Other types</td>
<td>2</td>
<td>20%</td>
</tr>
</tbody>
</table>
There were 2 categories of sponsorship in this research. Majority were sponsored by the Malaysian International Shipping Corporation (MISC Berhad). 9 respondents were sponsored and 1 respondent was on self-sustain scheme for his studies. The sponsored respondents were from conventional shipping lines while the self-sponsored student was from the offshore industry.

From the survey, the type of ships that received the highest frequency in service was the ‘LNG (Liquefied Natural Gas) and LPG (Liquefied Petroleum Gas)’ tankers with 70% (6 respondents). The other type was ‘Product Tanker’ with 1 respondent (10%) and ‘Others’ with 2 respondents (20%). Others here refer to OSV (Offshore Supply Vessel) and coastal tankers on which respondents had worked with.

The survey also reports that the most frequent route recorded by respondents during their 36 months of sea service was Asia with 6 respondents (60%). Domestic and Near Coastal came second with 2 respondents (20%) and lastly, 1 respondent each (10%) for Europe and North and South America. From this information, it could be summarized that there were mixed experiences of seafarers taking part in this research.

The following sections present the findings of the research with reference to the Research Questions formulated earlier.

Research Question One: What is the level of understanding of AWKO students on SMCP and VHF Radio Communications after lecture and facilitations have been conducted?

The range of respondents’ understanding and confidence in this research is measured by the range scores shown in Table 4.

Table 4. Level of respondents’ understanding/confidence on lesson

<table>
<thead>
<tr>
<th>Range of Mean Scores</th>
<th>Level of understanding/confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.0 – 1.99</td>
<td>Low</td>
</tr>
<tr>
<td>2.0 – 2.99</td>
<td>Lower Intermediate</td>
</tr>
<tr>
<td>3.00 – 3.99</td>
<td>Intermediate</td>
</tr>
<tr>
<td>4.0 – 5.0</td>
<td>High</td>
</tr>
</tbody>
</table>
Table 5 below shows the mean and standard deviation of each item in the category of respondents’ understanding of lesson in the first experiment. The level for understanding is reflected by the ranges of mean scores from 2.70 to 3.90 in all 24 related questions. From the mean scores obtained, we can conclude that the understanding of the respondents after undergoing lecture class was at the level of Lower Intermediate (mean score = 2.0-2.99) and also slightly at the Intermediate (mean score = 3.00-3.99) level. Furthermore, Table 5 also reveals that none of the respondents obtained High level of understanding which was strongly desired in normal maritime classes.

Table 5. Means and SD of respondents’ understanding (Experiment 1)

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>I can pronounce the Alphabets and Numbers correctly according to IMO SMCP.</td>
<td>3.90</td>
<td>.875</td>
</tr>
<tr>
<td>16</td>
<td>I know what is ‘Address and Identify’</td>
<td>3.50</td>
<td>.849</td>
</tr>
<tr>
<td>15</td>
<td>I can pronounce and demonstrate ‘Address and Identify’ spontaneously and correctly.</td>
<td>3.40</td>
<td>.843</td>
</tr>
<tr>
<td>17</td>
<td>I know the structure of ‘Address and Identify’.</td>
<td>3.30</td>
<td>.948</td>
</tr>
<tr>
<td>18</td>
<td>I can write down the structure of ‘Address and Identify’ correctly.</td>
<td>3.20</td>
<td>.788</td>
</tr>
<tr>
<td>19</td>
<td>I understand the 9 stages in Marine VHF Radio (ship to ship).</td>
<td>3.10</td>
<td>1.100</td>
</tr>
<tr>
<td>26</td>
<td>I can write down the correct structure Safety message.</td>
<td>3.10</td>
<td>.994</td>
</tr>
<tr>
<td>25</td>
<td>I can write down the correct structure Urgency message.</td>
<td>3.00</td>
<td>1.054</td>
</tr>
<tr>
<td>24</td>
<td>I can write down the correct structure of Distress message.</td>
<td>2.90</td>
<td>.994</td>
</tr>
<tr>
<td>21</td>
<td>I can write down the correct structure of the 9 stages in Marine VHF Radio (ship to ship) spontaneously.</td>
<td>2.80</td>
<td>.788</td>
</tr>
<tr>
<td>22</td>
<td>I can write the complete dialogue of ship to ship communication on Marine VHF Radio (ship to ship).</td>
<td>2.80</td>
<td>1.032</td>
</tr>
<tr>
<td>27</td>
<td>I can correctly demonstrate the complete Distress message to class.</td>
<td>2.70</td>
<td>1.059</td>
</tr>
<tr>
<td>28</td>
<td>I can correctly demonstrate the complete Urgency message to class.</td>
<td>2.70</td>
<td>1.059</td>
</tr>
<tr>
<td>23</td>
<td>I can correctly demonstrate the complete dialogue of ship to ship communication on Marine VHF Radio (ship to ship) with a partner.</td>
<td>2.70</td>
<td>.948</td>
</tr>
<tr>
<td>20</td>
<td>I can pronounce the 9 stages in Marine VHF Radio (ship to ship) correctly according to their sequence.</td>
<td>2.70</td>
<td>.823</td>
</tr>
</tbody>
</table>
From Table 5 above, it is obvious that the questions received mean scores below 4.00. Again, this supports the finding that respondents’ understanding was not at the accepted level ($mean\ score > 4.00$). The mean scores obtained for all questions which reflect respondents’ understanding of lesson after undergoing lecture classes were between 2.70 and 3.90 ($mean\ score < 4.00$). Altogether, 8 questions received mean scores between 3.00 and 3.99 ($mean\ score < 4.00$) while 7 questions received mean scores between 2.00 to 2.99 ($mean\ score < 3.00$). Based on the scale for level of understanding as depicted in table 4, it can be concluded that the level of understanding of respondents after going through lectures classes were Lower Intermediate and Intermediate level. This could be further discussed and analysed.

**Research Question Two: What is the level of confidence of AWKO students on SMCP and VHF Radio Communications after lecture and facilitations have been conducted?**

From the survey questions, 1 question in Section B and Section C had been allocated to evaluate respondents’ level of confidence. They were placed in the early and end part of the questionnaire in order to effectively measure respondents’ confidence. This is meant to remain neutral while seeking respondents’ feedback. Question number 12 was placed in Section B while Question number 30 was included in Section C. The following Table 6 shows these two questions which on level of confidence together with the mean scores for analysis.

**Table 6. Questions which measure respondents’ level of confidence**

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td><em>I am confident with my knowledge in SMCP and VHF Communication.</em></td>
<td>2.90</td>
<td>1.370</td>
</tr>
<tr>
<td>30</td>
<td><em>I think I can perform all the tasks correctly right now.</em></td>
<td>2.70</td>
<td>1.251</td>
</tr>
</tbody>
</table>

The table above shows that in the first experiment, the mean score obtained by Question number 12 in Section B was only 2.90 which was at the Lower-Intermediate level ($mean\ score < 3.00$). Meanwhile, Question number 30 in Section C received the lowest mean score of 2.70 ($mean\ score < 3.00$) which was also in the category of Lower-Intermediate level. Therefore, for Research Question Two, It can be summarized that the level of confidence of respondents after going through lecture classes was only at Lower-Intermediate level.
Research Question Three: Which topics within SMCP and VHF Radio Communications lessons that are difficult to AWKO students?

Research Question Three requires the researcher to analyse across all questions in Section B and C of the questionnaire. This is to identify the topics within SMCP and VHF Radio Communications that are difficult for respondents to understand. In general, questions with the mean score below 4.00 will be selected to answer Research Question Three (mean score < 4.00). The questions have already been listed down in Table 5 under Research Question One. The low mean scores received by these questions (mean score < 4.00) also represented the topics that respondents face difficulties to understand after going through lecture classes. These topics were integral parts of the SMCP and VHF Radio Communication lessons. To answer Research Question Three, Table 7 below highlights the topics which respondents face difficulty in understanding (Experiment 1).

Table 7. Topics and sub-topics which were difficult to respondents after lecture sessions

<table>
<thead>
<tr>
<th>No.</th>
<th>Topics and sub-topics</th>
<th>No. of Question in Questionnaire</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Address &amp; Identify</td>
<td>15, 16, 17, 18</td>
<td>B</td>
</tr>
<tr>
<td>2.</td>
<td>9 stages in Marine VHF Radio</td>
<td>19, 20, 21, 22, 23</td>
<td>C</td>
</tr>
<tr>
<td>3.</td>
<td>Distress Message</td>
<td>24 &amp; 27</td>
<td>C</td>
</tr>
<tr>
<td>4.</td>
<td>Urgency Message</td>
<td>25 &amp; 28</td>
<td>C</td>
</tr>
<tr>
<td>5.</td>
<td>Safety Message</td>
<td>26 &amp; 29</td>
<td>C</td>
</tr>
</tbody>
</table>

The table above identifies ‘Address & Identify’, ‘9 stages in Marine VHF Radio’ and ‘Distress, Urgency and Safety Messages’ as the five topics that are difficult to respondents. It is important to note here that the five topics are crucial in acquiring knowledge, skills and competency in SMCP/VHF Radio Communications. The findings were indeed shocking and alarming. They highlight the gap and weaknesses in the actual teaching-learning process.

Research Question Four: What is the level of understanding of AWKO students on SMCP and VHF Radio Communications after kinaesthetic activities have been conducted?

Table 8 below shows the mean and standard deviation of each item in the category of respondents’ understanding of lesson in the second experiment (Experiment 2). It is important to mention that, in the second experiment, which was the kinaesthetic activities,
the mean score had increased significantly from the first experiment in all questions. The mean scores for understanding range from 3.80 to 4.50 in all related questions.

Therefore, to answer Research Question Four, it can be concluded from the mean scores obtained that the respondents’ level of understanding after undergoing Kinaesthetic activities was at the Intermediate (mean score = 3.50-3.99) and High (mean score = 4.00-5.00) level. This shows that most respondents obtained higher level of understanding in Experiment 2 compared to Experiment 1.

Table 8. Means and SD of the second experiment on respondents’ understanding

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>I can pronounce the Alphabets and Numbers correctly according to IMO SMCP.</td>
<td>4.20</td>
<td>.421</td>
</tr>
<tr>
<td>16</td>
<td>I know what is ‘Address and Identify’.</td>
<td>4.20</td>
<td>.918</td>
</tr>
<tr>
<td>15</td>
<td>I can pronounce and demonstrate ‘Address and Identify’ spontaneously and correctly.</td>
<td>4.40</td>
<td>.699</td>
</tr>
<tr>
<td>17</td>
<td>I know the structure of ‘Address and Identify’.</td>
<td>3.80</td>
<td>.918</td>
</tr>
<tr>
<td>18</td>
<td>I can write down the structure of ‘Address and Identify’ correctly.</td>
<td>3.90</td>
<td>.994</td>
</tr>
<tr>
<td>19</td>
<td>I understand the 9 stages in Marine VHF Radio (ship to ship).</td>
<td>4.50</td>
<td>.527</td>
</tr>
<tr>
<td>26</td>
<td>I can write down the correct structure Safety message.</td>
<td>4.20</td>
<td>.421</td>
</tr>
<tr>
<td>25</td>
<td>I can write down the correct structure Urgency message.</td>
<td>4.20</td>
<td>.421</td>
</tr>
<tr>
<td>24</td>
<td>I can write down the correct structure of Distress message.</td>
<td>4.20</td>
<td>.421</td>
</tr>
<tr>
<td>21</td>
<td>I can write down the correct structure of the 9 stages in Marine VHF Radio (ship to ship) spontaneously.</td>
<td>4.30</td>
<td>.483</td>
</tr>
<tr>
<td>22</td>
<td>I can write the complete dialogue of ship to ship communication on Marine VHF Radio (ship to ship).</td>
<td>4.40</td>
<td>.516</td>
</tr>
<tr>
<td>27</td>
<td>I can correctly demonstrate the complete Distress message to class.</td>
<td>4.10</td>
<td>.567</td>
</tr>
<tr>
<td>28</td>
<td>I can correctly demonstrate the complete Urgency message to class.</td>
<td>4.20</td>
<td>.421</td>
</tr>
<tr>
<td>23</td>
<td>I can correctly demonstrate the complete dialogue of ship to ship communication on Marine VHF Radio (ship to ship) with a partner.</td>
<td>4.50</td>
<td>.527</td>
</tr>
</tbody>
</table>
I can pronounce the 9 stages in Marine VHF Radio (ship to ship) correctly according to their sequence.

