# Parallel Sessions: Overall Schedule

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<td>Session 2C</td>
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<td>&lt;Sub-theme B: New Learning&gt;</td>
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<td>14:00-15:30</td>
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<td>Sub-theme B</td>
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<td>Sub-theme C</td>
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- **1**: Slot number within the Session
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The goal of STEM education is to provide students with skills necessary for success in today’s workforce. These skills are defined as real world problem solving, inquiry, and creative and critical thinking. This can be achieved by moving towards student-centered teaching. This paper will describe a STEM intervention Program for 60 primary school students which employed an engineering design process as its instructional design. This paper will also discuss on the outcome of the program on the student thinking and communicative skills. Students were engaged in designing a prototype to solve a world challenge by applying science and mathematics concept in the project. The process of designing the prototype was found able to give autonomy to the students to think, plan create and test their ideas and improve on it. During the process their thinking skills and communicative skills were put into practice. Teachers were given training on how to execute this program which sees them as the facilitator and students as the active learner. The advantage of this program is that it provides students with informal practice creatively solving problems long before they need to decide on a course of study for college. The opportunity to practice and understand engineering skills opens up a world of possibilities for the students to experience and gained knowledge as to what their careers may be like. Using engineering design principles to complete hands-on, problem-based projects also deepens the student’s understanding of scientific processes and emphasizes on the 21st Century Skill.

Keywords: STEM Build, engineering design process, thinking and communicative skills

INTRODUCTION

STEM education is much talked about all over the world. STEM education practice
is often in the form of accelerated or enriched science and mathematics education rather than integration (Johnson, Peters-Burton & Moore, 2015). Learning concepts to pass test should not be the main aim but learning what it is like to think like a STEM professional and develop the requisite STEM habits of mind. STEM workforce must have strong thinking and communicating skills. Thinking skills help STEM workforce in problem solving to detect mistakes, gather relevant information and understand how different parts or systems interact with each other. Thinking skills are needed to develop innovative, cost-effective solutions (Bureau of Labor Statistic, 2015). STEM Build program was developed specially to cultivate and nurture students’ thinking and communicative skills.

**STEM Build Program**

It was developed for elementary level. Children in this age level needs to build connections and foundation in science and mathematics so that they are able to comprehend as they go further into secondary level. This is a crucial stage to inculcate interest in science and retain the interest by giving opportunity for them to engage as they proceed further in school. This program was developed based on three STEM principle; a) Integration of STEM with the School Science Curriculum; b) continuous involvement of the community and industry; and c) connection with secondary science education. Projects in the module were developed based on three themes in the primary science curriculum; life science, physical science, and technology and sustainable living. Projects in the module are all engineering based. In every module, it follows four instructional constructs; a) theory and concept; b) activity; c) project design and develop (engineering design process); and d) showcase. 20 teachers were given training using the modules in three phases in which teachers was asked to carry out at least one activity from the module to their students and the program was finalize with a one day STEM camp with 60 elementary school children.

**THINKING SKILLS AND COMMUNICATIVE SKILLS**

Thinking skills comprise of creative and critical thinking skills. Creative thinking is cognitive process that provides means to identify the problem and give rise to the generation of multiple alternatives on solving a problem (Allen & Gerras, 2009). Through critical thinking, alternatives are analysed and judged for effectiveness and appropriateness in solving the problem. Communicative skills are the ability of the students to convey their ideas and convince others to select their ideas or discuss on how to combine ideas to produce the best idea.

**WHEN DO THE THINKING AND COMMUNICATIVE SKILLS OCCUR?**

The instructional design of the module employed the engineering design process;
imagine, design, create, test and improve. The start of the projects, teachers will pose a problem and students are required to come up with a prototype to solve the problem. Students will be facilitated using the 5 stages in the engineering design process to solve the problem. During these 5 stages of the process, children have to use their thinking and communicative skills to brainstorm (imagine), come up with a design and select the best design (design), based on the selected design they develop/built their prototype (create). The students have to plan what to test on their prototype (test) and lastly decide on what and how to improve (improve). Teachers act as facilitators giving them the problem to solve using the 5 stages of the engineering design process. Students in each of the stages showed interest and were engaged in the activity. They were discussing and explaining their solutions and design with each other.

60 students were divided into 4 big groups and 8 projects were carried out with teachers as facilitators. Students were observed in all the 5 stages of process and field notes were taken. Students carry out the activities within the 4 big groups in smaller groups of 2-3 person. Projects were carry out in groups to ensure discussions and collaborations happen and this also encourage teamwork and tolerance between members.

The findings showed that students for the first project were quite reserve and there was not much discussion but just accept ideas from the first person who offered it. But as they moved on to the next project until the eighth projects students showed a remarkable change in offering to give ideas and defending their ideas when discussion to select the best one. Teachers facilitated the discussion for them to follow all 5 stages of the engineering design process. When students understand the process the flow of the doing the projects were more efficient and engaging. Students showed confidence and able to come up with design and plan to test by themselves and manage to give reflections on the results of the test for improvement. Creativity and critical thinking skills were based on their discussion throughout the process of doing the projects and also on their artifact. The discussion was audio taped. This was then transcribed and analysed based upon Allen & Gerras (2009) definition on creative (identifying problem and generation of multiple solutions) and critical thinking (students analyse solutions and justify the specific characteristic of the solutions in terms of effectiveness and appropriateness). These solutions were in the form of products/prototypes.

CONCLUSION
STEM Build Program using the engineering design process was found to be able encourage and encourage thinking and communicative skills by creating the learning environment for them to be creative and critical in order to solve a given problem. The approach though quite alien to them but they manage to adjust and embrace it and manage to do the projects
successfully. Even though students that were involve in the program came from 20 different schools but at the end of the program they became friends and are able to communicate freely with one another. They also showed they were engage in the activities, enjoyed the programs with the spirit to win the challenge given and most importantly they were happy learning science.

Reference
FACTORS INFLUENCING STUDENTS’ SATISFACTION TOWARDS FULLY ONLINE LEARNING COURSES: A CASE STUDY OF ONLINE DEGREE PROGRAMS FROM ASSUMPTION UNIVERSITY OF THAILAND

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The forces for globalization and Information Communications and Technology (ICT) have become predominant in the social movement nowadays. Technology innovations are massively widespread in both business and educational environment. One of the innovations that most educational institutions gear towards is online learning since it has become strategic mean to promote an effective teaching and learning strategy. Since online learning has been claimed as one of the most powerful tools to transform educational industry worldwide, the insights from end users are paramount. Therefore, the current study is aiming to scrutinize the determinants influencing overall satisfaction towards fully online learning courses. The quantitative research collected data from 336 students’ who have taken online courses. There are six course evaluation factors—content expert, facilitating instructor, courseware, course content, teaching and evaluation methods, and learning support facilities as predictor variables towards the students’ level of satisfaction. The result from the Multiple Linear Regression analysis revealed that teaching and evaluation method is the predictor with the highest degree of influencing students’ satisfaction towards the online courses. Therefore, to conclude, even students study in an online environment at their own self-pace, online students still value interactions and feedbacks from the online course instructors.

Keywords: Course evaluation, online interaction, online learning, students’ satisfaction, teaching and evaluation method

INTRODUCTION

As current, number of courses offered via the Internet-based has been rapidly grown. According to the report from Guide to online schools, in the year 2018, there are over 30,485 accredited fully online degree programs offering in the US alone (Guide to Online Schools, 2018). In addition to that in 2018, there are approximately 5,141 accredited fully online courses offering throughout Asia, based on the report from Online Studies (Online
In Thailand, there are some institutions offered online education programs mostly at the postgraduate level—Assumption University is included. The Learning Management System (LMS) is the main vehicle to deliver content and teaching and learning for online education (Govindasamy, 2002). Learning and teaching occurred in the virtual classrooms—LMS. However, the LMS alone would not be able to justify learning performance, rather, the determinants of the online education itself. Such online education course evaluation factors included content expert, facilitating instructor, courseware, course content, teaching and evaluation methods, and learning support facilities. Bonk (2006) stated that competency of online instructors, course developer skills, facilitator skills, and subject-matter experts were considered as important skills and factors that would affect success of online learning. While the learning support facilities was confirmed to have impact on students’ learning (Martinez, 2003). In learning environment, instead of teaching skills, curriculum or teaching/learning resources that enhance learning process, there is also activity involved (Sharma & Kitchens, 2004). Ozkan and Koseler (2009) found that information quality revealed the strong positive effect towards learners’ satisfaction. Such information quality included course quality, and content relevance (Arbaugh, 2002). Teaching and evaluation methods is one of the motivation strategies that online instructors applied to students.

The current study focused on exploring the factors influencing students’ satisfaction in online education environment as hypothesized as follows.

H_0: There is statistically significant influence on online education course evaluation factors (content expert, facilitating instructor, courseware, course content, teaching and evaluation methods, and learning support facilities) towards students’ level of satisfaction.

RESEARCH METHODOLOGY

The quantitative research collected data from 336 students’ who have taken online courses during the academic year of 2015-2016. There were six course evaluation factors comprised of content expert, facilitating instructor, courseware, course content, teaching and evaluation methods, and learning support facilities as predictor variables while the students’ level of satisfaction acted as criterion variable. The population was graduate students who have enrolled in online program at Graduate School of eLearning, Assumption University of Thailand. The purposive sampling technique was applied for sample selection. The five-Likert scale questionnaire was distributed to the sample at the end of the semesters. The Multiple Linear Regression Analysis was applied for the hypothesis testing.
DATA ANALYSIS AND RESULTS

Descriptive Results

The results from the 336 students revealed that the level of satisfaction on all factors of online education course evaluation factors was rated at the strongly agree level, according to Zikmund’s arbitrary level (2003). The results implied that respondents were very satisfied with all the factors of online course evaluation (as shown in table 1).

Table 1: Descriptive Results (n = 336)

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<th>Std. Deviation</th>
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<tr>
<td>Content Expert</td>
<td>4.34</td>
<td>.54</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Facilitating Instructor</td>
<td>4.32</td>
<td>.55</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Courseware</td>
<td>4.30</td>
<td>.57</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Course Content</td>
<td>4.32</td>
<td>.59</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Teaching and Evaluation Method</td>
<td>4.30</td>
<td>.54</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td>Learning Support Facilities</td>
<td>4.30</td>
<td>.54</td>
<td>Strongly Agree</td>
</tr>
<tr>
<td><strong>Overall Satisfaction</strong></td>
<td><strong>4.40</strong></td>
<td><strong>.63</strong></td>
<td><strong>Strongly Agree</strong></td>
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Multiple Linear Regression Result (n = 336)

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<tr>
<td>Content Expert</td>
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<td>.43</td>
<td>.55</td>
</tr>
<tr>
<td>Facilitating Instructor</td>
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<td>.61</td>
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<td>.56</td>
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<tr>
<td>Course Content</td>
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<td>.09</td>
<td>.60</td>
</tr>
<tr>
<td>Teaching and Evaluation Method</td>
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<td>.00*</td>
<td>.60</td>
</tr>
<tr>
<td>Learning Support Facilities</td>
<td>.06</td>
<td>.35</td>
<td>.54</td>
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R² = 0.5 (*p < .00)

The Multiple Linear Regression was conducted to investigate the influence of the course evaluation factors (content expert, facilitating instructor, courseware, course content, teaching and evaluation method, and learning support facilities) towards the students’ overall satisfaction. The linear combination showed a statistically significant related to the overall satisfaction

F (6, 329) = 55.65, p < .00. The sample’s multiple correlation was at .71 indicating that 5%
of the variance of the students’ overall satisfaction can be accounted for by the combination of the course evaluation factors.

The strength of the predictors showed that only the Teaching and Evaluation method had the highest strength ($\beta = .51$) and showed statistically significant correlation at $r = .68$, $p < .00$, which indicated that 46% of the variance of the students’ overall satisfaction can be accounted for by the change in the Teaching and Evaluation Method factor. The strength of the rest of the predictor ranged from .6 to .13. The formula for the combination of the predictors are

\[ \hat{Y} = .50 + (.06)X_1 + (.06)X_2 + (.08)X_3 + (.13)X_4 + (.51)X_5 + (.06)X_6 \]

**CONCLUSION AND DISCUSSION**

From the research results, it was apparent that among the six factors, the Teaching and Evaluation Method factor is mostly influenced students’ level of satisfaction in an online course environment. It is due to the fact that the teaching and evaluation method is paramount for teaching in a traditional classroom as well as in an online education setting. Students still focus on the way teachers instruct them to do during the course including feedback provided, assignment guidelines, grading system, or evaluation methods. According to Hattie, & Timperley (2007), feedback either negative or positive is considered as one of the influential role on learning achievement. However, the process of providing feedback should not be only informing the correctness, rather the new form of instruction (Hattie, & Timperley, 2007). With the effective feedback, proper guidelines, and guidance from teachers, in addition to the course content provided, students effectively learn best in the online course. In turns, the level of satisfaction would be increased as well.

**REFERENCES**


Abstract
There is an excellent old saying: “To teach is to learn twice.” Peer tutoring is a beneficial way for students to learn from each other in student-centered learning classrooms, where the focus of activity is shifted from the teacher to the learners. The present study investigates the effectiveness of implementing MMU-FET model of peer tutoring program for challenging engineering subjects. The working model of MMU-FET peer tutoring program is first described with its block diagram. The academic achievement of the tutees after attending this peer tutoring program was analyzed and the results are discussed here. The results plotted in the form of graphs show that academic achievement of the tutees after attending this peer tutoring program is considerably increased. Moreover the feed-back from both tutees and tutors involved in this program were collected through questionnaires and analyzed. The results plotted in the form of graphs show that both tutees and tutors involved in this program are benefitted. So it can be concluded that peer tutoring may be considered as one of the pedagogical tools for student-centered teaching in higher education. Hence the implementation of peer tutoring program is recommended for other higher learning institutions also.

Keywords: Peer tutoring, pedagogical tool, student-centered learning and MMU-FET model.
participation in a peer assessment activity on subsequent academic performance and found that participation in the peer assessment activity enhanced subsequent exam performance [4]. According to Keith Topping, 1998, peer assessment of writing and peer assessment of tests have shown positive formative effects on student achievement and attitudes [5]. In general, students may feel more comfortable and open to discuss and seek advice from peer-tutors. Other benefits of peer tutoring for participating students include higher academic achievement, improved personal and social development, increased motivation and improved relationships with peers [6].

Peer-tutors who have volunteered themselves are expected to be benefited from this program in the following ways. The preparation makes them to reinforce their own understanding in the subject, and increase their self-confidence and knowledge. It also enhances peer-tutor’s soft-skills, such as knowledge sharing, teaching and coaching and communication skills. Their sense of responsibility can also be improved through their participation in this program. While reviewing peer tutoring programs, researchers found that students involved as tutors in the tutoring process were far more effective and experienced significant gains in achievement [7,8]. It also benefits the faculty by improving the overall academic performance and passing rate of the engineering students of the faculty. Peer tutoring is an advantageous teaching strategy and it can be incidental or structured [9]. Incidental peer tutoring often takes place, whenever students are cooperating, playing or studying and one guides the others. An example for incidental peer tutoring is a student asking his classmate for tips on how to improve his performance in learning a specific subject while playing a game. Whereas, structured peer tutoring refers to peer tutoring implemented in specific cases and for specific subjects, following a well-structured plan prepared by the lecturer [9]. The model used in this paper belongs to structured peer tutoring category.

2. The MMU-FET Peer Tutoring Model

Peer-tutors worked in pairs with small groups of no more than 10 students, on voluntarily basis (Fig. 1). The program is intended for repeating students who failed the subject first time and expecting assistance on how to study effectively to improve their grades. Only academically sound and self-motivated students are eligible to be a peer-tutor. The peer-tutor must have passed the subject, for which they applied, with A- or higher grade. They focus mainly on selected text book questions, past year exam questions and tutorial questions. The coordinator for peer-tutoring program will be responsible for the selection of tutors. The subjects offered for peer tutoring program will be announced on the faculty website depending on the availability of peer-tutors for the subjects. The students who want to enroll for the peer tutoring
program need to register themselves through the faculty website. All peer-tutors and tutees will be given the required briefing about the program. Subject lecturers would be consulted by the peer-tutors to obtain the OBE lecture plan and past year exam solutions.

The peer-tutoring classes will be conducted for four to five weeks of two hours per week duration. Upon the successful completion of the peer-tutoring program, all the peer-tutors will be invited for an appreciation session to receive their certificate of excellence along with some book vouchers and gifts. Feedback from both tutors and tutees would be obtained using google forms posted on the peer-tutoring website and these feedbacks would be analyzed by the coordinator for the purpose of continuous quality improvement (CQI) and it will be presented at the end of every trimester to the student’s academic affairs committee (SAAC).

![Fig. 1. The working model of MMU-FET peer tutoring program.](image)

3 Evidence for the Usefulness of the Model

Graph on figure 2 shows the passing rate of the students attended in the peer tutoring program for the past three years. The number of subjects to be offered for peer tutoring in a particular trimester depends on the demand and the availability of peer tutors. The value on the top of each bar shows the percentage of students who passed the subjects after attending the program. The graph also indicates that the benefit is consistent over the past 10 consecutive trimesters.
Passing details of students attended the peer tutoring classes of trimester 3 for the year 2014/15 is shown in figure 3. Out of the 43 students attended 12 (25.5%) passed with A grade, 21(44.7%) passed with B grade, 10(21.3%) passed with C grade. Only 4 students (8.5%) did not manage to pass. The grade distribution is considered very good as per the university standard.
The feedback received from the tutees as well as tutors shows that they are truly benefited from this MMU-FET peer tutoring program. Graph on figure 4 shows the positive response of the tutees when they are asked whether this peer-tutoring program changed their attitude towards studies. One of the tutor says that this peer-tutoring program enhanced his soft skills as it requires the communication between the students and the tutors. Hence this innovative peer tutoring program is one of the successful initiatives taken by the faculty of Engineering and Technology of MMU Melaka campus.

Fig. 4. The students’ feedback.

4. Conclusion

The effectiveness of peer tutoring was experimented and analysed using the MMU-FET model for the challenging engineering subjects. Results shows that the performance of the students attended the peer tutoring program have increased considerably for the past 3 years. Hence the MMU-FET model of peer tutoring may be considered even in higher learning institutions as one of the effective tools to improve the performance of slow learning students in engineering subjects.

References


LESSON STUDY FOR LEARNING COMMUNITY (LSLC) FOR DEVELOPING KINDERGARDEN HEALTHY SELF-CARE ATTITUDE THROUGH PICTURES BOOK BIOLOGY

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This research is motivated by the importance of teaching children in the early time to care their health. It also helps create a conducive environment, so that children have the opportunity to develop a healthy self-care attitude. This study aims to build a learning community that mutual respect and can become independent person through the use of pictures book. In addition, through Lesson Study for Learning Community (LSLC) is expected to form children for mutual trust, mutual learning and courage to say "please teach me" in all matters relating to personal health such as how to wash hands and brush your teeth. The method used is descriptive analytic method with qualitative approach. Research subjects in this study consisted of 1 model teacher, 6 observers, one facilitator, and 27 Khulafaur Rashidin’s kindergarden. Data collection techniques used in this study are interviews, observation, and documentation studies. Open Lesson carried out as much as 2 cycles on the material "Me and My Body" with the help of pictures book. Planning, Implementation (Do) and Reflection (See) stages have been in accordance with the lesson study guidelines.

**Keyword:** kindergarden, pictures book, healthy, self-care attitude.

**Background**

Education given to early childhood should based on the child's psychological development. so it would be better if released in an atmosphere of play. This is also supported by the government regulation on National Education Standards which stated that education is delivered in accordance with child development (PP on National
Education Standards, 2005). One approach that teachers can apply is to play in groups. Playing in groups according to Eva (2003) very well applied childhood. A group play approach provides an opportunity for children to connect with new things around. The same thing is expressed Ridho (2015), a game play one of the path of non-formal education as an effort to foster children from birth to age six years. Hadi (2008) stated that the concept of playing while learning or learning while playing is preferred by early childhood can form a quality person.

Based on observations (April 12, 2017), the concept of learning while playing that has been done in TKIT Khulafaur Rasyidin is still limited to the nature or learning while playing in the natural surroundings. Learning community in the open is done to foster children's love for their environment (interview with teacher, April 13, 2017). Appropriate way is to do lesson study. Lesson study can be a means for teachers to exchange ideas to know each other's characters.

**Method**

The method used is descriptive analytic method with qualitative approach. Research subjects in this study consisted of 1 model teacher, 6 observers, one facilitator and 27 early childhood children TKIT Khulafaur Rashidin. In cycle I, groups formed as many as 6 groups that have been arranged heterogeneously. This is in accordance with the opinion of Sanjaya (2006) which states that the grouping system should be heterogeneous. Teaching model which applied were a cooperative. The cooperative model used because each group member will gain equal responsibility while working in a group (Isjoni, 2007; Nurasma, 2006). The activity ended with a reflection stage with attended by principal, 6 observers, 1 facilitator (note taken), and model teacher. The activity diagram refers to Solihatin (2007). The data analysis of interview result is descriptive. The observation sheet using check list (Arikunto, 2006) is adjusted to the learning stage agreed upon during the action plan. Step in analyzing data from result of observation using Riduwan (2010).

**Result**

Student activity in cycle 1 just from very weak to strong criteria. No one is on very strong criteria yet. This is due to cycle 1 students are still in the process of adapting
new models and methods. The students have been able to adapt because the age range is 4 and 6 years so that very quickly adapt to the new environment and can receive learning well. But there are constraints when working groups because there are 2 students who refuse to group with one of his friends. This is in accordance with opinion (Mayangsari, Nuriman, and Agustinigsih, 2014) that indeed at the beginning of the group there are sometimes some students who refuse to cooperate with one member of his group. In Figure 1 is shown the percentage of students' group discussion in cycle II

At cutting the nails rules, all the students stated "please teach me", how or what it is. 11 students claimed to prefer to bite long nails rather than using a nail cutter. This is stated that cutting nails rules has not been delivered in front of the class because it is considered not essential material. But teachers have chosen the right method according to the child's development (Sugiono & Kuntjojo, 2016). At an early age, children have not been getting much negative from outside the home (Wiyani, 2017). So the role of parents is very good in shaping the character of a good child as soon as possible. Character formation is very appropriate for children as soon as possible, because children will be easily familiarized with the good things in everyday life (Mulyasa, 2014). Child early age should be given nutritional intake in order to support all aspects of the development of the child's personality (Musi, Sadaruddin, & Mulyadi, 2017)

In the second cycle, looked enthusiastic students in asking both to the teacher and to his friend. No students are sleepy in the classroom because the learning process is more meaningful (Basonggo, Tangkas, & Said, 2016).
Conclusion
Planning, Implementation (Do) and Reflection (See) stages have been in accordance with lesson study guidelines. Student activity in cycle 1 is on very weak to strong criteria. No one is on very strong criteria yet. This is due to cycle 1 students are still in the process of adapting new models and methods. The material that is already known correctly is about cleaning the hair (100%), while the material that is not understood is cutting nails rules (100%). In the second cycle, the learning process looked enthusiastic students in asking both to the teacher and to his friend. The process of learning implementation in cycle I and cycle II is in very strong criteria with 100% percentage.

Acknowledgment
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Bibliography
A PARADIGM SHIFT IN ENGLISH LANGUAGE PEDAGOGY FOR THAILAND, ASEAN, AND BEYOND

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Abstract

This paper investigates the topic of diversity and global citizenship while focusing on an innovative trend in student-centered pedagogy which can be utilized in any higher education academic discipline. It is an approach whereby multilingual speakers use all of their linguistic resources to enrich the learning process. The nature of language as a tool to facilitate communication in English, the global lingua franca, and ASEAN multilingualism will be discussed. World Englishes, current strategies in English Language Teaching (ELT), along with university roles toward producing global citizens will be included. This is in reference to the present and potential benefits for Thailand within both Thai and international degree programs, such as Hotel, Aviation Services, Tourism, and MICE (Meetings, Incentives, Conventions, and Exhibitions). All of these programs can proceed in alignment with the pursuit of Thailand 4.0 and other advances of the 21st century. Thus, graduates in the workforce, displaying their global citizenship and diversity, will be able to sustain the unparalleled international stature of Thailand in ASEAN and throughout the world.

Keywords: global citizenship, diversity, student-centered pedagogy, ELT

With today’s globalization and glocalization, all people are international as well as diverse. They naturally speak different languages; however, by using the English language, they are able to communicate. According to Lyons (2018), 1.5 billion people speak English; nevertheless, not all of them are native speakers. Globally, communication in English includes a native speaker only 25% of the time (Koch, 2017), leading English to be considered a lingua franca. World Englishes (coined in 1986 by Braj Kachru) are used by non-native speakers who
do not always produce standard English. Despite the fact that many scholars have disputed the use of non-standard English, by using World Englishes, communication can and will most likely be successful. Communicative English does not require native-like proficiency, leading to the important topic of World Englishes versus standard English. Standard English, involving monolingualism, inhibits citizens from having the vehicle of other languages which are needed to lead to global awareness. With the recognized deficits of monolingualism, “Translanguaging reconceptualizes language as multilingual, multisemiotic, multisensory, and multimodal resource for sense-making and meaning-making” (Li, 2017). Translanguaging is student-centered to a much greater extent than a monolinguistic approach. It empowers the students by breaking down the barriers, equalizing immigrants and indigenous, minority and majority, mother tongue and the target language (Garcia, 2009; Creese and Blackledge, 2015).

Garcia and Wei (2014) defined “translanguaging” (coined in 1994 by Cen Williams) as the viewpoint wherein learners can use their full linguistic resources. The learners’ full linguistic repertoire is a resource for learning, not a cause of interference. The “trans” in translanguaging means across, but can also transcend (above or beyond), transform (a change), and also be transdisciplinary (able to be used in many academic subjects). To celebrate linguistic diversity, translanguaging, if acknowledged and adopted by educators, can be beneficial. By translanguaging, university instructors can learn to become co-learners, keen on inclusion and participation, and in effect, creating a “translanguaging space.” A monolinguistic approach is not pragmatic in this era of globalization.

In 2017, Bangkok was the leader in the MasterCard Global Destination Cities Index, ahead of London and Paris (Forbes, 2017). With the prominence of Thai tourism, having so many Thai people working in jobs associated with the tourism industry, it would be to their benefit to be able to communicate in English. By speaking English, Thai people will clearly demonstrate their current status as “global citizens.” However, Bolton (2008) stated that only ten percent of Thais can speak English. This is despite the fact that Thailand spends 18.1% on education (Bureau of the Budget of Thailand, 2017). Therefore, improving the English proficiency of Thai students is of utmost importance, and perhaps translanguaging needs to be seriously considered.

The role of translanguaging in English language teaching in Thailand allows students to use Thai (their native language) to be part of their linguistic resources to assist them in
learning English. Thai students, as first-year students at many universities, sit in a classroom with a Native English speaker (NES) and stare blankly into space or smile while not comprehending most of what the NES is trying to teach them. This is not successful communication. An English-English dictionary can be used, but an English-Thai dictionary could be even more beneficial in helping students to grasp quickly the meaning of certain English words while reducing frustration. Both dictionaries should be used simultaneously in order to facilitate comprehensibility.

Students can help other students while using their Thai, creating a more student-centered framework as well. Teachers can become co-learners, which does not mean that students will, or should, stop respecting teachers. The teachers’ new status as co-learners also leads to a more student-centered classroom.

Teachers do not have to be NES. Translanguaging fosters the teacher-student relationship, making it more communicative. Translanguaging is more pragmatic than monolingualism. People in the real world can communicate without being paranoid that they have to use only English; they can use all of their linguistic resources—Thai, etc. Moreover, in translanguaging, it is not necessary to utilize only NES. In fact, Non-NES instructors can bring special advantages, such as the ability to empathize with the students because of personal experience. Furthermore, Non-NES teachers make positive and excellent role models for students; they are teachers who demonstrate that it is possible to successfully communicate in English, the target language.

The roles of universities with regard to Thai students’ English proficiency should involve newly-designed language assessment tools. Standard tests, such as TOEFL, TOEIC, IELTS, etc., are highly biased and are not congruent with current theories, such as translanguaging. Moreover, universities can assist in motivating students to use as much English as possible. Examples of possible actions include:

- Provide bilingual signs (in Thai and English) on campus. This will also welcome international students and help them to better function on Thai campuses.
- Broadcast information in both Thai and English via all media.
- Train personnel, including instructors of all disciplines, to be more proficient in English.
- Encourage “English-type” activities, such as English Day, English Zone, English Buddy System, English Camp, etc.
• Improve library and learning centers so that they possess more English materials, including books, magazines, newspapers, etc.
• Offer English courses for all levels and make the courses accessible to students in all disciplines.

In summary, translanguaging can serve as a viable approach to ELT since it is a paradigm shift in English language pedagogy with the goal that non-native speakers will tap into their ability to sound intelligible and comprehensible.

References


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29
IMPLEMENTATION OF A DUAL PROGRAM AT THE FACULTY OF VOCATIONAL STUDIES, UNIVERSITAS AIRLANGGA AS AN EFFORT TO PRODUCE SKILLED RESOURCE ON A GLOBAL SCALE

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The Faculty of Vocational Studies is one of the university’s key faculties educating graduates in health, business and engineering fields spread over 21 courses. Our process is aimed at adding to the global skilled workforce. The Faculty of Vocational Studies has equalized the content of the international vocational curriculum with the main focus in maximizing psychomotor ability. The study ratio between theory and practical application is 60%: 40%. The minimum number of industrial practices is 6 credits. This is equivalent to 6 x 14 meetings of 170 minutes in industry and the networking hospitals in all three main study areas depending on the learning outcomes of each course. The process of maximizing psychomotor abilities and links is the main advantage for graduate students of the Faculty of Vocational Studies, meaning graduates move into the job market according to the needs of stakeholder in each field. The global content of the courses is supported by the implementation of study abroad programs in countries including Malaysia, Korea, Singapore and Japan. With the new initiatives added this year, it is expected that the faculty can create better implementation of the dual program. The application of interprofessional education, especially for healthcare professionals, also increases the competencies of the graduates of the Faculty of Vocational Studies. These efforts are being implemented from the vision of the Faculty of Vocational Studies which is independent, innovative and a forerunner at national and international levels with education based around religious morals. It is expected that the skilled resources on global scale could be fulfilled immediately in Indonesia in particular and in international level in general.

Keywords: the job market, interprofessional education, vocational training
1. INTRODUCTION

Faculty of Vocational Studies Universitas Airlangga is the fourteenth faculty in Universitas Airlangga according to Statua Universitas Airlangga, which is defined through the Government Regulation Number 30 Year 2014 in May 14th 2014. It is also supported by Rector of Universitas Airlangga Rule Number 1539/UN3/2014 about the adjustment of the name of vocational school as Faculty of Vocational Studies and the establishment of the flag for Faculty of Vocational Studies in June 14th 2014.

The foundation of Faculty of Vocational Studies is due to the Law of The Republic of Indonesia Number 20 Year 2003 about National Education System, the Law Number 12 Year 2012 about the Higher Education, the Government Regulation Number 30 Year 2006 about the determination of Universitas Airlangga as Indonesian state-owned enterprises, and also the Articles of Association and Bylaws of the Universitas Airlangga stating that Universitas Airlangga provides the higher education for three types of education which are academic education, professional education, and vocational education.

Before the establishment of Faculty of Vocational Studies, the diploma education (which is now under the coordination of Faculty of Vocational Studies) had been managed by the academic faculties in eight faculties which are Faculty of Medicine, Faculty of Dentistry, Faculty of Public Health, Faculty of Veterinary, Faculty of Economy and Business, Faculty of Social Sciences, Faculty of Humanities, and Faculty of Sciences and Technology. With the establishment of Faculty of Vocational Studies, the vocational education in Universitas Airlangga will be more focused and it is expected to be the pioneer of vocational education in Indonesia, in equal with academic education and professional education which have been developed first, and it is also expected as the driving force for applied research in diploma level, sarjana terapan, magister terapan, and doktor terapan in Indonesia. This faculty is established to answer the stakeholder needs for skilled workforces.

Faculty of Vocational Studies Universitas Airlangga has 21 study programs in Health, Business, and Engineering Departments. The faculty has applied the Vocational education and training (VET) as one of the effort to equip the graduates with practical competences so that they are able to compete internationally, including by implementing interprofessional education especially for study programs in Health Department. Faculty
of Vocational Studies also has professional certification institutions in the field of Library, Office Administration, Acupuncture, and Information System.

2. DISCUSSION

Vocational education and training (VET) has a key role in raising skill levels and improving the society’s productivity, in national and international level. One of the efforts which has been done by the Faculty of Vocation is by maximizing practicum in class, work field practices, and internships in companies and hospitals.

The amount of sit-in class for the theoretical learning is 50 minutes per credit and the amount for practicum, field practice, and internship are 170 minutes per credit. The total of curriculum credits is 110-120 credits for diploma 3 program and 142 credits for diploma 4 program. The faculty determines that 60% of the credits is for practicum, field practice, and internship; and the 40% is for theoretical learning which support the practical competence. Faculty of Vocational Studies has also applied the curriculum 321 which is three semesters for theoretical learning in class, two semesters for practicum, and one semester for industry learning outside campus. The dual program has been applied with the full support of cooperation between the university, the related institutions, and the professional associations.

The implementation of practicum, field work, and internship can be seen from the amount of students who have already done one of the VET methods. The amount of students of Faculty of Vocational Studies who have already done industrial field work are 877 students, up until February 2018. All of students of Faculty of Vocational Studies have to do internship in the third year at last. According to the Table 1, 21% of students have done field work and internship up until February 2018. Meanwhile, 79% of the students have already done practicum in class. The data of total students who are doing internship and field work are not yet final because the even semester of 2017/2018 has not finished yet. Generally, the students do the field work on the semester break, therefore the total data is not final yet.

Table 1. The amount of active students of Diploma 3 Program and Diploma 4 Program (Applied Bachelor) Faculty of Vocational Studies Universitas Airlangga
<table>
<thead>
<tr>
<th>Study Programs</th>
<th>Count of students</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>D3 (Diploma 3)</strong></td>
<td><strong>3820</strong></td>
</tr>
<tr>
<td>1. Accounting</td>
<td>342</td>
</tr>
<tr>
<td>2. Medical Laboratory Technology</td>
<td>142</td>
</tr>
<tr>
<td>3. English Language</td>
<td>238</td>
</tr>
<tr>
<td>4. Physiotherapy</td>
<td>74</td>
</tr>
<tr>
<td>5. Occupational Health and Safety</td>
<td>170</td>
</tr>
<tr>
<td>6. Tourism</td>
<td>240</td>
</tr>
<tr>
<td>7. Nursing</td>
<td>575</td>
</tr>
<tr>
<td>8. Farm Animal Health</td>
<td>139</td>
</tr>
<tr>
<td>9. Secretary and Office Management</td>
<td>180</td>
</tr>
<tr>
<td>10. Marketing Management</td>
<td>256</td>
</tr>
<tr>
<td>11. Banking Management</td>
<td>183</td>
</tr>
<tr>
<td>12. Hotel Management</td>
<td>212</td>
</tr>
<tr>
<td>14. Traditional Medicine Therapist</td>
<td>108</td>
</tr>
<tr>
<td>15. Tax Management</td>
<td>351</td>
</tr>
<tr>
<td>16. Information System</td>
<td>163</td>
</tr>
<tr>
<td>17. Dental Technology</td>
<td>124</td>
</tr>
<tr>
<td>18. Library Studies</td>
<td>224</td>
</tr>
<tr>
<td><strong>D4 (Diploma 4/ Sarjana Terapan)</strong></td>
<td><strong>366</strong></td>
</tr>
<tr>
<td>19. Physiotherapy</td>
<td>86</td>
</tr>
<tr>
<td>20. Traditional Medicine Practitioner</td>
<td>75</td>
</tr>
<tr>
<td>21. Radiologic Imaging Technology</td>
<td>205</td>
</tr>
<tr>
<td><strong>Grand Total</strong></td>
<td><strong>4186</strong></td>
</tr>
</tbody>
</table>

Those data shows that VET has already been running in Faculty of Vocational Studies to maximizing the competence of students’ skill. Figure 1 describes the comparison between students who do internship and students who do practicum in class.

The locations which students do the field practice and internship including hospitals, banks, government offices, private companies, manufacture industry, factories,
libraries, and markets according to each study program.

![Pie chart showing the percentage of students doing practicum and internship.](image)

Figure 1. The Percentage of students who do practicum and students who do internship in the company (Faculty of Vocational Studies Data taken until February 28th 2018)

The international internship has also been done in Japan, Malaysia, South Korea, and Singapore. The description above has showed the efforts from the faculty to shape the maximum skill competence for the graduates of Faculty of Vocational Studies with A.Md degree for Diploma 3 program and S.Tr degree for Diploma 4 program. The skill ability itself is not enough, therefore other certified competencies have to be added to each study program according to the needs of each stakeholder.

3. CONCLUSIONS
The implementation of dual program based on curriculum 321 has been done in the Faculty of Vocational Studies Universitas Airlangga with the main aim to shape graduates who have dignity and maximum practical ability that are ready to be accepted into the working world.

4. REFERENCES
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This study aims to understand how a teaching-learning approach of business subjects can be improved by applying the theory of Appreciative Inquiry (Cooperrider, 1990). A case study at Assumption University, one of the business schools in Thailand, was conducted by focusing on a fundamental business course, *Introduction to Business*. Twenty undergraduate students were interviewed in a semi-structured interview. The researchers used content analysis to analyze the interview data. The significant outcome of this research is to be able to introduce a new design for teaching plans and mark allocation for this course, which suggests researchers to implement the integrative blended teaching and learning method (Hermens and Clarke, 2009) in the future. The Appreciative Inquiry process offers unique opportunities to manage teaching and learning as well as better communication between lecturers and students.

Keywords: Appreciative inquiry, Teaching, Learning, Business education, Integrative blended teaching and learning.

**Introduction**

Understanding methods to improve the teaching-learning approach can always be an important element for business schools. Appreciative Inquiry (AI), one of the well-known action researches, has widely been studied and applied in the educational filed (e.g., Mellish, 1998; Yballe and O’Conner, 2000; Yoder, 2003) to improve an existing teaching-learning process. Those studies, however, tend to focus on the Western contexts; thus, it must be interesting for the current study to explore Asian context, whether AI can be effective to improve existing teaching-learning process in Thailand.
Literature Review

The Appreciative Inquiry (AI) is an action research which has widely been applied in organizational development in the Western contexts, such as US Navy and US department of Health and Human Service, McDonald’s, Nokia, British Airways, and healthcare organizations (Havens, et al., 2006). It encourages people to investigate, observe, and discuss to establish efficient institutional environment, which allows a sustainable development in an organization (Cooperrider, 1990). AI consists of four phases which are Discovery, Dream, Design, and Destiny. Discovery is to appreciate what the best in the organization; Dream is to create visual image describing how the organization will look and feel at its best; Design is a dialogue about what should be specific action steps in the organization; and in the stage of Destiny, people focus on sustaining AI’s positive approach to improvement (Cooperrider, 1990). This 4D framework was applied by Mellish (1998) into a university context, which resulted in the positive outcomes in order for a university to manage its strategic planning and transition. In Mellish’s study (1998), the appreciative questions were designed to focus on six categories which are 1. Personal highpoints, 2. Co-operative relationships, 3. Types of communication, 4. Hopes for the future, 5. Values and 6. Positive images. The current research also aims to adopt the 4D model and conduct interviews by employing these categories in order to explore the teaching-learning approach in a business school in Thailand.

Research Methodology

The research conducted 20 semi-structured interviews where each one took approximately one hour with a student who completed the subject, Introduction to Business at Assumption University, which is a fundamental course for all the freshman from various faculties. The assessment components for this subject are presentation, class participation, class discussion, midterm and final examinations. Based upon AI’s 4D framework, the Content Analysis were used to analyze the interview data, which was then sent to the two additional researchers to confirm the analysis procedure and inter-coding reliability.

Finding

Firstly, in terms of the AI’s “Discovery”, the general impression regarding the course was discovered by adopting Mellish’s (1998) six categories. As for the 1st category (Reflect
on your time with study Introduction to Business. What is your high points?), eleven students mentioned “high point” of studying Introduction to Business is from their presentation experience. Five students mentioned to discussion activities; three students mentioned to the calculation part; and one student was from an exam. For the 2nd category (co-operative relationship), the reason why students felt good about the group presentation exercise was attributed to its process where they made efforts together with their group members to search for the necessary information and to cooperate in the presentation performance. Regarding the 3rd category (types of communication), 16 students found face to face communication the most efficient. They preferred to receive immediate feedback from teachers and peers and face-to-face communication was considered as the easiest method for this purpose. The remaining four students mentioned that they rather used “Line” messages given that this method provided the “video-chat” and “share document files” functions. For the 4th category (hopes for the future), students’ answers mostly focused on the real business practice. They want to have more activities related to the real business, e.g., company visit, guest speaker sessions where practitioners can share their business experience. With the 5th category (what do you value the most about?), students firstly identified their communication skills, responsibility and skills to make presentation slides. About lecturers, students explained that their lecturers were responsible and willing to support students. The students also valued lecturers’ experiences and teaching skills. As for the last one (what are your positive images of the future), almost all students mentioned to the words, “more practical”, “more useful” and “more interesting”. Secondly, in terms of the AI’s “Dream” which aims to understand students’ desired future, again, seven students answered that they wished to have more activities in this subject such as company visits, guest speaker sessions, setting up mock companies in classes. Also, as noted above, students wanted this subject to be more useful, practical and interesting in the future.

Conclusion and Recommendation
Whilst “Discovery” and “Dream” were employed to explain interview findings, the remaining phases, “Design” and “Destiny”, will be used to proceed this section. With regard to the “Design” perspective, the outcomes of the interviews suggest that the current lecture style which simply teaches one chapter/topic each week should be modified to
have additional learning components and opportunities for students, such as guest speaker sessions which can provide a chance for students to learn from experienced practitioners and executives. For discussion classes, more two-way communication, especially face-to-face communication should be employed as students valued that the most. The mark allocation of presentation exercises can be increased for this purpose, and the feedback should not only be provided by a teacher but also group members and peers in the class. Furthermore, currently, the case studies are used in discussion classes; however, the new approach can include business simulation game or setting up mock companies in the class for students to experience the business practices (see Table 1):

Table 1: Modified Mark Allocation for Introduction to Business

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>➢ Oral Presentation 10%</td>
<td>➢ Oral Presentation 15%</td>
</tr>
<tr>
<td>➢ Discussion Activities (Case Studies) 15%</td>
<td>➢ Discussion activities (Case Studies, Business Simulation Game, Mock Companies) 15%</td>
</tr>
<tr>
<td>➢ Lecturer Class Attendance 10%</td>
<td>➢ Reflection from Guest speaker session</td>
</tr>
<tr>
<td>➢ Mid-term exam 20%</td>
<td>➢ Mid-term exam 20%</td>
</tr>
<tr>
<td>➢ Final exam 45%</td>
<td>➢ Final exam 40%</td>
</tr>
</tbody>
</table>

And the last phase, Destiny, should be the beginning of an ongoing creation of an appreciative learning culture. In order to create such for Introduction to Business, all teachers and students are encouraged to participate in the implementation of the new class plan and mark allocation. Currently, Introduction to Business uses the traditional blended teaching and learning method which placed the emphasis on lecture, textbook and case study. The limitation from traditional method of teaching and learning is that students are not able to contribute towards the development of higher order of management skills. The findings of this study suggest researchers to implement the integrative blended teaching and learning method (Hermens and Clarke, 2009) in the future, which is a combination of lecture, textbook, case studies and business simulations where the emphasis is also placed on student’s team work, execution of strategy and management of tactics. Business simulation is a positive reinforcement of learning experience that allow students to
contextualize what is learnt from lectures and case studies, through learning by doing while enhancing understanding of cause and effect.

References


FLIPPED-COOPERATIVE LEARNING TO ADDRESS SURFACE LEARNERS AND IMPROVE TEAMWORK SKILLS

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In developing 21\textsuperscript{st} century learners who are able to acquire critical thinking and deep learning, collaboration and communication skills, the learning environment has to be designed well to meet all these requirements. One of the strategies to do that is to empower the student-centred learning (SCL) pedagogical approaches. Flipped classroom (FC) and cooperative learning (CL) are two of the approaches that can be used independently as part of the SCL approach. However, FC strategy may not get the total buy in from the students where they would not go through the material given beforehand without the right motivation, while implementing CL had been always facing hiccup as the time may not be insufficient for the students for both lecture and in class activities in a team. Flipped-cooperative learning is an approach where both pedagogies are combined together, which will allow the students to be motivated to learn before the class and had an integrated peer-instructor support within the classroom to help them to reinforce the learning. A study has been conducted in Universiti Teknologi PETRONAS to investigate this approach and the findings has shown that the students had better cognitive achievement, improved their teamwork skills and also acquired positive values.

Keywords: Flipped-Cooperative Learning, Surface Learners, Teamwork Skills, 21\textsuperscript{st} century skills

BACKGROUND

Flipped classroom and cooperative learning are not new jargons among the educators. While flipped classroom was introduced for a decade ago, cooperative learning has long
been established and proposed for nearly 40 years ago. Both pedagogical approaches had their own strength but nonetheless facing certain hiccup that can be improved. Jonathan Bergmann and Aaron Sams [1] first initiated the flipped classroom in 2007 to assist their students who were unable to attend the class due to other commitments. Flipped classroom is defined as having activities that are usually conducted in class to be done outside the class, and the class session is used to do homework instead [2]. Students are provided with lecture materials days prior to the class to learn at their own pace and time. For the purpose to ensure students do their own learning prior to class, formative assessment could be conducted at the beginning of the class session.

Several reflections were collected from the educators at the Universiti Teknologi PETRONAS who used flipped classroom approach revealed that the following issues arise as highlighted in Table 1.

Table 1. Students’ Perspective and Educators’ Perspective on Flipped Classroom

<table>
<thead>
<tr>
<th>Students’ Perspective</th>
<th>Lecturers’ Perspective</th>
</tr>
</thead>
<tbody>
<tr>
<td>“I’m not going to bother to watch the video”</td>
<td>“Now I give them video to watch, now, what’s next?”</td>
</tr>
<tr>
<td>“I can surely copy my friends from the activities in class”</td>
<td>“How do I ensure the teamwork skills can be achieved?”</td>
</tr>
<tr>
<td>“I think the activities in the class are too complex, I cannot handle this alone”</td>
<td>“Students will still be dependent on me after I gave them the videos”</td>
</tr>
<tr>
<td></td>
<td>“Why there are still free riders in the class?”</td>
</tr>
</tbody>
</table>

Cooperative learning strategies are one of the methods to promote SCL and students’ participation. The main criterion of cooperative learning is to get the students to work in small groups of 3 to 5 students to achieve the same goal, meeting these cooperative learning pillars: positive interdependence, individual accountability and face to face promotive interaction. Johnson et. al. [3] and M T Azizan et. al. [4] reported a significant improvement of students’ achievement in cooperative learning environment as compared to their peers who learned individually. However, conducting cooperative learning will consume a lot of time, and if it is coupled with usual lectures inside the class, the time may not be enough to conduct cooperative learning based activities in the 3-credit class.
Therefore, while the instructors believe that cooperative learning may help to address the teamworking skills development, combining this pedagogy with flipped classroom approach, may result in better learning attainments, especially to address the surface learning issues among the students. It is therefore our intention to investigate how effective a combination of flipped-cooperative learning to ensure the students learn effectively.

**METHODOLOGY**

In Universiti Teknologi PETRONAS, chemical engineering students in their fourth semester enrolled to reaction engineering course, covering homogenous phase reactor design. A flipped-cooperative learning approach with partial implementation of problem based learning (PBL) was introduced throughout the whole semester for this course. Throughout the semester, the students were divided into 4-5 members per group and they stayed together throughout the semester. In the first week prior to the actual class, the instructors held a half-day special teambuilding program for the students. As for reaction engineering course, within the 14 weeks of the course, the students are required to study in advance the course materials provided, coming to the class for recap and in-depth activities and the instructor will do the closure. The activities are summarised in Figure 1. The data collection was done by analysing their overall performance and the comparison between their initial and final reflection of the course.

**OUTPUT**

160 students in May 2016 enrolled in this course. This cohort of students is known for their low average CGPA as compared to other cohorts for the first three semesters. Based on the analysis done on their learning styles, it is understood that the major problem could be related to the mismatch of their learning styles and teaching pedagogy.

The flipped-cooperative learning strategy is believed to be able to address all type of learners and encourage students to take charge of their own learning. Through the class activities that were conducted during the whole semester, students showed significant improvement as compared to their previous semester as well as the previous cohort of students taking the same course. Figure 2 shows the comparison of final grade distribution of two different cohorts taking the same course (Reaction Engineering). Students in the SCL environment show significant improvement in the final grade as compared to the previous cohort who underwent the course in the traditional lecture centered learning
(TCL) environment, even their performance in the first three semesters are worse, and concur to the findings from the literature [5].

Throughout the semester, students wrote their reflections based on their learning experience and understanding of the subject matters. Though there were high resistances from the students during the early of the semester, their final reflections showed the maturity level increased tremendously in term of learning and other soft skills. In the early of the semester, the reflections written by the students consisted pretty much negative perceptions such as watching videos as time consuming and not important, preferred to have lecture slide with complete solutions, reluctant to accept the changes and considered...
changing their habits of learning as a waste of time and they were unable to learn anything. However, after going through the semester, their reflections towards the SCL implementation changed. The students realized the benefit gained from their participation and this is shared in the reflection as shown in Table 2.

### Table 2. Snapshots of Reflections Shared by the Students

<table>
<thead>
<tr>
<th>Student 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>**Learning through video was quite challenging for me because I tend to be</td>
</tr>
<tr>
<td>bored after a while, but watching and jotting down the point helps me a</td>
</tr>
<tr>
<td>lot to make sure that I can focus on that video. From this course, I can</td>
</tr>
<tr>
<td>know my ability to do this self-learning. (Flipped Classroom attainment)</td>
</tr>
<tr>
<td>It also helps me a lot in developing myself to work with people through</td>
</tr>
<tr>
<td>teamwork activity which I need to work with others that I have never talk</td>
</tr>
<tr>
<td>with and I know I will face this during my internship and also my working</td>
</tr>
<tr>
<td>time perhaps. (Cooperative Learning attainment)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>**I started this course with a feeling of a loser. When I got to know that</td>
</tr>
<tr>
<td>we were divided into groups, it just made me suffocate thinking about all</td>
</tr>
<tr>
<td>those group work. I had social anxiety and it is very difficult for me to</td>
</tr>
<tr>
<td>communicate with people including my family too. As time goes by, I think</td>
</tr>
<tr>
<td>that the way of learning is something that we can cope with. It was not</td>
</tr>
<tr>
<td>hard as I think to communicate with people. My groupmates were so helpful.</td>
</tr>
<tr>
<td>They help me understand the chapter that I felt kind of blur. Through this</td>
</tr>
<tr>
<td>course, it doesn't just help me understanding what the reaction engineering</td>
</tr>
<tr>
<td>is all about, I also learn about soft skill, perseverance, teamworks and</td>
</tr>
<tr>
<td>the most is how your relationship with lecturer do affect your study.</td>
</tr>
<tr>
<td>Nothing worth having comes easy. It needs hard work. (Cooperative Learning</td>
</tr>
<tr>
<td>attainment)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>**I learn about what reaction engineering all about. First, there are a</td>
</tr>
<tr>
<td>few kinds of reactor. Second is that for each reactor there are mol balance,</td>
</tr>
<tr>
<td>stoichiometric. Other than that are, Damkohler number, numerical &amp;</td>
</tr>
<tr>
<td>differential &amp; integral method, reducing side reaction for series, parallel</td>
</tr>
<tr>
<td>and independent, and lastly sizing the reactor for non</td>
</tr>
</tbody>
</table>
CONCLUSION
The implementation of Flipped-Cooperative Learning approach in Reaction Engineering course has significantly helped students to gain deeper understanding on the subject matter as well as developing their soft skills and values. Their view on the approach has changed at the end of the semester despite all the hard work that they have to go through, and it makes them not only to be good cognitively by becoming a deep learner, but also acquiring teamwork skills, resilient and independent learner.

ACKNOWLEDGEMENT
The authors are grateful to Universiti Teknologi PETRONAS management, Center for Excellence in Teaching and Learning (CETaL) and Head of Department, Chemical Engineering Program for their endless support in the implementation of flipped-cooperative learning approach for this course.

REFERENCES

A STUDY ON THE IMPACT OF TEACHING METHODS APPLIED IN TRANSLATION COURSES ON THE TRANSLATION PROFICIENCY DEVELOPMENT OF ENGLISH-MAJOR STUDENTS

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Abstract

The study was aimed at investigating the effectiveness of methods of teaching TCs, used by Iranian instructors on the English-major students’ translation proficiency development. To do so, 156 homogeneous students were selected as the participants in the convergent parallel mixed methods design to attend the quantitative and qualitative data collection simultaneously. The data were collected by using a language proficiency test (PET), translation pre & posttest, the Waddington TQA rubric and an interview as the instruments of the study. Statistical analyses of the quantitative data-ANCOVA were used to test the hypotheses. The qualitative data were extracted through the procedure of content analysis by pinpointing and condensing meaning units as well as codifying and sorting the commonalities, out of the comments extracted from the interview’s responses. Finally, the two data banks were reported via SPSS software. It was concluded that the modern methods of teaching TCs had a significant effect on the students’ translation proficiency, the results of which were confirmed by the qualitative data analysis of the responses in the interview. The research findings contribute to translation studies via providing guidelines and solutions for the instructors to apply appropriate methods and deal with the challenging aspects of teaching TCs.

Keywords: English-major students, Methods of teaching translation, Teaching methods, Translation Courses-TCs, Translation proficiency development

INTRODUCTION

Concerning the ever changing needs of Higher Education-HE, the increasing demand
for the adaptation of educational programs’ curriculum to the novel needs and the related evaluation processes, various courses and methodologies applied in different programs of study come into attention (Tiropanis, Davis, Millard, Weal, White & Wills, 2009).

Currently, one of the academic resources of study which has a crucial role in paving the grounds for other resources and equips the learners with an updated knowledge of several different fields is the Translation Courses-TCs for English-major students. Accordingly, by limiting the focus of the present study to the teaching methods applied in TCs, it was possible to investigate more about the effectiveness of higher education since the methods were quite influential in shaping competitiveness among curriculum designers, instructors and learners.

During the past decade, translation has been gradually becoming one of the dominant factors in English language teaching. In spite of the fact that TCs have been provided in the objectives of the field, up to this time, there are a limited number of studies which have given at least a partial record of the trends regarding the teaching methods in TCs for the advancement of English-major students. Generally, the specific courses focusing on translation have not been much concerned with the debates and issues emerging in recent years in the field of language teaching (Dudley-Evans & St. John, 1998). Even the published reports in specific fields of language learning were limited and organized for specific objectives, although the exceptions such as the study of interlanguage use in relation to discourse domains existed (Selinker & Douglas, 1985). By considering other methods, Gerding-Salas (2000) proposed a cooperative translation work procedure for training the translators at undergraduate levels. In this method, the educator was a facilitator in the translation task and students may accomplish via collective, individual and further discussions and efforts.

Accordingly, conducting researches to provide guidelines for the instructors in teaching translation might be significant since their results provide them with the solutions to the challenging aspects of teaching TCs. In this respect, the present study was carried out among the English-major students, studying at the Islamic Azad University-IAU College of foreign languages to find out more about the phenomenon.

Obviously, TCs are significant materials for both first and second language learning. What has been shown by the experienced instructors of languages was to put emphasis on the role of translation abilities in developing languages among the learners. The
evidence to the issue is the use of Grammar-Translation Method-GTM, which dominated language learning for a long time. Another issue intertwined with the importance of TCs is the teaching methods used by instructors to teach translation to learners. Therefore, due to the essential role of TCs in educational contexts, it was valuable to examine the current methods of teaching TCs proposed by Alekseeva (2000), including traditional, complex and modern methods.

The traditional methods consisted of four sub-branches. The first branch, as the most popular one, was training translation in a specific field such as technical and legal translations. The teaching process began with studying the terms of the field and consequently, giving the related equivalents in the language of translation. Through this, students proceeded with complex grammatical structures of specific written texts. The method mostly focused on the learning of technical vocabularies which can be investigated in different kinds of texts and fields. However, learners were unaware of stylistic peculiarities and may fail to translate the texts appropriately.

The second reputable branch for teaching translation was text analysis and translation. Text analysis has been considered as one of the most crucial features of training languages and translation at HE institutions. The method resulted in identifying peculiarities and general principles of the text types under training. However, through the method, the translators were not able to pick out the features suggested for a text and should be distinguished from those that can be ignored. As a result, the method assumed intuitive choices in a translation strategy and characterizes a conventional practice of text analysis focusing on problematic elements of a translation such as grammatical structures, set-expressions, realities and other elements of a text. Thus, text analysis did not give a sufficient consideration to the features of the text as a complete substance including the type of the text, sphere of application and recipients suggested in a discourse method of making text analysis and considering text as an integral communicative message. The method might have certain shortages, but text analysis took a vital position in the translation process.

The third branch consisted of finding all existing translation equivalents. As the popular method in contemporary western education systems, it was rooted in the belief that form - content relations did not have only one equivalent in which, students were needed to find as many equivalents for a word as possible within a text.
The last branch of traditional methods was comprised of the translation training, implemented by an experienced talented translator which can be used alone or along with the first and the second branches to meet the necessary requirements in a translation. Through the method, an experienced translator trained other translators by selecting varieties of texts. The trainer rarely gave the grounds to students and the assessments were provided by the trainers’ own variants of translation. The trainer relied on his/her own knowledge, by which the branch of teaching can be called the “authoritarian-creative” method (Alekseeva, 2000). Thus, the method was dependable on sharing the trainers’ common experiences and competences, gained through a long-term practice in the field.

Besides the traditional methods, Alekseeva (2000) also proposed complex methods of teaching TCs in which the training process passed through preparatory, basic, and training stages. The preparatory stage consisted of examining different types of texts by investigating the issues like critical reading, text analysis and writing practices to cover the objectives of the stage by the practices provided for analysis and synthesis of texts’ type in the native language via finding similar types of texts in the language of translation, detecting their features and writing the texts at the same time. Thanks to the methods, students can familiarize themselves with the types and skills for reproducing different peculiarities of texts.

Finally, the last methods of teaching TCs applied to the translation of specialized texts, called modern methods, proposed by Alekseeva (2010). In her opinion, the methods were the specific branch of translation studies, which challenged previous methods of teaching in which the text was treated as an objective phenomenon and translation was defined as dealing with signs of an original text. In these methods, translation techniques were selected based on the following statements by which translation was considered as the modeling and the consequent transmission of complex-structured meanings: (a) the methods were based on handling with the text and the use; (b) the choice of texts for translation depended on translators; (c) the translator may add his/her comprehension to the translation; (d) translation techniques were determined by the text integrity.

Most recent studies on teaching translation methods have focused on mere teaching methods, neglecting translation learning techniques. By considering this fact, Garant
(2010) discussed Nord’s model of translation-oriented text analyses, the process-oriented and the competence and skill-led approaches to teach translation, for which Alekseeva (2000) also referred to the necessity of separation in training interpretations and written translations. In teaching written translation, she gave an overview of traditional methodologies and suggested complex methodologies that incorporated traditional perspectives. Alekseeva (2010), as a critique to the traditional methods, raised the issue of inadequacy in traditional teaching methods. She proposed the modern methods based on the idea that translation included the modeling of the original texts’ meanings by the translator and emphasizing the role of translation within educational contexts which were defined by Vermes (2010), as the pedagogical or instrumental translations.

Methods of teaching translation were also considered as the sub-branch of second language acquisition by pointing out the input based systems for the assessment of students’ translation practices or the output based systems to focus on the feedback provided for the learners including Krashen’s (1982) Monitor Model and Swain’s (1985) Comprehensible Output Hypothesis. Thus the commonalities existed in all methods of teaching TCs made it necessary to find out more about their effectiveness by applying different perspectives in educational researches and designs. In this view, according to O’Donoghue and Punch (2003), the data could be checked and verified from multiple sources of data collection via qualitative and quantitative procedures to reach the intended regularities in the research data, the results of which might be valuable to apply better teaching practices in classes.

TCs were also influenced by the linguistic types of research in translation, such as what had been proposed by Vinay and Darbelnet (1995) and Catford (1965), that linguistics did not incorporate sociocultural and pragmatic factors, nor did they emphasize the role of translation as a communicative act sufficiently. The continued application of linguistics-based models had demonstrated their obvious and in-built link with translation such as the models used in generative grammar, functional linguistics and pragmatics. All these issues might be challenging to the instructors and learners since they are expected to ensure effective interlanguage communication and to provide adapted teaching ideas to different learning environments (Davis, 2004). Based on the aforementioned problems, the present research attempted to answer the
following questions:

*Quantitative Major Question*: Do methods of teaching TCs differently affect the translation proficiency development of Iranian English-major students?

*Quantitative Minor Question 1*: Do traditional methods of teaching TCs differently affect the translation proficiency development of Iranian English-major students?

*Quantitative Minor Question 2*: Do complex methods of teaching TCs differently affect the translation proficiency development of Iranian English-major students?

*Quantitative Minor Question 3*: Do modern methods of teaching TCs differently affect the translation proficiency development of Iranian English-major students?

*Qualitative Question*: What are the most appropriate and common methods of teaching TCs according to the Iranian English major students’ viewpoints?

To answer to the quantitative questions of the study, the following null hypotheses were proposed:

*Ho*: There is no significant difference in the translation proficiency development of Iranian English-major students taught with different methods of teaching.

*Ho1*: There is no significant difference in the translation proficiency development of Iranian English-major students taught with traditional methods of teaching.

*Ho2*: There is no significant difference in the translation proficiency development of Iranian English-major students taught with complex methods of teaching.

*Ho3*: There is no significant difference in the translation proficiency development of Iranian English-major students taught with modern methods of teaching.

**METHODS**

**Participants**

From among 200 English-major students reached to their third and fourth academic semesters, 156 homogenous participants were selected and assigned randomly to the three experimental and three control groups (26 students in each group) in quantitative phases of the study. The participants were selected from Islamic Azad University-IAU North and South branches. In addition, to justify and confirm the results gathered in the quantitative procedure, the participants at the experimental groups in each class were also used for the qualitative data collection at the same time. The descriptive statistics of the participants in three classes are shown in Tables 1 and 2.
Table 1.
Descriptive Statistics for the Homogenous Participants at Three Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>No.</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>52</td>
<td>15.20</td>
<td>16.86</td>
<td>16.18</td>
<td>.31</td>
</tr>
<tr>
<td>Complex</td>
<td>52</td>
<td>15.66</td>
<td>16.84</td>
<td>16.18</td>
<td>.33</td>
</tr>
<tr>
<td>Modern</td>
<td>52</td>
<td>15.66</td>
<td>16.84</td>
<td>16.18</td>
<td>.33</td>
</tr>
</tbody>
</table>

Table 2.

<table>
<thead>
<tr>
<th>Total Number of</th>
<th>Gender</th>
<th>Proficiency</th>
<th>L1</th>
</tr>
</thead>
<tbody>
<tr>
<td>156</td>
<td>Male &amp;</td>
<td>Intermediate</td>
<td>Persian</td>
</tr>
</tbody>
</table>

Instruments

Various instruments were utilized in this study according to the quantitative and qualitative data collection requirements.

*Language Proficiency Test:* For the quantitative data collection, the Preliminary English Test-PET, provided by Cambridge English Language Assessment for selecting homogenous participants was used.

*Translation Pre & Posttest:* Two different authentic one-paragraph texts (about 200 words) to be translated as the pre-test and post-test in experimental and control groups were used. The two one-paragraph texts were almost at the same length and readability, which had been checked by instructors of TCs and translators with at least five years of experience.

*Waddington Model for Translation Quality Assessment-TQA:* To analyze the quality of the translations in pre and post test, the following rubric (Table 3) developed by Waddington (1999) was used as the criterion:

Table 3.

<table>
<thead>
<tr>
<th>Level</th>
<th>Accuracy of transfer of ST content</th>
<th>Quality of expression in TL</th>
<th>Degree of task</th>
<th>Mark</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>Complete transfer of ST information; only minor revision needed to reach</td>
<td>Almost all the translation reads like a piece originally written</td>
<td>Successful</td>
<td>9, 1, 0</td>
</tr>
</tbody>
</table>
Interview: For the qualitative data collection, a structured interview consisted of the three following questions developed based on the definitions of methods of teaching TCs proposed by Alekseeva (2010) was carried out:

1. What are the students’ evaluations about the methods of teaching TCs?
2. What are the students’ opinions about advantages and disadvantages of the methods in terms of fidelity, transparency and other features of a good translation?
3. Are the methods effective in the Iranian context by considering the linguistic abilities and communicating meanings and concepts in source and target languages?

Design
A convergent parallel mixed methods design was adopted to accomplish the purpose of the study through the qualitative and quantitative data collection procedures. The reason for choosing the mixed methods design was to compare the different results and perspectives drawn from quantitative and qualitative data and merging the databases to show how the data converged or diverged in studying the methods of teaching, and their impact on the students’ translation proficiency development. According to Creswell (2013), the required steps in a convergent design were as follows:

1. Collecting and analyzing the quantitative and qualitative data separately;
2. Merging or bringing together the two databases. This can be done in several ways.

After the results have been compiled, the interpretation of inferences drawn from the
two databases can be brought together in a discussion where they are arrayed side by side;

3. Examining the extent to which the quantitative results will be confirmed by the qualitative results;

**Procedure**

The quantitative and qualitative phases of the study were conducted at the same time, by which an interview was carried out among the three groups while the three phases of the quantitative experiment namely, pretest, treatment, and the posttest were run for each method of teaching TCs.

*Pretest phase*

For the three methods of teaching TCs, 52 intermediate English-major students in both experimental and control groups attended the pretest. The translations scored by two raters, which was checked via the inter-rater reliability. The data were analyzed through using SPSS software and reported.

*Treatment phase*

For the three methods of teaching TCs, the participants at the experimental group received the treatment phase for eight sessions within four weeks during their academic semester. They were provided with the main objectives and principles of the methods of teaching TCs.

Regarding the *traditional* methods, the participants have been trained by each sub branch separately. Also, during the treatment, the students were trained in a specific field by studying the vocabularies and equivalents of the field, besides getting acquainted with complicated grammatical structures of the texts in the same field by characterizing a conventional practice of text analysis including grammatical structures, set-expressions, realities, form - content relations, emotionally colored, literal or neutral words, polysemenicity, cooperative learning as well as the basics of text analysis.

For the *complex* methods of teaching TCs, the participants had been represented with a more comprehensive view on translation in which the treatment focused on the stages of acquisition to study different types of texts by concerning the preparatory, basic and training stages for critical reading, text analysis or writing training, analytical search of translation variants, analysis of translated texts and ideal translations.

Regarding the *modern* methods of teaching TCs, the translation of specialized texts
was focused by relying on the following statements: (a) the technique is based not on the use, but on handling with the text; (b) the original text as an object for translation totally depends on translators; (c) translator adds comprehension of meaning to translation; (d) translation techniques are determined by the text integrity.

The participants were provided with translation training by modeling and consequent transmission of a complex-structured meaning, building space for translation, compression of special knowledge, interpretation of meaning and identifying theme and rheme of the text. The treatment was finalized by practicing the written translation of specialized texts which were completely differing from earlier practices. Thus, the cognitive functions, extraction of the meanings, and modeling in the language of translation were emphasized by which the texts were considered as integral units.

Posttest phase
Following four weeks of instruction in eight sessions, the posttest of translation, an authentic one-paragraph text about 200 words, was administered to the participants in the three experimental groups. The translations of the participants were collected and scored by the two raters. The data were then analyzed by using SPSS software and reported.

At the same time, the qualitative data were also gathered from the same participants through the interview. The interview was recorded and transcribed in order to probe into the students’ opinions on each method. The qualitative content analysis was utilized to investigate each method’s evaluation, features and effectiveness based on the students’ perspectives. The qualitative data were extracted through the procedure of content analysis by pinpointing and condensing meaning units as well as codifying and sorting the commonalities, out of the comments extracted from the interview’s responses. The results were reported via SPSS to be used for the confirmation of the quantitative data.

RESULTS

Quantitative Data Analysis

Inter-Rater Reliability Indices
To ensure the existence of reliability between the raters’ scores in both pre-test and post-test results for each method, as shown in Table 4, Cronbach alpha was calculated. The results indicated the existence of a high consistency between the two raters in their
scoring systems in traditional, complex and modern methods since $\alpha$ was .912, .833 and .931, respectively; which were all greater than >.70.