References: 1- Strongly Disagree, 2-Disagree, 3-Moderate, 4-Agree, 5-Strongly Agree

In the table above, only two questions received mean score below 3.99 (mean score <4.00) but above 3.50 (mean score >3.50). They were ‘I know the structure of Address and Identify’ (mean score =3.80) and ‘I can write down the structure of ‘Address and Identify correctly’ (mean score=3.90). However, even though both were at Intermediate level, the actual understanding could also be regarded as being at accepted level, judging from the high scores they received which were in the range of 3.50 – 3.99. More importantly, the scores were higher than in Experiment 1 (mean score = 3.30 and 3.20) respectively. Therefore, on average mean scores, it can be concluded here that the level of understanding for Kinaesthetic learning was higher than the level of understanding for lecture classes with the total mean score of 4.295 as compared to mean score of 3.375.

Research Question Five: What is the level of confidence of AWKO students on SMCP and VHF communications after kinaesthetic activities in classroom?

In the survey questionnaire, 1 question in Section B and Section C had been allocated to specially measure respondents’ level of confidence. They were placed in the early and end part of the questionnaire in order to effectively measure respondents’ confidence. This is meant to remain neutral while seeking respondents’ feedback. Question number 12 was placed in Section B while Question number 30 was included in Section C. The following Table 9 shows these two questions which focus on level of confidence with their respective mean scores.

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>I am confident with my knowledge in SMCP and VHF Communication.</td>
<td>4.10</td>
<td>.567</td>
</tr>
<tr>
<td>30</td>
<td>I think I can perform all the tasks correctly right now.</td>
<td>4.20</td>
<td>.632</td>
</tr>
</tbody>
</table>

The table above shows that in the second experiment, the mean score obtained by Question number 12 was 4.10 which was at the High level (mean score>4.00). Furthermore, Question number 30 received a higher mean score of 4.20 which was also in the High level of confidence. Therefore, for Research Question Five, It can be summarized that the level of confidence of respondents after going through kinaesthetic activities was High, which was better than in Experiment One (Lower-Intermediate). The mean scores obtained by Experiment One for the two questions were 2.90 and 2.70 respectively.
Research Question Six: Which topics within SMCP and VHF communications that are difficult to AWKO students after kinaesthetic activities have been conducted?

To answer Research Question Six, the researcher had to look at mean scores received by all questions in the second experiment, Kinaesthetic activities. Then, the mean scores were compared with the mean scores obtained in the first experiment. The higher mean scores obtained by all questions in the second experiment show that all respondents did not face any facing difficulty to understand and to conceptualize the lessons.

Consequently, for Research Question Six, suffice to mention here that there was no difficult topic as respondents had already understood the lessons as experienced in the Kinaesthetic activities. To some extent, this reflects the effectiveness of Kinaesthetic activities in enhancing respondents’ understanding as compared to lecture sessions. However, Table 10 below lists down only two questions in the second experiment which received mean score below 4.00 but higher than 3.75. But they did not represent the topics that could be difficult to the respondents based on the high mean score received in the 3.75 to 4.00 range.

Table 10. Questions with mean score below 4.00 in second experiment

<table>
<thead>
<tr>
<th>No.</th>
<th>Statement</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>17</td>
<td>I know the structure of 'Address and Identify'.</td>
<td>3.80</td>
<td>.918</td>
</tr>
<tr>
<td>18</td>
<td>I can write down the structure of ‘Address and Identify’ correctly.</td>
<td>3.90</td>
<td>.994</td>
</tr>
</tbody>
</table>

Summary of findings

The average mean score which was obtained by Experiment 1 was lower than Experiment 2. Experiment 1 recorded an average of 3.375 in all 30 questions while Experiment 2 obtained 4.295. From the comparison of both average mean scores, it could be summarized that Kinaesthetic learning helps to improve students’ understanding especially on SMCP and VHF Radio Communications. All respondents scored lower in questions which evaluated their understanding and confidence in Experiment 1. On the other hand, there was a significant improvement in understanding and confidence after Experiment 2 was conducted (mean score>4.00). This finding gives the indication that there should be more integration of Kinaesthetic learning techniques in the teaching of Maritime English in general. As a generalization, trainers who teach competency subjects at the Akademi Laut Malaysia (ALAM) and other MET institutions should not only rely on lecture style of delivery. Instead, they should use multiple teaching techniques to enhance students’ understanding and Kinaesthetic learning is one of these effective techniques. This finding is similar with the discoveries of Dunn and Dunn (1978), Reid (1987), Gardner (1999), Wehrwein et al. (2007) and Gilakjani (2012).

Results in Experiment 2 indicate that students learn faster and better when they are actively involved in the teaching-learning process as reflected by Kinaesthetic learning. The
finding is in conjunction with the findings of Dunn and Dunn (1978), Wehrwein et al. (2007) and Gilakjani & Ahmadi (2011). They believed that students should not be left to listen passively to lectures, but should be given the opportunity to play an active role in learning. Activities such as pair work, group tasks, role-plays, dramatization, games and simulations shall make students active in class thus associate the lessons directly with learning objectives. Moreover, by moving around classroom when completing tasks such as communicative drills and role plays, students shall not be bored and get themselves distracted from lesson proper. These activities also promote cooperation and team work among students as the tasks assigned could not be completed individually but require a full team/group effort.

Another discovery of this research is that it confirms the findings of Cole and Trenkner (2012), Noble (2015) and Takagi et al. (2015) that the most effective method in teaching SMCP and VHF Radio Communications is through student-centred approach such as in the Kinaesthetic learning. Moreover, the role-plays and communicative drills used within Kinaesthetic learning are found to be the most suitable in familiarizing students with the structure and wordings of ‘Address & Identify’, ‘Distress, Urgency, Safety and Routine’ messages, Message Markers and the conventions of the SMCP. Other than having a vibrant and dynamic classroom atmosphere, Kinaesthetic learning enhances students’ conceptualization of lessons. This shall lead to the achievement of learning objectives as outlined in the IMO 3.17 Model Course for Maritime English.

Conclusion

This research serves as an initial study on the effectiveness of integrating student centred and communicative method such as Kinaesthetic learning at the Akademi Laut Malaysia (ALAM), particularly in supporting lecture style of teaching. There have been weaknesses in classroom facilitations in the form of lecture mode as depicted in this research. As such, lecturers and trainers should reduce lecture style of teaching and integrate other engaging teaching approaches such as Drills and Practice, Kinaesthetic, Tactile, Blended Learning, Cooperative Learning, Task Based Learning and etc. It is not too demanding to mention here that with relatively small classes as practiced at ALAM (<30 students); lecturers and trainers shall not face difficulties in utilizing more engaging and effective teaching techniques in their subjects; be it in Nautical or Marine Engineering fields of studies.

In line with the aspiration to have superior teaching, it is highly anticipated that this research could initiate more related studies and discussions on teaching effectiveness, innovative teaching approaches and other pedagogical aspects in Maritime Education and Training (MET) institutions. It is timely now for maritime educators, educationists, administration and regulatory bodies to consider more effective and engaging methods of delivery to further improve the quality of maritime education and training. For sure, more thorough studies shall be conducted in near future on Maritime English and English related subjects at ALAM so as to achieve teaching and learning efficiency. This is indeed in line with
the aspirations of the STCW 1978 as amended, when the 2010 Manila Amendments clearly emphasizes on having effective communications on board merchant ships worldwide.

References


Sejambak Bakti, Novel Komponen Sastera (KOMSAS) Tingkatan 1, sebagai Sumber Kesusastraan Pelbagai Budaya dalam Pendidikan Kepelbagaian Budaya untuk Pelajar: Satu Tinjauan

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Abstrak

Makalah ini membincangkan keupayaan novel Sejambak Bakti, karya Rejab F.I, novel Komponen Sastera (KOMSAS) Tingkatan 1 sebagai sumber kesusastraan pelbagai budaya dalam menyemai pendidikan kepelbagaian budaya untuk pelajar. Pendidikan kepelbagaian budaya yang dimaksudkan dalam perbincangan makalah ini merujuk kepada usaha mendidik pelajar untuk mengambil peduli dan seterusnya memahami perbezaan budaya dalam kalangan mereka bagi mewujudkan suatu hubungan yang harmoni dan sikap saling menghormati. Dalam usaha menyemai pendidikan kepelbagaian budaya, novel ini dilihat sebagai suatu sumber unsur pendidikan kepelbagaian budaya yang boleh menyemai semangat perpaduan dalam kalangan pelajar yang berbilang kaum di Malaysia. Perbincangan ini bertitik tolak daripada Teori Struktural dengan menggunakan kaedah kajian kepustakaan dan analisis kandungan.

Kata Kunci: Sejambak Bakti, Novel KOMSAS, Kesusastraan Pelbagai Budaya, Pendidikan Kepelbagaian Budaya, Pelajar

Pengenalan

Kajian tentang karya kesusastraan sebagai sumber pendidikan kepelbagaian budaya untuk memupuk perpaduan dalam kalangan masyarakat pelbagai kaum telah lama mendapat perhatian, sama ada daripada pengkajian dalam dan luar negara. Dalam hal ini, Saha (1997) melihat pendidikan kepelbagaian budaya sebagai proses atau strategi pendidikan melibatkan lebih daripada satu budaya yang ditunjukkan melalui bahasa, etnik, atau ciri-ciri ras. Tujuannya adalah untuk mewujudkan kesedaran, toleransi, pemahaman, dan pengetahuan yang mengambil kira perbezaan dan persamaan antara budaya dan
kaitannya dengan pandangan dunia, konsep, nilai, keyakinan dan sikap (Azwani Ismail dan Zahara Aziz, 2009).


Sehubungan itu, kajian ini meninjau keupayaan novel Sejambak Bakti, karya Rejab F.I, iaitu sebuah novel Komponen Sastera (KOMSAS) dalam mata pelajaran Bahasa Melayu Tingkatan 1 sebagai satu daripada sumber kesusasteraan pelbagai budaya untuk menyemai pendidikan kepelbagaian budaya kepada pelajar yang berbilang bangsa di Malaysia, iaitu mendidik pelajar untuk mengambil peduli dan seterusnya memahami perbezaan budaya dalam kalangan mereka bagi mewujudkan suatu hubungan yang harmoni dan sikap saling menghormati. Kajian ini juga cuba mengenal pasti elemen-elemen kepelbagaian budaya yang diterapkan oleh pengarang dalam novel tersebut, dalam menyemai pendidikan kepelbagaian budaya kepada pelajar berbilang kaum di Malaysia.

Metodologi Penyelidikan


Teori Struktural memberi penekanan terhadap analisis struktur karya sebagai satu kesepakatan dalam membina teks. Dalam hal ini, sebuah karya kesusasteraan terbina daripada strukturnya yang tersendiri, iaitu terdiri daripada plot, tema dan persoalan, watak dan perwatakan, latar, gaya bahasa, sudut pandangan, nilai dan pengajaran yang
tersendiri. Teori Strukturalisme melihat penilaian karya yang baik tidak harus dilihat berdasarkan kepada salah satu unsur atau elemen yang terdapat di dalamnya, tetapi harus meliputi keseluruhan struktur atau unsur intrinsik yang terdapat di dalamnya. Dalam kajian ini, unsur-unsur intrinsik atau seluruh struktur novel *Sejambak Bakti* seperti tema dan persoalan, watak dan perwatakan, latar, gaya bahasa, plot, sudut pandangan, nilai dan pengajaran akan dianalisis untuk mengenal pasti nilai pendidikan kepelbagaian budaya yang terdapat di dalamnya secara menyeluruh.

**Perbincangan**

**Novel *Sejambak Bakti* sebagai Sumber Kesusasteraan Pelbagai Budaya?**


Sekiranya berpegang kepada prinsip ini, analisis struktur terhadap novel *Sejambak Bakti* mendapati bahawa secara automatiknya, hasil karya Rejab F.I ini memang tidak dapat dikategorikan sebagai karya kesusasteraan pelbagai budaya. Hal ini demikian adalah kerana karya ini dihasilkan oleh Rejab F.I yang berketurunan Melayu, mewakili golongan majoriti negara ini, dan tidak memfokuskan kepada corak kehidupan golongan minoriti, seperti masyarakat Cina, India, orang asli atau lain-lain golongan minoriti. Sebaliknya, novel ini menjadikan watak Razali, berketurunan Melayu dari kaum majoriti negara ini yang juga pelajar Tingkatan 5 sebagai protagonisnya. Dalam hal ini, sudah tentulah pengarangnya tidak dapat lari daripada mengetengahkan kesemua yang berkaitan perihal kehidupan yang diwakili oleh kaum majoriti negara ini, iaitu Melayu melalui watak Razali tersebut.