Table 4.
Inter-Item Correlation Matrix- Reliability Statistics for Three Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>.912</td>
<td>.913</td>
</tr>
<tr>
<td></td>
<td>Pretest Score Rater 1</td>
<td>Pretest Score Rater 2</td>
</tr>
<tr>
<td>Pretest Score Rater 1</td>
<td>1.000</td>
<td>.675</td>
</tr>
<tr>
<td>Pretest Score Rater 2</td>
<td>.675</td>
<td>1.000</td>
</tr>
<tr>
<td>Posttest Score Rater 1</td>
<td>.770</td>
<td>.753</td>
</tr>
<tr>
<td>Posttest Score Rater 2</td>
<td>.726</td>
<td>.644</td>
</tr>
<tr>
<td>Method</td>
<td>Cronbach's Alpha</td>
<td>Cronbach's Alpha Based on Standardized Items</td>
</tr>
<tr>
<td>Complex</td>
<td>.833</td>
<td>.838</td>
</tr>
<tr>
<td></td>
<td>Pretest Score Rater 1</td>
<td>Pretest Score Rater 2</td>
</tr>
<tr>
<td>Pretest Score Rater 1</td>
<td>1.000</td>
<td>.795</td>
</tr>
<tr>
<td>Pretest</td>
<td>.795</td>
<td>1.000</td>
</tr>
<tr>
<td>Score Rater</td>
<td>Score Rater</td>
<td>Score Rater</td>
</tr>
<tr>
<td>-------------</td>
<td>-------------</td>
<td>-------------</td>
</tr>
<tr>
<td>Posttest</td>
<td>Pretest</td>
<td>Posttest</td>
</tr>
<tr>
<td>Rater 1</td>
<td>Rater 1</td>
<td>Rater 2</td>
</tr>
<tr>
<td>Score</td>
<td>Score</td>
<td>Score</td>
</tr>
<tr>
<td>Rater 1</td>
<td>Rater 1</td>
<td>Rater 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Method</th>
<th>Cronbach's Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modern</td>
<td>.931</td>
<td>.932</td>
</tr>
</tbody>
</table>

According to the above table, both pretest and posttest results from the two raters showed correlation with each other in the three methods.

Besides, there existed a high degree of inter-rater reliability between the two raters at both pre and posttest results, since the results for intra-class correlation for average measures were .908, .818 and .917 for traditional, complex and modern methods, respectively.
Analysis of Covariance - ANCOVA:

ANCOVA was used since the researchers aimed at controlling the potential effect of covariate, which was the pretest scores of participants by taking into account the preexisting difference between the experimental and control groups and its potential effect on the dependent variable of the study which was the participants’ posttest scores. The results of ANCOVA test are shown in the following tables by identifying the two levels of the between-subjects factors-experimental and control groups-for the three methods. As shown in Table 5, 6 and 7, the $p$ values of .414, .928 and .924 are all greater than 0.5 and they represent the fact that the interaction between the covariate (pretest) and independent (group) variable groups were not statistically significant for the traditional, complex and modern methods of teaching TCs. Thus, the researchers had not violated the assumption of homogeneity of regressions that revealed the similarities of the groups with respect to their slopes and trends in all the methods. In other words, the factors (pretests) and covariates (experimental and control groups) did not interact, so the assumption of homogeneity of regression slopes had been met.

Table 5.

Tests of Between-Subjects Effects for Traditional Methods

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Mean</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sum of</td>
<td>Mean Square</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Squares</td>
<td>df</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group</td>
<td>.079</td>
<td>1</td>
<td>.079</td>
<td>1.08</td>
</tr>
<tr>
<td>PRETEST</td>
<td>91.87</td>
<td>1</td>
<td>91.87</td>
<td>1255.34</td>
</tr>
<tr>
<td>Group * PRETEST</td>
<td>.050</td>
<td>1</td>
<td>.050</td>
<td>.678</td>
</tr>
<tr>
<td>Error</td>
<td>3.51</td>
<td>48</td>
<td>.073</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>431.00</td>
<td>52</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>95.923</td>
<td>51</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 6.
Tests of Between-Subjects Effects for Complex Methods

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>.000</td>
<td>1</td>
<td>.00</td>
<td>1</td>
<td>.00</td>
<td>.990</td>
</tr>
<tr>
<td>PRETEST</td>
<td>20.87</td>
<td>1</td>
<td>20.87</td>
<td>25.20</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Group * PRETEST</td>
<td>.007</td>
<td>1</td>
<td>.007</td>
<td>.008</td>
<td>.928</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>39.74</td>
<td>48</td>
<td>.828</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>520.25</td>
<td>52</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>61.20</td>
<td>51</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 7.
Tests of Between-Subjects Effects for Modern Methods

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group</td>
<td>.87</td>
<td>1</td>
<td>.87</td>
<td>1</td>
<td>3.41</td>
<td>.071</td>
</tr>
<tr>
<td>PRETEST</td>
<td>78.01</td>
<td>1</td>
<td>78.01</td>
<td>305.89</td>
<td>.000</td>
<td></td>
</tr>
<tr>
<td>Group * PRETEST</td>
<td>.002</td>
<td>1</td>
<td>.002</td>
<td>.009</td>
<td>.924</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>12.24</td>
<td>48</td>
<td>.255</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>666.75</td>
<td>52</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>107.70</td>
<td>51</td>
<td>.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The actual analysis of ANCOVA also provided the researcher to look for the effect of treatment group on the outcome, thus after investigating the peculiarities of the unadjusted group’s means and standard deviations, Levene’s test of homogeneity of variance (Table 8) were calculated for the three methods prior to the implementation of ANCOVA test to ensure the assumptions of equality between groups, by which the p values were .107, .421 and .347 which were greater than .05, respectively.
To complete the quantitative analysis of the study, the test of the main hypotheses were carried out through the tests of between-subjects effects, the results of which are presented in Tables 9, 10 and 11 for the traditional, complex and modern methods, respectively.

The tables show whether our groups in the study were significantly different in terms of their scores on the outcome variable, which was the posttest score based on the effect of independent variable through the test of between subjects effects. In order to interpret the results, the "sig." column shows the statistical significance value (i.e., p-value) of whether there are statistically significant differences in post-test scores (i.e., the dependent variable) between the groups (i.e., the independent variable) when adjusted for pretest scores (i.e., the covariate). In this respect, it is possible to see whether there is a statistically significant difference between adjusted means (p<.05).

Table 9.
Tests of Between-Subjects Effects for Traditional Methods’ Test of Null Hypothesis

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Mean Squared</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST</td>
<td>92.28</td>
<td>1</td>
<td>1</td>
<td>1269.2</td>
<td>.00</td>
</tr>
<tr>
<td>Group</td>
<td>.03</td>
<td>1</td>
<td>.03</td>
<td>.43</td>
<td>.51</td>
</tr>
<tr>
<td>Error</td>
<td>3.56</td>
<td>49</td>
<td>.07</td>
<td>1</td>
<td>.099</td>
</tr>
<tr>
<td>Total</td>
<td>431.00</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Levene's Test of Equality of Error Variancesa for the three Methods

<table>
<thead>
<tr>
<th>Method</th>
<th>F</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td>2.699</td>
<td>1</td>
<td>50</td>
<td>.107</td>
</tr>
<tr>
<td>Complex</td>
<td>.658</td>
<td>1</td>
<td>50</td>
<td>.421</td>
</tr>
<tr>
<td>Modern</td>
<td>.902</td>
<td>1</td>
<td>50</td>
<td>.347</td>
</tr>
</tbody>
</table>

To complete the quantitative analysis of the study, the test of the main hypotheses were carried out through the tests of between-subjects effects, the results of which are presented in Tables 9, 10 and 11 for the traditional, complex and modern methods, respectively.
As shown in Table 9, the main effect of traditional methods of teaching TCs was not significant on the English-major students’ translation proficiency development, controlling for the effect of pretest since $p(.513)>(.05)$ and thus the null hypothesis was not rejected.

Also the effect size was .009 and indicated that the strength of independent variable was considered as small as a numerical value for indicating the efficacy of treatment as the methods of teaching. In addition, the observed power of test was .099 which did not enable the researcher to reject the null hypothesis.

The actual influence of the covariate is also shown in the Table 9, for which the significant level associated with it, was $.000<.05$ indicating that the covariate had a significant effect on the outcome that might negatively treat the effect of treatment. Also, about 96% of the variance in the posttest was explained by pretest and not by the group behavior.

**Table 10.**  
Tests of Between-Subjects Effects for Complex Methods’ Test of Null Hypothesis

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
<th>Noncent. Parameter Power</th>
<th>Observed Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST</td>
<td></td>
<td>20.86</td>
<td>1</td>
<td>20.86</td>
<td>25.72</td>
<td>.000</td>
<td>.344</td>
<td>25.72</td>
<td>.999</td>
</tr>
<tr>
<td>Group</td>
<td></td>
<td>.04</td>
<td>1</td>
<td>.04</td>
<td>.05</td>
<td>.82</td>
<td>.001</td>
<td>.05</td>
<td>.056</td>
</tr>
<tr>
<td>Error</td>
<td></td>
<td>39.75</td>
<td>49</td>
<td>.81</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>520.25</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td></td>
<td>61.20</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

As shown in Table 10, the main effect of the complex methods of teaching TCs was not significant on the English-major students’ translation proficiency development,
controlling for the effect of pretest since $p (.823) > (.05)$ and thus the null hypothesis was not rejected.

Also the effect size of .001 indicated the strength of independent variable which was considered as small as a numerical value for indicating the efficacy of treatment as the methods of teaching. In addition, the observed power of test was .056 which did not enable the researcher to reject the null hypothesis.

The actual influence of the covariate is also shown in Table 10, for which the significant level associated with it, was $0.000<.05$ indicating that the covariate had a significant effect on the outcome and might negatively treat the effect of treatment. Also, about 34% of the variance in the posttest was explained by pretest and not by the group behavior.

**Table 11.**

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III</th>
<th>Mean</th>
<th>F</th>
<th>Sig</th>
<th>Partial Eta Squared</th>
<th>Noncent. Parameter Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRETEST</td>
<td>85.72</td>
<td>1</td>
<td>85.72</td>
<td>343.07</td>
<td>.00</td>
<td>.875</td>
</tr>
<tr>
<td>Group</td>
<td>6.14</td>
<td>1</td>
<td>6.14</td>
<td>24.60</td>
<td>.00</td>
<td>.334</td>
</tr>
<tr>
<td>Error</td>
<td>12.24</td>
<td>49</td>
<td>.25</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>666.75</td>
<td>52</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected</td>
<td>107.70</td>
<td>51</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

But finally, as shown in Table 11, the modern methods of teaching TCs’ main effect was significant on the English-major students’ translation proficiency development [$p (.000)< (.05)$] controlling for the effect of pretest and the null hypothesis was rejected.

In other words, one way ANCOVA was conducted to determine a statistically significant difference between the pretest and posttest scores on the English-major students’ translation proficiency controlling for the potential effect of pretest scores of
participants by experimental and control groups through which \( p = 0.000 < 0.05 \) resulted in rejecting the null hypothesis.

According to Table 11, the significant value of \( 0.000 \) which is smaller than 0.05 indicated the fact that our groups were significantly different from one another. Also the effect size of \( 0.334 \) revealed the strength of independent variable as an appropriate numerical value for indicating the efficacy of the treatment-modern methods of teaching. In addition, the observed power of test was \( 0.998 \) which enabled the researcher to reject the null hypothesis strongly.

The actual influence of the covariate is also shown in Table 11, for which the significant level associated with it, was \( 0.000 < 0.05 \) indicating the covariate had a significant effect on the outcome and therefore might negatively treat the effect of treatment and our ability to observe the effect of treatment. Also about 87\% of the variance in the posttest was explained by pretest and not by the group behavior. All these revealed the importance of taking into account the role of covariate variable in the study.

Post hoc tests were also run to figure out which groups were significantly differed from the others. In doing so, Tables 12, 13 and 14 show the adjusted means of the groups based upon the influence of covariate in three methods.

**Table 12.**

**Estimated Marginal Means in the two Groups of Traditional Methods**

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lower Bound</td>
</tr>
<tr>
<td>Experiment</td>
<td>2.514a</td>
<td>0.053</td>
<td>2.407</td>
</tr>
<tr>
<td>Control</td>
<td>2.563a</td>
<td>0.053</td>
<td>2.457</td>
</tr>
</tbody>
</table>

Covariates appearing in the model are evaluated at the following values:

\[
\text{PRETEST_AVG_Waddington Model} = 2.4712.
\]
Table 13.
Estimated Marginal Means in the two Groups of Modern Methods

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>3.000(^a)</td>
<td>.177</td>
<td>2.643</td>
<td>3.356</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>2.943(^a)</td>
<td>.177</td>
<td>2.586</td>
<td>3.299</td>
<td></td>
</tr>
</tbody>
</table>

Covariates appearing in the model are evaluated at the following values:
PRETEST_AVG_Waddington Model = 2.7788

Table 14.
Estimated Marginal Means in the two Groups of Modern Methods

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Std. Error</th>
<th>95% Confidence Interval</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>3.623(^a)</td>
<td>.098</td>
<td>3.426</td>
<td>3.821</td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>2.934(^a)</td>
<td>.098</td>
<td>2.737</td>
<td>3.131</td>
<td></td>
</tr>
</tbody>
</table>

PRETEST_AVG_Waddington Model = 2.7788

Based on the quantitative analysis of the study as the Tables 15 and 16 show, the researcher could compare the outcomes from experimental and control groups on the three methods of teaching. In this respect, both experimental and control groups were not significantly different from each other through multiple measurements of \(p\) values in both traditional and complex methods since \(p\) were .513 and .823 which were greater than .05, representing how different groups vary in the two methods.

Accordingly, the traditional and complex methods of teaching TCs did not make statistically significant difference in the proficiency of English-major students while controlling for the effect of the pretest.

The case is different for the modern methods since the adjusted means of the groups based upon the influence of covariate of the methods made the researchers to observe the statistical significance of .000 that by conducting a post hoc test the researchers could figure out which groups significantly differed from the others. Further to this, the researchers could compare the outcomes from experimental and control groups on the
modern methods of teaching.

It was concluded that in contrast to the previous methods, within modern methods, both groups were significantly different from each other through multiple measurements of $p$ value in both groups since $p=.000$ and is smaller than .05 that showed how different groups vary.

Accordingly, the modern methods of teaching TCs made a statistically significant difference in the proficiency of English-major students while controlling for the effect of the pretest.

**Table 15.**

Pairwise Comparisons for the three Methods’ Groups

<table>
<thead>
<tr>
<th></th>
<th>Traditional Methods</th>
<th></th>
<th>Complex Methods</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean Difference (I-J)</td>
<td>Std Error or</td>
<td>95% Confidence Interval for Difference&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Mean Difference (I-J)</td>
</tr>
<tr>
<td>(I) Group (J) Group</td>
<td>Std Error or Sig.&lt;sup&gt;a&lt;/sup&gt;</td>
<td>Lower Bound</td>
<td>Upper Bound</td>
<td>Std Error or Sig.&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Experimental</td>
<td>Control</td>
<td>-.049 (.07)</td>
<td>.513</td>
<td>-.200 (.101)</td>
</tr>
<tr>
<td>Control</td>
<td>Experimental</td>
<td>.049 (.07)</td>
<td>.513</td>
<td>-.101 (.200)</td>
</tr>
</tbody>
</table>

67
### Table 16.
Univariate Tests for the three Methods’ Groups

#### Traditional Methods

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Observed Powera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contras</td>
<td>.032</td>
<td>1</td>
<td>.032</td>
<td>.434</td>
<td>.513</td>
<td>.009</td>
<td>.434</td>
</tr>
<tr>
<td>Error</td>
<td>3.563</td>
<td>49</td>
<td>.073</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Complex Methods

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Observed Powera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contras</td>
<td>.041</td>
<td>1</td>
<td>.041</td>
<td>.051</td>
<td>.823</td>
<td>.001</td>
<td>.051</td>
</tr>
<tr>
<td>Error</td>
<td>39.756</td>
<td>49</td>
<td>.811</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Modern Methods

<table>
<thead>
<tr>
<th></th>
<th>Std Difference (I-J)</th>
<th>Std Error</th>
<th>F</th>
<th>Sig.b</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contras</td>
<td>.689*</td>
<td>.13</td>
<td>.9</td>
<td>.000</td>
<td>.410</td>
<td>.969</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Std Difference (I-J)</th>
<th>Std Error</th>
<th>F</th>
<th>Sig.b</th>
<th>Lower Bound</th>
<th>Upper Bound</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contras</td>
<td>-.689*</td>
<td>.13</td>
<td>.9</td>
<td>.000</td>
<td>-.969</td>
<td>-.410</td>
</tr>
</tbody>
</table>

68
Modern Methods

<table>
<thead>
<tr>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
<th>Partial Eta Squared</th>
<th>Noncent. Paramet.</th>
<th>Observed Powera</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrast</td>
<td>6.148</td>
<td>1</td>
<td>6.148</td>
<td>24.60</td>
<td>.000</td>
<td>.334</td>
<td>24.603</td>
</tr>
<tr>
<td>Error</td>
<td>12.244</td>
<td>49</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Qualitative Data Analysis

In order to provide answer to the qualitative research question, an interview consisting of three questions were carried out among the participants who took part in each experimental method separately. Actually, they became aware of the methods’ features during the treatment phases. Besides, a handout of a brief description of each method was also provided to assure their deep understanding of each method. The responses to the interview’s questions were provided as the answer to the qualitative question of the study. The results of the qualitative data analysis are shown in the following tables.

Table 17. Summary of the participants’ responses to the interview’s questions

<table>
<thead>
<tr>
<th>Q1: Students’ viewpoints on evaluation of the methods</th>
<th>Identified Categories</th>
<th>Frequencies of Comment Texts</th>
<th>Percent of Comment Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginners Practice</td>
<td>Requirements</td>
<td>Incapabilities</td>
<td></td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>20</td>
<td>27</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q2: Students’ viewpoints about the advantages and disadvantages</th>
<th>Categories</th>
<th>Frequencies of Comment Texts</th>
<th>Percent of Comment Texts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advantages</td>
<td>Disadvantages</td>
<td>25</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td></td>
<td>42.4</td>
<td>57.6</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Q3: Students viewpoints on the effectiveness of the methods</th>
<th>Categories</th>
<th>Frequencies of Comment Texts</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes-</td>
<td>No-</td>
<td>Yes-</td>
<td>No-Linguistic</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8</td>
<td>11</td>
</tr>
</tbody>
</table>
### Q1: Students’ viewpoints on evaluation of the methods

**Identified Categories**

<table>
<thead>
<tr>
<th>Stages Effect</th>
<th>Suitability of Equivalents</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>16</td>
<td>24</td>
<td>21</td>
</tr>
<tr>
<td>26.2</td>
<td>39.3</td>
<td>34.4</td>
</tr>
</tbody>
</table>

### Q2: Students’ viewpoints about the advantages and disadvantages of the methods

**Categories**

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>39</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>40.6</td>
<td>59.4</td>
<td></td>
</tr>
</tbody>
</table>

### Q3: Students’ viewpoints on the effectiveness of the methods

**Categories**

<table>
<thead>
<tr>
<th>Yes-Meanings</th>
<th>No-Meanings</th>
<th>Yes-Linguistic</th>
<th>No-Linguistic</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>17</td>
<td>11</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>19.2</td>
<td>32.7</td>
<td>21.2</td>
<td>26.9</td>
<td></td>
</tr>
</tbody>
</table>

---

### Modern Methods

<table>
<thead>
<tr>
<th>Usefulness of the Translator’s Role</th>
<th>Complementary Nature</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>39.7</td>
<td>15.5</td>
<td>44.8</td>
</tr>
</tbody>
</table>

### Complex Methods

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>76</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>75.2</td>
<td>24.8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Yes-Meanings</th>
<th>No-Meanings</th>
<th>Yes-Linguistic</th>
<th>No-Linguistic</th>
<th>Percent of Comment Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>38</td>
<td>5</td>
<td>25</td>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
The qualitative data of each method were summarized based on the above table. The summaries are also provided for the three methods of teaching TCs based on questions’ classification. The first question summary data on the participants’ viewpoints for the evaluation of the methods are as follows:

**Table 18.**

**Students’ viewpoints on evaluation of methods (Q1)**

<table>
<thead>
<tr>
<th>Method</th>
<th>Analysis of the Responses</th>
<th>Percent of the Comments on</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comments (N)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Complex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Modern</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Further to Table 18, 14.5 percent of the students believed on the fact that the traditional methods of teaching TCs is considered as the methods for beginners’ practice in language acquisition. Besides, 36.4 percent of them believed in the vast requirements of the methods before its beneficial implementation in TCs classes by which 49.1 percent of them declared the incapabilities of the methods in their comments.

Regarding the complex methods of teaching TCs and the students’ evaluation of the methods, it should be noted that 26.2 percent of them believed in the suitability of the methods resulted by the stages in training, comparing to the traditional methods. Besides, 39.3 percent of students declared their positive perspective about the suitability of the methods via the independency on equivalents finding, for which 34.4 percent of the participants made comments in supporting the issue.

However the students’ responses to the modern methods of teaching TCs’ evaluation were different. The reason for such a claim was confirmed by 39.7 percent of responses in supporting the usefulness of methods and 15.5 percent of the comments on the methods’ emphasis on translators’ role as well as 44.8 percent of the comments devoted for supporting the complementary nature of the methods.

The second question summary data about the participants’ viewpoints on the advantages and disadvantages of each method are provided in the following table:
Table 19.
Students’ viewpoints on advantages and disadvantages of methods (Q2)

<table>
<thead>
<tr>
<th>Method</th>
<th>Analysis of the Responses</th>
<th>Comments (N)</th>
<th>Percent of the Comments on Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Advantages</td>
</tr>
<tr>
<td>Traditional</td>
<td></td>
<td>55</td>
<td>42.4</td>
</tr>
<tr>
<td>Complex</td>
<td></td>
<td>61</td>
<td>40.6</td>
</tr>
<tr>
<td>Modern</td>
<td></td>
<td>101</td>
<td>75.2</td>
</tr>
</tbody>
</table>

By investigating the overall responses of the participants to the second question of interview, it was revealed that, out of 55 extracted comments, 42.4 percent of them emphasizing on advantages and 57.6 percent of them declaring the disadvantages of the traditional methods to achieve fidelity and transparency in translations.

The situation was somehow the same for the complex methods of teaching TCs by 40.6 percent of the comments on the advantages and 59.4 percent for the disadvantages, out of 61 comments.

However, the case is totally different in the modern methods in which, out of 101 extracted comments from the responses, 75.2 percent of them confirmed the advantages and 24.8 percent of them declaring the disadvantages of the methods in preserving the fidelity and transparency in students’ translations.

The summary data of the third question on the participants’ viewpoints regarding the effectiveness of each method are provided in the following table:

Table 20.
Students’ viewpoints on the effectiveness of methods (Q3)

<table>
<thead>
<tr>
<th>Method</th>
<th>Analysis of the Responses</th>
<th>Comments (N)</th>
<th>Percent of the Comments on Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Meanings</td>
</tr>
<tr>
<td>Tradition</td>
<td></td>
<td>46</td>
<td>21.7</td>
</tr>
<tr>
<td>Complex</td>
<td></td>
<td>52</td>
<td>19.2</td>
</tr>
<tr>
<td>Modern</td>
<td></td>
<td>74</td>
<td>51.4</td>
</tr>
</tbody>
</table>

By investigating the overall responses of the participants to the third question of interview, it was revealed that, out of the 46 extracted comments, 37 percent and 23.9
percent of them emphasized the inefficacy of the traditional methods in the Iranian context concerning the meanings and concepts as well as linguistic abilities, respectively. On the other hand, 21.7 percent and 17.4 percent of the comments indicated the effectiveness of the methods in the same context.

The situation was somehow the same for the complex methods of teaching TCs. That is, the 32.7 percent and 26.9 percent of the comments indicating the inefficacy of the methods whereas, 19.2 percent and 21.2 percent of the comments declaring the effectiveness of the methods in the Iranian context concerning the meanings and concepts as well as linguistic abilities based on the 52 comments extracted from the students’ responses.

However, concerning the 74 comments extracted for the modern methods, the case was changed by putting just 6.8 percent and 8.1 percent of the comments on the inefficacy of the methods concerning meanings and concepts, and linguistic abilities; however, the comments indicated that 51.4 percent and 33.8 percent of responses confirmed the efficacy of the modern methods in the Iranian context on the same categories. The analysis of the results obtained through the participants’ responses to the interview provided the answer to the research’s qualitative question by which the most appropriate and common methods of teaching in TCs according to the Iranian English-major students’ viewpoints are modern methods.

DISCUSSION AND CONCLUSIONS
In this study, the methods of teaching TCs for translation proficiency development of English-major students were examined in an attempt to seek for the applicability of the methods in the Iranian context. Thus, the findings in the current research are of crucial importance to the instructors and learners due to the limited number of studies focusing on the teaching methods used in TCs.

Generally, the findings of the study emphasized that the methods of teaching TCs differently affect the translation proficiency development of Iranian English-major students since instructors had used different resources and activities via applying the methods.

In this respect, through applying different methods of teaching TCs, students might need further assistance to develop abilities to translate in various genres and contexts. Although the use of vocabularies and their equivalences along with complicated
grammatical structures were the crucial components of teaching in TCs’ classes, but stylistic peculiarities might be neglected, since the methods were limited to the particular examples of specific genres or contexts. Even if instructors adjusted the methods to analyze the text for identifying the peculiarities of different text genres, but the intuitive choices might not be found. Accordingly, it was not possible to take different features and specific needs of a text into account that might lead to the ignorance of communicative abilities in a message. The methods also put emphasis on the role of form-content relation as the necessary factor for the polysemantc nature of a translation task and a cooperative learning, through which no intuitive choices will be made. In this respect, the instructors are needed to be equipped with both translation principles and experts’ knowledge of a field. Thus, the efficacy of training is highly depending on the combination of the strategies applied in all methods.

In this view, it seems clear that traditional methods of teaching have certain disadvantages. Therefore, a need for complex perspective of teaching TCs comes to the field to deal with the inefficacies of the methods by dividing the training process into separate stages. Finding equivalents is based on text analysis and helps the translators to delimit the scope of the analytical research both in finding equivalents and producing translations as the result of a mutual interaction between the teacher and student. However, what is at the stake here is to define the ideal translation which is affected by the roles assigned to the teachers, translators and texts to provide the required integrity in a translation learning task. All these are achievable via building a space for translation and interpretations as well as identifying the themes and rhemes of the text. Although the factors could be considered as the guidance during the training processes, but they may deemphasize the cooperative learning procedure through neglecting the role of a teacher as the facilitator and feedback provider.

Despite the fact that traditional and complex methods could be applicable for the mentioned purposes, but still further justifications are required, part of which have been met by modern methods. Accordingly, the following conclusions could be made via applying the three methods of teaching TCs for collecting, analyzing, and mixing both quantitative and qualitative data in a single study to provide a better understanding of translation training. In concluding the results, both quantitative and qualitative analysis of data in the three methods confirmed each other. Within the modern methods, the
confirmation was to the extent that the method had a statistically significant effect on the participants’ translation proficiency which was emphasized by the participants’ responses to the interview via mentioning the concepts such as the usefulness of methods, focusing on translator’s role and complementary nature of the methods; besides, devoting more comments for the advantages and effectiveness of the methods in linguistic abilities and communicating meanings and concepts as the result of multiple measurements of the same concept. Accordingly, the modern methods of teaching TCs had a statistically significant effect on the proficiency of English-major students while controlling for the effect of the pretest by the quantitative results that converged and confirmed through the qualitative data and analysis. The findings of the study might provide some suggestions to encounter the difficulties caused by the ever-changing needs of higher education, teaching methodologies, translation studies and the related courses as the determining elements in shaping the interdisciplinary fields of study in teachings languages and translation.

References


**Biodata**

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Abstract
Japanese higher education has experienced two unprecedented occurrences at the same time: the decline of the 18-year-old population and the increase of the percentage of college admissions. In the last twenty-five years, the number of university applicants has fallen by 30%. However, the number of universities has not decreased as of yet. Universalization of four-year college education is thus achieved, 52.6% in 2017, but many question the academic quality of the admitted students. The government has thus enhanced first-year education. The author describes a learner-centered first-year program compulsory for entrants to Meisei University, a mid-level institution in Tokyo, that has contributed towards the improvement of their retention rate.
Keywords: Japan, population decrease, universalization of higher education, bridging secondary and higher education, first-year programs, Meisei University

1. A glimpse of Japanese higher education today

The 18-year-old population in Japan was significantly reduced to 1.2 million in 2017 compared with 2.49 million peak in 1966. It is predicted that it will decrease to 1.1 million in 2023 and to less than a million in 2033. By mitigating the Standards for Establishment of Universities, however, the number of four-year colleges and universities has increased from 507 in 1990 to 780 in 2017. As a result, four-year tertiary education in Japan has reached the level of universalization: 52.6% in 2017.

It does not mean, however, that all colleges and universities enjoy a great number of applicants and new entrants. On the contrary, in 2015, 43% of colleges and universities did not meet their quota because of the shortage of applicants and matriculated new entrants. It is quite high compared to the 30% in 2005 and 4% in 1995. It shows that the applicants today concentrate more than before on well-known colleges and universities perhaps because of the influence of school names when job hunting. Their diplomas serve as social licenses for the future. The financial situation of some colleges and universities has thus become severe, and some may go bankrupt soon or merge with other

### Shrinking 18-year-old population and Universalization of four-year college education in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>18 yrs population</th>
<th>high school graduates</th>
<th>number of four-year colleges</th>
<th>authorized capacity of admission (A)</th>
<th>total number of applicants (B)</th>
<th>total number of admitted applicants (C)</th>
<th>four-year college entrance exams:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>2,490,000</td>
<td>1,290,000</td>
<td>511</td>
<td>1,030</td>
<td>2,630</td>
<td>1,500</td>
<td>B/A=2.63 (1966) C/A=1.50 (1966)</td>
</tr>
<tr>
<td>1976</td>
<td>2,130,000</td>
<td>1,100,000</td>
<td>516</td>
<td>1,050</td>
<td>1,170</td>
<td>1,060</td>
<td>B/A=1.17 (2011) C/A=1.06 (2011)</td>
</tr>
<tr>
<td>1992</td>
<td>1,870,000</td>
<td>1,110,000</td>
<td>507</td>
<td>1,070</td>
<td>1,160</td>
<td>1,050</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>1,610,000</td>
<td>980,000</td>
<td>494</td>
<td>1,060</td>
<td>1,060</td>
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</tr>
<tr>
<td>2009</td>
<td>1,350,000</td>
<td>860,000</td>
<td>479</td>
<td>1,050</td>
<td>1,050</td>
<td>1,050</td>
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</tr>
<tr>
<td>2010</td>
<td>1,200,000</td>
<td>780,000</td>
<td>462</td>
<td>1,050</td>
<td>1,050</td>
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<tr>
<td>2011</td>
<td>1,050,000</td>
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<td>446</td>
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<td>1,050</td>
<td>1,050</td>
<td></td>
</tr>
</tbody>
</table>

Sources: MEXT, Japan
institutions.

### Graph 1: Shrinking 18-year-old population and universalization of four-year college education in Japan

<table>
<thead>
<tr>
<th>Year</th>
<th>18 yrs population (x1,000)</th>
<th>high school graduates (x1,000)</th>
<th>number of four-year colleges</th>
<th>authorized capacity of admission (A)</th>
<th>total number of applicants (B)</th>
<th>total number of admitted applicants (C)</th>
<th>B/A= nominal competition rate</th>
<th>C/A= real competition rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1966</td>
<td>1,000</td>
<td>2,63</td>
<td>1,000</td>
<td>1,50</td>
<td>2,000</td>
<td>1,50</td>
<td>2.63</td>
<td>1.50</td>
</tr>
<tr>
<td>1976</td>
<td>1,000</td>
<td>1,76</td>
<td>1,000</td>
<td>1,50</td>
<td>2,000</td>
<td>1,50</td>
<td>1.76</td>
<td>1.50</td>
</tr>
<tr>
<td>1992</td>
<td>1,000</td>
<td>1,17</td>
<td>1,000</td>
<td>1,50</td>
<td>2,000</td>
<td>1,50</td>
<td>1.17</td>
<td>1.06</td>
</tr>
<tr>
<td>2009</td>
<td>1,000</td>
<td>1,00</td>
<td>1,000</td>
<td>1,50</td>
<td>2,000</td>
<td>1,50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>2011</td>
<td>1,000</td>
<td>1,00</td>
<td>1,000</td>
<td>1,50</td>
<td>2,000</td>
<td>1,50</td>
<td>1.00</td>
<td>1.00</td>
</tr>
</tbody>
</table>

sources: MEXT, Japan

2. **First-year education to bridge high schools and universities**

Private colleges and universities, for their own survival in the age of declining youth, admit not-too-small portions of applicants recommended by high schools without severe entrance exams and admit applicants of low academic credentials and/or low motivation of study. In this system, the mismatch between applicants and universities may occur, unwilling entrants are not happy, and, consequently, the desertion of unfinished four-year college education in Japan reached 9% in 2011 (OECD 2013:71). The three major reasons of dropout are financial difficulties, college transfer and low academic performance (Ministry of Education, Culture, Sports, Science and Technology [MEXT] 2014). And more than 30% of the college graduates quit their first job within three years. This has been happening consistently since the mid-1990s (Ministry of Health, Labour and Welfare 2016).

Thus, MEXT has, in the last 10 years, (1) paid more attention to the transition from
secondary education to higher education, (2) encouraged the first-year education at colleges and universities for the retention of students, and (3) drawn more attention of the college students to the future professional life. By 2011 88% of the four-year colleges and universities in Japan (651/780) have introduced first-year education to the curriculum. The focus of the first-year education differs from one university to another.

3. First-semester education at Meisei University

At Meisei University, the Center for Advancement of Meisei Education (MEC) launched its compulsory first-semester program in 2010 that focused on fostering awareness of being a member of their alma mater and advance basic academic literacy such as writing skills, discussion and presentation technique of the students. Table 1 shows the structure of the program 2017.

<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Introduction</td>
<td>6. How much do you know about Meisei</td>
<td>12. Let’s learn from our alumni and</td>
</tr>
<tr>
<td></td>
<td>University?</td>
<td>alumnæ!</td>
</tr>
<tr>
<td>2. Meeting others in a new environment</td>
<td>7. Let’s introduce Meisei University to</td>
<td>13. Let’s think about yourself and imagine</td>
</tr>
<tr>
<td></td>
<td>high school students!</td>
<td>your work in the future!</td>
</tr>
<tr>
<td>3. Thinking together about learning in</td>
<td></td>
<td>14. How do you want to spend college</td>
</tr>
<tr>
<td>college</td>
<td></td>
<td>years from now on?</td>
</tr>
<tr>
<td>4. Listening and understanding others,</td>
<td></td>
<td>15. Let’s write a letter to you living in</td>
</tr>
<tr>
<td>Part 1</td>
<td></td>
<td>2027!</td>
</tr>
<tr>
<td>5. Listening and understanding others,</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Part 2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

9. Let’s interview our university staff!
10. Let’s respect the value of yourself and others and say no! when harassed
11. How are rules and manners different?

In this program, some 2,000 new students are divided into some 70 groups of 30 students who are sub-grouped into 5 sets of 6 students. 55 permanent professors trained in this subject use a unified syllabus and textbook-portfolio edited by MEC and play the role of facilitator along with some 90 sophomore and junior student assistants. 15 gatherings compose a semester and a gathering once a week lasts 90 minutes.

Each year, more than 90% of the students show satisfaction, especially for the student-focused small size class, active-learning group works and the chance to get acquainted with students from other departments and schools. Some students with good high school background and clear objectives of study complain about the classes, however. They show dissatisfaction relating to the inertia of some fellow students and feel that their pride is being damaged.

In the anonymous comments to the first-semester education that MEC has collected since its beginning, students write in their self-evaluations that as Meisei students, they have positive feelings towards this program. In particular, what they want to do after graduation, what they should do as students, how they have become interested in the history of the university and its educational strongpoints. Also, they express that they have acquired some tips to speak and write logically and comprehensively and listen to others with respect and interest and have become familiarized with the library.

The attendance rate of the program from 2010 to 2016 is 84.9%, and 93.6% of the students satisfactorily received credits. The retention of the students has improved: 80.4% of the new students admitted in 2013 have proceeded to their senior year and 86.5% of the new students enrolled in 2014 proceeded to the junior year. Before launching this program, it was 66.3% and 73.7% respectively, though other endeavors should also be counted.

References


ACTIVITY-BASED ENHANCEMENT PROGRAMS FOR CLINICAL COMPETENCE

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Abstract

Activity-based teaching methods enhance student’s participation and clinical competence relevant to their learning experience. Moreover, it builds the confidence of the instructors on their students competence when exposed to an actual clinical scenario. This study determines the level of effectiveness of activity-based programs: Grand Return demonstration and Low Fidelity Simulation in terms of equipments, clinical instructors and overall implementation. It will look into the relationship of student’s gender and year level to the overall implementation of activity-based enhancement programs.

The findings of the study showed that the level of effectiveness of grand return demonstration and low fidelity simulation is highly effective in enhancing students’ clinical competence. The gender of the clinical instructor is significantly related to the implementation of Grand Return demonstration and Low Fidelity Simulation. Meanwhile, a significant relationship was found between implementation of grand return demonstration and clinical instructor and the use of equipments. This suggests that grand return demonstration and low fidelity simulation may significantly contribute in enhancing the decision-making skills and confidence of the nursing students in the actual clinical setting. The implementation and utilization of simulated activities needed to be reviewed and updated to meet the changing demands of nursing education.

Keywords: activity-based, grand return demonstration, low fidelity simulation

I. Background

Activity-based teaching method is a student – centered approach, used by a teacher that emphasizes student’s participation, physically and mentally, which will lead to an efficient learning experience. Learning by doing is essential in successful learning because the more senses are stimulated, the more and longer knowledge will retain.

Newly added activity-based enhancement program at National University – College of Nursing are Grand Return Demonstration and Low Fidelity Stimulation. Grand Return
Demonstration is an instructional method which the learner attempts to perform a certain procedure which the learners will be using in their future career, while Low Fidelity Simulation refers to the engagement of learners in life-like experience that mimic real clinical encounters.

Clinical Performance is a measure of the process by which by healthcare is delivered. It is based on scientific evidence and can reflect guidelines, standards of care or practice parameters, and a measure of the outcome of the patient’s experience. The researcher wanted to find out the effectiveness of activity–based enhancement programs as perceived by National University nursing students. This study will help the university as well as the students, the university will improve the quality of learning that the student achieve.

**Statement of the Problem**

1. What is the demographic profile of the respondents in terms of:
   1.1. Gender; and
   1.2. Year level

2. How effective are activity–based enhancement programs as perceived by National University nursing students in terms of:
   2.1. Grand Return Demonstration
       2.1.1. Equipment;
       2.1.2. Clinical Instructor; and
       2.1.3. Overall Implementation;
   2.2. Low Fidelity Simulation
       2.2.1. Equipment;
       2.2.2. Clinical Instructor; and
       2.2.3. Overall Implementation;

3. Is there a significant relationship between the perception of the National University nursing students and the effectiveness of activity–based enhancement programs according to gender and year level?

**Scope and Limitations**

This study is conducted to seventy-two (72) nursing students enrolled at National University taking the implemented enhancement programs, namely: Grand Return Demonstration and Low Fidelity Simulation. Equipment, clinical instructor, and overall implementation are the parameters used in evaluating the effectiveness of Grand Return Demonstration and Low Fidelity Simulation.
Review of Literature

According to Walker et al (2013), Low-fidelity simulations use devices such as partial task trainers or full-body mannequins that represent a body part, such as an extremity or anatomic structure. Such devices allow the learner to focus on an isolated task. An instructor (typically located in an adjacent room) controls the mannequin’s vital and speaks to the student through a microphone inside the mannequin. According to Grady (2008), Low Fidelity Simulation and gender has a significant relationship which shows that male tends to have more learning from the use of simulation technology than female, and also shows a fair amount of learning with an aid of simulation equipment. Thus, the result of the study shows positive outcome that learning for both male and female nursing students improved. The result of the study of Cohen (2010) shows that the training had a positive effect to the participant, and it yield readiness in terms of technical, behavioral, and cognitive dimensions of obstetric emergencies. It equipped them with the proper attitude towards real world pressure and trained them to be self-efficient. Sharpnack et al (2012) in their study entitled using Low Fidelity Sophomore Nursing Student in a Baccalaureate Nursing Program, Low Fidelity Simulation encourage an active and utilization of different type of learning and it provides students’ confidence and collaborative team building. Aggarwal (2010) noted that simulation started through real–life mannequins which now encompass an entire range of systems. It should suite the needs of the students and should be systematically includes in the curriculum. It is encouraged worldwide to develop such training.

Theoretical Framework

Kolb’s Theory of Experiential Learning by David Kolb in 1984, emphasizes the role of experience in the learning process of a student, learning through action, learning by doing, learning through experience, and learning through discovery and exploration. The knowledge is gained from the combination of grasping and transforming experiences. Students are engaged intellectually, emotionally, socially, soulfully and/or physically. They are actively engaged in posing questions, experimenting, solving problems, being creative and constructing meaning. Through this experience the students can develop communication skills, confident and critical thinking and responding and making actions to what is happening in the real world.

Conceptual Framework

This conceptual framework is consists of concepts that are placed within a logical and sequential design that shows the relationship between variables. The implementation of the activity- based enhancement programs, such as grand return demonstration and fidelity simulation is the independent variable while the perceived effectiveness is the dependent
Research Design

The researchers utilized descriptive-correlation research method. This aims to determine the relationship between two variables. These variables pertain mainly to the nursing students’ demographic data and perception, and the effectiveness of activity-based enhancement programs.

Research Locale

The study was conducted at National University, College of Nursing to seventy-two (72) Level II, III and IV nursing students at National University taking the enhancement programs, namely: grand return demonstration and low fidelity simulation. At the said university, as the study investigates the effectiveness of the activity-based programs, said above, as perceived by the nursing students at National University.

Instrumentation

The researcher a survey questionnaire and items were answered using Likert Scale. The Likert Scale scores for the perceived effectiveness of activity-based enhancement program were interpreted as follow: 3.01 – 4.0 (Strongly Agree), 2.01 – 3.0 (Agree), 1.01 – 2.0 (Disagree) and 0.01 – 1.0 (Strongly Disagree). A survey questionnaire was formulated based on research objective. The researcher sought for professionals’ assistance from experts for validation of the tool. A pilot test was conducted to 10 nursing students and results showed an acceptable reliability score (cronbach alpha-0.75)

Analysis of Data

Frequency, percentages and mean scores were utilized to describe the perception of the respondents in regards to activity-based teaching strategies. Pearson moment correlation was used for the test of relationship between the demographic data and perception to Grand Return demonstration and Low Fidelity Simulation.

Results

Demographics

Using the percentage distribution, the results showed that majority or 65% of the respondents are female, Level IV nursing students.

Table 1 below presents the level of effectiveness of Low Fidelity Simulation as
perceived by the National University nursing students. The effectiveness level of Low Fidelity Simulation is higher on higher on both clinical instructor and overall implementation, and lower on equipment, but overall, it is very effective as perceived by the respondents.

**Table 1. Level of Effectiveness of Low Fidelity Simulation**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>3.31</td>
<td>0.29</td>
<td>Very effective</td>
</tr>
<tr>
<td>Clinical Instructor</td>
<td>3.54</td>
<td>0.25</td>
<td>Very effective</td>
</tr>
<tr>
<td>Overall Implementation</td>
<td>3.54</td>
<td>0.31</td>
<td>Very effective</td>
</tr>
</tbody>
</table>

**Table 2. Level of Effectiveness Of Grand Return Demonstration**

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equipment</td>
<td>3.38</td>
<td>0.18</td>
<td>Very effective</td>
</tr>
<tr>
<td>Clinical Instructor</td>
<td>3.64</td>
<td>0.31</td>
<td>Very effective</td>
</tr>
<tr>
<td>Overall Implementation</td>
<td>3.61</td>
<td>0.29</td>
<td>Very effective</td>
</tr>
</tbody>
</table>

Table 2 presents the level of effectiveness of Low Fidelity Simulation as perceived by the National University nursing students. The effectiveness level of Grand Return Demonstration is higher on clinical instructor, and lower on equipment, but overall, it is very effective as perceived by the respondents.

**Table 3. Relationship between Activity-based programs and Gender**

<table>
<thead>
<tr>
<th>Variable 1</th>
<th>Variable 2</th>
<th>Pearson r</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Fidelity simulation</td>
<td>Equipment</td>
<td>0.17</td>
<td>0.34</td>
</tr>
<tr>
<td>Clinical Instructor</td>
<td>0.38</td>
<td>0.03</td>
<td></td>
</tr>
<tr>
<td>Overall implementation</td>
<td>-0.14</td>
<td>0.44</td>
<td></td>
</tr>
<tr>
<td>Grand Return</td>
<td>Equipment</td>
<td>0.26</td>
<td>0.11</td>
</tr>
</tbody>
</table>
Table 3 showed the relationship between activity-based programs and gender. Low fidelity simulation is significantly related to clinical instructor ($r=0.38$, $p=0.03$) but not to equipment ($r=0.17$, $p=0.34$) and overall implementation ($r=-0.44$, $p=0.44$). The same findings also was found to grand return demonstration and clinical instructor ($r=-0.59$, $p=0.00$)

Table 4. Relationship between Activity-based programs and Year Level

<table>
<thead>
<tr>
<th>Variable 1</th>
<th>Variable 2</th>
<th>Pearson r</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Fidelity simulation &amp; Grand Return Demonstration</td>
<td>Equipment</td>
<td>0.50</td>
<td>0.01</td>
</tr>
<tr>
<td></td>
<td>Clinical Instructor</td>
<td>0.46</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>Overall implementation</td>
<td>-0.01</td>
<td>0.94</td>
</tr>
</tbody>
</table>

Level of significance $<$0.05

Table 4 shows that relationship between activity-based programs mainly the low fidelity simulation and grand return demonstration and year level. It is interesting to note that only the clinical instructor has a significant positive correlation to use of activity-based programs.

CONCLUSION

Level of effectiveness of grand return demonstration and low fidelity simulation is highly effective in enhancing students’ clinical competence. The gender of the clinical instructor is significantly related to the implementation of Grand Return demonstration and Low Fidelity Simulation. Meanwhile, a significant relationship was found between implementation of grand return demonstration and clinical instructor and the use of equipments.

RECOMMENDATION

Grand return demonstration and low fidelity simulation may significantly contribute in enhancing the decision-making skills and confidence of the nursing students in the actual clinical setting. The implementation and utilization of simulated activities needed to be reviewed and updated to meet the changing demands of nursing education.
REFERENCES
Aggarwal R. eta l (2010). Training and simulation of Patient safety
POSTGRADUATE STUDENTS’ ATTITUDES AND ENGAGEMENT IN COOPERATIVE JIGSAW READING INSTRUCTION

Juliana OTHMAN

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Student-centred instructional methods have become increasingly popular in higher education and one such method is cooperative learning. The study was conducted to examine the ESL students’ attitudes towards the implementation of jigsaw cooperative learning technique in a postgraduate class. Participants were 36 postgraduate students enrolled in a masters of education program. They were assigned weekly reading tasks for the duration of ten weeks and worked in small cooperative groups.

Evaluation of students’ attitudes and engagement in the cooperative learning tasks in this study was carried out using a survey questionnaire. Results indicated that most students showed positive attitudes towards the implementation of cooperative strategies.

Keywords: jigsaw reading, cooperative learning, postgraduate students.

Introduction

It is widely acknowledged that reading is a fundamental skill for academic success. In postgraduate studies, having good reading skills are essential for students to comprehend and engage in critical discussions of academic texts. Academic reading demands more than basic comprehension of the text. It involves both taking meaning from the text and also interacting with the text (Anderson, 2000; Carell, Devine & Eskey, 2000). Studies (Ghaith & Bouzeineddine, 2003; Phakiti & Li, 2011; Sabbah, 2016) have shown that ESL learners faced various challenges in academic reading at postgraduate level. They faced difficulties in coping with their reading materials as they explore new areas of studies which require unfamiliar subject related terminology and complex discourse patterns used in the text. One of the instructional approach to facilitate students’ reading comprehension is through the use of cooperative learning in reading activity. Morrow and Sharkey (1993) found that learners could achieve greater reading comprehension when they cooperatively discuss and share opinions about a reading text.

Cooperative learning is based on social interdependence theory which posits ‘the way
in which social interdependence is structured determines how individuals interact within the situation which, in turn, affects outcomes’ (Johnson and Johnson, 1989, p.5). Cooperation is viewed to be effective when participants had to share similar goals and when their individual goals are positively dependent on the actions of the group. Such positive interdependence is believed to promote interaction among members of the group where they encourage and facilitate each other to reach their goals.

Jigsaw activity (Johnson & Johnson, 2009) is an example of cooperative learning structure as it incorporates two basic principles; i.e positive interdependence and individual accountability (Millis and Cottel, 1998; Slavin, 1996). According to Aronson & Goode (1980), jigsaw is a well-established approach to facilitate students’ learning as it increases the level of student participation in the classroom, develop interpersonal skills and promote student achievement. In reading task, jigsaw involves an instructional cycle of activities which consists of reading, grouping, regrouping, expert group discussions and team reporting (Kagan, 1995). In jigsaw reading activity, each member of the group is responsible for a section of the text and has to teach their section to other members of the group. They need to put the different pieces of information together in order to get the whole picture. The benefit of using jigsaw method for academic reading task are in terms of increasing reading comprehension, raising metacognitive awareness and learning the content while teaching it to their peers in a small group. This learning strategy would increase student engagement in academic discussion which in turn will facilitate the deep level of understanding of complex concepts. Millis and Cottell (1998) and Millis (2010) argue that cooperative learning, as a teaching-learning activity used in higher education classes, is supportive of and congruent with deep approaches to learning.

Thus, the aim of this study is to examine ESL postgraduate students’ attitude and engagement on the implementation of jigsaw reading activity in a postgraduate class at a local university in Malaysia.

**Research Context**

Thirty six postgraduate students in a local higher institution in Malaysia participated in a weekly jigsaw reading activity. In this activity, students had to work in groups of four. Each student in a group was assigned a section of the reading task. After reading the article, students in every group that read the same section form an “expert group” to discuss and master the part. Next, they would return to their original group and present their section to their group members. The intervention lasted for 10 weeks of a 14-week semester. Lectures were conducted as usual during the first 2 weeks, and thereafter cooperative learning was introduced.
Data Collection and Analysis

The postgraduate students were asked to complete a questionnaire after the ten weeks intervention. The questionnaire comprised of items to obtain the respondents demographic data as well as items on students’ attitude towards the cooperative learning experience. Using a 4-point Likert-scale respondents were asked to rate from 1 (Strongly Disagree) to 4 (Strongly Agree) to statements regarding cooperative jigsaw reading activity. To establish the validity of the questionnaire, a pilot study was conducted to test the reliability of the instrument. Reliability analysis yielded a Cronbach’s of .86 for the questionnaire. The survey data were statistically analysed and described.

Findings and conclusion

Table 1 Descriptive Statistics of Students’ Attitude Towards Jigsaw Reading Task

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>Std Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Felt responsible to my group.</td>
<td>3.92</td>
<td>0.28</td>
</tr>
<tr>
<td>2. Cooperative learning increases student participation in learning activities.</td>
<td>3.80</td>
<td>0.40</td>
</tr>
<tr>
<td>3. Committed to the success of the group</td>
<td>3.78</td>
<td>0.42</td>
</tr>
<tr>
<td>4. Peer interaction helps me to obtain a deeper understanding of the materials given.</td>
<td>3.75</td>
<td>0.50</td>
</tr>
<tr>
<td>5. The cooperative learning approach forced me to take on more responsibility for learning.</td>
<td>3.69</td>
<td>0.52</td>
</tr>
<tr>
<td>6. Cooperative learning improves student communication and decision making skills.</td>
<td>3.69</td>
<td>0.47</td>
</tr>
<tr>
<td>7. Responsible for the success of each individual in the group</td>
<td>3.67</td>
<td>0.53</td>
</tr>
<tr>
<td>8. Members of my group felt a commitment to other individuals in the group.</td>
<td>3.66</td>
<td>0.48</td>
</tr>
<tr>
<td>9. Cooperative learning is an effective instructional technique in postgraduate class.</td>
<td>3.64</td>
<td>0.54</td>
</tr>
<tr>
<td>10. The cooperative learning experiences in my class enhanced my learning.</td>
<td>3.61</td>
<td>0.59</td>
</tr>
</tbody>
</table>

Table 1 presents the results and analysis of the questionnaire. In terms of individual
accountability, the data presented above indicated that students felt responsible for their group (m=3.92) and they also felt committed to the success of their group (m=3.78). As to whether cooperative learning increased the amount of student participation in the classroom, the results indicated a strong agreement to the statement (m=3.80). The students also strongly agreed that peer interaction facilitated better understanding of the materials given (m=3.75).

Findings in Table 1 also revealed that the students believed cooperative learning strategy forced them to take more responsibility for learning (m=3.69) and improved their communication and decision making skills (m=3.69). As for individual and group commitment, it was found that the students felt responsible for the success of each individual in the group (m=3.67). Furthermore, the students believed that members of their group felt a commitment to other individual in the group (m=3.66). Lastly, most of the students felt that cooperative learning is an effective instructional strategy (m=3.64) and it enhanced their learning (m=3.61).

To conclude, data from the questionnaire indicated that the ESL students held positive view on the implementation of jigsaw reading strategy in their postgraduate class. The findings implied that the cooperative learning approach seemed to promote students’ engagement in their tasks and facilitated their reading comprehension through interaction with their peers. The students felt responsible for completing the assigned reading tasks and positively participated in their group discussion.

REFERENCES


1. Abstract

Multi-media production is one of the emerging platforms to facilitate transfer of knowledge, enhance learning and keep students engaged. It also provides avenues for students to explore their digital technology skills. Grade 12 students developed multimedia sources, specifically infomercial videos to supplement the lectures. The purpose of the study was to explore the results of using the student-produced videos as educational tools to help students in understanding Media and Information Literacy. A total of 120 students were involved in the study. The experimental method was used with two randomly selected groups: the control group was given modules while the experimental group watched the videos. Results of the post-test proved that students who had seen the videos were able to understand complex matters, work independently and attain higher academic achievement and greater self-fulfillment compared to the other group. Student satisfaction survey conducted at the end of the semester revealed that students believed that videos elicited more engaging learning episodes. Videos allowed students to watch creative graphic and practical applications of the concepts and thus helped them in processing the information and monitor their own understanding. Data revealed that 94% responded with ‘agree’ or ‘strongly agree’ when asked if the videos were effective in enhancing their media and information literacy. Despite limitations like video editing, software applications and cost in producing videos, the study proved that using student-produced videos in SHS classes does not only foster student engagement but also enhances students’ creativity.

Keywords: infomercials, creativity, engagement, student-produced

2. Background

Several multimedia platforms are utilized used to impact student engagement, bridge learning gaps and promote active learning. Videos are effective tools in grasping and grounding
complex concepts. Teachers use these multi-media sources for opening and closure activities, for eliciting discussion points and for enhancements.

Integrating technology in the classroom has changed the course of instruction through the years. Students before would do oral presentations without using any technology-enhanced gadget. However, multi-media production is an emerging platform for critical thinking, problem-solving and deep learning (Meeks & Ilyasova 2003). Videos, nowadays, have become a major ingredient in an instructional delivery and a tool for student engagement. Furthermore, videos are used as information delivery mechanism specifically for distance learning and massive open on-line courses (MOOC’s).

Mayer’s (2001) “multimedia principle” explained that “people learn more deeply from words and pictures than from words alone”. Clearly, students can easily process information and achieve higher level of competency when they can see (visual) and hear (auditory) their lessons. Thus to make learning relevant, students need to filter, select, organize and integrate information in their prior knowledge.

On the other hand, student engagement, refers to the extent that students show attention, curiosity, interest, optimism, and passion while they are learning or being taught (Abott 2014). It is posited that when students are interested or inspired, then meaningful learning exists.

**Purpose of the Study**

The study sought to explore the impact of using the student-produced videos as an educational tool to help students in understanding Media and Information Literacy.

**Research Questions:** The study sought to answer the following questions:

1. How do student-produced videos impact student engagement?
2. How effective are the videos in scaffolding learning?
3. What are the benefits and limitations of using student-produced videos in instruction?

**3. Method**

**Subjects**

One hundred twenty (120) Senior High School (SHS) students were involved in the study. They are all in Grade 12 coming from three strands namely Science Technology, Engineering and Mathematics (STEM), Humanities and Social science (HUMSS) and
Accountancy and Business Management (ABM) and they are all regular students of Saint Michael’s College of Laguna.

All are aged 17 to 18 years old and all of them are computer–literate with advanced knowledge in video productions. All of them took Media and Information Literacy, one of the core subjects in the Senior High School.

**Data Collection**

The study used the experimental method using two (2) randomly selected groups: the controlled group; both were given a pre-test to identify their level of competency on the Legal, Ethical, and Societal Issues in Media and Information. The respondents were randomly selected. The control group was given modules while the experimental group was given student-produced videos to watch. Both groups were given thirty (30) minutes to process the information with the use of the guide questions. The next thirty (30) minutes was spent for discussion. Post-test was given after the twenty hours (20) of meeting. Results of the post-test were tabulated and filed. Moreover, experimental group was also asked to answer the questionnaire to evaluate the effectiveness of the student-produced videos using the five-point-Likert scale.

**4. Results**

The study yielded relevant results that connect the use of multimedia to student engagement. Results of the post-test proved that students who had seen the videos were better able to the learners were able to understand complex matters, work independently and attain higher academic achievement.

The average pre-test class point score (N=60) for students who used the modules (the control group), was 52.10%, ranging from 45.26% to 62.05% while for those students in the experimental group (N=60), the average post-test class point score was 67.42%, ranging from 52.86% to 84.00%.

Comparing pre-test and post test scores showed that the average pre-test % was 52.10 and the average post-test % was 67.42, yielding a % difference of +15.32. The % difference is positive and found to be statistically significant. When a correlation was performed, the pre-test and post-test were significantly correlated at the 0.05 level (p<.01**), showing evidence that both tests measure the same concepts. Moreover, the results of a T-test yield significance at the .001 level (p<.001***) which means that the difference between the pre-test average score and the post-test average score was statistically significant.

The student produced videos covered Digital Divide, Virtual Self, Data Privacy Act
among others. The videos were presented with subtitles and were digitally enhanced rendering the informercials attractive, interesting and informative. Millennials are multimedia designers using various apps that are readily available online. They tend to experiment and challenge themselves to engage, expand and encompass learning through technology. Videos inspire and engage students resulting to higher marks, enhanced learning experiences, promote team work, develop communication skills and autonomy (Willmot et al, 2012).

Furthermore, based on the student satisfaction survey conducted at the end of the semester, students expressed that videos elicit more engaging learning episodes. Videos scaffolded their learning because they were allowed to view creative graphics and practical applications of the concepts seen in class and thus helped them in processing the information and monitor their own understanding of legal, ethical, and societal issues in media. Data revealed that 95% responded with ‘agree’ or ‘strongly agree’ when asked if the videos were effective in enhancing their media and information literacy. They believe that they were totally engaged with the auditory, visual and technical aspects of the presentations thus achieving deeper learning of the complex topics. Moreover, they were encouraged to create their when they do oral presentations.

Videos definitely enhanced creativity among the student-producers. They felt a sense of fulfillment when students were engaged in watching the videos featuring animation, re-enactments and simulations. They were determined to create more videos that would capture learners’ attention, interests and curiosity. However there were certain limitations on the part of the video-producer such as difficulties in video editing, costly software applications and strenuous production work. There was no identified limitation on the part of the learners who viewed the videos.

**Conclusion**

Based on the results of the data, student produced videos impact student engagement in terms of academic achievement, transfer of knowledge and self– fulfillment. Using videos as scaffolds of learning made the learners understand complex matters, work independently and attain higher academic achievement and greater satisfaction. The study therefore proved that using student-produced videos in SHS classes does not only foster student engagement but also enhances students’ creativity.

**4. References**


THE DEVELOPMENT OF EVALUATION TOOL AND EVALUATION DIGITAL LITERACY OF HIGHER EDUCATION STUDENTS: A CASE STUDY OF KHON KAEN UNIVERSITY

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Abstract

Digital literacy is imperative for digital citizens to live in a world full of information and ever-changing tools. College students need digital literacy skills to live and work in the future. Therefore, it is necessary to develop a digital literacy evaluation tool that is consistent with an international conceptual framework, and to assess such a tool. The present study aimed to develop a mobile application for evaluation of college students’ digital literacy. In addressing the objective, we synthesized various conceptual frameworks for developing a mobile application and, subsequently, a mobile application was designed and created. Internal validity of the mobile application was established by experts investigating consistency between the created mobile application and the conceptual frameworks, and external validity was ensured via a survey of students’ opinions on using the mobile application. The developed mobile application that aims to assess digital literacy is consisted of the following assessment components: fine & use, create & innovate, identity & wellbeing, teach & learn, tools & technologies and communicate & collaborate. It is also composed of three levels of assessment: beginner, intermediate, and advanced. Regarding student's digital literacy assessment, findings indicate that most of them have a high level of digital literacy.

Keywords: Digital Literacy, Mobile Application, and Global citizenship

I. INTRODUCTION

Technology is now part of everyday life for all of us, whether as a student, teacher, administrator, technical specialist, or even just as an ordinary citizen. The pace in which new technologies emerge from initial concept to widespread adoption is also much faster than ever
before, new words being added to the dictionary each year and new websites and apps to get our heads around for anything from paying tax to ordering pizza; from watching the latest movies to speaking with distant relatives; or for learning a new skill and collaborating with others.

There’s also no shortage of hype, with the pitch for new systems often becoming quite extravagant in their claims. Some might be justified, but many perhaps not. Somehow, we’re to make sense of all this – judging claims, looking at what might or might not work in our context or what hybrid mixtures of approaches can bring to addressing some long standing challenges we’ve faced as learners or teachers. Keeping up to date, isn’t always easy, nor is feeling confident that we’ve really grasped the limitations as well as the capabilities of each system, each device. Indeed, for most of us, it’s difficult even knowing “what’s out there” that might be relevant or useful to our work, our study or our lives.

Therefore, Technology learning management is crucial. Students must improve their technological knowledge, skill, and literacy which can be called “Digital Literacy”. Digital Literacy have to be taught as a subject individually or to be integrated in other subjects in order to make sure that students possess sufficient level of Digital Literacy which can be about Fining and using, creating and innovating, identity and wellbeing, teaching and learning, using tool and technologies, and communicating and collaborating, as well as to use in problem solving and innovation creating.

The present study aimed to develop a mobile application for evaluation of college students’ digital literacy. In addressing the objective, we synthesized various conceptual frameworks for developing a mobile application and, subsequently, a mobile application was designed and created.

II. DEFINITIONS OF DIGITAL LITERACY IN KEY FRAMEWORKS

Literacy or literacies is the most frequently used term in the contemporary discussions of the digital in education. It is used to bring together knowledge, attitudes and skills, and so encompasses the basic ability to use digital devices and applications as well as allowing for the development of a level of critical, reflective and strategic capability in various areas of application and practice. The definition of ‘literacy’ thus has expanded and this is can be demonstrated (for example) in the official definition proffered by the National Council of Teachers of English in the US in 2013:

- develop proficiency and fluency with the tools of technology;
• build intentional cross-cultural connections and relationships with others so to pose and solve problems collaboratively and strengthen independent thought, and design and share information for global communities to meet a variety of purposes;

• manage, analyze, and synthesize multiple streams of simultaneous information, and create, critique, analyze, and evaluate multimedia texts;

In parallel to this review of the literature and policy landscape, the All Aboard project team undertook a range of activities to collate suggestions and ideas from the wider community, in addition to hosting a number of design sessions at which a range of possible approaches and structures were considered. Indeed, a number of contributors pointed to specific frameworks with which they were already familiar (particularly those of JISC, SCONUL, UNESCO and ANCIL). The initial, emergent broad categories were:

• finding (effectively/systematically) and using information and digital resources;

• applying and using information and resources in an effective manner;

• using tools to learn and to support the learning of others;

• managing one’s online identity (factored into this also were concerns regarding security, personal safety (“cyberbullying” and “trolling” were mentioned as risks) and data security;

• creating materials in a variety of media formats;

• using a range of tools for communication and collaboration;

• higher level critique of information sources, of technological dependency, commercial restrictions and wider societal implications.

Digital Literacy drew on frameworks developed at state, national, and international levels. These frameworks serve as a basis for our proposed operational definition of Digital Literacy to enable a Digital Literacy assessment that serves the needs of higher education institutions.

III. EVALUATING EXTERNAL VALIDITY OF THE MOBILE APPLICATION DEVELOPMENT

External validity of the mobile application development was investigated through a survey on students’ opinions about using the mobile application. The results are as follows:

• Its interface was suitable in all aspects, namely font size, font colors, the background of the application and the menu position.

• In terms of its speed and interaction, the application could be used effectively, despite
the slow internet speed, while its menus could interact with each other and function well.

- Finally, in respect of its language use, some words were academic and technical, so it may cause students’ misunderstanding about the assessment. However, most students were able to read and understand the language used in the application.

IV. THE RESULTS OF STUDENT’S DIGITAL LITERACY ASSESSMENT

The analysis of data from the digital literacy assessment by interpreting and average. The findings indicate that most of them have a high level of digital literacy. Table 1 shows the number and percentage of students that can be done as indicators of digital literacy in advanced level.

Table 1 shows the number and percentage of students that can be done as indicators of digital literacy.

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Percentage of students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>beginner</td>
</tr>
<tr>
<td>Fine &amp; Use</td>
<td>5.02</td>
</tr>
<tr>
<td>Create &amp; Innovate</td>
<td>7.95</td>
</tr>
<tr>
<td>Identity &amp; Wellbeing</td>
<td>7.43</td>
</tr>
<tr>
<td>Teaching or Learning</td>
<td>13.69</td>
</tr>
<tr>
<td>Tools &amp; Technology</td>
<td>15.45</td>
</tr>
<tr>
<td>Communicate &amp; Collaborate</td>
<td>17.24</td>
</tr>
</tbody>
</table>

V. DISCUSSION AND CONCLUSION

In developing the application for assessment of students’ Digital Literacy, conceptual frameworks of assessment and the mobile application development were reviewed and synthesized. Subsequently, the study designed and created the mobile application for the assessment while still examining its internal and external validity. The results showed that the development of the mobile application consisted of these assessment aspects: fine & use, create & innovate, identity & wellbeing, teach & learn, tools & technologies and communicate & collaborate. In the assessment, there were three levels, namely beginner, intermediate and advanced. The findings indicate that most of them have a high level of digital literacy. The development of the mobile application corresponded to Microsoft Digital Literacy Assessment and The Northstar Digital Literacy Project and Digital Literacy Assessment by ISTE in respect of conceptual frameworks, the assessment standard and the classification of assessment levels.
More importantly, this development of the mobile application applied the mobile technology and designed the assessment to closely match students’ local contexts specifically as in Thailand.

It is hoped that the development of the mobile application for assessment of students’ Digital Literacy would serve as a guideline for teachers’ instruction in order to reinforce and enhance students’ Digital Literacy in each subject. Moreover, it would enable students to assess themselves and set a goal of self-improvement. Using this application in a real setting would promote effective learning, operation and resolution using digital technology.

Acknowledgements

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NAROTAMA UNIVERSITY EXPERIENCE: AN ENDEAVOR AS A PRIVATE E-BUSINESS AND POST-MODERN HIGHER EDUCATION INSTITUTION IN THE 21ST CENTURY

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In a very diversed country with roughly 260 millions of people, 17,000 islands, more than 742 languages and dialects, Narotama University have to become one of the recognizable names regarding quality according to Indonesia’s and South East Asia’s higher education standard. Some students also need special requirements. Moreover we also accept students from other countries. We need to support them to reach their goals.

On the other hand, the 21st Century requires a sophisticated and comprehensive Information and Communication Technology (ICT) and Management system, called the “E-Business” (Kalakota & Robinson, Strauss & Frost). It consists of an integrated system of Enterprise Resource Planning, Customer Relationship Management, Selling Chain Management, Electronic Commerce, Business Intelligence, Supply Chain Management, Knowledge Tone, and Electronic Procurement to be more effective, more efficient, in managing organization.

The 21st Century is also a Post-Modern or The New Age, Avant Garde Era. It is a “Back To Nature”, “Go Green” way. A balance between Ratio and Heart way of living. To create a better civilization, enriched with wisdom and prosperity. Globally.

This paper is to show how we combine it all to support higher education system, especially for the spirit of diversity and global citizenship.

Keywords: ICT (Information and Communication Technology), Management, E-Business, Post-Modern, Wisdom.
students from diversified cultures, ethnics, religions, etc. We need to support them to reach their goals. Whilst also achieving our own’s.

And as a private university, Universitas Narotama funds itself, in favour of its stakeholders. Quite a different situation from Indonesia’s State-owned universities. And thus, it must really be effective (action-wise), efficient (economic-wise), in using its sources, to become more productive. This consequence, perhaps, arguably, in the beginning, can be somewhat hard. But in the long term perspective, with a commitment to do so, it is logically good.

Universitas Narotama was founded in the year of 1981. In Surabaya City, the second metropolitan of Indonesia, the gate to Eastern part of Indonesia. And was considerably and humbly quite small, at first. But along with the vision of the founding fathers, Narotama was the first private university in Eastern part of Indonesia to achieve the ISO 9000 certificate (later changed to 9001:2000), and the second one, nation-wide. And since then, have been holding this certificate. And other achievements, respectively. Say, its Quality assurance system. Often later, be benchmarked by other institutions.