Walau bagaimanapun, analisis terhadap struktur novel ini mendapati bahawa Rejab F.I banyak menerapkan nilai pendidikan kepelbagaian budaya dengan caranya yang tersendiri, yang boleh diconterhi oleh pelajar untuk cakna dan seterusnya memahami perbezaan budaya dalam kalangan mereka bagi mewujudkan suatu hubungan harmoni dan sikap saling menghormati. Dalam hal ini nilai pendidikan pelbagai budaya diterapkan oleh pengarang melalui watak-watak berbilang kaum yang saling menghormati, bantu-membantu dan bekerjasama dengan plot cerita yang menarik dan mudah difahami. Perbincangan berikut ini akan memperincikan nilai pendidikan kepelbagaian budaya yang diterapkan oleh Rejab F.I dalam novel *Sejambak Bakti*. 
Pendidikan Kebelagaian Budaya dalam Novel Sejambak Bakti


Kumpulan remaja berbilang bangsa, agama dan jantina tersebut sentiasa bekerjasama, bersempanggigih dalam menjayakan projek penternakan ayam telur, penambahbaran barangan jualan di kedai koperasi sekolah, dan juga penubuhan bilik bacaan di sekolah. Perkara ini digambarkan oleh pengarang melalui salah satu episod di bawah:

Pada waktu yang sama, di suatu tempat lain pula, Ramlah, Cikgu Robeah, Rozita, Harun, Silvam dan Leong serta beberapa orang Ahli Lembaga Pengarah Koperasi sekolah itu sedang mengemas bahan bacaan di dalam sebuah bilik. ...


Kerjasama, kegigihan dan kesungguhan yang ditunjukkan oleh Ramlah, Rozita, Harun, Silvam dan Leong mengemas sebuah bilik untuk dijadikan bilik bacaan di sekolah dalam petikan tadi merupakan suatu contoh penerapan nilai pendidikan budaya yang baik oleh pelajar. Contoh lain dipaparkan oleh pengarang dalam episod kumpulan remaja berbilang bangsa, agama dan jantina ini membuat persiapan untuk menyertai pertandingan koperasi-koperasi sekolah. Perkara ini digambarkan oleh pengarang dalam contoh petikan di bawah:

Setiap petang, ahli lembaga pengarah bergilir-gilir mengurus projek yang telah dilaksanakan oleh mereka. Bangsal ternakan ayan mereka sentiasa dijaga rapi. Begitu juga dengan bilik bacaan.


Analisis terhadap persoalan dan watak serta perwatakan juga memperlihatkan upaya pengarang mewujudkan suasana pendidikan kepelbagaian budaya yang lebih menarik apabila watak-watak pelajar berbilang bangsa, agama dan jantina ini digambarkan mengamalkan budaya saling membantu dalam mencapai kecermeleguan akademik. Watak pelbagai kaum ini digambarkan duduk semeja, saling membantu mengulangkaji pelajaran bersama-sama tanpa rasa prejudis. Sikap terpuji ini digambarkan melalui sikap terpuji Razali yang sanggup membantu kawan-kawannya memahami topik prinsip akaun tanpa mengira bangsa. Dalam episod ini Razali sudi menerima kunjungan Ramlah, Saridevi, dan Rozita ke rumahnya untuk mengulangkaji pelajaran bersama-sama. Razali yang lebih pandai dalam prinsip akaun membantu kawan-kawannya memahami subjek tersebut. Perkara ini dipaparkan oleh pengarang melalui paparan petikan di bawah:

“Kamu semua datang ke sini nak belajar atau nak makan angin?” tanya Razali menyindir sambil membuka buku teks Asas Perdagangan.

“Nak belajarlah!” tegas Ramlah. Dia turut membuka catatan soalan pelajaran Perdagangan yang diberikan oleh Cikgu Saiful di sekolah hari itu.

“Kalau nak belajar tu, buka buku cepat!” kata Razali yang berlagak sebagai seorang guru.

“Eh, garangnya cikgu ni!” Sindir Saridevi.

... 


Razali tersenyum lalu menerangkan kaedah membuat Penyata Wang Tunai yang diajarkan oleh Cikgu Saiful sehingga
mereka benar-benar faham membuatnya (Rejab F.I, 2014, hlm. 55-56).


Di samping itu, pengarang juga menyemai sikap setiakawan sebagai suatu nilai budaya unggul dalam kalangan pelajar berbilang kaum untuk tetap memberi sokongan dan saling menjaga antara satu sama lain ketika salah seorang daripada mereka ditimpa masalah. Perkara ini ini ditunjukkan oleh Rejab F.I dalam episod Razali difitnah meneroboh dan mencuri wang koperasi sekolah. Rakan-rakan Razali yang terdiri daripada Ramlah, Saridevi dan lain-lain tetap memberi sokongan dan mempercayai bahawa dia tidak bersalah, sebaliknya telah difitnah:


Budaya setiakawan tanpa mengira jantina dan bangsa seperti yang ditunjukkan di atas menunjukkan usaha pengarang untuk mendidik pelajar untuk mengambil peduli aau mengambil berat terhadap rakan tanpa mengira perbezaan budaya dalam kalangan mereka sehingga mampu mewujudkan suatu hubungan yang harmoni dan sikap saling mengambil berat antara satu sama lain, terutamanya ketika ditimpa musibah.

Selain itu, analisis terhadap teks ini juga mendapat pengarang turut mengetengahkan budaya kerja positif masyarakat Cina dalam bidang perniagaan yang boleh dicontohi oleh masyarakat berbilang bangsa di Malaysia. Perkara ini merupakan satu daripada pendidikan kepelbagaian budaya yan penting dalam novel Sejambak Bakti. Persoalan ini diketengahkan melalui watak Encik Aik Hong, yang merupakan ayah kepada Swee Lan. Dalam hal ini, Encik Aik Hong mengamalkan budaya kerja yang positif dalam kehidupan, iaitu bekerja bersungguh-sungguh seperti sikap orang Jepun. Dia juga tidak lokek menolong orang yang memerlukan. Rejab F.I menggambarkan pendidikan kepelbagaian
budaya dalam konteks masyarakat Cina yang suka membantu orang dan bersungguh-sungguh dalam pekerjaan dalam perenggan di bawah:

Encik Aik Hong mengangguk-angguk. “Masukkan cikgu. Saya berikan harga paling minimum untuk kedai koperasi sekolah. Saya juga patut tolong memajukan koperasi sekolah kita,” kata Encik Aik Hong dengan ramah dan mesra.


Dalam konteks petikan di atas Rejab F.I sebagai pengarang cuba menerapkan pendidikan kepelbagaian budaya menerusi sikap positif dalam budaya kerja kaum Cina yang boleh diteladani oleh bangsa-bangsa lain, terutamanya bangsa Melayu dan India dalam perniagaan.

Sikap masyarakat majmuk pelbagai bangsa yang menghormati tetamu turut dipaparkan oleh Rejab F.I dalam novel Sejambak Bakti ini. Dalam konteks ini, dipaparkan bahawa masyarakat majmuk di Malaysia, sama ada Melayu, Cina atau India sangat menghormati dan meraihkan tetamu yang datang berkunjung ke rumah atau berjumpa di mana-mana. Nilai budaya ini dilihat sebagai suatu budaya universal pelbagai kaum di Malaysia yang perlu dikeakalkan dalam konteks kehidupan generasi masa kini. Budaya menghormati dan meraihkan tetamu dalam masyarakat Melayu ditunjukkan menerusi watak Razali dan ibunya ketika menyambut kedatangan kawan-kawan Razali yang berbilang bangsa ke rumahnya untuk mengulangkaji pelajaran bersama-sama. Perkara ini dapat dilihat dalam papara petikan di bawah:

Ketika matahari menumpahkan cahayanya yang lembut petang itu, Ramlah, Saridevi dan Rozita muncul di halaman rumah. Mereka membunyikan loceng basikal beberapa kali dan memberi salam.


Petikan di atas memaparkan budaya masyarakat Melayu yang sangat menghormati dan meraih tetamu yang datang ke rumah, walaupun yang datang tersebut cumalah dari kalangan pelajar/anak-anak remaja. Menerusi petikan tadi, Razali dan ibunya, Mak Sopiah digambarkan menyambut kedatangan kawan-kawan Razali dengan ramah dan mesra dan sebagai tanda meraih tetamu, mereka turut dihidangkan dengan air dan kuih-muih.

Budaya yang senada turut menjadi amalan dalam kehidupan masyarakat Cina. Dalam novel ini pengarang menggambarkan budaya masyarakat Cina yang menghormati dan meraih tetamu yang berkunjung ke rumah melalui watak Swee Lan dan ayahnya Encik Aik Hong. Dalam hal ini Swee Lan dan ayahnya Encik Aik Hong sangat mengalu-alukan kedatangan Cikgu Zulkifli dan Razali ke kedainya untuk membeli stok barang-barang jualan di kedai koperasi sekolah mereka.


Encik Aik Hong mengangguk-angguk. "Masuklah cikgu. Saya berikan harga paling minimum untuk kedai koperasi sekolah. ..."


Petikan di atas menunjukkan bahawa amalan menghormati dan meraih tetamu bukan sahaja diamalkan oleh bangsa Melayu, tetapi juga menjadi budaya hidup masyarakat Cina. Walaupun hanya dengan hidangan air botol, tindakan Swee Lan tersebut sudah membuat Cikgu Zulkifli, Razali dan Ramlah berasa kunjungan mereka sangat dihargai dan dialu-alukan oleh Swee Lan dan ayahnya.
Satu perkara yang tidak kurang penting, Rejab F.I turut mengetengahkan budaya hidup masyarakat Melayu yang sangat menghormati orang yang lebih tua, terutama ibu bapa, walaupun bukan sebagai bapa kandung. Perkara ini dipaparkan oleh pengarang melalui watak Razali yang sangat menghormati bapa tirinya, walaupun dirinya sering dibenci tanpa alasan yang munasabah. Dalam satu insiden, Razali tetap bersabar walaupun dicemuh dan dituduh mencuri wang koperasi sekolah oleh Pak Zakaria, ayah tirinya.


Tindakan Razali di atas menunjukkan usaha pengarang untuk mengetengahkan budaya menghormati orang yang lebih tua dalam kalangan masyarakat Melayu. Sebenarnya, budaya menghormati orang tua dalam kalangan masyarakat Melayu diseperti yang ditunjukkan oleh pengarang dalam petikan di atas juga merupakan suatu budaya yang diamalkan dalam masyarakat Cina, India dan lain-lain masyarakat majmuk di Malaysia.

Di samping itu, analisis terhadap gaya bahasa mendapati pengarang turut menyelit beberapa falsafah hidup budaya Melayu melalui penggunaan peribahasa seperti “Kerana nila setitik rosak susu sebelanga” yang mengingatkan masyarakatnya supaya sentiasa berhati-hati dalam setiap tindakan atau perbuatan yang dilakukan supaya tidak mencemar nama baik bangsa dan agama:


Falsafah hidup budaya Melayu bijak dalam mengingatkan masyarakatnya supaya ikhlas dalam setiap setiap pekerjaan diselitkan dalam peribahasa, “Ada udang di sebalik batu”, manakala prinsip untuk mengingatkan bahawa setiap segala sesuatu perkara yang terjadi pasti ada sebab musababnya pula diselitkan dalam peribahasa “Kalau tidak ada apa-apa masakan tempua bersarang rendah.” Perkara ini diungkapkan oleh pengarang dalam episod berikut:

“Ah, tentu ada udang di sebalik batu tu!” sindir Munir lagi.

“Nm, kalau tidak ada apa-apa masakan tempua bersarang rendah!” Silvam pula mencelah, menyokong kata-kata Munir (Rejab F.I, 2014, hlm. 18).
Kesemua peribahasa tersebut merupakan rangkaian falsafah hidup budaya Melayu yang membawa mesej berguna dalam hidup untuk diamalkan bukan sahaja dalam kalangan pelajar berbangsa Melayu di sekolah, tetapi juga pelajar pelbagai kaum yang lain seperti Cina dan India. Hal ini demikian kerana kesemua peribahasa tersebut mendukung falsafah hidup yang universal dan boleh terjadi dalam kehidupan manusia di mana-mana sahaja tanpa mengira batas bangsa, agama, dan jantina.

Kesimpulan dan Cadangan


Walaupun begitu, bertitik tolak daripada Teori Struktural, analisis terhadap struktur teks seperti tema dan persoalan, watak dan perwatakan, dan gaya bahasa terutamanya, mendapat bahawa karya ini masih mengangetungk pendidikan kelip bagaian budaya yang boleh dijadikan wadah dalam menyemai perpaduan dalam kalangan pelajar pelbagai bangsa jantina, tetapi dalam kadar yang agak terhad. Pendidikan kelip bagai budaya yang dimaksudkan dalam kajian ini merujuk kepada usaha mendidik pelajar untuk mengambil peduli dan seterusnya memahami perbezaan budaya dalam kalangan mereka bagi mewujudkan suatu hubungan yang harmoni dan sikap saling menghormati melalui kisah yang disajikan dalam sesuatu bahan kesusasteraan.