But since the ISO acknowledgement is mainly about management system, especially in Filing system management, there are still lots of other thing to be done. In real-practice, towards the outside stakeholders, Narotama must become better. Not only by this. The world is changing, fast.

On the other hand, the organizations of the 21st Century usually requires a more sophisticated and comprehensive Information and Communication Technology (ICT) and Management system, called the “E-Business”. The term “E-Business” consists of an integrated system built on the Internet-centric technology architecture. Enterprise applications will go beyond the Enterprise Resource Planning (ERP) packages, to integrate back-end internal processes, with those affecting customers and business partners. The application architecture will likely include Customer Relationship Management, Supply Chain Management (SCM), Business Intelligence (BI), Selling Chain Management (SeCM), Data Warehousing (DW), and Data Mining (DM) functions (Kalakota and Robinson, 2001). It is quite similar with a term proposed by Strauss and Frost (2001), as the Business Intelligence and with The Data Warehousing and Data Mining are being considered as the Knowledge Tone in that scheme.

Figure 1. E-Business by Kalakota-Robinson
And after the era of 20th Century, the world now is called: The Post-Modern Era, or the New Age Era of the Avant Garde Era, with its Post-Modernity, and Post-Modernism movement. The names of the Thinkers, Pilosophers famous on this subject are Lyotard, Capra, Nietzsche, Foucault, Derrida, et al. It is by far, briefly speaking, a global and new spirit in balancing Ratio, Feeling (Heart), and Senses approaches towards Life. To be able to Re-newing the World. It is also a global trend and spirit to be Back To Nature, with a ‘Go Green’, Balanced approach, as well. All things must be being done naturally, as natural as possible, referring to Nature’s pathway that actually teaches us. An East meet West approach. A Global recognizing. No longer be based on merely almost just about Rational-wise as it was during the so-called Modern, Industrial Revolution, or Enlightenment Era (17th to 20th Century), or merely almost just Non-Rational-wise as it was during the so-called Medieval Ages Era (1st to 15th Century) in Europe and it the Western worls.

For further readings on this subject. See https://www.iep.utm.edu, https://en.wikipedia.org/wiki/Postmodern_philosophy, https://en.wikipedia.org/wiki/Postmodernism. It also is in accordance with arguably all the things stated by Naisbitt in his books Megatrend 2000, Megatrend Asia, Global Paradox, etc., as well.

While also, Management states that an organization naturally consists of The 5 Ms factors: Man, Machine, Material, Money, Methodology factors. These factors flow throughout the Inputting process, the main Process itself, and the Output process, called Closed Loop I – P – O System (Turner–Mize-Case “Introduction to Industrial and Systems Engineering”). And must be managed effectively and efficiently. To be productive. And of course, according to this also, Organization Management is one important key.
This is when the enlightenment came. A chance. As one approach in doing so within the Organization Management, is called Matrix Organization technique. It is a type of organizational structure, in which people with similar skills are pooled for work assignments, resulting in more than one manager (sometimes referred to as solid line and dotted line reports, in reference to traditional business organization charts) and is the practice of managing individuals with more than one reporting line (Tara Duggan, "Successful Organizational Structure"). While in the Soccer World, in a quite a similar approach, arguably, can be considered as the Total Football strategy. As Total Football (Dutch: totaalvoetbal) is a tactical theory in football in which any outfield player can take over the role of any other player in a team (https://en.wikipedia.org/wiki/Total_Football).

And it can be in accordance with the term of The E-Business mentioned. Since to be able to do it effectively and efficiently enough, a Matrix Organization is best to backed-up by a strong tool. Such as, The ICT foundation. A strong foundation, empowering this ambitious and progressive Management system: The E-Business approach.

For example, let us look at the practice of building a Selling Chain Management approach, a la Universitas Narotama:

First, let us look at the term, the definition. The application of technology to the activities in the life cycle of an order – from customer inquiry to order fulfillment - is called Selling Chain Management. The E-business applications that automate these activities are called Selling Chain Management Applications. Factors like increasing demand for customer self-service, the rising costs of pre-sales support, the increasing cost of order errors, changing
sales channels, increasing product complexity, and the rise of mergers and acquisitions are driving the growth of Selling Chain Management applications. The order acquisition process in the selling chain includes the following steps: identifying prospective customers, understanding their needs, exploring possible solutions, translating them into production, price and delivery terms, presenting the proposal to customers, revising it if needed, and preparing an order.

Second, with not many people in Universitas Narotama specifically hold this responsibility, while the institution naturally requires it, it must be done flexibly and even everybody should be able to market and sell. The Lecturers, the Administration Staffs, the Office boys, the Security Guards and so on, are part of Marketing and Selling pseudo-Force. If it can empower them. And it does.

Imagine that when the Marketing and Sales staffs are away, a potential stakeholder comes. Who should deal with him or her, then?

If we hold on to the classic point of view, the Marketing and Sales staffs, should. They are in responsible for this. It is part of their Job Description and Job Specification. No argument. But since they are away, the potential Stakeholder can not be served. Somebody should do the Marketing and Selling service for him or her. All day, if necessary. This is obviously important, since Universitas Narotama is open from 8 AM to 10 PM with two shifts. Monday to Saturday, weekly. With three classes: The A class for Regular Students, The B Class (or Night Class) for part-time Students, The C Class for week-end only students.

In Universitas Narotama, everybody is encourage to do it. Everybody should be able to serve, to sell. Even while the Receptionists - whom are also part of Marketing and Sales staffs - are away during the break (12 PM to 16 PM), the Security Guards or anybody else within the Management force – including the Lecturers, if necessary – can take their seats. And suddenly they are the acting Marketing and Sales staffs. Equipped with all the information needed, for instance by using the “SIM Naro” software application program, an ERP system made specifically for and by Universitas Narotama. And this application is also connected to its CRM system, its Data Warehousing and Data Mining (Knowledge Tone) system, its Business Intelligence system, and its Supply Chain System, 24/7/365. And so the transaction can be done. Any time, if necessary.

Even, if must, they can do all of this transaction, electronically. Via Internet. All things being done electronically. Thus, this is also a sophisticated use of the ERP system, E-Commerce, Supply Chain Management (for services), Knowledge Tone, E-Procurement, and Business Intelligence. And this is indeed: E-Business. And on other sub-subjects of Organization
Management of Universitas Narotama, it is being applied, naturally.

Now this approach, naively, could be considered as quite exhausting, even frustrating, at the end. For the Organization force. As it requires a lot of energy. So this strategy is arguably can be quite unacceptable if we want to balance things up, of the Mind-Heart-Sense-Soul approach of the New Age Era. To reach the so-called Post-Modern stage. So something should be modified.

And to do so, it balances the people by exploring their Religious side. Develop them morally. It also create a more sophisticated ‘Carrot and Stick’, Rewards and Punishments strategy. And a Go Green environment, with gardens, nice athmosphere, as well. And an open-minded, open-hearted attitude. And so on. Humbly speaking, so far, the results are satisfactory. The Grades and Accreditations are rising, with optimistic positive trend. The number of students are also rising, with less negative comments, healthier financial situation. And starting new projects and co-operations, locally, globally. All things are improving, to be brief.
THE NEW STUDENT ADAPTATION TO UNIVERSITY LEARNING ENVIRONMENT: HASANUDDIN UNIVERSITY’S CASE

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Abstract

As the biggest university in the eastern part of Indonesia, Hasanuddin University has been so attractive to new student candidates, especially those from this region. The quality of high schools across this region, however, is less competitive compared to those in the western part of Indonesia. To anticipate this situation, Hasanuddin University has introduced a new student adaptation program since 2007. This program is designed to prepare first-year students to adjust themselves to a new learning environment. Initially, this program was called Basic Study Skills (BSS). Later on the program was extended to become Basic Character and Study Skills (BCSS). In 2017, the program was then transformed to become Basic Learning Skill, Character, and Creativity (BALANCE). All first-year students are required to join this program during their first five weeks at the university. Among others, major subjects covered are: 1) how to identify your strength; 2) Hasanuddin University outlook; 3) character building and etiquette; 4) time management; 5) learning skills; and 6) student creativity development. Survey conducted to all students involved in 2017 indicated that about 97% of them are happy and appreciate this program. The program is considered to be well designed and supported with professional instructors.

Keywords: new students, adaptation, and study skills

1. Introduction

Currently there are about 122 state universities in Indonesia managed under the Ministry of Research, Technology, and Higher Education of Indonesia (https://forlap.ristekdikti.go.id/). Among them, eleven universities have been granted autonomous status during the last several years. Hasanuddin University is one of these autonomous institutions. This university was established in 1956, located in Makassar City, South Sulawesi.
Hasanuddin university consists of 15 faculties and one graduate school. Its current student body is around 30 thousands. Of this student body, about 24 thousands are undergraduate students, and the rest are graduate students. The number of staff employed is around 1,700 academic staff and 1,000 administrative staff. With such size, this university becomes the biggest university in the eastern part of Indonesia (Muhidong and Pulubuhu, 2016).

The number of new undergraduate student is about five thousands each year distributed to 60 study programs. They are originated from different provinces across Indonesia. Among them about 15% comes from outside South Sulawesi province. Those coming from outside South Sulawesi are dominated by those from eastern part of Indonesia and Kalimantan (Borneo) island. The quality of high schools, especially, those coming from these regions is relatively lower than those from the other parts of Indonesia.

The above facts tell that the Hasanuddin University students are varied in terms of their provincial origins (varied in cultural aspect) and their high school backgrounds (varied in quality aspect). This situation leads this university to create a new student adaptation program that could help students better prepare themselves to a new learning environment.

2. Program Concept

The student adaptation program was initiated in 2007. Initially this program was called as Basic Study Skills (BSS). Later on, the program was extended to cover aspect related to character building. With this change, the program title was also adjusted to become Basic Character Study Skills (BCSS). In 2017, the program was then transformed again to become Basic Learning Skill, Character, and Creativity (BALANCE).

This program is managed under the Vice Rector for Student and Alumni Affairs. All first-year students are required to join this program during their first five weeks at the university. This program was carefully designed involving Department of Psychology, Hasanuddin University to guarantee its effectiveness. The followings are steps carried out during the development of BALANCE program:

Step 1: Identification of the appropriate soft skills needed

A series of focus group discussions (FGD) was conducted in this step. The topics of FGDs included exploring relevant scientific references such as study results by Taylor et al. in 2004 and Mudhovozi in 2012. Skill gaps observed from the results of the previous programs, BSS and BCSS, was also discussed and analyzed. It was also explored the academic, social, and psychological challenges possibly pacing by the new students. Academic staff, sophomore and senior students, psychologists, instructors from previous programs, and all Vice Deans for
Student Affairs were involved in the FGDs.

**Step 2: Concept development**

This step basically tried to identify the main skills (major subject skills), based on the FGD results in the first step, that should be addressed and tackled. Indeed, there were five major subject skills were identified: 1) how to identify your strength; 2) Hasanuddin University outlook; 3) character building and etiquette; 4) time management; 5) learning skills; and 6) student creativity development. Subjects covered by each of main subject skills were then identified through FGD. In total there were 15 relevant subjects identified.

**Step 3: Curriculum development**

A team was set up to tailor the sequence of the subjects to have an appropriate curriculum design. Learning outcomes of each main subject skills subject were clearly defined at this stage. Appropriate teaching strategy was also identified. The team also had to be aware the time constraint. Hasanuddin University has set that this program should be carried out only on Saturday during the first five weeks of the first semester.

**Step IV: Module development**

In this step, all subjects identified in the curriculum were transformed into modules that would become teaching materials used by each instructor involved. All modules were finalized through an intensive FGD to guarantee their relevance.

**Step V: Instructor training**

The last step was training of the instructors. Hasanuddin University academic staffs were identified and invited by the office of Vice Rector of Students and Alumni Affairs to join the training. Only those who passed the test at the end of the training process would be recruited as instructors.

3. **Program Implementation**

   As mentioned above, BALANCE program in 2017 were conducted every Saturday during the first five weeks of the first semester, namely during the 9th, 16th, 23th, 30th of September, and 7th of October 2017. There were 128 classes covered during this period. Meanwhile, the number of instructors used was 120.

4. **Implementation Result /Conclusion**

   To understand the level of effectiveness of this program, a survey conducted to all students involved in 2017 program. The survey result indicated that about 97% of the students are happy and appreciate this program. The program is considered to be well designed and supported with professional instructors.

References


OCCUPATIONAL INFECTION CONTROL KNOWLEDGE AND PRACTICES AMONG HEALTH CARE WORKERS IN SELECTED INSTITUTIONS IN BATANGAS PROVINCE: A BASIS FOR AN ACTION PLAN FOR CLIENTS’ AND HEALTH CARE WORKERS’ SAFETY

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Abstract

The study aimed to assess the perceived knowledge and practices on occupational infection control among health care workers’ (HCWs’) in various institutions in the Province of Batangas. A descriptive-correlational study was conducted in selected governmental and private health institutions. The study revealed that health care workers grouped with relevant training were very much knowledgeable on infection control practices as compared to those who have no training. However, it could be noted that there is a significant relationship on the level of knowledge and practices on infection control among health care workers’ grouped with and without training. The relationship revealed that those health care workers, with relevant training and updated knowledge always practice infection control correctly than those without training. It was also found out that the profile of HCWs’ with relevant trainings have significant difference on their knowledge and practices in terms of training, educational attainment and profession. Furthermore, HCWs were knowledgeable on infection control, but compliance was inadequate. Lastly, a proposed action plan was offered to prevent hospital acquired infections for health care workers’ and clients’ safety for institutions consideration.

Keywords: Occupational Infection control; perceived knowledge; practices; health care workers; health care workers associated infections; nosocomial infections.

1.0 Introduction

Infection control is a critical issue in any clinical setting as this involves health care workers’ and clients' health and safety. It is also one of the most important strategies to achieve quality clients’ care. In order to promote high quality and safe care to clients, health care facilities and health care workers must conform with the standards required on infection control. The standardization of infection control in the Philippines reflects the
maturity of infection control in the country. The study had the following objectives namely; to assess the perceived level of knowledge on occupational infection control among health care workers grouped according to whether they have training or not, to determine the practices on occupational infection control among HCWs grouped according to whether they have training or not, to analyze the relationship between health care workers’ perceived level of knowledge and their practices on occupational infection control, to determine the significant differences of the profile of HCWs with relevant training on the perceived knowledge and practices on occupational control program, and to propose an action plan to prevent hospital acquired infections for health care workers and clients’ safety for the institutions consideration.

2.0 Methodology

This study intended to assess the perceived knowledge and practices on infection control among HCWs of various institutions in the Province of Batangas as basis for an action plan for clients’ and HCWs’ safety. The facts and figures were obtained through empirical investigation and a systematized way of processing data pertinent to the attainment of the researchers’ goals. The descriptive-correlational method was used in the study.

The study referred to the present health care workers of selected private and government institutions in the Province of Batangas. The HCWs included were physicians, professional nurses, registered midwives, laboratory personnel and nursing aides/attendants who are directly involved in the care of clients admitted in the institution.

3.0 Results and Discussions

1. Majority of respondents were female professional nurses with overall count of 225, 26-30 years old and working for almost 1 to 5 years in private institutions without training on infection control.

2. It can be noted that the group with relevant training were very much knowledgeable on the infection control practices as compared to those without training. It is known information that in-house trainings and regular education programs regarding infection control practices are pertinent to increase health care workers compliance to these practices.

3. Majority of HCWs with and without training often practice infection control practices.

4. Knowledge is very significant for the HCWs with and without relevant training in order to practice infection control measures correctly.
5. Training, educational attainment and profession were significant with the probability value of 0.001 in the perceived knowledge and practices among health care workers.

4.0 Conclusions

1. The HCWs are composed mostly of Professional Nurses with Bachelors Degree, in their middle adulthood, regularly employed in various private institutions in the Province of Batangas and without relevant training on infection control practices.

2. The HCWs with relevant training are very much knowledgeable on infection control practices.

3. The HCWs with and without training often practice most of the standard infection control practices. Adherence to hand washing and cleaning, disinfecting, drying, and packing and sterilizing of equipment were always practiced.

4. Knowledge and Practices of HCWs have significant relationship to occupational infection control.

5. The profession, educational attainment and relevant trainings have significant difference on their knowledge and practices of infection Control.

6. A proposed action plan is offered to prevent hospital acquired infections among health care workers’ and clients’ for the institution’s considerations (Appendix A).
5.0 Direction for Future Use

☐ The Hospital Administrators of the different government and private institutions may provide a continuous employee training program for the different categories of staff most especially for nurses who would be targeted relevant to their functions.

☐ The Hospital Infection Committee should have well-defined roles and functions in this process to minimize hospital associated infections.

☐ The Health Care Workers of each level of facility may work and collaborate with other care workers for regular meetings for suggestions as to the modification of their infection policies aligned with standards of infection control for better client and health care workers health..

☐ Future researchers may take the initiative to conduct a follow up study on epidemiological research to further investigate hospital infections..

☐ Lastly, the researchers would like to recommend the adaption of the proposed action plan for the institutions considerations

REFERENCES


Appendix A

ACTION PLAN

Proposed Action Plan to Prevent Hospital Acquired Infections for Health Care Workers and Clients Safety

<table>
<thead>
<tr>
<th>Quality Objectives</th>
<th>Strategies /Proposed Actions</th>
<th>Rationale</th>
<th>Timetable</th>
<th>Success Parameters</th>
<th>Expected outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>To review the database of infection control program of the health care facility and assist each department</td>
<td>Develop and formulate their Institutionalize Infection control Assessment Tools Checklist on Facility Demographics and Infection control</td>
<td>To guide the quality of improvement activities</td>
<td>6-12 months</td>
<td>60-80% of institution will cooperate on developing their own assessment tools to</td>
<td>The hospital institution will device their own assessment tool in compliance to their goals and objectives on infection central practices</td>
</tr>
<tr>
<td>Activity</td>
<td>Description</td>
<td>Duration</td>
<td>Expected Outcome</td>
<td>Action</td>
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<tr>
<td>Assessing program and infrastructure</td>
<td>Each facility may device and implement an Intensive Learning</td>
<td>6-8 months</td>
<td>Enhance infection control</td>
<td>Competency based practice on infection control will be utilized by health institution</td>
<td></td>
</tr>
<tr>
<td>Upgrading existing policies and practices</td>
<td>Hospital Facilities may have a Facility Risk Assessment Policies and procedures/protocol and intra facility Surveillance system reviewed properly planned implemented with reported documentation.</td>
<td>6-12 months</td>
<td>90-100% of hospital facility will adopt the risk assessment policies</td>
<td>The institution will come with an improved infections policies and procedure adopting continuous development and technological advancement technique</td>
<td></td>
</tr>
<tr>
<td>Monitoring infection practices of each facility based on national quality assurance program</td>
<td>Quality accreditation on Hospital Infection Control Hospital Internal and External Audits be implemented to each facility and within ISO standards. Hospital Research and Development Council be established in institutions where researchers on infection control can be utilized. The hospital facility may grant scholarship</td>
<td>6-18 months</td>
<td>Hospital Institution will comply with standards of infection central to 80%</td>
<td>Hospitals come out with standardized infection control programs</td>
<td></td>
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<tr>
<td>Developing a comprehensive proposal for research on infection control prevention by Health Care Workers</td>
<td>To develop and adherence of HCW’s on infection practices and modify programs based on auditors Research is an essential tool to critically analyze the common approach, and identify methodology challenges</td>
<td>6-12 months</td>
<td>60-80% of HC Workers conduct researcher on infection control</td>
<td>The institution will come up with policies, resources and motivational activities to encourage HCW to conduct research studies.</td>
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</table>
INTERNATIONAL ACCREDITATION OF EDUCATIONAL AND RESEARCH LABORATORIES IN SUPPORTING THE ACHIEVEMENT OF DIVERSITY AND GLOBAL CITIZENSHIP IN DEVELOPING COUNTRIES

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Airlangga University, Surabaya is one of University in Indonesia which aims to become World Class University. Faculty of Science and Technology (FST), precisely, has arranged international curriculum, including supported facilities and infrastructure such as educational and research laboratories which are in progress accredited by ASIIN. This paper was designed to explain best practices for curriculum innovation to reach international accreditation, specifically in building educational and research laboratories in order to enhance research collaboration among undeveloped, developing, and developed countries. Indonesia is one of developing countries which has a natural biodiversity, ethnic, traditional language and religion diversity, yet able to build civilization from its diversity. As accredited research laboratory which has supported international research and publication, therefore, it eases to do collaboration in student outbound and inbound, visiting lecturer and professor among developing and developed countries. After successfully changing the curriculum according to ASIIN accreditation standard, we have successfully published 182 international journals of scopus indexed in 2017 which increased significantly compared to 2016 and finally 8 of postgraduate students from Myanmar have been enrolled in FST. Thus, this becomes initial implementation in diversity and global Citizenship Education in nation.

Keywords: Research laboratory, Curriculum, ASIIN, FST UNAIR, Postgraduate

Introduction

Airlangga University (UNAIR) as the biggest university in the eastern of Indonesia, with 14 faculties, is projecting itself to be a world class university. UNAIR was establish in November 10th, 1954 as state university. In 2006, UNAIR has a commitment to change the status of a State Owned Legal Entity (BHMN), then in 2012 became State Universities Legal Entity (PTN BH). There are currently 14 faculties within the university including Faculty of Science and Technology.

UNAIR has vision for 2020, which declare “to become an autonomous, innovative, and excellent University in both national and international levels. In the era globalization, one of our mission is achieving independence in conducting education, research, and community service, which is oriented toward quality and international competitiveness.

In this paper we focused explain about international activity of Faculty of science and Technology (FST),
UNAIR. FST UNAIR has 11 study program, ie. Mathematics, Physics Chemistry, Biology, Environmental Science and Technology, Information System, Biomedical Engineering, and Statistic. FST was designed to become international faculty going accredited by ASIIN to increase student capability by providing good academic environment, teaching, laboratory equipments, student softskill and curriculum.

Each program study determines the competence of graduates (Study program learning outcome / PLO) in accordance with the market needs and the suggestions from the steak holder and alumni, then arrange the courses with the appropriate learning outcome and support the competence of graduates.

Vision, Mission and Learning Outcome Faculty and Study Programme.

The vision and missions of Study Programme encourage its objectives and are consistent with the vision and missions of Faculty of Science and Technology and UNAIR. Study Program was established to produce graduates with moral, proficiency in science of mathematics, Physics, Chemistry and Biology, depend of each study program and have ability to work in the area and managerial skills as details bellow: 1) producing a competitive and ethical graduates, 2) producing innovative research, 3) providing guidance, counsels, and empowerment to the community, 4) conducting performance based education, competence, and entrepreneurship for the academic community.

The curriculum is designed firstly by defining the Graduate Profiles and its competencies which are then elaborated as Learning Outcomes. The curriculum is designed to meet the needs of job market to provide students with the opportunity to succeed in academic and non-academic areas. Graduate Profiles are revisited every five years to maintain the relevance to the stakeholder needs. Evaluation and SWOT analysis of the curriculum were carried out to examine how far the LOs of the programme have been achieved and adopted by graduates.

Every PLO corresponds to the Course Learning Outcome (CLO) of both compulsory and elective courses. PLO and CLO synergize mutually to achieve the Graduate Profiles. The achievement of PLO is constantly evaluated each semester by the Quality Assurance Unit. PLO of study programme is classified into two compentencies, namely specialist and social competencies. Every courses in the curriculum has specific Courses Learning Outcomes (CLO). Assessment methods are also in line with the learning objectives in the Curriculum Document, so they can be used to ensure the alignment of CLO with the PLO.

Each course has a module comprises of one course with or without tutorial or practical work or internship. Courses are the implementation of learning process which take place in form of interaction between lecturers, students, and support staffs in a particular learning environment. Credit allocation for each course is based on the estimated time for the student to achieve the CLO.

Since everyday culture in campus may be different with that of community, it is better for students to also gain off-campus experiences. Practical field work serves exactly that. The work takes form of a 3-credits compulsory Community Service course. As a member of ASEAN University Network (AUN), Airlangga University can use this network to offer international Community Service Program that will be awarded with Asean Credit Transfer System (ACTS).
To support independent scientific work, students have to conduct final research project in the 4th year to complete the bachelor program. Other efforts by the programmes to support the students’ academic accomplishment are providing research activities, providing opportunities for students to join student exchange programs, and holding guest lectures from practitioners/industries and other universities.

**Evaluation of Study Program Learning Outcome Achievement**

Evaluation of course assessment is held to ensure that students achieve the expected learning outcomes, both hard and soft skills. The selected method of assessment is corresponded to the learning outcomes to ensure the alignment of CLO and PLO. To ensure that the assessment methods appropriately measure the achievement of LO and fulfilling the stakeholder needs, internal and external evaluations are routinely performed. The internal evaluation is conducted by the teaching team through analysis of types of examination test and score distributions of exam results to evaluate the difficulty level, differentiation, and objectivity of the assessment methods.

The lecturers conduct research and science development to support the development of research peer group and international networks. Research is also conducted collaboratively among peer groups in the related field supported by research grant from such various funding as university, government, national and international institutions. In conducting research, the lecturers involve students for accomplishing the final projects. Some research also involves cooperation with other national and foreign universities as well as other institutions especially for industry-related research. The research results are presented in seminars and published in national and international journals. These have led to the continuity of the research roadmap, the increase in the number of publications, and the limitation to the time needed by students to finish their final projects. The University provides rewards for lecturers whose articles are published in highly reputable international journals. Staff exchange program is supported by department/faculty funded by Ministry of Research, Technology and Higher Education and by the university. Lecturers are allowed to conduct staff exchange abroad in the area of research, publication, or as guest lecturer or a reviewer. Lecturer involved in a staff exchange program is generally assigned to a foreign university that has an MoU with Airlangga University, or a Letter of Agreement (LoA) with the faculty.

The laboratories are equipped with sophisticated instruments which are able to accommodate the number of student in one class of practical work. Furthermore, AIMS, which includes ISO 9001, has been adopted in the management of teaching laboratories. The implementation of quality management system in teaching laboratories provides a continuous maintenance system to improve the quality of instruments used by students in learning process during the practical works. The learning facilities to conduct lecture, tutorial, practical work and PBL are available in sufficient quantities.

Quality Assurance System (QAS) is needed by an institution to ensure the sustainability of quality institutions. At the university level, the quality assurance system is coordinated by the Quality Assurance Board (BPM), at the Faculty level by the Quality Assurance Unit (SPM), and at the study program level by the Quality Assurance Unit (GPM). Based on regulation of the Republic of Indonesia the higher education Quality Assurance System also consists of an external quality assurance system which is conducted through accreditation.
by National Accreditation Agency for Higher Education, independent certification board, such as Indonesian Accreditation Agency for Higher Education in Health (IAAHEH), BSI (Indonesian Certification Board) and international certification board such as Asean University Networking (AUN) and Quality Assurance based on ISO 9001-2002. Finally, from 2016 and 2017 Faculty of Science and Technology got highest performance target and awarded from university. Two study Programmes, Chemistry and Biology has certificate AUN. Four study programmes, Mathematics, Physics, Chemistry and Biology going accredited by ASII. In 2015 International publication Scopus Index 28, in 2016 has got 80 and in 2017 have significantly increase to 205. The number of foreign student and student inbond also increase, in 2015 has one students, in 2016 became 24 for student inbond and two foreign students Ph.D program and in 2017 students inbond 21, however five Ph.D foreign students and one adjunct Professors from Chulalongkorn University, Thailand.

**Conclusion:** International certification or accreditation is an effort to improve teaching and learning process. Prodi who has been accredited, means have done the process of learning with international standard with a valid quality assurance system. Students and graduates are expected to be able to compete at the International level both in the field of science and employment.

References:

1). Subject-Specific Criteria Relating to the accreditation of Bachelor’s and Master’s degree programmes in life sciences. 2011.

AN ONLINE ACADEMIC PERFORMANCE GRADE REPORT SYSTEM FOR SAINT MICHAEL’S COLLEGE OF LAGUNA

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Abstract

Education Institutions embraced technology on its processes and operation for competitive advantage. With this, the study aims to develop a solution that provides the end-user a greater convenience to access grade report and generate accurate and timely report. The study utilizes a descriptive method to explain the institutional policies and procedures and Rapid Application Development model with iterative model approach for the development of the system’s accuracy, suitability and applicability. The system was evaluated by the experts using ISO9126 model in terms of its functionality, usability, reliability, maintainability and portability thus resulted to a weighted mean of 4.52 “Very Satisfactorily” which means that all required components are addressed and delivered accordingly.

Keywords: Academic performance, grade report, grade.

1. Background

In the advancement of technology, educational institutions integrate technology to support institutional goals and purpose thus improve its operations and processes in a significant way in learning, instruction, communication, collaborative work and other related reportorial documentation reports. One of the vital education process is the summative assessment as this is core purpose of education, is to assess student achievement in a form of grade report. A grade report is significant, to determine quality education as this will served as a reflection of student learning performance, predictors of academic success, determinant of student acquisition of required standards, basis for promotion to the next level of educational system, it is also used as motivational tool to develop good study habits and self-perception of competence so therefore it is important that grades is measured specifically and it must be comparable, reliable, valid, accurate and communicated.

With the advancement of technology, educational institutions embraced and develop their own solutions or other may preferred to buy solutions from vendors with the purpose to satisfy their clientele and however, there are some schools in the country processed and kept their record manually or suffered system obsolesce resulted to repetitive task on creation and encoding of grades report that may cause time consuming that cause to some delays which significantly create negative impact. Relatively, manual monitoring purposes is difficult to manage since it can be prone for malicious manipulation, erroneous data entry and time consuming to generate reports.
These problems cited made the researcher to develop a solution that would lessen the task and produce real time reporting system thus improved the facilitation and processing of request thus conform to the idea of a quality management system and this is one of the direction of Saint Michael’s College of Laguna is gearing to continuously improve the operations and process through enhancement initiative that make the school to be more productive, effective and efficient in serving its clientele through responding the challenges and opportunities of technology. This led the researcher to propose the study to significantly contribute the goal and objectives of the institution towards a school of catalyst growth and innovation. Furthermore, our client is our life thus quality of service should be provided to them at any given time because technologies change their perspective on how they will be served in today’s generation.

**Purpose of the Study:**
To develop an Academic Performance Grade Report System that will automate the submission of grades, monitoring grade report and generation of relevant report to increase productivity and accuracy of reports.

**Scope and Limitations**
The project will mainly focus on the Tertiary Division with the following modules: manage account module, curriculum module, teaching assignment module, setting module, print module, dashboard module, uploading module, update grade report module and audit trail module however the system will only accept file grade report based on the prescribe format and does not cover computation of grade report.

2. **Methods**
The study utilizes the descriptive research design in determining the policies and procedure of the Institution Grade Report System, analyzed the suggestion and recommendation of the process owners through Focal Group Discussion and for the execution of the proposed system the researcher utilized the Rapid Application Model with an iterative approach to ensure the visibility of the system being developed and ISO 9126 characteristics is utilize to evaluate the functionality, reliability, usability, maintainability and portability of the system.
3. Results

Below are the user interface of the system being developed that conforms the agreed requirements.

![User Interface](image)

**Fig. 1. User Interface of the proposed system**

Fig. 1 shows interfaces of the proposed system which includes the Log-in Page, the dashboard that shows the graphical report form of the GPA and Assessment Report it also includes the registration of accounts, users account page, the report of student GPA and assessment report, setting of room assignment, class schedule, log’s report activity, the list of faculty per institute, the curriculum of the institute programs offerings, teaching load assignment, grades record, uploading of grade report, list of submitters report, student GPA report, request of grade change transaction.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Weighted Mean</th>
<th>Verbal Interpretation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functionality</td>
<td>4.52</td>
<td>Very Satisfactorily</td>
</tr>
<tr>
<td>Reliability</td>
<td>4.32</td>
<td>Satisfactorily</td>
</tr>
<tr>
<td>Usability</td>
<td>4.56</td>
<td>Very Satisfactorily</td>
</tr>
<tr>
<td>Maintainability</td>
<td>4.49</td>
<td>Satisfactorily</td>
</tr>
<tr>
<td>Portability</td>
<td>4.72</td>
<td>Very Satisfactorily</td>
</tr>
<tr>
<td>Total Weighted Mean</td>
<td>4.52</td>
<td>Very Satisfactorily</td>
</tr>
</tbody>
</table>

Table 1. Software Evaluation Result

Table 1. shows the result of the evaluation and it indicates that the proposed system received high acceptance.
Conclusion and Recommendation

With the proposed system capabilities and the new added features it surely provides user’s convenience and greater accessibility thus improve its services and operations. And to further improve the system, the researcher recommend to convert the system into a mobile application, the grade report is reflected directly to transcript of records and automatically assess and recommend academic honors.

4. References


Palmer, J, Williams, R, & Dreher, H ( 2002). “*Automated Essay Grading System applied to a First Year University Subject- How Can We do it Better?*. Curtin University of Technology, Perth, WA, Australia
This paper proposes a new teaching style conducted with a teacher and Speech Communication students in two consecutive school years from one university in Manila. The goal was to understand the role of technology in the process of learning International Phonetics Alphabet (IPA) and the perception that students give to phonetic symbols. The selected participants were two groups, two of them were composed of first semester students who have undertaken topics on phonetics under the Speech Communication (Section A: Traditional) and another group composed of first semester students from another class (Section B: Digital). The chosen instruments were surveys, examinations, worksheets, students’ journals, and voice recordings. The data analysis showed preferences for some resources in particular, students’ positive views about phonetic instruction and transcriptions, pronunciation mistakes, and students’ perceptions about the articulation of phonemes using their vocal tract.

Keywords: IPA, phonology, pronunciation, digital technology

Introduction

Today, one of the central issues on the teaching of English is where to focus among the four macroskills namely listening, reading, writing and speaking. In this regard, the researcher would like to put a strong focus on the teaching of speech communication using digital teaching materials such as audiovisuals, web servers, desktop computers, digital cameras, and digital video recorders so as to improve the speaking ability of the students.

The ability to speak adequately becomes a helpful factor for advancement in any selected career especially nowadays where stiff competitions among newly graduate is very prevalent. The focus in the teaching of speech was brought about by the researcher’s increasing awareness of the learner’s need to communicate effectively in this fast growing competitive industrialized society. Jean Brady Jones (1983), in his article *Objective Testing of Pronunciation at the College Level* said this basic communication, which may be called the cornerstone of civilization is almost entirely in the form of speech. And speech communication in spoken words still remains the basic tool in life and education for life. Without it our boasted civilization would vanish overnight. It is that phase of human experience which forms the subject matter in speech and courses in English. Therefore, it is very important that students today be equipped with good command of English speech.