Analisis menunjukkan pengarang menerapkan tiga aspek nilai budaya yang universal yang perlu ada dalam kalangan masyarakat pelbagai bangsa untuk mewujudkan keharmonian negara, iaitu kerjasama, saling membantu, dan setiakawan. Pengarang didapati lebih banyak mengangkat nilai budaya masyarakat Melayu dalam novel ini, seperti budaya menghormati orang tua sebagai suatu budaya, budaya menghormati tetamu dan beberapa falsafah hidup budaya Melayu lain yang diungkapkan melalui gaya bahasa peribahasa. Di samping itu, analisis mendapati pengarang turut mengetengah budaya masyarakat Cina, tetapi dalam jumlah yang terhad, iaitu menghormati tetamu dan budaya kerja masyarakat Cina yang positif dalam bidang perniagaan, iaitu bekerja bersungguh-sungguh dan tidak lokek membantu orang lain untuk turut sama berjaya dalam bidang perniagaan.

Dengan hal yang demikian novel Sejambak Bakti sebenarnya boleh dianggap sebagai satu bahan kesusasteraan yang sesuai dalam mendidik kepada usaha mendidik pelajar untuk mengambil peduli, memahami perbezaan budaya dalam kalangan mereka dan seterusnya...
mewujudkan suatu hubungan yang harmoni dan sikap saling menghormati. Namun, novel ini akan menjadi lebih baik dan efektif sebagai bahan kesusasteraan pelbagai budaya untuk pendidikan kepelbagaian budaya sekiranya pengarang memasukkan lebih banyak unsur-unsur budaya positif tentang budaya Melayu, Cina India atau lain-lain bangsa dengan kadar yang lebih seimbang agar pengetahuan dan kesedaran tentang kepelbagaian budaya tersebut akan lebih dihayati untuk mewujudkan persefahaman dan menyemai perpaduan masyarakat pelbagai kaum di Malaysia. Dengan hal yang demikian pendidikan kepelbagaian budaya tersebut akan dapat direalisasikan dalam pendidikan kebangsaan teutamanya dengan memanfaatkan teks KOMSAS yang memuatkan unsur-unsur kepelbagaian budaya dalam memupuk perpaduan dengan pendekatan dan pengajaran yang berkesan dalam mata pelajaran Bahasa Melayu.

Senarai Rujukan


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PERSPEKTIF NILAI MATEMATIK SEBAGAI KEUTAMAAN UNTUK PEMBINAAN KEMahirAN BErFIKIR ARAS TINGGI PELAJAR

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ABSTRAK

Pengajaran dan pembelajaran matematik di sekolah rendah dan menengah tidak harus dilihat daripada perspektif kognitif sahaja, tetapi satu lagi perspektif yang penting ialah perspektif afektif. Satu daripada perspektif afektif yang perlu diberi perhatian demi pengajaran dan pembelajaran matematik berkesan ialah perspektif nilai, khususnya nilai matematik. Tiga pasangan nilai matematik yang boleh diberi penekanan ialah nilai rasionalisme-objektisme; nilai kawalan-keterbukaan; dan nilai keterbukaan-misteri. Penekanan dalam pengajaran dan pembelajaran kepada perspektif nilai matematik akan memastikan bahawa matematik menjadi sebagai suatu mata pelajaran yang boleh dipelajari secara bermakna dan seterusnya diminati oleh pelajar. Penekanan kepada aspek nilai matematik juga akan menjadikan matematik suatu mata pelajaran yang relevan untuk memupuk kemahiran berfikir aras tinggi dalam kalangan pelajar. Oleh itu dicadangkan agar perspektif nilai matematik dijadikan asas untuk sesuatu proses pengajaran dan pembelajaran matematik berkesan di sekolah rendah dan menengah.

Pendahuluan

Pengajaran dan pembelajaran matematik merupakan proses yang kompleks melibatkan interaksi antara komponen-komponen utama bilik darjah iaitu guru dan pelajar. Bagaimanapun peranan guru dalam mengarah dan mengendalikan bilik darjah tidak dapat disangkal lagi. Pengetahuan matematik guru berpotensi untuk digunakan dalam proses pengajaran bilik darjah. Dalam konteks pengajaran matematik bilik darjah, guru bukan sahaja menyampaikan konsep dan isi kandungan matematik, tetapi juga nilai matematik.

Nilai Matematik

Nilai merupakan satu daripada ciri-ciri dalam domain afektif, selain daripada beberapa ciri afektif lain seperti minat, sikap, aspirasi dan emosi atau bias. Nilai dimaksudkan sebagai suatu hasilan sosial yang telah diinternalisasi dan digunakan oleh seseorang guru sebagai kriteria dirinya sendiri. Ini bererti, nilai yang dimiliki oleh seseorang
pelajar akan menentukan bagaimana sepatutnya atau tidak sepatutnya bertingkah laku, atau kecenderungannya untuk melakukan sesuatu perkara. Internalisasi yang dimaksudkan ini didefinisikan sebagai menyatukan sesuatu ke dalam rohani atau jasmani; menjadikannya idea, amalan, kepiawaian atau nilai seseorang atau masyarakat lain sebagai kepunyaan sendiri (Krathwohl et al., 1964).

Nilai Matematik


i. Rasionalisme – objektisme:

Nilai yang dominan dalam matematik adalah rasionalisme, yang bergantung kepada logik, andaian (hypothetical) dan hujah (Bishop, Clarkson, FizSimons & Seah, 2000; Seah dan Bishop, 2000). Menjadikan matematik itu rasional adalah membentuk hubungan yang logikal antara dua idea yang pada awalnya berada dalam keadaan sama ada tidak mempunyai perhubungan atau dihubungkan dengan cara yang tidak selaras. Oleh itu, memiliki nilai rasionalisme akan menjadikan pelajar bercenderungan membuat kritikan terhadap sesuatu idea atau hujah, mencuba untuk membuat pembuktian tentang kebenaran sesuatu hipotesis, mengenal pasti “contoh-berlawan (counter-example)”, membina rumusan atau kesimpulan, mencabar kebenaran sesuatu konsep atau mencuba mendamaikan hujah-hujah yang saling bercanggah.

Nilai objektisme pula berkait dengan idea seperti membina dan menggunakan simbol serta pengkonkritan (concretizing). Oleh itu, nilai objektisme menggambarkan kekuatan matematik yang berurusan dengan idea yang abstrak secara berkesan dengan menjadikannya konkrit (seperti nombor, simbol dan rajah), iaitu mempertimbangkan idea sebagaimana ianya objek (Seah dan Bishop, 2000: Bishop, 1988). Oleh itu satu contoh kekuatan matematik adalah mewakilkan situasi dalam dunia sebenar ke dalam bentuk simbol dan seterusnya mengaplikasikan simbol untuk menyelesaikan masalah.

ii. Kawalan – Kemajuan:
Nilai **kawalan** adalah merujuk kepada keyakinan yang ditawarkan oleh matematik, bukan sahaja untuk menyelesaikan permasalahan melibatkan fenomena semula jadi, tetapi juga apabila matematik digunakan untuk menyelesaikan masalah dalam persekitaran sosial (Seah dan Bishop, 2000). Satu contoh perasaan keyakinan yang timbul adalah melalui keinginan dan kebolehan seseorang menggunakan konsep dan prosedur matematik untuk menyelesaikan masalah. Kesilapan atau kegagalan seseorang memperoleh penyelesaian dengan betul bagi suatu permasalahan matematik boleh dikesan dengan menyemak hujah-hujah matematik yang dilaksanakan, iaitu sama ada mengikut peraturan (seperti rumus-rumus dan hukum-hukum) atau sebaliknya. Oleh itu, semakin meningkat seseorang melihat idea matematik sebagai fakta objektif, mematuhi peraturan dan hukum, serta boleh disemak, bererti semakin meningkat juga nilai kawalan mereka (Bishop, 1991b).


iii. **Keterbukaan – Misteri:**

Nilai **keterbukaan** pula adalah tentang kefahaman bahawa kebenaran suatu pernyataan atau idea matematik sentiasa terbuka untuk diselidiki asalkan seseorang memiliki pengetahuan yang berkaitan (Bishop, 1988). Sebagai contoh, sebarang teorem atau formula dalam matematik adalah terbuka untuk diselidiki kebenaran melalui pembuktian dan penghujahan. Dalam konteks pengajaran bilik darjah pula, nilai keterbukaan dikenal pasti apabila pelajar diberi peluang oleh guru mempelajari matematik melalui aktiviti seperti berbincang, menyatakan pendapat dan mencuba meneroka sesuatu masalah atau isu matematik. Sebagai contoh, kajian oleh Seah et al. (2001) ke atas guru sekolah rendah (Diane) mendapati, walaupun nilai keterbukaan tidak dinyatakan dalam rancangan pengajarannya, namun guru dihasilkan menggalakkan pelajar mencuba untuk mengeluarkan idea sendiri semasa perbincangan.

Meissner (2005) telah menggariskan kreativiti dalam matematik melalui penggunaan masalah matematik berbentuk “masalah dunia sebenar (real world)” yang bersifat terbuka, iaitu masalah matematik yang sukar diselesaikan menggunakan peraturan, algoritma, prosedur atau pengetahuan spesifik. Contoh masalah matematik adalah seperti berikut: “Seorang kerani pos menjual 4 keping setem RM10 dengan meleraikan daripada kepingan setem yang besar, tetapi keempat-empat keping setem itu masih kekal bersambung pada tepinya. Tentukan bilangan cara yang berlainan supaya 4 keping setem itu boleh dileraiikan”.

Perbincangan

Dalam konteks pendidikan matematik, satu daripada cara penerapan kemahiran berfikir aras tinggi boleh dicapai adalah melalui penekanan kepada penerapan nilai matematik. Berdasarkan taksonomi Bloom, empat tahap teratas dalam pembinaan kemahiran aras tinggi ialah aplikasi, analisis, sintesis dan penilaian. Tiga pasangan nilai matematik yang perlu dipertimbangkan ialah nilai matematik, iaitu nilai rasionalisme-objektisme, nilai kawalan-kemajuan, nilai keterbukaan dan misteri.

Melalui penerapan nilai rasionalisme, penekanan pengajaran harus ditumpukan kepada aktiviti berhujah dan membina perhubungan antara pernyataan yang pada asalnya kelihatan tidak bersambung. Ini bererti melalui penerapan nilai rasionalisme para pelajar digalakkan mempelajari matematik secara bermakna. Di samping itu juga, para pelajar diperlukan untuk membina perhubungan antara kenyataan dalam dunia sebenar dengan alam matematik melalui pembinaan simbol, yang berkait dengan nilai objektisme. Oleh itu, melalui penerapan nilai rasionalisme-objektisme, pelajar didorong untuk mengaplikasi, analisis dan sintesis konsep-konsep matematik untuk menyelesaikan masalah.

Kemahiran berfikir aras tinggi juga boleh diterap dalam diri pelajar melalui penerapan nilai kawalan dan kemajuan. Melalui nilai kawalan, pelajar akan lebih berkeyakinan untuk menguasai dan menggunakan konsep dan prosedur matematik untuk menyelesaikan masalah. Pelajar juga digalakkan untuk memperkembangkan lagi kefahaman terhadap konsep matematik agar berupaya menyelesaikan masalah dalam situasi yang baru, yang tentunya berkait dengan penerapan nilai kemajuan.

Pelajar juga digalakkan untuk memperkembangkan lagi kemahiran berfikir aras tinggi melalui penerapan nilai keterbukaan dan misteri. Melalui penerapan nilai keterbukaan, pelajar akan menjadi lebih terbuka untuk berhujah dan menilai idea-idea baru. Melalui aktiviti seperti ini, pemahaman yang lebih bermakna tentang sesuatu konsep matematik akan dapat dicapai. Pembelajaran matematik juga akan menjadi lebih menarik melalui persoalan dan misteri yang dicapai melalui penerapan nilai misteri. Melalui penerapan nilai misteri pelajar akan lebih meminati matematik dengan mencuba meneroka sendiri pengetahuan baru sehingga berupaya meningkatkan kemahiran diri dalam menyelesaikan masalah.
Kesimpulan

Pengajaran dan pembelajaran matematik haruslah dilaksanakan secara berkesan melalui pertimbangan bukan sahaja daripada perspektif kognitif, tetapi juga perspektif afektif. Melalui pertimbangan kepada perspektif afektif, proses pembelajaran akan menjadi lebih menyeluruh dengan mengambil kira aspek nilai, iaitu nilai rasionalisme-objektisme, nilai kawalan-kemajuan, dan nilai keterbukaan-misteri. Dengan mengambil kira faktor nilai menjadikan pembelajaran matematik menjadi lebih berfokus dan seiringan dengan perkembangan berasaskan aspek epistemologi matematik. Berasakan nilai matematik kemahiran berfikir aras tinggi pelajar dapat dibina secara lebih menyeluruh.

Rujukan


HOW SOCIAL NETWORKING SITES (SNS) AFFECT NEW SME BUSINESS IN PERAK

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ABSTRACT

The purpose of the research was to find and analyse the effects of Social Networking Sites (SNS) namely, Facebook and Blog on new MARA Small Medium Enterprises (SMEs) in Perak using quasi-experimental design. The independent variables in this research were two treatment modules: SNS Training and Without SNS Training. The dependent variables were sales volume, operation cost, time and accessibility of products, marketing strategy and customer networking. 60 entrepreneurs were purposely chosen from MARA Negeri Perak. The entrepreneurs chosen for this research are similar in terms of entrepreneur ratio in the business category and assigned into two groups to interact with either SNS Training or Without SNS Training. The data obtained were analysed by carrying out Descriptive and Independent t-Test parametric statistical techniques. The results showed that the entrepreneurs who used the SNS perform much better in their business compared to those who not using SNS. Conclusion from the research findings that the entrepreneurs get the enhancement of sales volume, decrease operating costs, time-saving during online transactions, maximize in creating new customer relationships or retaining old customers and for marketing strategy, there is no significant difference in the perceived marketing medium between entrepreneurs who experienced the SNS technology (Facebook & Blog) treatment and entrepreneurs without SNS technology (Facebook & Blog). This means that the entrepreneurs more confident in the traditional marketing strategy compared to SNS as a marketing medium.

Keywords: Social Networking Site (SNS), SMEs in Perak, MARA SMEs, Online Business

1.0 INTRODUCTION

Small and medium enterprises (SMEs) are playing an important role which contributes to the development of the economic, social and political upholds in every country. SMEs form almost all business which run in the urban or rural areas and can be considered as a backbone of every country’s national economic growth (Peters and Waterman, 1982; Amini, 2004; Radam et al.,2008).

Although there is no specific definition of SMEs accepted worldwide (Hooi, 2006; Omar and Ismail, 2009), Malaysia have its own guidelines in describing this type of business by looking into the annual sales turnover and the total number of full-time employees...
involved in running the business (Hashim and Abdullah, 2000, SME CORP, 2013). According to Small and Medium Enterprises Corporation Malaysia (SME CORP, 2013), medium-sized enterprises usually employ between 50-150 full-time employees while small-sized enterprises usually employ between 5-50 workers. On the other hand, those which hires less than five (5) workers are considered as micro enterprises.

In Malaysia SMEs especially those operating in the manufacturing sectors has played a very important role in the country’s economic growth. Thurasamy et.al (2009), in his study reveals that SMEs contributes to 47.3% of the 2006’s GDP and fulfills 65.3% of the national employment rate of the same year. The type of business involved are mainly processing and production of raw materials, such as textiles, food, beverages, wood, rubber, petroleum and not leaving behind the manufacturing of electrical and electronic appliances, etc. Due to its significant contribution, various agencies, particularly that of government, have given a lot of importance on the development of SMEs. Malaysian government’s allocation for the development of SMEs has been increased from RM 1,561.6 million in the Eight Malaysia Plan to RM 2,160.2 million in the Ninth Malaysia Plan (Economic Planning Unit, 2006).

However, SMEs are not without flaws. It has been reported that SMEs all over the world are facing problems in maintaining their competitiveness and survival. While few studies show that 50% of the SMEs all over the world collapsed within their first five operational years (Reiss, 2006; Ahmad and Seet, 2009), Malaysia’s estimated failure rate is 60% (Portal Komuniti, 2006; Ahmad and Seet, 2009). It reflects that SMEs in Malaysia are facing serious issues and plenty of obstacles to stay competitive in the globalized business environment.

Khalique et al., (2011) identified various challenges facing the SMEs naming among all, the rapid development of information and technology in a globalized business environment. Teoh and Chong (2008) on the other hand, argued that the major obstacles to entrepreneurship development are lack of access to credit, lack of access to formal business and social networks. Additionally Hashim and Wafa, (2002) and Khalique et al., (2011) have also identified the barriers naming some of them as lack of knowledge about marketing techniques and lack of social network with other local and international enterprises. Their statement was then strengthened by Alam et al., (2011) who argues that social barriers are among the main obstacles faced by the SMEs in Malaysia to make the lots of the competitive advantages which consequently leading them to lose out in terms of opportunities.

This is then supported by Tunggak, Salamon, & Abu (2011), stating that the main weaknesses of the Bumiputera Small and Medium Enterprises entrepreneurs are marketing and network business. Their study which involved 241 Bumiputera entrepreneurs from Johor, who run their businesses with the fundings from Majlis Amanah Rakyat (MARA) Business Financing Division shows that 28% of the respondents do not set up strong networks among other entrepreneurs to promote their businesses. The situation worsened with the entrepreneurs’ business premises which were concentrated in rural areas and only afford to rent stalls or bazaars built by MARA or district councils in remote places. Without a strong and establish social networking, they faced serious difficulty in finding business
partners; exchanging business ideas and expertise that can hinder their efforts to expand their businesses.

In addressing this matter, the Social Networking Site (SNS) may be used as a medium of social networking for Malaysian SMEs generally as it is appropriate to the exponential growth of the internet in the digital age. This includes disclosure of the use of blogs, forums, and social networks like Facebook, Twitter, MySpace and others. Through SNS, the network cycle of traditional social network has grown from a few dozen people to hundreds of friends, friends of friends, connections and followers. It also includes creating and sharing (text, image and video) content, as well as networking and bookmarking. It encourages active user participation. In terms of business, it helps to communicate collaboratively between current customers and potential customers, receiving feedback, product definition, product development, or any form of customer service and support. Social media are also a good place for discussion and a classic marketing and communication goals (Edosomwan, 2011)

Therefore, an investigation should be carried out in view of the impact of SNS on the development of the SME business. The focus of the study is MARA entrepreneurs in the state of Perak with the use of SNS (Facebook & Blog) as the platform for promoting, marketing and advertising their businesses.

2.0 BACKGROUND OF RESEARCH

Majlis Amanah Rakyat (MARA) is a Malaysian government agency. It was formed to aid, train, and guide Bumiputera (Malays and other indigenous Malaysians) in the areas of business and industry.

The main objective of MARA Entrepreneur Development Division was developing viable global entrepreneurs who are resilient and competitive in accordance with the aims of the MARA Entrepreneurship Program. MARA has been established for the creation of entrepreneurs since 1976. The entire MARA Entrepreneurs’ have been given the Entrepreneur Training Program, which aims to produce entrepreneurs who have self-insight and quality wise in looking for viable business opportunities (MARA, 2014).

These entrepreneurs will be trained with the many programs such as Entrepreneur Training, Business Consultation Service, Technical Entrepreneur and others. MARA also provides Marketing Development Program for these MARA entrepreneurs to improve their marketing strategy. All these programs are developed to ensure that they will be successful but despite all these, there are still issues arising. According to MARA (2014), one of the many issues that are facing Bumiputera SMEs is how to market the products or services produced. This is also supported by Tunggak, Salamon, & Abu (2011) where from his research, the main weakness of the Bumiputera SME entrepreneurs is marketing and network business.

In addressing this problem, it is recommended to use the social media technology in business by combining traditional business model, including the marketing with on-line business model via Facebook and Blog. SNS not only function as a medium of
communication or even socialize, but now can be a medium for doing business on-line. This was highlighted by Harris & Rae (2009), where today’s businesses are now recognizing the potential of SNS for the development of their brands and to build relationships with their key customers.

Through SNS marketing strategy, Bumiputera SME entrepreneurs will be able to bring better results in terms of global promotion instead of just sitting in the shop waiting for the customer as stated by WordStream (2013). Facebook is a powerful marketing tool where it is a great space to keep customers informed, develop brand identity and broaden business reach. One example of its marketing tools is the Facebook Page and it is free for businesses. These pages allow businesses to identify themselves; it is not just through listing product offerings and services, but also by sharing links, images, and posts to give a better sense of a business’s personality and character. Same goes to blog where blogging is now widely accepted as one of the most effective and widespread forms of both personal expression and content marketing (Forbes, 2014) such as promoting small business.

3.0 RESEARCH DESIGN AND METHODOLOGY

The overall population for this research is Malaysia’s new MARA SMEs business and this research focused on the new MARA SMEs entrepreneur in Perak, which has 179 entrepreneurs (MARA, 2013). From this population, a sample of 60 entrepreneurs was purposely chosen from MARA Negeri Perak. The entrepreneurs chosen for this research were similar in terms of entrepreneur ratio in the business category. Purposive sampling was employed to select samples for this research and the rationale of using this method of sampling is that it is the primarily used to select samples for specific purposes and if the researcher believes that the chosen sample is the representation of the given population (Teddlie & Yu, 2007).

For this research, the sample size (n=60) was determined using the Central Limit Theorem (Rice & John, 1995), where the sample size for each group should reach at least n = 30 and research specifying a 5% margin of error. This margin of error signifies that the researcher has a 95% confidence level that the sample chosen figures the whole population. The entrepreneurs’ list is chosen from ten (10) MARA District Offices in Perak such as Daerah Kinta, Daerah Hilir Perak, Daerah Kerian, Daerah Larut Matang and Selama, Daerah Perak Tengah, Daerah Batang Padang, Daerah Hulu Perak, Daerah Kuala Kangsar, Daerah Manjung and Daerah Lenggong.

The new MARA entrepreneurs were categorized by way of have been running the business ten years or less in Perak. The respondents have been categorized into two (2) groups and each group will have 30 persons in mix business categories. From the 179 lists of entrepreneurs, they have been classified into five (5) categories of business, including food, clothing, beauty centre, wedding planner and computer & phone accessories. In terms of to balance the total of the business categories chosen for this research, there are three (3) business categories are appropriate, namely food, clothing and beauty centre. Treatment Group and Control Group will have 30 businesses that categorized in 10 businesses each
group, namely food, clothing and beauty centre. The total of respondents for two (2) groups are 60 persons.

This research employed a quasi-experimental research design. It involved two (2) independent variables and three dependent variables. In this research was to determine the effect of SNS treatment on the dependent variables, namely sales volume, cost, time and accessibility of product, marketing strategy and customer networking. This research appointed the selected SNS, which are Facebook and blog as a treatment for the experimental or treatment group (Xs) to measure the dependent variables (Os). Table 5.1 illustrates the factorial design for the research with factor Xs and Os.

**Table 5.1 Factorial Design of the Research**

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Dependent Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>SNS Training</td>
<td>O₁</td>
</tr>
<tr>
<td>(Doing sales with Facebook &amp; Blog)</td>
<td>O₂</td>
</tr>
<tr>
<td>(X₁)</td>
<td>O₃</td>
</tr>
<tr>
<td>Without SNS Training</td>
<td>O₁</td>
</tr>
<tr>
<td>(Doing sales without Facebook &amp; Blog)</td>
<td>O₂</td>
</tr>
<tr>
<td>(X₂)</td>
<td>O₃</td>
</tr>
</tbody>
</table>

O₁: Sales volume, operation cost, time and accessibility of product

O₂: Marketing Strategy

O₃: Customer Networking

Furthermore, this quasi-experimental research involved a pre-test and post-test those were conducted before and after the treatment session. For this, pre-test and post-test questions were developed to measure the impact of SNS to the new SMEs MARA business. These pre-test questions were given to the entrepreneurs from both experimental groups, X1 and X2 before the intervention. Then, the entrepreneurs were given the treatment and at the end of the intervention, both groups were given the post-test questions. The entrepreneurs’ results were recorded to determine the effectiveness of the treatment on their business. Figure 5.1 describes the flow of the quasi-experimental pre-test and post-test design.
4.0 RESEARCH FINDINGS

Discussions on the findings of this research provide important implications for the MARA entrepreneurs in Perak. As stated in the problem statement, which is there are ten factors, which contribute to the SME business entrepreneurs’ business failure, including lacks of networking in business (Majalah Niaga, 2012). This is also supported by Tunggak, Salamon and Abu (2011), stating that the main weaknesses of the Bumiputera Small and Medium Enterprises entrepreneurs are marketing and network business. Therefore, through this research, hopefully as an alternative solution to improve the way there are doing the business in this digital era compared the traditional era that the entrepreneurs just waiting the customers at the business premise only.