In this regard, the researcher, in an attempt to develop speech communication skills, would like to provide the student with a lesson anchored with the learning of International Phonetic Alphabet (IPA) focusing on the articulation of consonants using digital materials such as audiovisuals, web servers, desktop computers,
digital cameras, and digital video recorders. A review of the present syllabus in teaching speech communication of San Beda reveals a strong focus on the traditional lectures about communication and kinds of speeches only without merely discussing the technicalities of elements of speech particularly the pronunciation. Brady Jones said that professors of English do not know what speech all about. He said that it is unfortunate but natural that they should identify it with its most important aspect (1983). The researcher believes that a good speaker should also deliver correct utterances of words not only on how the speaker carries himself on the platform doing proper gesturing and perfect posture. As noted by the researcher from the analysis of previous records and personal observation, the syllabus helps student feel that they have covered all the important points of the subject. However when tests on speaking are administered, that is, correct pronunciation/enunciation, students seem weak. This inability to speak correctly is merely by limiting the students to learn the phonetics using traditional lectures. Thus, Nicholas Hawkes cited in Doronilla, (1995) offers the following suggestion:

... a more complex form of syllabus would be appropriate, incorporating, several categories, certainly including structures and communicative functions and perhaps topic areas and recommended target activities.

The researcher’s constant interaction to the students has allowed him to find out their deficiency in pronunciation. These observations and views provide the reason of this study. The writer of this paper believes it is necessary that San Beda College English teachers of Speech Communication take concern with the teaching of phonetic with the aid of digital teaching materials. As a means to improve the pronunciation of the students, the writer proposes a lesson focusing on the articulation of consonants using digital teaching materials such as audiovisuals, web servers, desktop computers, digital cameras, and digital video recorders.

The study is expected to answer the question: (1) do learning the articulation of consonants using traditional lectures improve the pronunciation of the students as oppose to using digital teaching materials?

**Method**

The present study, as stated in the first chapter, was concerned with the study of the effectiveness of learning the phonetic articulation to improve the pronunciation of the students in the Speech class of San Beda University.

The selected participants were two groups, two of them were composed of first semester students who have undertaken topics on phonetics under the Speech Communication (Section A: Traditional) and another group composed of first semester students as well (Section B: Digital). The mispronunciations noted provided the basis for selecting the specific consonant articulation for the study. These consonants are the fricatives ([θ], [ð], [v]) to which the students of SBU found weak in pronunciation.

Lists of words and short paragraphs having the primary consonants selected were prepared from some text books and used for the pronunciation drills. With a competent teacher to illustrate the articulations, such drill materials were expected to effect the desired changes in pronunciation. Because of availability to teacher and students, the norms of English pronunciation in the *American Accent Training* book by Cook (2000), and in two other text books *Speech Communication* by Tiburcio & Pagay (2004), and *Speech and Oral Communication* by Guia (2008), were followed. The teacher who was to instruct the class during the study exhibited exact conformity to these guides for the given articulation of consonants. It should be noted that that
the study did not attempt to set up a standard of pronunciation, but simply adopted an arbitrary norm for study purposes. The leading objective was to determine whether or not deficient pronunciation could be improved by learning the manner of articulation of consonants by undergoing in a traditional lesson of the topic and speech drills and trainings conducted using digital teaching materials.

To find out the result of studying the articulation of consonants, several procedures were done. This includes speech recordings, speech trainings, lectures, written exam to test the students’ grasp of the subject matter, and oral presentation. All of which were given in the beginning and in the end of a week observation with speech drills given simultaneously. The tests were supervised by the researcher. Each performance of the student was videotaped. To make the study and rating of changes in pronunciation practicable, in the time allotted to the experiment, it is necessary to select only a definite number of fricative consonants such as [Ѳ], [ð], [v] and [f] as sampling. As mentioned earlier in the discussion of literature, these consonants are representatives of the group’s most urgent difficulties and seem to afford the most suitable basis for the study.

An initial recording of each student’s speech was made at the beginning of a week study. Great care was taken to ensure the greatest possible objectivity for the study. The general conditions were kept constant. The same room was used for the recordings and the usual classroom was used during the lecture and administration of speech trainings and drills. On the day of the first recording, before entering the room, each student was instructed to sign in the attendance sheet with a corresponding number and was advised to read the paragraph flashed in the Liquid Crystal Display (LCD) projector. As the student came in, the teacher with friendly words tried to put the student in a relaxed, self-confident mood. The teacher explained the method of using the microphone and directed the student to read as well as she could in order to properly record the performance to the video camera. Instructional Media Center (IMC) personnel assisted the teacher in the technical aspect such as the set-up of LCD projector, video camera, and microphone to make sure that the entire process will not experience any disruption that would affect the performance of the student and the study as well.

The collected data was analyzed based on the rubric set by the researcher. The percent rating for the deficiency in the performance particularly in pronunciation was statistically treated and analyzed. The average improvement for each student was obtained by comparing the ratings for the Traditional and the Digital group. The comparative validity of the tests of speech improvement used in the study was established by comparing the amount of change achieved by each student.
Results

Table 1. Deficiency Rating for the Traditional and Digital in the Pronunciation of the Students

<table>
<thead>
<tr>
<th>Student number</th>
<th>Traditional Errors ([\Theta], [\delta])</th>
<th>Rating %</th>
<th>Traditional Errors ([V])</th>
<th>Rating %</th>
<th>Digital Errors ([\Theta], [\delta])</th>
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<th>Digital Errors ([V])</th>
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<td>11</td>
<td>2</td>
<td>7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17</td>
<td>3</td>
<td>7</td>
<td>1</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>18</td>
<td>9</td>
<td>20</td>
<td>2</td>
<td>7</td>
<td>2</td>
<td>4</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>19</td>
<td>32</td>
<td>71</td>
<td>14</td>
<td>47</td>
<td>4</td>
<td>9</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>AVERAGE</td>
<td>10.16</td>
<td>23%</td>
<td>3.36</td>
<td>11%</td>
<td>2.26</td>
<td>5%</td>
<td>0.5</td>
<td>2%</td>
</tr>
</tbody>
</table>

A study of Table 1 calls attention to the fact that the students in the Traditional section obtained a considerable errors in the pronunciation. As shown in the table, there were 45 words within the paragraph that each student needs to recite during the lectures. This shows the variations in their ability to speak correctly. It is evidenced that quite few members of the class have acquired a number of errors as compared to the other members. It can be noted also that the students has more difficulty in articulating the consonant \(th\) as compared to the other consonant \(v\) both in the Traditional and Digital though they have considerably improved on both. Comparative results of the Traditional and Digital used during the study were confirmations that the technique
used by the teacher to help the students improve their pronunciation is very effective.

**IV**

**Discussion/Conclusion**

As evident in Table 1, the students who received digital phonetic trainings and instructions for the target consonants, showed improvement of 78% for the *th* consonants and of 85% for the *v* consonant. Therefore, lesson in the articulation and phonetic training using digital learning materials can prove efficient for the improvement of pronunciation.

One of the reasons for this, is perhaps the lesson administered to the students was anchored with different activities that the students enjoyed while learning to overcome the deficiency. The approach used by the teacher – arousing the interest of the students by putting the class in a receptive mood while learning not to mention the proper execution of the lesson seems contributed also to the degree of speech improvement. Improvement was noticeable at the end of the study period, when called upon in class, the next day, they were often able to reproduce the consonants or the entire words even the sentences correctly. It seemed evident that the idea of giving them a lesson on the articulation of phonetics using digital teaching materials in general is necessary for these students to acquire skill in pronouncing the words correctly not only inside the classroom but even in their usual conversation outside the school. Though few of the students in the group have occasionally slight errors during conversation, it seemed evident also that more time than was allotted for the study would be necessary for these students to acquire skills. Better or more reliable results would probably have been obtained if a well-equipped laboratory had been available in the study. If another study will be conducted with regard to pronunciation, the researcher would like to suggest that the physiological feature of individual oral cavity should be examined and taken into consideration also. The researcher believes that it can affect in the utterance of a word. Nevertheless, the gains noted sufficiently prove that pronunciation can be improved by phonetic training supplemented by short daily pronunciation drills. The amount of change achieved by the students in the study further indicates that a lesson on phonetic articulation helps in correcting pronunciation deficiencies. The study, therefore, shows that notable changes in pronunciation can be obtained by students trained under similar condition.

**References**


Creating Supportive Learning Environment Using E-Learning for Medical Students

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Introduction. Technology proposed an alternative implementation of student centered learning strategy as the conventional classroom setting has its limitation such as time and space availability. Electronic learning environment provides teaching and learning sessions beyond the classroom to support student’s learning. Medical students should also learn in the recent medical context which utilize the fast growing of technology.

Method. We conducted educational e-learning sessions using Aula, a platform which developed by Universitas Airlangga. The e-learning was a part of Critical Thinking, Study Skills, and Evidence Based Learning block for first year medical students. The block was proposed for student’s foundation of further learning in recent medical context. A voluntary survey for the implementation was performed after completion of block which also utilized the same platform.

Results. A number of 246 of 271 students respond the invitation (response rate: 90.77%). Students’ perception of e-learning session was useful (69.51%). Students also expressed their feedback on aspects need to be improved.

Conclusion. The e-learning for particular block seems to be useful in supporting both of current and future learning.

Take home message. Improvement for the supportive electronic environment is called in order to provide foundation for our student towards further learning in medicine.

Keywords: electronic learning environment, medical students
Introduction.
The development of information technology changes medical practice. The information could be accessible for both of patients and medical profession. It also gives opportunity in medical education which proposing an alternative implementation of student centered learning strategy as the conventional classroom setting has its limitation such as time and space availability.

In order to prepare medical students in the recent context, they should also learn in suitable learning environment supported by technology. Using combination of elearning and traditional educational method, students are provided an interactive and fruitful learning process (Alamro & Schofield, 2012) which cultivate students’ enthusiasm (de la Varre, Ellaway & Dewhurst, 2005) and positive effects in their learning (Cook, et al., 2008).

Technology also promises to involve students in a more realistic learning context than a classroom setting (Vozenilek, Huff, Reznek & Gordon, 2004).

The development and implementation of electronic learning environment to conduct educational activities which need to be assessed whether supporting student’s learning (Hammond, 2005).

Method
We conducted educational e-learning sessions using Aula, a platform which developed by Universitas Airlangga. The e-learning was a part of Critical Thinking, Study Skills, and Evidence Based Learning Block which aimed for first year medical students. The block was proposed for student’s foundation of further learning in recent medical context. The elearning for this block consists of a variety of activities in 2 week of implementation such as video of lectures, written assignment of selected topics, and eforum of problem based learning. A voluntary survey for the implementation was performed after completion of block which also utilized the same platform.

Results.
A number of 246 (84 males, 162 females) of 271 first year undergraduate medical students responded to the survey. The response rate was 90.77%.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>84</td>
</tr>
<tr>
<td>Female</td>
<td>162</td>
</tr>
</tbody>
</table>
A total of 197 students (69.51%) perceive that e-learning session conducted was useful. While 45 and 4 students, respectively, moderately agree and disagree that e-learning session will be useful for further learning. Students also expressed their feedback on aspects need to be improved for the block implementation, which are diverse scenario, e-forum optimization, tutor’s role, student participation, assessment (e-exam) criteria, and timing.

<table>
<thead>
<tr>
<th>Questions</th>
<th>Don’t know</th>
<th>Disagree</th>
<th>Moderate</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The block had been well implemented</td>
<td>6</td>
<td>2</td>
<td>57</td>
<td>181</td>
</tr>
<tr>
<td>E-forum facilitates the tutorial</td>
<td>12</td>
<td>18</td>
<td>82</td>
<td>134</td>
</tr>
<tr>
<td>Several technical problems were happened</td>
<td>12</td>
<td>90</td>
<td>70</td>
<td>74</td>
</tr>
<tr>
<td>during e-forum</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Need to improved</th>
<th>Quotation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diverse scenario</td>
<td>It might be better if more topics and scenarios are raised, but still one that is used as material for creating a scenario paper. With diverse cases and scenarios being discussed, we will further add insight and critical thinking of a students</td>
</tr>
<tr>
<td>E-forum optimization</td>
<td>the e-forum should be more optimized so that it can be more useful for all students</td>
</tr>
<tr>
<td>Tutor’s role</td>
<td>Further open discussion with the tutor, the tutor shouldn't only just give instruction but also give further reasoning so the students will achieve the standard competence faster</td>
</tr>
<tr>
<td>Student participation</td>
<td>The (e-forum) discussion should be more active</td>
</tr>
<tr>
<td>Assessment (e-exam)</td>
<td>Overall, these lectures have been done very well, but then, my only concern was about the e-exam. I do feel that it's better if we know the criteria for the marking of our essay, and it will be much better if we are provided discussion on our essay, so that we know our mistakes during making the essay for e-exam.</td>
</tr>
<tr>
<td>Timing</td>
<td>We need time to understand this important topics in a short time so, intense discussion is really needed within a long time</td>
</tr>
</tbody>
</table>
Conclusion.
The e-learning for particular block seems to be useful in supporting both of current and future learning. Some aspects that need to be improved had been followed up in subsequent blocks.

Take home message.
Improvement for the supportive electronic environment is called in order to provide foundation for our student towards further learning in medicine.

References
Alamro AS & Schofield S (2012) Supporting traditional PBL with online discussion forums: A study from Qassim Medical School, Med Teach 34: S20–S24
GROWING SELF-RELIANCE LEARNING, THROUGH SOCIO-CONSTRUCTIVISM APPROACH.

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abstract

Future learning will be very different from the how it is now, it is caused by changes in patterns and society lives at large. The development of instructional technology has directed learning in the constructivist era, as the impact of the development of knowledge on individual learning awards. That pattern in modern learning known as the era of socio-constructivism. Learning in that era requires independence by students to help themselves find the direction and navigation about the goals and way of how learning to be done. This research is a literature review study by analyzing existing data and summarizing the answers to the necessary learning needs. The results of this study are interpretative predictions of emerging problems.

Keywords: learning independence, socio-constructivism approach.

A. Background

The demands on the learning development is getting higher. This happens as an effect of the society’s life that is getting more complex. The complexity arises as a result of the emergence of various human activities both individually and in groups. The diversity brings it own impact in the education world that requires maturity towards the process and the results in implementing learning. This diversity is emerging as a consequence of the growing social condition that is giving rise to the learning needs in divers as well. According to the theoretical study of the experts, that era is known as the era of socio-constructivism. Education in the era of socio-constructivism is the development of intelligence, so that with the intelligence someone will be able to help himself in the form of self reliance learning.

Learning process is expected not only to produce learners who are able to solve spontaneous problems, but more on developing the ability to solve more complex problems. The ability will be obtained through the independence of learning so that the individuals can always learn in order to complete the task of life or problems encountered. Based on the background above, then the problem can be formulated as: 1) How to learn in the era of socio-constructivism? 2) How the self reliance learning on the student? 3) How is the self-reliance learning in the socio-constructivism era?

B. Design and Research Methods

This research is a study of literature, which is research conducted by collecting data of scientific work in accordance with the object of the research to solve the problem of an analytic study with critical review on the relevant literature. Methods of data collection were obtained from relevant data
sources ie socio-constructivism learning era and self reliance learning. Sources of data were taken at the students of Universitas Negeri Surabaya. Data analysis used is content analysis, that is analysis to content of information obtained from the data source.

C. Results and Discussion

1. Learning In the Socio Era of Constructivism

In the next era, learning is increasingly complex along with human development in all dimensions including social community, so it is assumed that the influence on future learning is enormous. The phenomenon of this can be observed in the present study which started to enter the era of social constructivism.

As social beings, human always interact with their environment, including in terms of learning and or anything that makes people learn. Vigotsky in the theory of moral development explained that human is a social being and without interaction with society they can not develop their abilities. In addition Vigotsky explained that: "Experience is the most important psychological reality. Experience should begin with research on the role of the environment in child development. Experience is the core of all the different influences of internal & external circumstances".

The learning environment is a social environment in which individuals grow and develop. Learning according to Bandura in Salkind, Neil J. (2004) is the process of observing the environment to get stimuli according to their stimulus, it is done through observation. The factors that influence the observation in learning are a) Attention process, b) Representation process, c) Behavior production process, d) Motivation and reinforcement process

2. Self-reliance Learning

The form of self-reliance is the self-reliance in terms of learning. According to Candy (1975): "self-reliance has four dimensions, namely: a) personal autonomy, b) self-management in learning, c) the independent pursuit of learning, and d) learner-control of instruction." Based on conditions in the field, obtained data:

Table Average Student Learning Independence

<table>
<thead>
<tr>
<th>No</th>
<th>Dimensions</th>
<th>Average (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>1*)</td>
</tr>
<tr>
<td>1</td>
<td>Personal Autonomy</td>
<td>6.7</td>
</tr>
<tr>
<td>2</td>
<td>Self management</td>
<td>7.0</td>
</tr>
<tr>
<td>3</td>
<td>Independent pursuit of learning</td>
<td>7.0</td>
</tr>
<tr>
<td>4</td>
<td>Learner Control of Learning</td>
<td>6.8</td>
</tr>
</tbody>
</table>

*1) Often, 2) Sometimes, 3) Very Occasionally, 4) Never

Knain and Turmo (2000) describes the intended self-reliance is "a dynamic process in which students develop the knowledge, skills, and attitudes while studying the specific contexts." In addition, Wolters, Pintrich, and Karabenick (2003) asserts that "self-reliance learning is a
constructive and active process in which students define goals in learning, and try to monitoring, organizing, and controlling the cognition, motivation, and behavior by being guided and constrained by contextual objective and characteristics in the environment”


Based on the understanding of learning in the socio-constructivism era discussed above, that the way of someone’s learning is influenced by the way the individual observing the environment to find stimuli that can stimulate him to learn. The stimuli to learning is strongly influenced by the individual's psycho-social condition. Learning events that occur on those individuals need to be managed by the learner or educator in managing the learning to make the learning events that is successfully achieve the goal. The effort needs to be done by developing, selecting, managing and evaluating appropriate learning strategies.

On the other side, amid the development of human life both individually and socially is indispensable the individuals who are able to continuously learn in all situations and conditions in accordance with their needs. It means that self reliance learning can be a personal navigation to be able to demand how learning happen to himself.

D. Conclusion

Learning in the era of socio constructivism is influenced by several factors called 1) constructivism process, 2) psycho-social theory and 3) moral development. Based on the theoretical studies that have been disclosed above, the influential factors need to be involved on the student self-reliance learning refers to those three aspects. Observing the aspects and components of self-reliance learning, associated with the inclusion of socio-constructivism era it is necessary to consider the application of the theory study on the development of expected learning. Based on the theory above, learning in socio-constructivism era to grow self-reliance learning need to pay attention to aspects 1) relevance, 2) effectiveness, and 3) efficiency, with the following illustration:
REFERENCES


FACTORS INFLUENCE POSTGRADUATE STUDENTS IN SOLVING GEOMETRIC PROBLEM: 2018
ASAIHL CONFERENCE AT SOKA UNIVERSITY, JAPAN

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This research aims to determine the dominant factors (mathematics self-efficacy, mathematics anxiety, belief, attitude toward mathematics) that affect students’ learning outcomes in solving geometry problems. This is a quantitative research with regression analysis method to see the effect of mathematics anxiety, mathematics self-efficacy, attitude, and belief on the learning outcomes of geometrical problem solving. It was concluded that (1) there is no significant influence between self-confidence, attitude, indecisiveness, self-efficacy, belief, geometric ability together to solve geometry problem, (2) there is no influence of each affective factors or geometric ability to solve geometric problems, and (3) there is no significant influence between each affective factor and geometric capability collectively to solve geometric problems. If the age is noticed, younger students have a tendency of anxiety and high learning motivation.

Keywords: Affective Factor, Geometric Problem Solving

1. Introduction

Math self-efficacy (MSE), Math self-concept (MSC), Math anxiety (MA), are the most important psychosocial in academic achievement (Paidar, Amirhooshangi, & Taghavi, 2016; Pajares & Miller, 1994; Parker et al., 2013; Siegle, 2007). Positive or negative feelings toward mathematics is one of the important factors associated with achievement (Mc Leod, 1994, Ma & Kishor 1997). Ma & Kishor (1997, p. 27) said “An aggregated measure of a liking or disliking of mathematics, a tendency to engage in or avoid mathematical activities, a belief that one is good or bad at mathematics and a belief that mathematics is useful or useless”. One of the affective aspects that affects problem-solving abilities is belief (Schoenfel, 1992). Belief will positively improves student success in the problem-solving process. While increased negative beliefs can reduce persistence in solving problems. So, it can reduce the success of the students themselves. Budiarto (2016) stated that elementary, middle and high school students tend to have negative beliefs about solving geometric problems.

2. Methodology

This is a quantitative research. The population were 3rd semester of mathematics postgraduate students who were taking geometry courses. consisting of 3 classes. The samples were two classes of them, consisting of 33 students, selected by purposive cluster random sampling technique. Subjects were given MSE, MA, attitude, and belief questionnaires, geometry and geometric problem solving tests. The data of the research were analyzed by regression analysis using R application aid.
Regression analysis of all affective factors and geometric ability collectively to solve the geometric problem are presented in the regression table between independent variables (confidence factor, attitude, anxiety, self-efficacy, confidence, geometric ability) to the dependent variable (geometric problem solving) as follows.

By using $\alpha = 0.05$, it’s obtained $P$-value 0.6307, so it failed to reject $H_0$. Therefore, it can be concluded that there is no significant influence between confidence factor ($X_{11}$), attitude ($X_{12}$), anxiety ($X_{13}$), self efficacy ($X_{14}$), belief ($X_{15}$), geometric ability ($X_{2}$), together to problem-solving skills ($Y$). Correlation test of each independent variable to dependent variable showed that each of them has no significant effect to the dependent variable ($Y$) and the correlations are weak.

MSE students in solving geometric problems related to individual beliefs about the ability to solve problems, related to one's belief about the ability to complete tasks of finding plane area and related to one's beliefs about their ability in completing the tasks (Bandura 1997). The students’ capability in solving geometry problems were directly proportional to age, the higher the age, the MSE is also higher, since MSE is individualized, as Bandura (1997) said that individual’s beliefs or perceptions with respect to his or her abilities in mathematics”. Ferla, Valcke, & Cai, (2009) also said “Individuals’ convictions that they can successfully perform given mathematics task at designated levels”.

MA students was influenced by negative experiences in the classroom or family, the lecturers’ characteristics, level of cognitive abilities in general; and self-confidence and learning behaviors. It turns out that the MA is also inversely proportional to Age. The higher the age turns the anxiety level low. This is in accordance with the proposed Richardson & Suinn, (1972) feelings tension and apprehension about the
solving of mathematical problems in academic. The geometry problem is related to the proof that for most students it is a "specter" because it deals with the mastery of concepts according to the proposed Jain & Dowson (2009) that the consequence of an inability to handle frustration, excessive school absences, poor self-concept. Weakness in the mastery of the concept leads to feelings of tension, anxiety or fear that interfere with mathematical performance (Ashcraft, 2002). The source of this anxiety is more to intellectual variables and personality variables (Devine, Fawcett, Szűcs, & Dowker, 2012).

Positive attitude is important because the results of this research indicate that there is a correlation between the performance of students in solving problems and their attitude to mathematics when viewed from the age factor. A positive attitude toward mathematics is directly proportional to the ability to solve mathematical problems (Marchis, 2015). The tendency of student behavior pattern can be seen from an aggregated measure of a liking or disliking of mathematics, a belief that one is good or bad at mathematics and a belief that mathematics is useful or useless (Ma, X. & Kishor, 1997). One of the affective aspects that affects problem solving is belief. This is in accordance with the opinion of Schoenfeld (1992) which suggests that four different factors that influence students problem solving, are the source, heuristics, dick, and belief systems (belief systems). Ozturk & Guven (2016) said “According to studies in the literature, beliefs have a strong and observable effect on the thoughts and behaviors of individuals. They are also effective in problem solving process”.

The beliefs are classified as positive and negative by researchers and students generally have negative beliefs about problem solving. Positive or negative beliefs affect students’ behaviors in problem solving process”. The results of this research indicated that students belief has no influence on problem solving ability, but if the student's age is noticed, belief is directly proportional to his age and experience, the more students experience the belief is also increasing

3. Conclusion

This research concluded that there is no significant influence between confidence factors, attitudes, anxiety, self efficacy, beliefs, geometric ability values together to solve geometric problems. There is no influence of each affective factor or geometric ability to solve geometric problems. There is no significant influence between each affective factor and geometric ability collectively to solve the geometric problem. The age and experience of the subject are directly proportional to self-confidence, attitudes toward mathematics, beliefs and inversely related to anxiety and self efficacy.

4. References


Many Thai universities have attempted to promote green behaviors of students. It is still unclear whether the mere role of environmental education would enhance the engagement in green behaviors. This study investigated how global citizenship, public mindedness, moral quotient, and environmental attitudes affect sense of responsibility to act environmentally which in turn leads to the engagement in pro-environmental behaviors. The questionnaire surveys with 423 students of a Rajabhat University, and 337 students of King Mongkut’s University of Technology Thonburi were carried out. Path analyses were performed to test the effect of global citizenship, public mindedness, moral quotient, and environmental attitudes on sense of responsibility and the effect of sense of responsibility on pro-environmental behaviors. The result showed that the path model could perfectly predict pro-environmental behaviors of both universities. Global citizenship, public mind, moral quotient, and environmental attitudes had a significant effect on students’ pro-environmental behaviors through sense of responsibility. Global citizenship and environmental attitudes were the most powerful predictors, followed by public mindedness, and moral quotient. This result implied that students’ global citizenship, public mindedness, and moral quotient should be enhanced in order to promote green behaviors.

Keywords: Pro-environmental behaviors, Global citizenship, Moral quotient, Public mindedness, and Environmental Education

Introduction

Many universities attempt to search for strategies for promoting pro-environmental behaviours (PEBs) among students. Unfortunately, a wide range of previous studies have found that although many university students show an interest in environmental problems (e.g., environmental contamination, climate change, and ecological depletion) and express positive environmental attitudes, they do not engage in any pro-environmental behaviours in their normal activities (Muderrisoglu & Altanlar, 2011). Previous studies revealed that environmental knowledge and information may not contribute to students’ decision to engage in PEBs (Levine and Strube, 2012). Although traditional theories and early models of pro-environmental behaviour explain that providing environmental knowledge can enhance individuals’ environmental attitude, which leads to PEBs
(Burgess et al. 1988), many scholars argue that PEBs are influenced by diverse factors (Kollmuss & Agyeman, 2002). There are still other relevant factors potentially predicting people’s engagement in PEBs. Therefore, to effectively encourage students to engage in PEBs, universities should develop a curriculum-based, comprehensive understanding of potential determinants of pro-environmental behaviours.

This study investigated how students’ global citizenship, public mindedness, moral quotient, and environmental attitudes can enhance students’ sense of moral obligation to act environmentally, which, in turn, leads students to engage in PEBs. In this study, PEBs refer to private sphere pro-environmental behaviours, which include green purchasing, using reusable things, reuse and recycling behaviours, and waste separation. Global citizenship could enhance students’ understanding of interdependence between human and environment and the importance of existing environments to conserve ecosystems; thus, students may form their altruistic or biospheric views, which are important in the creation of their moral obligation and decision to engage in PEBs. In addition, because PEBs are generally considered moral behaviours (Guagnano 2001) which are performed based on individuals’ moral considerations. Therefore, developing students’ public mindedness and moral quotient may help strengthen their moral obligation to act environmentally. Environmental attitude is also important as it can help students create motivation to behave in environmentally sustainable ways. This study assumed that students’ global citizenship, public mindedness, moral quotient, and environmental attitudes would have a direct effect on their sense of moral responsibility to act environmentally, which, in turn, would cause them to engage in PEBs. Furthermore, the study also assumed that global citizenship, public mindedness, moral quotient, and environmental attitudes are all correlated.

Methods

The study employed questionnaire sheets for data collection. The sampling groups were 337 students from King Mongkut’s University of Technology Thonburi (KMUTT) in Bangkok city and 423 students from Valaya Alongkorn Rajchaphat University (VRU), which is a university under the Royal Patronage located in Prathumtani province, Thailand. The questionnaire surveys were carried out in both universities during March-April in 2017. For the data analysis, path analyses were performed to test the proposed model.

Results and Conclusions

In the case of KMUTT, Bangkok City, the number of male and female respondents was nearly equivalent: 49.3% and 50.7%, respectively. An average of participants was 20 years old. All students in this university study in the field of science and technology such as engineering, sciences, technology education, and information technology. The results of path analysis revealed that the proposed path model was acceptable (see Figure 1). The χ² value was not significant (χ² = 2.331, df = 3, Probability Level = 0.507). These values represented the close fit between the model and the observed data. The results, as shown in Table 1, also indicated the proposed model fit the data perfectly. The result in Table 2 demonstrated that environmental attitudes, global citizenship, public mindedness, and moral quotient affected KMUTT students’ sense of obligation, which, in turn, contributed to their engagement in PEBs. Environmental attitudes and global citizenships were the most significant variables, followed by moral quotient and public mindedness respectively.
**Table 1 Goodness-of-Fit Indices**

<table>
<thead>
<tr>
<th>Indices</th>
<th>KMUTT (N = 337)</th>
<th>VRU (N = 423)</th>
<th>Accepted Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>GFI</td>
<td>0.998</td>
<td>0.998</td>
<td>&gt;0.900</td>
</tr>
<tr>
<td>CFI</td>
<td>1.000</td>
<td>1.000</td>
<td>≥0.900</td>
</tr>
<tr>
<td>RMSEA</td>
<td>0.000</td>
<td>0.000</td>
<td>&lt;0.08</td>
</tr>
<tr>
<td>CMIN/DF</td>
<td>0.777</td>
<td>0.773</td>
<td>&lt;3</td>
</tr>
<tr>
<td>IFI</td>
<td>1.001</td>
<td>1.002</td>
<td>&gt;0.900</td>
</tr>
</tbody>
</table>

Notes: ***p < 0.001.

In case of students from VRU, most of participants were female students (68.60%). The proportion of male participants was 31.40%. Average age of participants was 20 years old. Participants were from various faculties such as management science, humanities and social sciences, education, public health, industrial technology, and agricultural technology. Same as the case of KMUTT’s students, the path analysis revealed that the proposed model was acceptable. The $\chi^2$ value was not significant ($\chi^2 = 2.220$, df = 3, Probability Level = 0.532). The result in Table 2 revealed that global citizenship had the strongest effect, followed by public mindedness, moral quotient, and environmental attitudes.

Table 2 Parameter estimates – path analysis.
<table>
<thead>
<tr>
<th>Path</th>
<th>Case Studies</th>
<th>Estimate</th>
<th>S.E.</th>
<th>C.R.</th>
<th>β</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obligation</td>
<td>PM</td>
<td>K MUTT</td>
<td>.131</td>
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In sum, it could be concluded that developing students’ environmental attitudes together with enhancing global citizenship, public mindedness, and moral quotient could enhance students’ sense of obligation to act environmentally. Consequently, students may decide to engage in PEBs. Besides of educating students with environmental knowledge, universities should provide some course which could enhance students’ understanding global issues, concerns about the society, and having morality.

**References**

ABSTRACT: Facing the era of globalization, character education gets serious attention in Indonesia. However, studies show that character education has not been effective yet, so the Government of Indonesia issues the Presidential Regulation No. 87/2017 on Strengthening Character Education. However, a research conducted by MOEC found 10 schools have successfully developed character education based on the values of Pancasila philosophy combined with local wisdom.

The purpose of this research was to find the main pillar of successful character education, especially in elementary schools. The research used qualitative research methods with multi sites in the three primary schools mentioned in the MOEC study. Data were collected through a series of observations and in-depth interviews from January to May 2017. Data analyzed simultaneously through data condensation, data display and conclusion.

The research found school culture was the main pillar of character education success. When school culture was built on the basis of the values that are believed to be good, then the school leaders, teachers and other school staffs will behave daily according to the culture. Then students will imitate their behavior and that means behaving in accordance with the values of the characters developed. It confirmed that everyone has a tendency to adapt to his environment.

Key words: character education, school culture

INTRODUCTION
Facing the era of globalization, character education gets serious attention in Indonesia. However, studies show that character education has not been effective yet (Samani, Daryono, Ratnadewi, 2017), so the Government issues the Presidential Regulation No. 87/2017 on Strengthening Character Education.

Basically character is formed from the interaction between the nature of a person with the environment in which he/she stays for a long time (Lapsley, 2008; Soedarsono, 2009). Assuming that the nature can not be changed, then the environment where he/she lives is a key factor in character formation (Lexmond & Reeves, 2009; Samani & Haryanto, 2012).

Character is formed in a long time and have been started since childhood (Schulman & Mekler, 1994). In the process of character formation, children are more likely to imitate the behavior of adults around them or
characters of whom become his/her idol. Therefore modeling is the most importance in character education (Lickona, 1992; Latif, 2014; Mak, 2014).

Because character formation takes a long time and needs consistency, so some studies show that successful schools in carrying out character education are schools which based on religion or certain beliefs, because the values of characters developed are associated with that religion or belief (Kemdikbud, 2010; Samani & Haryanto, 2012).

In primary school-aged children who do not yet have the ability to understand the concept of character values, character building will be effective if it begins with habituation so that behavior becomes habit. Then step by step, the habituation is enriched with the understanding of why it must be done, so it becomes the process of enculturation and the habit converts into culture showed in everyday activities (Schulman & Mekler, 1994; Sudrajat, 2011). Such patterns are also often applied to society in general. Although in general character education has not run effectively, a research conducted by MOEC found 10 schools that successfully developed character education based on the values of Pancasila philosophy combined with local wisdom (Kemdikbud, 2010; Samani, Warson, Rahayu & Supardjo, 2015).

Methods
The purposed of this research was to find the main pillar of successful character education, especially in elementary schools. If the main pillar can be found, it can be used to design dissemination in other elementary schools.

The research used qualitative research methods with multi sites in the three primary schools mentioned in the MOEC study. Those schools were chosen because they were stated in the MOEC research as a very successful primary school in carrying out character education (Kemdikbud, 2010).

The data were collected through a series of observations, in-depth interviews and examined documents from January to May 2017. To obtain comprehensive data, interviews were conducted on teachers, school personnel, students and parents. Member check and prolonged engagement was done to ensure the data obtained is valid. Further data were analyzed simultaneously through data condensation, display and conclusion data.

Result and Discussion
The three primary schools had different characteristics. School "A" was based on religion "X" and most of its students came from society with upper middle social economy. School "B" was based on religion "Y" and most of its students came from society with lower middle social economy. School "C" was not based on religion and its students came from society with very various social economy. Nevertheless all three were known by the public schools that implement discipline and their students had excellent character, and made them as favorite schools.

Interviews with teachers and examined the existing documents indicated that the three schools had long time carried out character education seriously. Even in the school "B" since its inception, the character was understood more important than the academic achievement of the students, so each teacher was required to integrate character building in the teaching-learning process. In contrast, school "A" and school "C" relied more
on character building through extra-curricular activities and had incorporated aspects of character in the teaching-learning process when applying the 2013 Curriculum.

Although the approach applied was different, but the observation for 4 months found the similarity of student character in the 3 schools. *First*, they were very disciplined of time. Very rarely teachers and students who were late to get school or late to class when the lesson begins. Even the teachers of school "A" arrived at school 10 minutes before the lesson begins.

*Second*, the three schools succeeded in cultivating a clean and healthy life behavior. For schools, the three schools' neighborhoods were very clean. The gym, school cafeteria and toilets were very neat and clean. At school "A", students were required to clean up their classrooms before going home. In school "C" there was a cleaning picket schedule for students, to clean up the classroom and the yard in front of it. From observations and interviews with students, it appeared that students did it with pleasure. Some students at the school "C" said if you want to be healthy you have to keep clean.

*Third*, the liveliness of the students in the three primary schools in carrying out the school cleanliness obligation showed the school succeeded in fostering the attitude of student responsibility. As is known responsibility is one aspect of character that is very important and must be grown from an early age.

*Fourth*, empathy for others was successfully grown in the three schools. Document data and interviews with teachers and parents indicated high levels of student care in the three schools to the affected communities and underprivileged communities. Interviews with students in school "A" and school "B" indicated that the concern is a religious teaching they profess.

*Fifth*, although it was not yet ideal, honesty has grown in all three schools. Observations during the examination showed no students cheated. In school "A" the known slogans was that cheating was a sin, in school "B" cheating was considered as corruption and in school "C" cheating was equated with stealing.

Interviews with students indicated they have understood that cheating was a sin and should not be done. They would remind their friends who were cheating. Interviews with teachers noted that honesty, especially not cheated was implanted since grade 1 and always reminded every examination period, so it was natural that had become the daily behavior of students. Interviews with parents were informed that honesty character was the hallmark of schooling that they sent their children to the school. For parents, honesty will be an important provision when the child is an adult.

In-depth interviews with teachers, students and parents accompanied by a four-month observation found that the success of these schools fostered the character of the students was sustained by the school culture which supported by teacher daily behaviors as models. Honest, discipline over time and following school rules, maintaining cleanliness, as well as the spirit of helping others become everyday behavior in the school and teachers and school personel become models. Figure 1 showed the relationship factors that affected to students’ character.
Indeed schools have code of conduct and rules that must be obeyed by teachers, employees and students, but interviews and discussions with students, found out that most students did not understand it, but they followed what the habits at school and imitated what was done by the teachers. These findings reinforced the opinion of Lickona, (1992) and Mak (2014) that the behavior of children basically mimics what adult adults around or idolized.

Another finding that was also very interesting, teachers also did not pay much attention to the school code of conduct and rules, but rather hold the aspects of the character that was believed to be good and has been agreed to apply at school. Teachers did things not for fear of breaking school rules, but because they had to avoid disgrace and sin. These findings reinforce the findings of Bialik, Bogan, Fadel & Horvathova (2015) that people's behavior is more related to what is believed to be true or good and not by existing rules.

Therefore, the three schools started character education by determining aspects of character that must be done in school, based on religious values and local wisdom. In general, the character aspects were in accordance with the values that grew in the community around the school, so there was a strengthening between what happens in schools and in the community around (Samani & Haryanto, 2012; Lapsley & Woodbury, 2016).

School facilities and environments also contributed to teachers’, school personnel’s and students’ obedience, but not something dominant. When the garbage bin at school "A" was being cleaned and painted, it turns out students did not throw garbage carelessly. They placed garbage in the location where garbage bin was usually placed and when the garbage bin had been returned, the garbage would be put into it. When at school "B" the electric power went out, some students took the well water to fill the tub in the toilet, to keep the toilet in use. The emergence of awareness of students taking well water to fill the tub in the toilet and not littering even though the trash was not there was the emergence of a sense of responsibility. Bialik, Bogan, Fadel, & Horvathova, (2015) say the sense of responsibility for children is very important and must be grown from an early age, so the phenomenon in the three schools is very encouraging.

Conclusion
Based on the above findings, it can be concluded that the school culture that was supported by the exemplary

Figure 1. Character Development at Schools
teacher was the main pillar in building the character of the students. Although the school had a code of conduct, but students did not notice it and more imitated the behavior of teachers and what day-to-day seen in school. School facilities did support the implementation of character education, but not a decisive factor.

REFERENCES


The Enrichment International Publication (EIP) is a program designed by the Ministry of Research, Technology and Higher Education of the Republic of Indonesia. This program is a scholarship aimed at improving the ability of Indonesian researchers to cooperate in the international sphere. This paper will cover a range of experiences during these 3-month program participants in Japan by 2017. A variety of science exchange activities, data processing techniques and research and cultural introductions are discussed here.

In this program, each participant will begin his learning adventure by contacting a potential advisor, planning research in the destination country to create an article in a well-known international journal and advisor in the destination country. This cooperation will take place from the initial contact assessment until it can be continued once the program is completed. This paper discusses the implementation of the program conducted at Tokyo University of Technology, Hachioji, Tokyo with lecturers who have taken a doctorate at an Indonesian university in the field of Artificial Intelligence: Social Media Network.

Each party involved will experience the learning experience as a participant or advisor in this program. A valuable experience exchanging knowledge and research wisdom among countries.

Keywords: Enrichment International Publication, Knowledge, and Wisdom

1. INTRODUCTION

Enhancing International Publication (EIP) Program is a routine activity sponsored by the Ministry of Research, Technology and Higher Education, Republic of Indonesia. This
program aim is to improve the quality and quantity of writing activities scientific journals at the level for a doctoral student in higher education institutions in Indonesia. Participants of this program are doctoral candidates from various universities in Indonesia. They have to pass a series of selections process then placed in university in the destination country. Some destination countries are Japan, Taiwan, Netherlands, Hungary, America, and Australia. This paper is based on the real experience of EIP Program, especially in Tokyo University of Technology, Hachioji, Tokyo and Osaka City University, Osaka. The duration about this program is around three months.

The Goals and objectives of the program are improving the international outlook of lecturers, especially for the purposes of international publications, improving the quality of the doctor candidate with international collaboration experience, and in general, improving the quality of the lecturers at universities in Indonesia. To achieve these objectives, the activities undertaken are writing technical papers with partners at university abroad for publication in a reputable international journal, conduct research activities utilizing facilities at university abroad which will otherwise be difficult to perform in Indonesia.

During the program, students will stay in dorms or apartments so that they will feel a direct interaction with the local citizen and culture. Using local transportation, enjoying daily food and visiting some places on weekends. In addition to interact with campus life and students, as well as local advisors. Experiences gained from both sides and build trust as well as long-term cooperation. These are very beneficial for individuals and institutions

Before leaving for the host university abroad, students should have completed correspondences with the supervisor from destination university abroad to discuss and approve topics to be written into a manuscript. While living in the host university abroad, students will discuss and receive guidance from the supervisor on how to explore ideas, conduct research, and list research outcomes to obtain a publishable manuscript in the International Journal. Before returning to Indonesia, students are expected to have submitted a manuscript as a result of the joint research activities with the supervisor from the partner universities abroad.

2. RELATED RESEARCH

Placing people in different environments within a certain duration can provide an atmosphere of new experiences. This experience will be felt by the perpetrator and his environment (Ma, Yan, Zhang, Zhang, & Ling, 2015). Organizational environments and actors will adapt to form new mindsets and behaviors. Cultural exchanges will also be formed from this interaction. A study by IBM shows that key initiation of transformation can occur due to
cultural exchange between individuals (DeViney, Sturtevant, Zadeh, Peluso, & Tambor, 2012).

The use of technology and applications also supports collaboration between individuals. Geographic distance is no longer a barrier to collaboration. Ideas and research can be developed through interaction with applications such as social media. Researchers can connect and work together after reaching mutual understanding while working in different locations (Liggett, Earnshaw, Thompson, Excell, & Heald, 2015). The experience of conducting joint research will contribute to socio-technical exchange in addition to increasing knowledge. The success of this joint research project is also supported by the availability of collaborative applications with cloud computing technology (Lundell & Gamalielsson, 2017).

Hitachi visiting research programs (HIVIPS) show that visiting researchers in addition to professional skills, should also have a good personality and able to work with supervisors. The quality and responsibility of supervisors also influences this cooperation (Kuwahara & Takeda, 1988). The benefits of visiting research programs will also enrich the insights through experience of experiencing the atmosphere of different educational environments (Bojic, Jagust, & Sovic, 2015).

3. APPROACH METHODOLOGY

Methodology for carrying out this program as shown on Figure 1. Beginning with the student (applicants) registering online at the website designated. Then performed administrative selection by the organizers. After passed the administrative selection, an interview process is conducted by the assessors which includes document verification, participant motivation, mental readiness and research plan. The next stage is the announcement of the selection results and Pre-Departure Workshop before Departure and Signing Contract.
4. RESULTS & CONCLUSION

This activity takes place in October to December 2017. Daily activities are conducted in the campus laboratory along with the advisor. The main activities are conducting international scientific writing articles and several equipment testing. There is a regular meeting with advisor to discuss the progress weekly, and the final presentation at the end of the program. Draft articles can be made in Indonesia so consultation with advisors can be done more effectively. Other activities with students from local universities such as lunch together, welcome party etc. Participants also conduct personal activities such as: using local transportation, try local food, visit historical places or interesting objects, attending openSUSE Submit Asia 2017, attending RAKUTEN Technology Conference, presenting in TRON Symposium IEEE 2017 and others. At the end of the event, participants from Tokyo University of Technology have successfully submitted articles to the Journal of Information Processing (IPSJ), while participants from the Osaka University submitted articles to the IAENG Journal. Each participant receives a document indicating the completion of the activity, and future cooperation opportunities as illustrated in Figure 2. Each party gains mutual advantage in the intercultural knowledge and culture exchange. For universities will benefit from the occurrence of international research cooperation.

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With Malaysia being a non-signatory country to the 1951 Refugee Convention, refugee children in the country are denied access to the national education system and could only obtain informal education through community-based learning centres, established by local refugee community or NGOs. While the current provision of education aims to help refugee children to gain basic knowledge and skills to survive in the country, they seem to live a different lifestyle in isolation and remain “invisible” to the vast majority of the Malaysian citizens. Efforts to promote integration of refugees into the society are very important as the sense of belonging is one crucial factor to help them regain dignity and hope. Thus, there is a need to look at the term “refugee education” from another perspective, which is, “education about refugees” for the Malaysian citizens. The founder of Soka University, Dr. Daisaku Ikeda, mentioned in his speech at Teachers College in 1996 that one key element to global citizenship education is “the wisdom to perceive the interconnectedness of all life and living”. Therefore, global citizenship education plays a vital role in promoting harmonious co-existence among people of different ethnicities and backgrounds, and the issue of refugee education could be a stepping stone towards the introduction of global citizenship education in the country.

Keywords: Refugee education, Malaysia, Integration, Global citizenship education

Introduction

By the end of 2016, the number of displaced people in the world marks its highest level on record than any other time with an unprecedented 65.6 million people being forcibly driven away from home due to war, persecution, conflict, violence, or human rights violation. Malaysia is currently hosting some 152,420 refugees and asylum seekers and this is the largest population in South-east Asia region. Around 25 percent are children below the age of 18 (UNHCR, 2017b). These refugees and asylum seekers were “allowed” to remain in Malaysia with the assumption that their stay will be temporary, pending resettlement to a third country. However, resettlement is never a promising solution for a vast majority of the refugees and
asylum seekers in Malaysia. Many of them have been in Malaysia for more than 20 years and remained undocumented to date, especially the Filipino refugees in East Malaysia. With reference to this situation, it is without doubt that efforts towards the solution of local integration should be prioritized to help these refugees and asylum seekers to sustain their livings in the country. In his interview with The Star newspapers, the UNHCR representative in Malaysia, Richard Towle stated, “If you allow people self-sufficiency, autonomy and empower them with work opportunities and better education, their capabilities will be strengthened and they can contribute to the community and (adopted) country.” (Azizan, 2017).

Refugees in Malaysia

Malaysia is not a signatory to the 1951 Refugee Convention and its 1967 Protocol; nor have they established a system for providing protection to refugees considering the consequences of it becoming a drawing factor for refugees to come to the country due to its strategic geographical location in the region (Kaur, 2007). In addition, the government had also indicated that providing protection to the refugees might impose heavy financial burden upon the country as well as the problem of national security due to the huge presence of refugees or asylum-seekers (UNICEF, 2015). Therefore, refugees are not legally recognized in the country. Without specific policies to address the issue of identification and protection of refugees in the country, refugees and asylum seekers in Malaysia are not only denied refuge, but also left vulnerable to additional human rights abuses (Palmgren, 2011; Kaur, 2007).

As of end November 2017, there are some 152,420 refugees and asylum seekers registered with UNHCR in Malaysia. Among them, 90 percent are from Myanmar, comprising some 65,250 Rohingyas, 34,140 Chins and other ethnicities. There are also some 18,830 refugees and asylum seekers from other countries, including Pakistanis, Yemenis, Syrians, Somalis, Sri Lankans, Iraqis, Afghans, Palestinians etc (UNHCR, 2017a). As there are no refugee camps in Malaysia, the majority of the refugees are concentrated around the capital, Kuala Lumpur and the surrounding Klang Valley. They live within the local community, in crammed low-cost flats in the city, as invisible as they could. In fact, a huge number of Rohingya children are born in the country. However, most of the Malaysians are not aware of the existence of refugees in the country and often mistaken them for illegal immigrants (Letchamanan, 2013).

The current state of refugee education in Malaysia
Among the refugees and asylum seekers in Malaysia, 40,470 are under the age of 18. However, only 30 percent are enrolled in community learning centres and the enrolment rate in primary and secondary education were reported at 44 percent and 16 percent respectively (UNHCR, 2017c). Given that Malaysia is a non-signatory to the 1951 Refugee Convention, refugee children in the country are denied access to the national education system. However, the government has welcomed initiatives by the private sector, NGOs and individuals in providing these children with an education (UNICEF, 2015). Thus, refugee children can only obtain education via an informal parallel system of more than 130 community-based learning centres, established either by the local refugee community, local NGOs, or a partnership of both, supported by UNHCR. With the purpose to discover more about the current state of refugee education in the country, fieldwork was conducted in two refugee learning centres located near the capital of Malaysia— Kuala Lumpur in August 2017. Semi-structured interviews were conducted with one teacher and one administrative staff from each learning centre and some of the findings are as follows:

• Demographic diversity. Malaysia is a host country to refugees and asylum seekers from more than 10 different countries including Myanmar, Sri Lanka, Pakistan, Somali, Syria, Iraq, Iran, Palestine, Afghanistan, Yemen and Sudan. The demography of refugee population with such diversity is thus reflected in most of the learning centres. In one learning centre, there are students from 12 different countries, with the majority from Myanmar and Pakistan. This gives students a chance to learn in an environment of multi races, cultures and backgrounds which allows them to gain soft skills, such as respect and tolerance. It is a merit for them if they were to continue staying or to integrate into the multiracial Malaysian society in the future. However, there also exists some learning centres established by the refugee communities themselves and thus only accommodate refugee children from their own community.

• Syllabus and curriculum. While UNHCR encourages learning centres to follow the Malaysian curriculum to make the case stronger for the government to unconditionally open the doors of public schools to refugee children and to make it easier for children to integrate when the government changes its policies (UNICEF, 2015), it is still very much depends on the nature and purpose of the learning centres to decide their syllabus and curriculum. For instance, learning centres which aim to help students resettle in third countries such as the United States or Australia chose to use syllabus of higher level and English as the medium of teaching to prepare students for
resettlement.

- **Problems and challenges.** Many of the learning centres are severely underfunded and heavily reliant on UNHCR’s assistance for teacher compensation and training, overcrowded and lacked proper classrooms. They also do not have sufficiently trained teachers and the qualifications of teachers are very diverse whereby some are university graduates, while some only complete high school. In many cases, the teachers are refugees themselves with little teaching experience or knowledge of pedagogy. Parents’ attitude towards education is also one challenge faced by most learning centres. In general, most refugee parents see education as an important mean for a better future of their children. However, refugee parents from a more traditional and conservative background, for example refugees from the Rohingya community, do not put much emphasis on the importance of education especially when it comes to education for girls.

**Refugee education in another perspective**

Even though some sort of access to education for refugee children exists, the educational environments that they are in seem to be an isolated space where there are very limited interactions with the outside world. While much more needs to be done to improve the quality and accessibility of the provision of education for refugee children, this paper suggests a different perspective of looking at the issue of refugee education. It is without doubt that education plays a very important role in providing refugees with the basic skills and knowledge to survive in the society. But on top of that, we need to take into consideration their psychological needs, to help them in terms of gaining a sense of belonging in the society and to become resilient. The recent outbreak of the persecution of Rohingya ethnic in Myanmar during end of August last year had revealed the narrow-mindedness and intolerance of majority of the Malaysian society despite being a multiracial and multicultural country. The condemns and critics toward refugees from the public very much reflected the flaw in the Malaysian education system.

The Malaysia Ministry of Higher Education has introduced the “Ethnic Relations Module” as a compulsory course in all public and private universities in 2005 to promote national unity, appreciation of diversity and harmony among citizens of different ethnicities. Likewise, subjects such as moral and civic education are taught in elementary and secondary schools to inculcate values such as respect, tolerance, love for the country and peace and
harmony. However, it left us with some questions here: “Given that the curriculum from elementary all the way through to tertiary education includes teaching values such as caring, tolerance, inclusion, harmonious co-existence etc, how far has it achieved in terms of promoting a caring and a more civilized society? How effective are we in creating unity among people of different races and cultures? While national unity is undoubtedly important, where are we standing in terms of fostering citizens who value diversity, and are capable of fitting into a globalised and fast-changing era?”

Therefore, while the word “refugee education” has been widely used to refer to the provision of “education for refugee children”, I would like to divert the attention to looking at the word of “refugee education” from another perspective, which is “education about refugees”. The core problem underneath the xenophobic attitudes toward refugees, in my opinion, is the lack of the consciousness that all of us are living on the same Earth and we are all citizens of the world. The issue of refugee crises has become one global concern and the fact that there exists a large number of refugees and asylum seekers in the country, with majority of them are living in the urban areas (there is no refugee camp in Malaysia), citizens of Malaysia should start learning and become aware about the issue. As much as it is important for refugees to learn about the cultures and norms of the host country, citizens of the host country need to know about the background and cultures of refugees, as well as to listen to the journey of them seeking refuge. It is only through the initiative trying to achieve mutual understanding through dialogues and exchanges that allows a harmonious co-existence of both parties in the society. Therefore, the role of education is vital not only in terms of educating the refugees, but to also educate the Malaysian citizens about refugees and to cultivate an open-minded attitude which allows them to embrace the “newcomers” in the country.

**Conclusion—The way forward**

In his speech at Teachers College, Columbia University in 1996, Dr. Daisaku Ikeda, the founder of Soka University, spoke on the three essential elements of global citizenship: “First, the wisdom to perceive the interconnectedness of all life and living; second, the courage not to fear or deny difference, but to respect and strive to understand people of different cultures and to grow from encounters with them; and third, the compassion to maintain an imaginative empathy that reaches beyond one’s immediate surroundings and extends to those suffering in distant places” (p. 112-113). Global citizenship education is very much needed to tackle the issues of xenophobia and hate speeches that are filling our world today. I would like to,
therefore, suggest that global citizenship education should from now on be introduced in the Malaysian school curriculum, and education about refugee should be included as part of its syllabus. While we are looking into the problems and challenges surrounding on the provision of education for refugee and trying to find solutions for its betterment, this idea about global citizenship from Dr. Daisaku Ikeda should serve as the fundamental philosophy to produce more global citizens with compassion and empathy, and together we create a society of greater solidarity for refugees.

References


The paper aims to showcase higher education initiatives, policies and practices in the context of integrating transformative and sustainable development objectives in the teaching and learning spaces. These are with due recognition of the challenges and opportunities brought about by internationalization and globalization to the education sector stakeholders in particular. It expounds on models and approaches in inculcating a global citizenship mindset in various engagements whether academics, research or community service. Having gone through review of selected literature and studies on global citizenship education (GCED), the paper likewise seeks to highlight its historical foundation, implications and noted recommendations. Engaging the youth in civic society activities has been made part of the major policies and practices of higher educational institutions. This then puts more emphasis on their role in the transformative development of individuals, communities and nations amidst diversity. Responsible citizens in an increasing technologically advanced and interdependent world are expected: both valuing national and global citizenship. As higher educational institutions operate not only on local and national settings, GCED then has to consider all global forces and dimensions for knowledge, skills and values acquisition to ensure the sustainable future of humanity.

Keywords: higher education, internationalization, and global citizenship education

Introduction

In an increasingly globalized world there are a number of complex issues and challenges, which have to be addressed to ensure peace, unity, welfare, and sustainable development of nations. Thus, the promotion of awareness and deeper understanding of the social, economic, political, cultural, technological and environmental realities, among others, necessitate innovative actions and policy measures from all concerned sectors of society. Well-
recognized is the crucial role of education at all levels in developing a mindset and instilling commitment among learners on their rights and responsibilities as citizens of the world. That is, to live in harmony with others while contributing to the collective good of the human race through knowledge, skills acquisition, attitudes, and values (KSAVs) formation. It is within this context that higher education’s transformative and integrative process has been recognized as one of the best conduits to facilitate belongingness and caring for the world, through collaboration with other stakeholders for global citizenship.

**Historical Notes on Global Citizenship and Education**

Tye (as cited in Bourn, 2015) shared that as early as the 1930s, expressions such as “being world citizens” (p.12) were already deliberated in some literatures due to various conflicts and threats to democracy from fascism. And, further on, in the 1950s and 1960s internationalization of programs have started to be given priority and due attention.

It was in Delors (1996) report where the United Nations Educational, Scientific and Cultural Organization (UNESCO) “holistic and integrated vision of education” was presented with the following pillars for life-long learning: 1) learning to know; 2) learning to do; 3) learning to be; and 4) learning to live together and to live with others. (p.5). A fifth pillar has been introduced in line with the United Nations Decade of Education for Sustainable Development (UN DESD, 2005-2014) that is, “learning to transform society and change the world – i.e., work toward a gender-neutral, non-discriminatory society; act to achieve social solidarity; and live sustainably.”

Ruprecht (2017) reported that it was in 2012 at the launching of the United Nation’s Global Education First Initiative when the term, global citizenship education (GCED) was fully coined together and expounded. She highlighted that the concept was not at all new, with UNESCO promoting “peace and human rights education and shared universal values” (p.3), since 1946.

**Education Initiatives and Trends in GCED**

Delors’ report discussed the directions of learning from basic education as “passport to life,” to higher education as “education throughout life” (part 3, sec. 6). This relates with the role of education from the formative childhood years to the transformative years for responsible adulthood and citizenship development.

GCED is a strategic area in UNESCO’s Education Sector programme for 2014-2021.
Initiated were agenda setting through global consultations on GCED’s objectives, domains and dimensions. Likewise, Sustainable Development Goal (SDG) No. 4 puts emphasis on ensuring inclusive and equitable quality education to promote lifelong learning opportunities for everyone. As concurred, “Global citizenship education (GCED) aims to empower learners of all ages to assume active roles, both locally and globally, to face and help resolve global and local challenges, and to become proactive and responsible contributors to more peaceful, tolerant, inclusive and secure societies. It nurtures respect for all, a sense of empathy and belonging to a common humanity” (UNESCO, “What is Global Citizenship Education?,” para.1-2).

Noted initiatives and trends are in the areas of program and curriculum development, learning materials development, textbook publications, teacher education and training, research and community service, among others. Those anchor on the integration of the three domains of learning: the cognitive, socio-emotional and behavioral.

As reported by Global Education Monitoring (2016) for the period 2005-2015, “some emphasis on sustainable development issues…” (p. 1) were noted in the curricula of 75% of 78 countries surveyed for primary to secondary levels. For higher education, GCED’s emphases were on teacher education/training, development and integration in curricular and co-curricular programs, learning objectives, outcomes, and student assessment.

**GCED Frameworks, Approaches, Models, Policies and Practices**

Bourn (2015) cited an approach based on the neo-liberal framework of education, that is, equipping the learner with skills to be a global citizen through active participation in a global world. He shared the case of the University of Hongkong on its approach to global citizenship by “developing an international outlook and enhancing… global competencies in terms of attitude, language abilities, knowledge, and analytical skills through curriculum, student activities and a variety of international experiences” (p. 26). Other universities utilize similar or other frameworks, approaches, strategies for knowledge and skills development linking learning with identification of activities to address citizenship and civic issues and related matters of concern. Oxford University report (“International Trends,” 2015, pp.6-9) presented relevant higher education initiatives around the world which include shifting and changing traditional educational approaches, government strategies, policy provisions for students’ internationalized experiences, technological innovations, among others.

Oxley and Morris (2013, p.306) presented cosmopolitan and advocacy as the two
models of global citizenship. Each model has four types based on the concepts of: democracy; human rights; international development; globalization of arts, media, sciences, technologies; global society; post colonial agenda; sustainable development agenda; and aspects of human relations. The cosmopolitan model of global citizenship include: political, moral, economic, and cultural while the advocacy model include: social, critical, environmental, and spiritual. GCED policies and practices on the other hand are designed amidst current trends and are implemented either individually or collectively.

Implications on Higher Education for Global Citizenship

Higher educational institutions craft programs, policies which are aligned with national education policy measures, and in observance and support of global education movements for sustainable development. Various frameworks and approaches have been conceptualized and implemented. With challenges, the current innovations and initiatives of education networks and organizations all point out to common aim for a peaceful world for all. The service-learning model integrating academics, research and community engagements for sustainable development and other concrete integrative programs can be had for formal and non-formal meaningful multi-cultural exposures. Other sectors such as NGOs, professional associations, and industry groups could be tapped by academia and the government to intensify GCED collaboration on policies, benchmarking programs/practices on responsible local, national, regional and global citizenship.

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The The CEO@Faculty Programme (CFP) is a special programme designed by the Malaysian Government in an effort to strengthen industry-academia collaborations. In the CEO@Faculty 1.0 programme, CEOs and top industry leaders are invited to various institutes of higher learning to share their success formulas and work experiences to the university students and academicians. Whereas in the CEO@Faculty 2.0 programme with its theme “Coaching by the Pros”, CEOs are given the opportunity to coach young selected academicians at their respective companies by inculcating work experience and responsibilities in exposing them to corporate leadership, technical and management skills. This approach will allow the young academicians to learn the working and industry environment. It is a hope that these young academicians could produce market ready graduates in coming years. The CEO@Faculty 1.0 programme started in 2015 with 24 CEOs, and another 60 CEOs joined the programme in 2016. Subsequently in 2017, 20 young academicians were selected for the CEO@Faculty 2.0 programme. Both these programmes have been very successful as national industry-academia programmes in Malaysia.

Keywords: CEO@Faculty Programme, CEO@Faculty 1.0, CEO@Faculty 2.0

Introduction
In an attempt to revolutionize the education sector in Malaysia, the government has launched the Malaysian Education Blueprint (Higher Education) 2015-2025. The main objective is to aid the tertiary education system in facing future challenges. There are 10 shifts listed out and under the Shift 2 known as “Talent Excellence,” focuses on mentorship and co-teaching of major corporate figures for researchers, educators, leaders and even professional practitioners. The three main strategies outlined in this particular shift is to position higher learning institutions (HLIs) according to their recognized areas of institutional excellence, enabling HLIs to develop multi-track career pathways, and to provide the best practice guidelines to
support both public and private HLIs. Thus, the CEO@Faculty Programme was established and many CEOs and huge industry players were brought into Malaysia’s higher learning institutes to facilitate the tertiary education system by hosting talks to share their exposures and experiences with students and throughout the university community. As of 2015, a total of 24 CEOs participated in this programme and the number increased to 60 CEOs in the following year 2016. Mentorship provided by CEOs in this programme will spend up to 30 hours annually in guiding institutes of higher learning in the country concerning career path, curriculum development, and many other topics which are related to the industry. There are two phases from the CEO@Faculty Programme. The first phase or CEO@Faculty 1.0 is carried out via sharing of experiences and work expertise from industrial players to intensify the participation from industrial sectors as a part of the system of higher education. Students will then be able to grasp and deepen their knowledge on a particular topic being discussed by the speaker through the “Learn from the Pros” concept. Besides that, this programme which enhances student learning experience and by reducing the mismatch in the job supply and demand would benefit graduate’s employability. CEO@Faculty 2.0 or the second phase is focusing on grooming young university lecturers with PhD qualifications with respect to industrial operations and management exposures. Therefore, selected CEOs will be mentoring and guiding these university lecturers in becoming future leaders. The chosen candidates for this programme will be stationed at the corresponding CEO’s office and will be handed a specific task up to a period of six months for them to learn and have a better understanding of the corporate culture in managing high-profile companies. This initiative has been implemented since April 2017 and forms a platform to improve and redesign the higher education in Malaysia [Salleh, M. S. & Omar, M. Z., 2013; Ministry of Education Malaysia, 2015].

Program Structure

Even though the minimum commitment period is 30 hours per year, some CEOs have increased their work periods further than the prescribed guideline, seeing this programme as not a daily routine, but a passion in guiding and shaping the young to be future dependable leaders in the corporate world by clocking in 60 hours, twice the period from the recommended guideline. This particular individual is non-other than the Secretary General of the Treasury himself who has initiated a mentorship programme called ‘Masterclass Entrepreneur’. This special programme is an elective course which is only available for selected candidates who have a very strong desire to be entrepreneurs. This 14-week programme is in collaboration with the
top management group from the Malaysian Global Innovation and Creativity Centre (MaGIC) and various agencies, while the objective of producing brilliant, competent and exceptional young entrepreneurs [Asohan, A., 2014; Rahman, D., 2015; Rahman, D., 2016]. Another example is the “Data Engineering” undergraduate programme utilizing the ‘2u2i’ approach, which requires students to dedicate two years of their undergraduate in their home institute and another two years in top IT companies. Some of the well-known IT companies such as Oracle, Microsoft, VADs, TM, HILTI, and I2M were brought in by the CEO of Malaysia Digital Economy Corporation (MDEC), to share knowledge and experience in the area of information technology and communication [Rahman, D., 2015; Rahman, D., 2016; Ruban, A., 2016]. In 2016, AirAsia Group CEO shared the work experience and some practical management tips to students in Universiti Putra Malaysia (UPM) by emphasizing the importance of having a good work culture with staffs and that the key to be successful is transparency. The talk was conducted in conjunction with the CEO@Faculty Programme organized by Universiti Putra Malaysia (UPM) and was joined by the Higher Education Minister. The CEO of AirAsia officially declared UPM to be AirAsia’s official university in his opening speech last year. Also, UPM recently designed an aircraft livery for AirAsia, which was presented on AirAsia’s Airbus A320 aircraft with a flight number 9MAQD during the launch in September 2017. Furthermore, the birth of student and staff mobility programmes, AirAsia’s high-flyer internship programmes and academic partnerships of executive and research programmes that were aerospace related are due to the direct result of contribution from the CEO of AirAsia to the UPM-AirAsia’s strategic collaboration. Besides AirAsia, Rolls-Royce Group (Research and Technology) was invited over to UPM to share his thoughts and expertise in 2015 [Phung, A., 2016; Rahman, D., 2016; Ruban, A., 2016]. Talks given by CEOs at various institute of higher learning are not only addressing technical issues concerning the industry, but also on educating the mindset of local graduates to identify themselves and prepare them to be ethical and responsible in achieving their ambitions. According to the press, good feedbacks were received from the participating CEOs and that they were truly happy in engaging both students and members from the university during their sharing.

**Value Creation**

Universiti Teknikal Malaysia Melaka (UTeM) has collaborated with Samsung and formed the UTeM-Samsung IoT (‘Internet of Things’) academy which is deemed to be first of its kind in this world where students from that institute of higher learning will be exposed to newly
developed technologies and they will be trained on both software and hardware development. This is because IoT is such a convenient technology tool that allows products to communicate with one another, thus enhancing our daily lives. Ultimately, by the year 2020, all of Samsung products are expected to be IoT-enabled through a US$100 million pledged specifically on IoT-related efforts globally [Rahman, D., 2015]. In any case, universities can serve as solution providers to difficulties faced by the industry through the set-up of Public-Private Research Network (PPRN) by the Education Ministry. For instance, in the scenario of supplying casing materials, the materials could be produced from a university and supplies them to a certain company that needs it. The company will then pay a particular sum, with matching grants backed up by the Government. According to the report filed in May 2015, there were 10 successful completed projects done in this manner after 154 projects were matched to researchers from 20 universities. Industry Centre of Excellence (ICOE) is another public-private collaborative initiative example which sets to improve R&D and boost technology transfer. Some of the industry players that incorporate ICOE in the area of ICT are IBM and Motorola as an example, while in the construction line we have Sunway Construction and CIDB, also in the biotechnology industry, Biocon and Orchid Life are involved, as in the automotive side, familiar brands like Toyota and DRB Hicom, and within the wholesale and retail industry, the key players are MyDIN, AEON, and Giant to name a few. Overall, there are 10 ICOE clusters each being led by a university and supported by the industry [Salleh, M. S. & Omar, M. Z., 2013; Ward, K. & Wolf-Wendel, L. E., 2014; Rajaendram, R., 2015]. Hence, it is very crucial for industry to be directly involved with the universities in developing our education system. Via the support and sharing from CEOs and prominent industry players could enhanced not only the technical knowledge, but also on English communication proficiency and work attitude skills. In all, the curriculum crafted by the head of an industrial company would ensure market relevance and suitability for the selected candidates undergoing this programme. Soon enough, one of the merits in promoting academics in universities would be to gain sufficient industry linkages [Pillania, R. K., 2005; Ankrah, S. & AL-Tabbaa, O., 2015].

Conclusion

The partnership forged between industry and universities will be the next trend in Malaysia in restructuring the higher education system. This collaboration would benefit both parties in the long run in producing future experienced graduates that will contribute to the industry, as well as leveraging useful assets and resources directly from academic institutes via research and
development so that a product of science manufactured can be introduced to the market. Therefore, the CEO@Faculty Programme is a catalyst in boosting the growth of many industries innovation economy that would create more business and jobs opportunities. In Malaysia, industry and universities are seen as a single cluster.