As the findings before, all the dependent variables (sales volume, operation cost, time and accessibility of products, marketing strategy and customer networking); it was found that the entrepreneurs who used SNS (Facebook and Blog) recorded a significantly higher scores compared to the entrepreneurs who not used SNS. This means that entrepreneurs who used SNS (Facebook and Blog) obtained enhancement of sales volume compared to entrepreneurs who not used the SNS. Same goes to operation cost because entrepreneurs could decrease their operation cost if the entrepreneurs doing their business through online. They would reduce a lot of budget in terms of premise rental and the other procedure by local government such. By using Facebook and Blog, the entrepreneurs and customer also could ease to access the product because the entrepreneurs can update, editing or else through website or social media. For the customer, they can access the...
product anywhere, anytime without any restrictions. They also can make a decision to buy and can make the online transaction. Online transaction makes time more flexible to handle and manage by the entrepreneurs or customer.

The entrepreneurs also could create many relationships among their customer through the SNS either create a new customer relationship or remain the old customer. This was highlighted by Harris & Rae (2009), where today’s businesses are now recognizing the potential of SNS for the development of their brands and to build relationships with their key customers.

In terms of marketing strategy, the traditional marketing was chosen by the entrepreneurs instead of marketing through SNS. This indicates that the entrepreneurs without using SNS training scored higher on marketing strategy compared to the entrepreneurs using SNS in their business. This means that the entrepreneurs more confident in the traditional marketing strategy compared to SNS as a marketing medium.

5.0 LIMITATION OF THE RESEARCH

The research is bound to certain limitation where it was primarily limited by its small sample size because of focusing on new SME Business in Perak. The sample size should be expanded by including the entire Malaysia SME Businesses and the number of participant should be more evenly distributed across gender and types of business. In this research, the participants represented a narrow range of gender, ages and types of business. A larger sample is better with more diversity would giving benefited the whole research results. It is including multiple groups of business categories from small till large businesses should be represented in the sample.

6.0 SUGGESTIONS FOR FUTURE RESEARCH

This research has raised several interesting issues that warrant further research. First, the sample of the research was limited to MARA entrepreneurs in Perak only. The researcher would recommend that the future investigations should also consider the whole MARA entrepreneurs in Malaysia to identify the significance of using SNS in business. As such, future research could further generalize the results to a larger sample, with different category of business to enhance the findings.

Second, the researcher should give training into future tool social networking websites such as licensing agreement with certain parties to prevent copyright infringement from happening on the internet.

Lastly, the researcher could identify the negative effects of SNS in MARA Business in terms of employee when they are involved in online business.

7.0 CONCLUSION

In conclusion, this research has shown that the use of the SNS (Facebook and Blog) in business, would serve as a useful strategy to increase their sales volume, transaction time and customer networking. At the same time, it should be an easier medium to access the products either for the customer or entrepreneurs itself. In terms of operating cost, finding
showed that will reduce the cost and it is more suitable for the SMEs entrepreneurs that could help them to stable their business. For the marketing strategy, no significant difference in the perceived marketing medium between entrepreneurs who experienced the SNS technology (Facebook & Blog) treatment and entrepreneurs without SNS technology (Facebook & Blog). This means that the entrepreneurs more confident in the traditional marketing strategy compared to SNS as a marketing medium.

Therefore, through this research, hopefully as an alternative solution to improve the way there are doing the business in this digital era compared the traditional era that the entrepreneurs just waiting the customers at the business premise only. Concisely, this research provides timely answers for the MARA entrepreneurs to change or update the way there are doing business in this era to increase their business profit with less operating cost. Hopefully they will realize that they have to be where their customers are, and it is clear that their customers use social networks. At the same time, MARA entrepreneurs should know how to access the customers and potential customers and understand the market to choose the right platform or the online channel for reaching those potential customers.

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BLENDED LEARNING: PEDAGOGY, LEARNING STYLES, AND ASSESSMENT ACTIVITIES IN THE CLASSROOM

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Frog-Virtual Learning Environment (Frog VLE), pedagogy, learning styles.

ABSTRACT
A change on the education system is essential in order to produce positive impacts to the success of students; hence, preparing them for the 21st century globalization challenges. The advanced technology nowadays which is both dynamic and futuristic ought to catalyses innovation within the education system of Malaysia. As such, the Ministry of Education (MOE) of Malaysia has taken proactive steps and innovate the education system in line with the current technology. Smart school is one of the results of the initiative and to ensure the success of the smart school concept, MOE has implemented a blended learning platform known as the Frog-Virtual Learning Environment (Frog VLE). Nevertheless, the Frog VLE remains new and hardly practiced among educationist; therefore, this study aims to highlight the Frog VLE in details and how it can be practice within the classroom.
1. Recognition

Reforms of the education system are essential in producing a positive impact on student success and prepare students for the challenges of 21st century globalization. Positive impact expected, highly dependent on accurate collaboration of all parties. by Wang Han and Yang (2015), The interaction of all parties must be balanced and fair role in shaping the success of an effective combination or system changes. Technological development is so dynamic and futuristic (Kong et al., 2014), Should be a catalyst for change in the education system in Malaysia.

Recognizing this situation, the Ministry of Education (MOE) has taken proactive steps in drafting the new changes in the education system in line with the current technology. Among the changes are clearly visible Schools Smart Plan, where this strategic plan initiated in 1999 (Smart School Project) with a rating of smart schools selected schools. Basic information and communication technology (ICT) are perfectly prepared to schools to create a rich learning environment technology (integration of technology in the learning process). Finally now, almost all schools in Malaysia, nearly 10,000 schools have been provided with ICT (Project 1BestariNet) for the realization of the smart concept of the (Ministry of Finance, 2013),

With the new initiatives to ensure the success of the smart school concept, MOE has introduced a virtual platform which is known as -Frog Virtual Learning Environment (VLE Frog). VLE Frogis a cloud-based platform (cloud-based) aims to provide a virtual learning environment characterized by flexibility and mobility. Using this platform, all information and soft copy files stored on cloud storage (cloud storage). It can be reached at anytime and anywhere via the internet for the purpose of learning (1BestariNet Project, Ministry of Education).

However, the smart business school was reported as status failed to achieve its objective, the Auditor General's Report, Series 3, 2013. This failure may be due no dissemination of pedagogical methods, learning styles, and assessment activities in the implementation process in the classroom. Most teacher-teacher interviewed think that they have not disclosed the rules and measures in order to integrate blended learning in teaching and learning. Based on these problems, this paper aims to reveal the pedagogical methods, learning styles, and assessment activities have been working to improve the business performance of blended learning in the classroom.

2. Blended learning

Learning environment that exists on the integration of technology in the learning process directly produces a mixed approach to the learning environment. Mixing is meant is the face to face learning (teachers and students) and online learning or technology as the main medium of instruction. In order to implement a blended learning in teaching and learning, there are various things that need to be addressed, among them is the pedagogical aspects, learning styles, the activities that are appropriate for them and finally teachers
should know how to evaluate the success of blended learning. Next description will discuss how blended learning can be successfully implemented through the following methods.

3. Pedagogical methods in a blended learning

Since the technology is so rapidly and dynamically use in teaching and learning, Savin-Baden et al. (2010) has noted that the technology has been overcome pedagogy. Tsai (2014) also explained that students and teachers now urgently require a form of pedagogical practices towards technology-web environments. Therefore, it is proposed to teachers, in order to plan and design of learning (pedagogy) which coincides with the specific needs of today's students. Parallel to a blended learning approach, students should be exposed to a significant learning experience and an opportunity to improve their learning achievements, with the active involvement in the learning activities for traditional (face to face) and online learning (ICT-based). Besides, Banyen, Viriyavejakul, & Ratanaolarn (2016) recommend appropriate pedagogy for blended learning is learning to face (face to face) and pedagogical practices ICT based learning.

In short, face-to-face learning is learning-based real-time interaction between teacher and student in the classroom to help students transfer of learning. While learning via ICT is using web-based learning (example: e-learning, VLE, LMS, Moodle and MOOC) as the main platform learning process. Bath & Bourke (2010), noted it should focus the use of blended learning technology to improve the quality of the student learning experience through interactive learning activities (online) and supported by a conducive face interaction between students and teachers in the classroom. For example, using of technology to support communication and collaboration, assessment and management for the success of the learning process.

4. Models and Learning Styles in Blended Learning

There are many models that reflect the trends and options for students to receive and process information in the process of learning (learning styles). Among the models of learning styles, including; Felder-Silverman model 1., 2. and 3. Kolb model Myers-Briggs Type Indicator. However, in the study of Laine, Myllymäki, and Hakala (2015). they were referring to the Felder-Silverman model in explaining the learning styles appropriate for a blended learning approach. Where, Felder-Silverman model, divided into four dimensions, namely; active-reflective, sensing, Intuit, visual-verbal and sequential-global. Findings from Laine et al. (2015) shows that students who have active-reflective learning styles have a greater chance to digest a blended learning outcomes. In Felder-Silverman model, active-axis reflective learning styles generally reflect the trend; how students process information. Whereas, active students are more likely to learn while doing something active and they are also very good work in groups. While, the reflective learners prefer to think before they are attempting an action.

The advantages of active learning style-reflective in helping students succeed in learning a blended learning process is believed to be influenced by the fact that students are
active (active) benefit from interactive learning and interaction between teachers and students. While students reflective (reflective) abundance in online learning that provides / supports learning based on student choice (learning based on the ability of students or self-paced learning) (Laine et al., 2015), The combination of features and characteristics of this learning produces learning styles that are appropriate to a blended learning approach.

Whereas, in the study of Akkoyunlu & Soylu (2008), contended that there was no significant difference in student achievement based on students' learning styles. Analysis on learning styles based on Kolb’s model shows that students with style "assimilators" is the most active student learning in blended learning. However, the findings from Cakiroglu (2014) has different views, where the findings of his study showed a significant relationship between students' learning styles, study habits and performance of integrated technology is online learning. Formulation studies show learning styles "Vergers and Accommodators" is correlated (have a strong relationship) with the score of high, thus reflect an exact match between learning styles and study habits and methods of instructional (Learning blended) can produce the performance of academics who better. Therefore, the design of integrated ICT learning (blended learning) should be well designed to produce effective learning. So, for designing learning (blended learning) effective, appropriate strategies should be used to address the different learning styles of students. Hence, the different learning styles can be adopted in blended learning pedagogical practices.

5. Activities blended learning

Blended learning activities are highly dependent on pedagogy, learning experience, learning resources and models that are used to implement the learning process (Bailey et al., 2015; Bath & Bourke, 2010), The following table is a summary of a blended learning activities that can be implemented based on the pedagogy of learning.

<table>
<thead>
<tr>
<th>Table 1: Activities blended learning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Learning resources</strong></td>
</tr>
<tr>
<td><strong>Face to face learning</strong></td>
</tr>
<tr>
<td>• Textbook</td>
</tr>
<tr>
<td>• Workbooks</td>
</tr>
<tr>
<td>• reading</td>
</tr>
<tr>
<td>• Note teacher</td>
</tr>
<tr>
<td>• Table learning</td>
</tr>
<tr>
<td><strong>Learning with ICT</strong></td>
</tr>
<tr>
<td>• Reading is online</td>
</tr>
<tr>
<td>• Online learning guide</td>
</tr>
<tr>
<td>• Website links</td>
</tr>
<tr>
<td>• Activities of self-paced online learning</td>
</tr>
<tr>
<td>• Schedule online learning</td>
</tr>
<tr>
<td>• Discussions, forums, debates and role-play on-line (virtual classroom)</td>
</tr>
<tr>
<td>• Small group work in virtual (meeting room)</td>
</tr>
<tr>
<td>• Build and share online learning</td>
</tr>
<tr>
<td><strong>Collaborative</strong></td>
</tr>
<tr>
<td>• Small group work</td>
</tr>
<tr>
<td>• Discussion</td>
</tr>
<tr>
<td>• Main role</td>
</tr>
<tr>
<td>• debate</td>
</tr>
<tr>
<td>• project work</td>
</tr>
</tbody>
</table>
6. Evaluation of Blended Learning

According to Rossett & Frazee (2006), Blended learning should be assessed based on 1. The process of continuous learning; 2. Transparent and comprehensive. There are several criteria that can be referred to perform an evaluation of a blended learning process. These are; 1. The student's willingness and ability to achieve learning objectives (complete a course of study), 2. Active participation of students, 3. Reaction of students to learning activities, learning outcomes and 3. Mastery the content knowledge and skills required. Therefore, Bath & Bourke (2010) and Bailey et al. (2015) suggests an evaluation of blended learning must be carried out based learning strategy used (refer Table 2).

Table 2: Evaluation of a blended learning

<table>
<thead>
<tr>
<th>Valuation</th>
<th>Face to face learning</th>
<th>Learning with ICT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Examinations / Tests</td>
<td>Online testing</td>
</tr>
<tr>
<td></td>
<td>project</td>
<td>Ratings of online student assignment</td>
</tr>
<tr>
<td></td>
<td>Performance evaluation</td>
<td>Task (groups) or individuals through a virtual learning environment</td>
</tr>
<tr>
<td></td>
<td>Essay / writing</td>
<td>Involvement</td>
</tr>
<tr>
<td></td>
<td>Oral exam / quiz</td>
<td></td>
</tr>
<tr>
<td></td>
<td>products</td>
<td></td>
</tr>
</tbody>
</table>

Source: Adaptation of "Getting Started with Blended Learning" by Debra Bath and John Bourke, 2010, p.4.
7. Conclusion

In summary it can be concluded that blended learning is a teaching method that requires pedagogical methods, learning styles, and evaluation of its own activities. Teachers should understand more thoroughly the appropriate pedagogical methods to implement blended learning. In addition, teachers should also be able to identify their students' learning style before implementing blended learning. The activities should be designed to involve the use of technology and teaching aids attractive. This is because a blended learning is a process of learning founded by the successful combination of methods of delivering the range, compliance with the models of learning to meet individual learning styles. This process is conducted in an interactive learning environment between virtual learning environment and learning face to face in order to achieve learning objectives.

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POVERTY CHALLENGES IN EDUCATION CONTEXT: A CASE STUDY OF TRANSFORMATION OF THE MINDSET OF A NON-GOVERNMENTAL ORGANIZATION

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ABSTRACT

This study attempts to explore poverty challenges in education context faced by a non-governmental organization (NGO) responsible in carrying out its corporate social responsibility to the community. Research questions of this study are to explore the meaning of poverty based on the NGO definition; identify the efforts created for the community and the impact from those efforts. This study was carried out using case study. Respondents were selected through purposive sampling that involves only three respondents who works for the selected organization. The data collection techniques used in this study are semi-structured interviews, document analysis, observation and reflection notes. The study found that the cause of poverty is closely linked to economic factors and mindset poverty. With regards to efforts carried out by the NGO, the study found that the impact on the target group is quite satisfactory. Efforts undertaken by the organization has helped a number of poor students from the trap and vicious circle of poverty. Continuous efforts by NGO in this study can serve as a guide for future studies in addressing mindset poverty issue in this country.

Keywords: poverty, education, non-governmental organizations (NGO), corporate social responsibility.
1. Introduction

Since the country's independence on August 31, 1957, the Malaysian government has initiated various efforts to ensure that all citizens throughout the country have equal rights in terms of standard of living, education, health, welfare and many others. Regardless of their differences whether they live in urban or rural areas, the policies enacted by the government has always been concern for the welfare of its citizens. However, there are still problems faced by these people such as poverty, education, health etc.

To ensure that all policies are implemented as planned, the government has collaborated with relevant implementing agencies to assist them in their objectives and goals for community development (Amran & Devi, 2008). The agencies appointed play an important role in ensuring that the plans are comprehensive addressing all aspects namely budget, political factors, economic, social, people etc. In addition, the government also collaborates with corporate companies in addressing the various aspects mentioned (Mustaruddin, Norhayah & Rusnah, 2010). This collaboration is termed Corporate Social Responsibility (CSR). CSR is a concept that encourages every company or organization or firm to give their support and assistance on welfare of the general public (Chapple & Moon, 2005; Vilanova, Lozano & Arenas, 2009). At the very least, CSR ensures that the welfare of society are well taken care of and not shouldered by the government alone (Mustaruddin, Norhayah & Rusnah, 2010; Abdifatah, 2013).

In order to help people out of poverty, education is a platform for them to get a better living especially in the current economic situation. What is the function of education to individuals, communities and countries? According to Amir Hasan (2009), education contributes to the sustainability of society and therefore it is necessary to support the overall goals of the community. The existence of school and its system are due to insistence on the need to provide labour and division of labour in society (Drucker, 1994; Hussein, 2012). However, as the country progresses, development becomes dynamic and modern, education becomes more important than before that it does not only serves to provide labour but also contributes to diversity (Nisar, 2013). This education is not new in the public structure but it has long been obligated on every individuals as stated the Quran:

O you who have believed, when you are told, "Space yourselves" in assemblies, then make space; Allah will make space for you. And when you are told, "Arise," then arise; Allah will raise those who have believed among you and those who were given knowledge, by degrees. And Allah is Acquainted with what you do.

Al-Mujadalah (58:11)

In addition, the problem of poverty can be understood by understanding its vicious. This scenario occurs due to the standard of living that begins from a poor family that is unable to provide educational needs to its family members, and thus become a tradition passed down to their children and grandchildren. The failure of parents to provide education to their children making it difficult for them to change the condition of their lives (Drucker, 1994; Hussein, 2012). The need for education is very important because it is a platform for people who wants to change the condition of their lives and their families.
2. Education and Poverty

Education has become one of the basic human needs. Nowadays, getting basic needs such as food, shelter and clothing require education to ensure better living condition. Without knowledge and education, most people could not live a better quality of life now. However, poverty is also seen as an obstacle for someone to get good education (Drucker, 1994; Hussein, 2012). Naschold (2012) stated that households are impeded by poverty on several factors, namely poverty, physical weakness, poor endurance, marginalized and powerless. Another study by Barrett & Carter (2013) also added some factors for poverty trap namely poor health, lack of education and illiteracy, lack of interaction with the educated, lack of involvement in public decision-making and limited acceptance to current/latest development.

2.1 Theory on Vicious Circle of Poverty

This theory was first introduced by Ragnar Nurkse through his book 'Problems of Capital Formation in Underdeveloped Countries' in 1953. This theory explains situation of poor families where the head of household (HOH) is unable to provide the basic needs of the household such as food, clothing, shelter housing, education, health and many others (Bass, 2011). Poverty will continue to be inherited by future generations if the earlier HOH still unable to provide all the basic needs. Nurkse has detailed his theory through a source of income in developing countries that has not yet fully developed will cause the whole household suffered the same poverty problem. In a nutshell, this theory can be understood through Figure 1.

![Figure 1: Nurkse’s Model of Vicious Circle of Poverty (VCP)](image-url)

According to Figure 1, starting with demand, low income will cause low purchasing power among the poor as a result of an equally low productivity. Thus this chain will indirectly reduce their ability to save and invest. While on the supply side, low income will also result in low saving power capacity. This is because their income is only enough for
their daily needs (Bass, 2011). This in turn, this will lead to lack of capital and low productivity. This cycle will eventually revert to lower revenue.

2.2 Culture Poverty Theory

Sharing the same poverty definition as Nurkse, Oscar Lewis is a sociologist who also looks at the issue of poverty as a serious phenomenon throughout the world. This theory was first developed based on a study conducted by Lewis entitled 'Five Families: Mexican Case Studies in the Culture of Poverty in 1959'. The results of his research found that poverty becomes culture among the poor that will remain despite being in a different place and time (Valencia, 1997). Lewis saw this poverty is not caused by economic factors, but has become a culture among the poor community.

He views that poverty was caused by adjustment of the poors to new living in a city. Thus, Lewis has identified cultural characteristics through his observation of the poor in his research of 4 stages. The stage begins with the society, community, family and individual (Valencia, 1997). Michael Harrington has developed the cultural values of the poor brought by Lewis through his study entitled 'The Other America: Poverty in the United States Harrington' (1962) also noted that the situation is known as the inherited poverty (Valencia, 1997; Mohd Fauzi Mohd Harun and Ahmad Fauzee Abdullah, 2007).

2.3 Social Stratification Theory

If Nurkse see poverty was caused by economic factors and Lewis views it from culture and thought perspectives, Kinsley Davis in 1942 also sees poverty as a result of relative position and the different roles of both culture and thought in society. This means that the position of the poor is at the lowest level in the society structure (Valencia, 1997). The strata of society were once a very important aspect in society. For the elites, like kings and religious individuals are highly regarded, considered as important figures and respected by their society.

Apart from that, currently there are broader characteristics of the poor (Naschold, 2012; Barrett & Carter, 2013). Relatively poor is more visible everywhere. The previous structure of society regarded farmers, ranchers and others at the lower level before the level of slaves. Now the farmers, ranchers and others are more advanced along with the middle class community. Those who are perceived as poor are now homeless people, the group who make their own choices for their lives.

3. Corporate Social Responsibility on Education Development

A strong business organization is the one that makes good profit. Profit gains here not only refers to effectiveness of its leader, but also refers to benefits that they gain from the community. Therefore, it is an obligation for firms to contribute something to the
community known as social service (Chapple & Moon, 2005; Mohd Fauzi & Ahmad Fauzee, 2007; Norajila & Joni, 2010; Abdifatah, 2013).

According to Maimunah & Abdul Rashid (2011), there are four corporate social responsibilities towards the Malaysian community, which are responsibility to the economy, law, ethics and philanthropy. Maimunah & Abdul Rashid has also devoted some analysis made by Secchi (2007) concerning theories involving CSR. Theories on CSR can be divided into 3 categories, namely 1) Utility Theory, 2) Theory and Management 3) Relevancy Theory. Utility Theory explains that CSR exist as an ethic in corporate business. He also explained that community activities are an investment and this investment can also be profitable and returns back to the firm. If the Utility Theory is considered the community as an investment, Management Theory on the other hand views that the development and progress of a society is an indicator to economic performance of the firm (Chapple & Moon, 2005). Relevance Theory shows us the relationships that exist between the firm and its surroundings in terms of society and business, stakeholders, civil society and corporate social contract (Secchi, 2007; Vilanova, Lozano & Arenas, 2009; Abdifatah, 2013).

This study attempt to explore the meaning of poverty based on the NGO definition; identify the efforts created for the community and the impact from those efforts.

4. Research Methodology

This study is carried out using case study. Creswell (2013) stated that the case study involves a lot of internal and external elements such as emotions, feelings, motivation, empathy and desire related to natural conditions of the individual. The purposive sampling method is used because it fulfils the criteria desired by the researchers. Data was collected through interviews, observations and document analysis and notes of reflection at workplace from May until July in 2015. For the record, one of the researchers is employee of the NGO. All information and data were recorded and analyzed to build some codes manually based on the objectives and themes of the study. Since, each study must be conducted in good ethics, therefore, prior to interviews conducted, the respondents were notified earlier on confidentiality and approval for recorded interviews was requested.

5. Findings and Discussion

CSR has its own implications when looking at the phenomena experienced by each function of society, particularly the structure of society that is interdependent and closely related in nature (Secchi, 2007). In the feudal era, education is not something that is very important as compared to interests of political, religious and economic. But now with the arising issues on politics and economy, it seems that education is now necessary as it deals with the society condition of living (Drucker, 1994; Hussein, 2012).

Based on the objectives of this study, the findings can be divided into three areas, namely, poverty, the efforts of NGOs and impact of NGO efforts.
5.1 Poverty

Poverty can be divided into two parts, namely absolute poverty and relative poverty. In brief, poverty refers to individuals who already have an income below the poverty line set by the government (Naschold, 2012; Barrett & Carter, 2013). Relatively poor refers to the middle class society that is undoubtedly poorer than the higher society group. However, given the economic situation nowadays, individuals who used to be in the middle class can also be almost equal to the lower society group.

Thus, classification of the poor seems to lose its relevance compared to poverty phenomenon nowadays. A new meaning for the poor can be divided into two parts, the economic poverty and mindset poverty (Valencia, 1997). Interview with the respondent found that:

"Erm... definition of poverty is actually based on a number of factors, which are both economically and in terms of the mindset (pause). In economic terms those who have an income that is err... scarce (clears his throat) compared to others while my mindset poverty is err... a new expression for the target groups of the poor is mainly in terms .. of erm.. behaviour, attitude and so on. "

(Attachment A1, 3-11)

Economic poverty still refers to the amount of income while mindset poverty refers to the behavior, attitudes etc. Mindset poverty is a new term that exists nowadays for the poor group. Mindset poverty as observed can affect anyone even though their economic situation is at the satisfactory level because it grows from the inner self of the individual and affects other generation.

How does mindset poverty takes place? Mindset poverty can be associated with Culturally Poor Theory stated by Lewis that poverty is not due to economic factors, but has become a culture among the poors. Some of the obvious characteristics are they often keep away from society, lack of participation and lack of integration in society. This was stated by the respondent through his observation of the organization adopted children namely:

"Ok, from our observation err.. poor students have low self-confidence. They are too embarrassed to go forward, too shy to express their views, too shy to interact. This we can see, yes, I can see this during our Adoption Foundation program when we take care of foster children of more than one hundred and fifty kids and this is the picture that we can see when we gathered in specific programs that bring them together. Although they have joined this program for three years, for example, some four years but they still do not know each other. "

(Attachment A7, 298-314)
According to the respondent, their (foster children) were included in the program for some time but they still have the self-distant attitude meaning they are not eager enough to get to know other people in the same program. When asked whether they know each other they seem a bit shy to interact. This is in contrast to students who live in cities where they have higher self-confidence level:

“He's different with students in urban areas if they went to summer camp or anywhere else, one hour is enough for them ..”

(Attachment A8, 323-326)

With regard to education dropout issue, respondents indicated that the dropout problem should not happen in Malaysia as the government always ensure that education is accessible to all citizens who are eligible. The government also provides many schools across the country, even for poor students they are exempted from paying tuition fee and provided with Poor Students Trust Fund (PSTF), supplementary food program and many more. Poverty stems from mentality of their parents who are not concerned with education and do not carry out their responsibilities.

"Aa.. for me not because our country wherever the poors live the government will always helps no matter they live in rural areas, in urban, rural and so on because .. for poor children as they are excluded from paying tuition fee and so on, have also given what is called food supplement for poor students in the school and there is also aa .. sagu money (inadvertently) aa .. pocket given to them, and KWAM program .."

(Attachment A1, 31-40)

The government does not focus only on rural students but also to those in remote areas of the indigenous peoples. Definitely it is quite difficult if there are children in the neighborhood at school ages who face difficulty to go to school. Accordingly, the Department of Orang Asli (JAKOA) took the initiative to hire a van for transportation to ensure that these children do not fall behind in their studies. According to the respondent on his recent visit of an indigenous village in Kampung Bawong, Sungai Siput found that the government also provides dormitories as residential place for Aboriginal children so that they can give full attention to their studies.

"Ok. Aa .. The situation is somewhat isolated case for me but nevertheless the efforts of what has been done for me by the state government to address the problems of those in rural areas. So such isolated cases are mostly likely to happen to me in Sabah and Sarawak but I don't think this happen in the Peninsular areas. But for example in villages of indigenous people own even though it's far hurmm.. hilly and so on, but the government has always helped for example aa .. JAKOA err .. I know they help to pay transportation
money for the van to send students to school every month. They pay for ermm.. every month to make sure the kids were going to school. And if we see aa.. (the sound of the phone ringing, there is little interference) at .. on .. (respondents answer a call while) so for example in some areas in Ulu Kinta for example, then recently I visited this village in Perkampungan Bawong in Sungai Siput the government actually provide hostels for the aboriginal students people so the kids can totally focus on learning. Ok. "

(Attachment A2-A3, 79-102)

*Mindset poverty* does not stem from major issue and also involves many individuals rhythm but it occurs as a result of circumstances over time. It is about behavior, thoughts and attitudes of an individual in trying to change towards a better life. Respondents felt that if an individual still remains in negative mentality, the desire to succeed will always be at a low level. They will remain trapped in poverty.

"Ok, this mentality exists as a result of the current situation yes current situation. But the current situation, we have to remember our lives err ..no no-one can change the fate err .. er ..ourselves unless we ourselves want to change. Ok, so if they still keep such mentality which is negative and so surely their hope to change, to be successful are extremely at low levels compared with those who have middle class standard."

(Attachment A5, 194-204)

Should this happen, the values of this culture will finally be passed down to the next generations. Therefore, the parents or the older generation like their forefathers, they should be strong, firm in fighting the diseases of poverty. *Poverty trap* as stated by Nurkse (1953) should no longer be relevant nowadays. If this continues then poverty is not the impact of being poor, but being poor is the cause for poverty. To be exact, being poor is the root cause for poverty (Mohd Fauzi Mohd Harun Abdullah Ahmad Fauzee, 2007; Naschold, 2012).

5.2 The efforts of the Non-Governmental Organizations

Government has played a role to overcome poverty, not only economically, but also through education that is seen as the starting point that cause poverty if it is not curbed (Hargreaves & Shirley, 2009). However, these efforts will not run smoothly if all the responsibilities are shouldered only by one party (Amran & Devi, 2008). Therefore, the existence of non-governmental organizations to some extent will be able to assist the government through CSR (Mohd Fauzi & Ahmad Fauzee, 2007; Norajila & Joni, 2010). A firm is not only for profit alone but they also carry out social responsibility as giving back to the community in the name of social service.
Over the past five years of establishment of the organization, the organization is responsible in the first run of the adopted children programme held by the organization. Those chosen were more than 150 students who came from poor families with academic potentials. Thus, the welfare of their education are monitored and recorded from year to year to ensure that they will not be left behind in education despite living in deprivation. The organization has been giving pocket money to them on a monthly basis and provides them with school necessaries at the end of each school year under 'Back To School' program. However, improvements have been made over the years; the organization does not focus only on the adoption of children but has also developed the program to almost all students in Perak state. With the help of local officials, the State Education Department, schools, village chiefs, headmen and individuals, now the number of recipients has reached almost thousands of poor students.

According to the respondent, characters of the students also are quite different than those who come from middle class families. For adopted children in the organization, it was observed that they lack of self-esteem and being aloof at most times.

"So this is how we can describe that low he has what .. (cough) self-confidence, he had an interaction with friends and so on. Because they are a bit afraid. Scared, shy and so on and keep to themselves during the program."

(Attachment A7-A8, 316-321)

In addition to providing their welfare needs, the organization also runs programs in the form of motivation, study tour, camp center visit and so forth to encourage their will to succeed and increase self-confidence. Last but not least, motivational programs are also targeted to selected students in each district.

Every programme is not shoulerded to the organizations alone but they are implemented in collaboration with other agents of change in the name of corporate social responsibility. Example given by the respondents is a program which was carried out since two years ago is collaboration with Maybank. Maybank has sponsored nearly 200 poor students for tuition on weekly basis. The selection of students is based on students who will be sitting Sijil Pelajaran Malaysia (SPM) exam this year. Two critical subjects chosen for the tuition class are English and Mathematics.

"Ok, aa ..we always collaborate with other organizations such as aa .. our recent collaboration is with the banks. So Maybank sponsored nearly 200 poor students to what aa ..attend weekly tuition err .. at several schools ... "

(Attachment A2, 62-67)

The organization also collaborated with another organization in Perak, namely K-Silver Incorporated to conduct a number of seminars to expose students on the importance of information technology. The program, known as Knowledge Application, New Media, Communication and Technology, Integrated Learning or in its abbreviations KANCIL are
programs that emphasize education for the 21st century that is competitive in line with advances of information technology nowadays. Throughout the program, in addition to new knowledge, students can also enjoy the fun and educational atmosphere. Indirectly, this program can motivate students.

"In addition, we also collaborate with other government agencies such as KPerak where we make the seminar, a number of seminars to expose rural students about the importance of IT and business. and we will strive for this from time to time."

(Attachment A2, 67-72)

Following the interviews, the respondent also shared information on social responsibility program that will be held by the organization in collaboration with Maybank Foundation RISE program for next year. According to the respondent, RISE is a program to help build the capacity of people with disabilities (PWDs) in each district in the state of Perak.

"Err...we are in discussions with several other agencies or corporations to work together with us for us what is trying to change the mindset of this poor community in Perak. Ok, then... The most immediate example in January we will be together with the one that is provided by Maybank Foundation under a program called RISE (respondents mentioned RISE), which we will create in every district for example to help disabled persons with disabilities in every area for their business. For example, in business and have more income than what they earn now. So we already have a collaboration with a company for us to tackle the disabled groups..."

(Attachment A5, 211-224)

Although the program is not directly in the field of education, this program can change the mindset of the poor families especially those who are having family member with disabilities. To remove a person from the poverty trap, it should be targeted not only to children but also to their parents to ensure that their children will get a better life in the future.

5.3 Impact from NGO efforts

Every problem that is faced with determination and effort is definitely going to pay off. It depends on whether these efforts give positive and negative impact (Mohd Fauzi & Ahmad Fauzee, 2007; Norajila & Joni, 2010; Nisar, 2013). For positive effect, the improvement and enhancement efforts must be intensified. Otherwise, the efforts undertaken must be put under close review and improved to ensure they are not wasted and become meaningless.
Throughout the organization initiatives to help the destitute students, their effort begins to show success. According to the respondent, there are some individuals who were once sent for seminars, tuition etc. and has continued their studies at university level. It is a great success for the organization even if not as a whole but the efforts have started to show positive outcome.

Speaking of the poverty trap and vicious circle of poverty, during the respondent’s visit and participation in the program he found that a number of children now have also successfully stepped out from the poverty trap. Under the program known as Travel Syawal held recently in conjunction with Aidilfitri celebration, the organization paid a visit and conducted census to the target groups. For example there is one poor family but the son has managed to become an engineer in a well-known company i.e Petronas. Seeing such situation certainly brings joy and pride to the organization.

"Erm ..yes, in fact we are the ones who watched from time to time when we went down to the field. Indeed, among poor children there is actually successful and actually become .. (think) be outside of what we imagine. Some became engineer with Petronas and others so thank to Allah. But this happened to me can only happen if the attitude and mentality of the parents are positive."

(Attachment A8, 344-353)

With reference to the tuition program held by the organization in collaboration with Maybank has yet to show results because they are still waiting for their exam results. However, the organization will not ignore the students in case their results turn out to be unsatisfactory. The organization is prepared to help them in other skills courses such as courses in Giat Mara, Community College and many others.

"Ok, for those of us who we are what we (think) what is err ..err ..we’ve guard their data with us so this example should they fail at Form Five secondary level, we still do this to help. For example we will put them to places what to get aa ni ..service .. ermm of skills such as Giat Mara and so on, so this is also one of the business we are the ones to ensure they have a better future."

(Attachment A3, 122-132)

Meanwhile, the students’ performance will still be put under supervision and recorded in terms of their attendance and excellence to ensure they are not overlooked or left out during the tuition session carried out. The organization eventually would like to see them achieve success in the end.

Every human being wants to achieve success. Remembering the days of school a long time ago, when asked about ambition, almost all of us would aspire to become teachers, doctors, engineers, lawyers and the list goes on. No one wants to work as farmers, laborers, general workers who are regarded as lower class work. Nowadays all trying to earn
a good living, and as far as possible do not want to work in lower occupational groups. When asked about the impact on the structure of society to the respondent, he has his own view.

According to the respondent, the margin of the economy wealth for each country is different. The revenue obtained for lower class groups are also very different. There may be some countries that pay their lower class workers thousands of dollars, while for some countries they only receive hundreds of dollars. In addition, most tasks in the developed countries such as laundry and cleaning services, general services have been implemented through robotics. Accordingly, high education still does not made any changes to the structure of society.

6. Suggestions and Conclusions

Education is an early start for a person to get a better life. CSR does not harm or benefit any party but it brings a win-win situation (Vilanova, Lozano & Arenas, 2009). The attitude for social responsibility is also supposed to be carried out in team and mutual assistance in each individual since childhood. Education is a mechanism to get out of poverty (Hargreaves & Shirley, 2012; Hussein, 2012). Definitely great effort is required but it will eventually pay off. Following all the efforts carried out in this study, it can be suggested to non-governmental organizations to implement programs of assistance in the form of education in which all materials and goods to be supplied in a box. Therefore, apart from running the program motivation, educational aid box can also be given as a gift to the students. Contents of which can be filled into the box is in the form of stationery, motivational books, reference books, notebooks etc.

Apart from running programs to students, motivation program should also be carried out to the parents so that they understand the importance of education to help their families out of the poverty trap. The non-governmental organizations can also work with the Ministry of Education to encourage learning outside the classroom (Secchi, 2007). The learning environment in the classroom for a long period of time may sometime cause boredom to the students.

It is also proposed for future research that respondents must come through a variety of parties. For the efforts that have been carried out, the study needs review on their outcome and impact on non-governmental organizations, schools, students, parents and the community. Researchers need to see the efforts that are undertaken to assist the school in governance, ease the burden on parents, improve student performance and bring prosperity in society. Observation should be done consistently on behavior and attitudes of students and parents before and after the programs held by non-governmental organizations. Data, performance records and their presence can also be monitored to see the success of the programs. Not only educational achievement, school and home environment also play important role in identifying deficiencies and constraints faced by students.
Numerous suggestions were proposed for improvement of education in the country, both to the researchers and agents of social change (Amran & Devi, 2008; Nisar, 2013). Even so, every plan should be carried out with good framework to ensure that they are implemented successfully. However, as long as self-intention is pure, all the effort will undoubtedly receive good blessings and all things will run smoothly. Social responsibilities is not something meaningless, in fact it is something noble and highly respected and give long-lasting impact on community and nation (Chapple & Moon, 2005; Abdifatah, 2013).

References


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