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ENGLISH-MEDIUM INSTRUCTION AND GLOBAL CITIZENSHIP: AIMS PRACTICE AT AN INDONESIAN PUBLIC UNIVERSITY

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To cope with global citizenship and partnership as well as develop more quality higher education, universities in developing countries like Indonesia, support students’ international engagement, one of which is by participating in AIMS (ASEAN International Mobility for Students). Courses in this international credit-transfer program is fully delivered in English. Although this English-based program has been implemented for a long time, how this program may be effectively implemented among universities in Kachru’s (1992) expanding circle countries is understudy. This qualitative study explores the use of English-medium instruction in AIMS program at an Indonesian public university and how it supports students’ global engagement and citizenship. Results of questionnaires, interviews and classroom observations for one semester show that, to certain extent, the English-Medium Instruction (EMI) has been effectively implemented and, therefore, can support the purpose of AIMS. Both local and international students can achieve the purpose of their international credit-transfer courses as well as have developed international citizenship and engagement. The study also explores challenges that both students and instructors face during the implementation of this international program for global citizenship.

Keywords: English-medium instruction, credit-transfer, global citizenship

INTRODUCTION

In today’s more global world, English-Medium Instruction (EMI), particularly at universities, becomes more important in preparing quality human resource necessary for economic development. Countries all over the world, including Indonesia, emphasize the importance of quality human resource so that they can actively take part in global economy and development. As the most populous developing country in Southeast Asia, Indonesia is predicted to be one of Four Big World Economies in 2050, after China, The United States and India (Moriyasu, 2015). This predicted economic development will only come true with quality human resource,
one of which is through the improvement of English competency for global communication and partnership.

Human resource development relies on quality education, particularly at higher education. To prepare human resources to be competitive for global market, universities have to be at the front gate in developing the human resource and research for national development (Stukalina, 2016). These educational institutions should be able to provide research findings required for social problem solution. Therefore, universities should identify various research which have big impacts for the development of human capital as many populous countries like China and India have been practicing (Reddy, Xie, & Tag, 2016). Research findings will have bigger social impact when they are written and disseminated in academically good English.

In addition to supporting economic development, English-Medium Instruction (EMI) also facilitates global engagement. This practice enables Indonesian universities to attract foreign students to interact with local students so that many regional and international accreditation agencies require the use of English for their assessment. For example, to be accredited by ASEAN University Network (AUN), universities in the region should have English-based classroom instruction, curriculum, website and other supporting facilities. This English-based documents are also required by other international ranking institutions such as QS, Time Higher Education, and Webometrics. The Indonesian Higher Education Ministry targets that 5-7 universities in this country listed in 500 Top World Universities by 2025. This ambitious target needs strong support from all academics through the improvement of their English language competency.

Despite this increasing importance of EMI for global engagement and citizenship, little is known, how the practice of EMI, especially in developing expanding circle countries (Kachru, 1992) like Indonesia may support and develop students’ global perspective. Therefore, it is interesting to more specifically examine how the practice of EMI in AIMS Indonesia may contribute to the development of students’ English competencies as well as their global citizenship and perspective on which this study focuses.

THEORIZING ENGLISH-MEDIUM INSTRUCTION

The need for English-Medium Instruction (EMI) has some dimensions, including university ranking, global engagement and international acknowledgement.

English Competency and University Ranking
As an international language, English is used in academic setting worldwide. It has been the instructional language at universities, schools, and other educational settings. English has even become the lingua franca of university studies (Smit, 2004). Classroom instruction in world class universities have used English so that students, both local and international, can exchange ideas and views more fluently in that language as well as contribute to university international ranking.

In addition to international student, another essential aspect in university ranking is publication. The number of publication university can claim for its international ranking depends on the number of scientific articles that academics can publish. For most of them, not only can publication show professional autonomy as researchers but also indicate academic freedom and collegiality (Taylor, 2008, p. 34). For instance, by disseminating their ideas in journals or conferences, researchers can both show their academic contribution and maintain partnership with their colleagues. International exchanges can be a medium for improving the teaching and research performance of academics (Enskar, Johansson, Ljusegren & Widang, 2011) for a better international development.

Furthermore, publication can receive international acknowledgement if it is disseminated in acceptable academic English. For this purpose, many educational institutions emphasize that research findings be disseminated in English for more extensive readership and international acceptance. In Southeast Asian region, for example, the Malaysian government believe that, supported by excellent English proficiency, the skills, expertise, and experience of Malaysian researchers and scientists can bring their university into World Class University ranking (Hassan, Silong, Ismail, & Asmiran, 2011). With sufficient English competency, academics will be able to disseminate their research results, thus, receiving international recognition. This notion may also be applicable to Indonesian academics involved in this study.

**English-Medium Instruction and global citizenship**

EMI supports international educational development. Courses taught in English like in AIMS program serve as a bridge for educational institutions to outreach overseas students. As such, universities in outer and expanding circle countries (Kachru, 1992) such as those in Easter Europe, Africa, Asia and Middle East, manage to implement English-Medium Instruction. For instance, the University of Vienna requires students to practice English during classroom session but allows them to use their own native language outside of classroom interaction (Komori-Glatza, 2015), Meanwhile, the University of Copenhagen organize an oral proficiency test for lecturers involved in EMI programs (Dimova, 2017). A similar policy is
also made by universities in Indonesia involved in this study.

Meanwhile, good English language skill also supports students’ global engagement. This competency enables them to have confidence when interacting with their counterparts from overseas. As many scholars believe, international educational partnership is an effective way of building global citizenship (Coombs, Potts, & Whitehead, 2014). English-Medium instruction allows students to meet and interact with their foreign friends who have different cultural backgrounds. This global friendship widens their social partnership, confidence and global competitiveness, while respecting diversity of values (Dower, 2008).

Finally, EMI practice improves English proficiency and supports professional development. With fluency in both written and spoken, lecturers and students can read academic journals and publish based on their research projects. Oral English proficiency allows them to take part in conferences, seminars, and other academic forums. In this context, good English competency supports international collegiality (Taylor, 2008). Good proficiency of English enables them to not only join conferences and meet international counterparts but also develop their professional careers.

**English-Medium Instruction and Language Development**

The practice of EMI at educational institutions like universities is actually more than just about language practice. It is a political sociolinguistics policy determined by who hold the power (Tollefson & Tsui, 2004). Authorities like government or university presidents have the power to determine whether or not English can be adopted as a means of classroom instruction. In some countries, the practice of EMI at universities have attracted many foreign students, making the study program more competitive and favorite (Tatzl, 2011; Barriosa, Lopez-Gutierreza & Lechuga, 2016). EMI has become a means of promoting universities to attract international students.

In relation to language development, the practice of EMI supports oral proficiency and literacy. The use of English in classroom interaction allows students to practice speaking with their classmates. Discussion activities also build their confidence in English oral proficiency. Furthermore, this practice is also expected to support students’ literacy (reading and writing). For a better learning outcome, however, the development of reading and writing skills should be adjusted to their learning styles. For example, among ASEAN countries, Indonesian students need to have more practices in reading for analyzing global information (Pamumu, Amir & Rizan, 2014) whereas Thailand students need to combine cognitive, social and metacognitive skills for a better reading comprehension (Kunasaraphan, 2015).
Finally, the proficiency in English is not inseparable from vocabulary mastery. Studies have shown the importance of vocabulary mastery in language learning, particularly second or foreign language like English (Blachowicz & Fisher, 2003; Graves, Juel, & Graves, 2004). This vocabulary requirement is also considered necessary in EMI. These scholars believe that the amount of vocabulary acquired in English determine fluency in speaking and support clarity writing. Insufficient vocabulary mastery may hamper fluency and comprehension. Indonesian university students, for example, need to master about 3,000-5,000 words to support good reading comprehension and fluent speaking (Nurweni & Read, 1998). These aspects of English language development may be observed from participating students in this study.

STUDY METHOD
This qualitative study portrays the subjective feelings of AIMS participants (Indonesian, Malaysian and Thai students) and Indonesian lecturers on the benefits and challenges of EMI practice during one semester Academic Year 2017-2018. Data for this study were generated from observation, interviews, and document analysis conducted from September 2017 to January 2018.

Observation
Observation took place three times during the semester in two classes of hospitality management program of a public university in Bandung, Indonesia. Each observation was about 100 minutes using two video cameras concurrently.

Interviews
To have a more in-depth feelings of the participants, semi-structured interviews were conducted two folds; students and lecturers. As many as 12 students and 3 lecturers were interviewed to identify their perceptions on the practice of EMI, including benefits of EMI, problems and challenges.

Document analysis
The study also analyzes documents related to EMI such as text-books used by the lecturers and students and other supporting documents used to help the learning process like lesson plans and other teaching aids. Data generated from these three instruments were then triangulated and cross-checked to answer the two afore-mentioned research questions.

FINDING AND DISCUSSION
The practice of EMI in AIMS program is believed to be beneficial for both students and teachers as it improves students’ English language and builds their global citizenship.

**AIMS and English Language Improvement**

The first benefit of EMI practice in AIMS program is the improvement of English language proficiency. Observations show how classroom practice enables students and lecturers to exercise their English speaking skills in classroom discussions. They have to be involved in classroom lectures and discussions as well as write final paper and projects, all of which are in English. Lectures have to read extensively in English when preparing the classroom tutorials and so do students when they complete the assigned tasks. This has confirmed the fact that English has become the lingua franca of university studies (Smit, 2004). For example, one Thai student believes that EMI has become a means of communication with friends from Indonesia and Malaysia. They feel both motivated but also challenged to practice English during the classroom interactions for the following benefits.

First, oral skill is the most needed language skill. Most students prefer to speak English and feel more motivated to learn tourism subject, especially Malaysian students as they are more fluent in English rather in Malay language. Despite limited English, Indonesian and Thai students also feel more confident in speaking English during classroom discussion. Speaking and listening are considered the easiest language skills, particularly for participating Malaysian students due to their intensive exposure to this language in their home country.

In addition, students also require literacy skills. They have to be able to read textbooks and other references in English. They also have to write reports and papers in this language. Indonesians students feel more confident in reading whereas Thai students find writing easier. The first cohort tends to be passive learners of English and need more exercise in reading for global information (Pammu, Amir & Rizan, 2014). Meanwhile, to improve their reading comprehension, Thai students need to combine cognitive, social and metacognitive skills (Kunasaraphan, 2015).

Next, EMI practice during AIMS program helps students learn content-knowledge vocabulary, particularly those related to tourism and hospitality. As interviews reveal, not only does acquisition of this specific vocabulary improve their English language skill but also support their subject mastery. For instance, one Malaysian student majoring in business administration learns a lot of tourism terms during her credit-transfer program. To achieve good comprehension, students need to develop their vocabulary mastery (Blachowicz & Fisher,
2003; Graves, Juel, & Graves, 2004), particularly for Indonesian students who consider English as a foreign language (Nurweni & Read, 1998).

Finally, almost all students agree that tourism subject is better taught in English than in local languages (Indonesian, Malay or Thai). The subject requires students to learn terms and vocabularies found in tourism across the world. It is different from more local subjects like history and religious subject which are more appropriate to be delivered in local languages of Indonesian, Malay or Thai. This fact supports what Waterworth (2016) has hinted that English is required to be the official language instruction in ASEAN region.

**Challenges of EMI in AIMS Program**

Despite the afore-mentioned benefits, the practice of EMI also poses some challenges due to limited English proficiency. The first challenge is confusion and limited comprehension due to non-standard English accent. Of the three participating lectures, only one female lecturer who is considered to have good speaking skill. Two other male lecturers have non-standard accent and need to refine their speaking skills. Due to students’ limited English, classroom interactions tend to be passive, causing boredom for students. Lectures need to be creative in making the learning more fun. Second, due to language limitation, international communication is restricted. For instance, Indonesian students feel rather reluctant to interact with their counterparts from Malaysia and Thailand. This limited English is, to certain extent, caused by lack of vocabulary.

However, students manage to handle the challenges by doing the following activities. First, asking classmates for clarification. As two lecturers have non-standard accent, many students, particularly from Malaysia and Thailand, felt confused and asked friends for clarification. Second, using google translation for meanings. Sometimes, asking friend still does not help. As digital natives, students make use of technology when searching for meaning. Third, due to limited English, students prefer to switch to their mother tongues, particularly among Indonesian students who are the majority in the classroom. Since the main purpose of AIMS program is exposure to English, they sometimes mixed between Indonesian and English.

Despite these challenges, students still considered EMI essential and beneficial for their professional development. As they will be working in tourism industry which requires English skills, the recommend that EMI be practiced during and outside AIMS program. Indonesian students propose that AIMS run each semester. Malaysian and Thai students suggest that all students be encouraged to participate more in classroom discussions. Lecturers need
additional preparation for teaching, reduce the use of Indonesian language, and refine their accents. Students need to work harder in English, particularly grammar mastery for academic writing. Due to limited English, a few students feel forced to take AIMS class to substitute summer class. Finally, the lecturers should be more student-centered by providing them sufficient opportunity to practice their English language skills.

**AIMS and Global Citizenship**

AIMS program supports engagement in global citizenship. In this study, participating students from three countries (Indonesia, Malaysia, and Thailand) develop a strong partnership with their counterparts. Since participation in AIMS also include all ASEAN countries plus Japan, South Korea and China, the program enables students from these countries to meet, greet, cooperate, and work together to achieve the common goal of life in the region, mutual partnership and cooperation, wider interaction with people across the globe. As Coombs, Potts and Whitehead (2014) have emphasized, AIMS program has become an international educational partnership which is an effective way of building global citizenship. In this case, AIMS program enables universities in Indonesia to attract foreign students, making the study program more competitive and favorite (Tatzl, 2011; Barriosa, Lopez-Gutierreza & Lechuga, 2016).

In addition, AIMS EMI widens students’ horizons. Improved English enables to travel around ASEAN region and the world. For instance, a Malaysian student believes that communication with people of different nationals is the real life experience that students can find in their future global engagement. Supporting a study by Waterworth (2016), English has become a common means of interaction among people in ASEAN countries.

Next, this global citizenship creates respect for cultural diversity. During AIMS program, the participating students learn different languages, cultures, and behaviors. One Malaysian student said, “my friends are friendly, so I like making friend with them. Although sometimes we have different perspectives, we respect our different cultures.” Cultural diversity will be more challenging but interesting to learn with participants of outsider ASEAN such as Japan, South Korea and China. In this program, intercultural friendship widens their social partnership, confidence and global competitiveness, while respecting diversity of values (Dower, 2008).

Finally, AIMS program relates to university ranking. Agents of ranking includes
number of international students as an important point. This program has invited students from
different countries (Malaysia, Thailand and South Korea) to experience studying at an
Indonesian university. This international exchange can be a medium for improving the teaching
and research performance of academics (Enskar, Johansson, Ljusegren & Widang, 2011),
particularly at Indonesian universities.

CONCLUSIONS
The practice of EMI is beneficial for both students and lecturers. First, it improves the English
proficiency of both students and lecturers, which is in line with the purpose of AIMS program.
The program enables students and teachers to practice all English language skills so that they
become more confident in practicing the language. Second, it also develops students’ global
citizenship. Students from different participating countries come together and work together in
the same classrooms, enabling them to share different languages, cultures, and perspectives.
This shared space helps build regional partnership and create their global citizenship. Students
expect to be more global citizens who are respectful of cultural differences. Despite these
benefits, the program also pose some challenges such as limited English proficiency and less
dynamic classroom interaction, which need to be addressed more thoughtfully.

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EFFECTS OF ART THERAPY ON THE MENTAL HEALTH OF VICTIMS OF TRAFFICKING IN PERSON AT THE PHITSANULOK WELFARE PROTECTION CENTER, THAILAND

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Abstract
This research is an experiment comparing the mental health levels of female adolescent victims of human trafficking before and after art therapy intervention. 106 subjects were randomly placed into one of the 52 experimental groups or 54 control groups. The experimental groups received 11 treatment sessions over 3 days involving various art activities. The control group subjects participated in the usual activities of the Center and did not participate in the art sessions. The Thai Mental Health Indicator (TMHI-15 Version 2007) was used to assess the mental health of both groups before and after the sessions. The statistics used for data analysis were percentage, mean, standard deviation, and T-test. Both groups tested out at low average mental health in pre testing. Analysis of post testing indicated the experimental group had improved from low average, to average mental health after participating in the art therapy sessions. The increase of mean score of mental health for the experimental group after treatment was statistically significant at \( P<0.01 \). The difference in mean scores between the post-test results of the experimental and control groups was statistically significant at \( P<0.01 \).

Key words: Art Therapy, Mental Health, Victims of Trafficking in Person, Welfare Protection Center

Introduction
Human trafficking is a major international transnational crime and serious human rights violation. Originally, trafficking was simply intruders entering villages but now criminals prey on victims in much more sophisticated ways with larger rings of accomplices engaged in the trafficking business with a highly organized international participant web. New technologies are now available to deceive innocent people who want to find a better life into believing in
some scheme. Many women and children have been exploited and their human rights abused suffering physical and mental harm. The damage for this activity results in losses to individuals, communities and societies and affects human safety and security, which is impossible to measure monetarily. )Human Right Watch, 2018,

Phitsanulok Welfare Protection Center for Victims of Trafficking in Person )PWPC( is under the supervision of the Ministry of Social Development and Human Security to provide care and protection for Thai and foreign trafficking victims and people experiencing social problems. Most of the clients are impacted physically, mentally, and socially, so it is important to have a functional rehabilitation facility to help return victims to their families and social community. )Royal Thai Government, 2016,

The PWPC offers group therapy models and techniques used in healing and communication based on theoretical concepts applied to those with problems. )Frisch N C, 2011.( Art therapy is one of the group approaches the center offers involving a variety of artistic activities like painting, drawing and movement to music. The activities are used as a media tool for healing, helping to restore social, emotional and psychological reconditioning for victims and people experiencing social problems, stress, depression, anxiety as well as low self-esteem. )Edwards, D., 2014,

The use of art therapy helps the victims get in touch with their emotions and express their feelings. Activities can be designed for stress reduction, relaxing, self controlling movement, self discovery, problem encountering and problem solving, including discovering self confidence problems and help change yourself to bring happiness. These activities can also provide useful information about how victims can perform successfully and provide relevant information in the diagnostic analysis of the victims, by counselors and mental health professionals )Anusaksathein K., 2016,

**Research Objective**

Study the effects of the mental health of victims of trafficking in person before and after participating in an art therapy program.

**Research hypothesis**

Art therapy helps trafficked female youths at the PWPC have better mental health.

**Methodology**

This research is an experiment comparing levels of mental health status in adolescent
girls before and after the art therapy program at PWPC. 106 female victims of trafficking were divided randomly with 52 persons in the experimental section and 54 persons in the control section. The experimental section experienced 11 art therapy activities over 3 days. The control group did not experience the art therapy activities and rejoined the regular activities at the PWPC.

The study consisted of the following parts:


2. 3 days of art therapy activities for the experimental group.

Research tools

1. Mental Health Indicator version 2007 = TMHI-15) 15 items. The surveyed data sets are in groups. Nonparametric uses median and percentile values of 25 is 28 and percentile 75, equal to 34 as a normal rating when using the Thai happiness index) 15 items. Apichai, M. et al. 2009.

2. The experimental group participated in 11 art therapy activities over 3 days encouraging their self-expression.

Research results

The goal of this research was to study the effects of mental health of WPWC trafficking victims before and after participating in an art therapy program.

Table 1: Comparison before and after the control group and experimental group 3 day Art Therapy program.

<table>
<thead>
<tr>
<th>Group</th>
<th>Comparison</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Difference</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experimental</td>
<td>Pre - Post</td>
<td>-3.42</td>
<td>5.08</td>
<td>-4.85</td>
<td>.000</td>
</tr>
<tr>
<td>Control</td>
<td>Pre - Post</td>
<td>-0.44</td>
<td>3.10</td>
<td>-1.05</td>
<td>.297</td>
</tr>
</tbody>
</table>

Table 1 Discussion: Comparisons of pre and post treatment of the control group indicate there was no significant change) p > .01. Comparisons between pre and post scores indicate significant experimental group differences at the 01 level. These results indicate the positive effects of art therapy intervention.
Table 2: Comparison before and after treatment between experimental and control groups.

<table>
<thead>
<tr>
<th>Comparison</th>
<th>Group</th>
<th>Mean</th>
<th>S.D.</th>
<th>t</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td>Experimental – Control</td>
<td>0.54</td>
<td>1.19</td>
<td>0.46</td>
<td>.649</td>
</tr>
<tr>
<td>Posttest</td>
<td>Experimental – Control</td>
<td>3.52</td>
<td>1.11</td>
<td>3.18</td>
<td>.002</td>
</tr>
</tbody>
</table>

Table 2 Discussion: There were no differences between the groups in the pre test \( p > .01 \) but there was a difference in the post test between the groups \( p > .01 \). These results indicate the positive effects of art therapy intervention.

Conclusion

The art therapy program at the WCPC was effective because the scores changed in post testing in the experimental group and did not change in the control group. The scores of the experimental group went from low average mental health to normal indicating a significant change.

Suggestions for future study:

1. Based on the improvement in mental health of the trafficked women at Phitsanulok Welfare Protection Center for Victims of Trafficking in Person after art therapy, other specific victim groups should be studied to determine the value of art therapy intervention.
2. Because the therapy activities were social and interactive additional studies should be conducted to determine the impact of the socialization during art therapy.

References:


Up to now, the Indonesian government continues to improve support and empowerment to students with special needs, including students with disabilities. However, many of universities in Indonesia are not ready to accept disable students to study. We would like to know how disable students in Universitas Airlangga perceive the services provided. We gave questionnaires to 5 (five) disable students studying in two faculties in Universitas Airlangga. 

We found that many of the policies of the university are not readily available for the disable students. Four of the students believe that the facilities in general need improvements. Some facilities for supporting the learning process are good according two of the students, but the rests, at least half of those facilities still need improvements. All of the students have good relationship with the peers, and many of them are helpful to the disable students. We conclude that the area that we need much improvement is giving more access to the disable students regarding the university policies, and improve the facilities of the university so that it will be a friendlier physical environment for the disable students.

Keywords: disable student, university policy, university facility, learning process, supporting staff

In the Law of the Republic of Indonesia Number 8 of 2016 on persons with disabilities are stated a), that the Unitary State of the Republic of Indonesia guarantees the survival of every citizen, including persons with disabilities who have legal standing and have equal human rights as Indonesian citizens and as an integral part of the citizens and the people of Indonesia is a trust and gift of God Almighty, to live forward and develop in a fair and dignified.

Based on the purpose of the law, the younger generation of Indonesia is entitled to have education. However, some still do not get it in a small number of Indonesian citizens because they have disabilities, both physically and mentally. Children and parents who are basically
Indonesian citizens are ideally enjoying all forms of public facilities and services that have been provided, be it health, safety services and especially education.

Up to now, the Indonesian government continues to provide services and empowerment to students with special needs, including students with disabilities. This can be seen in Law No.8 of 2016 on Persons with Disabilities (PWD).

Government Regulation concerning the implementation of Disability Laws and Ministerial Regulations which includes Permenristekdikti No: 44 of 2015 on National Standards of Higher Education in Article 37 stated that:

Paragraph (1) Universities shall provide facilities and infrastructures accessible to students with special needs.

Paragraph (2) The facilities and infrastructure as referred to in paragraph (1) shall consist of: a. Braille labeling and information in the form of sound; b. ramp for wheelchair users; c. guiding block on the road or corridor in the campus environment; d. a surfaced raised map of campus for blind students; and e. toilet or bathroom for wheelchair users.

Paragraph (3) Guidance on facilities and infrastructure for students with special needs as referred to in paragraph (2) shall be determined by the Director General of Learning and Student Affairs.

In 2017, the Directorate General of Learning and Student Affairs, Ministry of Research, Technology and Higher Education has launched 2,000 (two thousand) scholarships for students with disabilities. The existence of Permenristekdikti No: 44 of 2015 on National Standards of Higher Education has made Universitas Airlangga in Surabaya seeks to develop inclusive education--humanist campus--for people with disability.

Although legislation already exists to regulate disabled students' rights, the psychological readiness of "normal" students in accepting disable students is questionable, as there are cases of harassment of students with disabilities in some universities in Indonesia, by "normal" friends". One example of the case that occurred Indonesia is the circulation of video duration of 14 seconds which displays harassment of a student with disabilities by colleagues at Gunadarma University (Hariyadi, 2017). Aggravation is seen in students who abuse disable students.

Meanwhile, disable students were seen to still have inconvenience in studying. Is it because they feel unprepared for university studies that are mostly "normal" students? Are they having trouble because of the unpreparedness of the system that should support their existence as a student?
This research was conducted at Universitas Airlangga. It has claimed to have opened up to accept the PwD students. Universitas Airlangga is considered an interesting research object in this matter, because so far research related to people with disabilities were done outside university environment. As an example, a study entitled Implementation of Inclusive Education Service Policy in Sidoarjo Regency, contains the implementation of inclusive education services, has been carried out in Sidoarjo District (Sulistyadi, 2014). Therefore, we want to do research on the issue of disability students within the internal environment of Universitas Airlangga.

Based on the description on the background above, it is necessary to formulate a research question as follows: What is the perception of students with disabilities about the system and services at the university they are attending? How do the peers support the disable students in studying in a state university?

The aim of the study is to get a good foundation in making the system at the university so that it is ready to accept PWD students, and it can be good source of information for other state universities in Indonesia.

METHODS
We gave questionnaires to 5 (five) disable students studying in in two faculties in Universitas Airlangga, in the city of Surabaya, East Java, Indonesia. In doing this research the authors interviewed the disable students, and when possible asked them to fill out a questionnaires using soft copy.

Questionnaires were distributed to disable students in Universitas Airlangga. The data obtained were qualitative and quantitative data. The results then described as a narration. Conclusion were derived after the analysis.

RESULTS AND DISCUSSION
We found that many of the policies of the Universitas Airlangga are not yet readily available for the disable students. It has started the process to accommodate the disable students well, however, the university has a lot more improvements. Four of the students believe that the facilities in general need improvements. Some facilities for supporting the learning process are good according two of the students, but the rests, at least half of those facilities still need improvements.

Our findings in this university show that the disable students’ peers help them in doing
daily chorus. As many as 60% agree and 20% said strongly agree that their peers are very helpful. Concrete forms of assistance provides by their peers including being a reading assistant, when the soft copy of files are not provided by the lecturers. In addition, once in a while the peers help them assisting in note taking.

The disable students and their peers build good interaction in learning process, especially when they are in the same study program. There are several forms, among others are inviting the disable students to a group of students, to learn and give feedback in a discussion. During the interaction process in the study group, students with disabilities agree that their peers give good responds to their opinions in group discussion.

Physical limitations of students with disabilities do not restrain them to adapt to the environment, although the university does not have yet adequate facilities. On the other hand, this situation allows the peer students to offer assistance.

Credit Point System established by Universitas Airlangga as a graduation requirement has encouraged students not only to develop academically but also to have their self-actualization. The PWD students think that they have easy access to organizational information at the study program level. They get information from their peers and the faculty members.

CONCLUSION
We conclude that the area that we need much improvement is giving more access to the disable students regarding the university policies, and improve the facilities of the university so that it will be a friendlier physical environment for the disable students. Surprisingly, the limited facilities on the other hand is a key to the better involvement of the other students in the university to be good friends, good support, and being helpful to the PWD students.

REFERENCES


LEADERSHIP EDUCATION: THE IMPORTANCE OF YOUNG LEADERS

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What is the purpose of higher education? It is to create transformational change in society, at the fundamental level. Young, global leaders are needed in the 21st century to provide fresh and creative ideas. However, many youths, especially females, do not perceive themselves as leaders (Hoyt and Kennedy, 2008). Herein lies the value of leadership education, allowing them to bring forth their leadership potential. This study is based on three theoretical models: the snapshot perspective on leadership development (Komives, Owen, Mainella, Osteen and Longerbeam, 2005), which suggests that leaders can be fostered; the gender-culture model (van Emmerik, Euwema and Wendt, 2008), which overcomes the stereotype of leaders; and the concept of Cultural Intelligence (Earley & Mosakowski, 2004), which describes an individual’s ability to adapt to different cultures. This presentation will be conducted in the form of a case study where the embedded unit of analysis are perspectives from four individual students. Respective students’ transformation in ideas on leadership before, during and after the courses would be offered. By having a thorough understanding of the importance of leadership education, young leaders, both female and male, are empowered to become change makers in the 21st century.

Keywords: Education, Global Leader, Youth Development, Leadership Identity Development, Leadership Education

Introduction

Global issues in the 21st century are more complex than ever before. This research argues that teaching leadership in higher education is key in fostering young, global leaders to solve these issues with fresh and creative ideas. King (1997) stated that “helping students develop the integrity and strength of character that prepare them for leadership may be one of the most challenging and important goals of higher education” (p. 87). Due to its pivotal role in the development of leadership capacity in youths, tertiary education is increasingly seen as a source for potential change (Astin & Astin, 2000). As discovered in the research, due to the
lack of understanding of leadership, young individuals are hindered from believing in their leadership potential. The stereotypical image of a leader is male, of a certain age and with high status. Hence, young individuals do not perceive themselves as leaders. In particular, young females face greater obstacles in their leadership development (Chamorro-Premuzic, 2013; Kolb, 1999). Thus, this case study examines the importance of leadership education and its capacity to foster young and more diverse leaders.

**Literature Review**

According to a study by Komives, Owen, Mainella, Osteen, and Longerbeam (2005), there are four influences affecting leadership identity development, including adult influences, peer influences, meaningful involvement and self-reflection. Adult influences are one of the most important factors for youth leadership identity development. When adults validate the leadership potential of youth, they are empowered to believe in their own leadership abilities.

Van Emmerik, Euwema and Wendt (2008) examined the influence culture and gender have on leadership behavior. Their study asserted that leadership behaviors reflect the societal expectations which reinforce the gender role stereotypes in a culture, which means that leadership behavior is influenced by both gender and culture. Van Emmerik et al. (2008) further emphasized that men and women do not differ much in their behavior as leaders, which demonstrates that women have leadership potential as well.

The concept of Cultural Intelligence (Earley & Mosakowski, 2004) is the ability to decipher the actions unfamiliar to one’s culture, which is crucial for leaders who deal with the complexity of global issues. Cultural Intelligence stems from the concept of Emotional Intelligence (EQ). Goleman (1996) defined EQ as a group of five skills including self-awareness, self-regulation, motivation, empathy, and social skills. In particular, self-awareness is emphasized as leaders need to have a thorough understanding of their emotions, strengths, weaknesses, and values. It can be developed through self-reflection in order to gain confidence in one’s self-identity.

**Research Method and Findings**

The embedded unit of analysis in this exploratory case study are perspectives from four individual students at a private university in Tokyo, Japan. Through the educational leadership experience, leadership perspectives were gradually cultivated and developed in students. The subjects answered four questions in order to analyze the transformation of their understanding.
of leadership before, during and after the courses.

The findings of the case study can be categorized into three points. First, leadership potential is inherent in every single individual. However, the key to drawing forth leadership potential of youths lies in adults’ attitudes toward them. According to the study by Komives et al. (2005), adults have strong influence on youths’ leadership identity development. The research revealed that subjects were empowered to believe in their inherent leadership potential through the validation of their professor. Through this process, the stereotypical image of leaders who are believed to be of a certain age, have status and power, can be overcome. When subjects are empowered to believe that they have something to offer, each individual can tap on their strengths and develop their leadership identity.

This relates to the next finding, which emphasizes the importance of leadership education because of its ability to empower females to take on leadership roles. Female leaders can overcome the limitations and prejudice based on gender and culture (van Emmerik et al., 2008) by fostering and believing in their own leadership potential. Evidence for this can be derived from the subjects’ graduation theses, in which two female students respectively discussed leadership development in young females and gender equality in Japan. Both subjects commented that through the classes, they realized that women face greater obstacles to become leaders but are empowered to learn that they can be leaders too. This indicates the crucial role leadership education plays in bringing forth the leadership potential which is inherent in each individual, regardless of age, culture, gender or position. Thus, leadership education allows a more mixed representation of leaders with different perspectives, which is needed when being confronted with the complexity of global issues.

Lastly, leadership can appear in many different forms. Prior to the leadership courses, the respondents shared the understanding that leadership is limited to one’s position or status. However, through the exercise of frequent reflection, which stems from the concept of Cultural (Earley & Mosakowski, 2004) and Emotional Intelligence (Goleman, 1996), the subjects were able to observe examples of leadership in their daily life and thus transformed their understanding of leadership. In the leadership courses, the professor constantly challenged the subjects to observe daily life, through the lens of leadership. These reflections led one of the respondents to perceive his father as a leader, whose simple yet selfless gesture of waking up early every morning to cook for him demonstrates an intangible aspect of leadership. This newly gained perspective reflects that leadership is part of daily life.
Conclusion

In conclusion, leadership education is significant because it enables young individuals to transform their understanding of leadership. This research provided three main insights into youth’s leadership identity development. First, adults play a crucial role on youths’ leadership identity development due to their ability to empower students to recognize their inherent potential. Second, leadership education has the capacity to help females overcome the barriers of gender stereotypes. Lastly, frequent reflection allows students to realize that leadership occurs in many different forms in everyday life. Thus, leadership education is of utmost importance as it empowers youth to take the lead in creating social change in the 21st century.

References


SASAK ETHNOMATHEMATICS: THE CONCEPT OF GEOMETRY IN THE LIFE OF BANYUMULEK VILLAGES, MATHEMATICS AND PEDAGOGICAL REVIEWS

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Abstract. This study examines the elements of culture especially the manufacture of pottery at Banyumulek village, West Lombok, Indonesia which can be used to review the mindset of the Sasak tribe from the point of view how the pottery artisans teach the making of pottery to the future crafters. This is a qualitative research with ethnography method. The results showed that there are 25 types of pottery that has a symmetrical geometric shape. Pedagogically, the pottery crafters at this village teach how to make pottery to elementary school children. The techniques used to teach the making of pottery with curved side is by rotary techniques, plates, massage, and gyre by way of learning while doing. Mathematically, the symmetrical Pottery model can be obtained from rotating a function \( f \) against the \( x \)-axis. The function \( f \) is obtained from a three-point cubic interpolation with its midpoint as the peak point. To develop to another pottery model, it can be used transformation function.

Keywords: Ethnomathematics, cubic interpolation

1. Introduction

Ethnomathematics is the study of mathematical ideas from traditional societies (Ascher, 1991). Ethnomathematics is a mathematical practice used by cultural groups, refers to mathematical concepts embedded in cultural practices and recognizes that all cultures and all peoples develop unique methods for understanding and changing the reality of cultural communities. The mathematical perspective that validates and determines the whole experience of society for mathematics shows that mathematical thinking is in accordance with the life of society. Aligned with this view, D’Ambrosio (2006) considers that in the ethnomathematical view, mathematical thinking is developed on different cultures depending on the issues.

In particular, Sasak is major and native ethnic living in Lombok Island, West Nusa
Tenggara of Indonesia. In Sasak, there are some unique arts and crafts. People make ketak for household object that is used in daily life. Ketak is made from a kind of plant that grows on water. This craft is more made by people in Loyok, Sikur, East Lombok. While pottery is centered in some region in Lombok, they are Penakak, Penujak, and Banyumulek, and the famoust is Banyumulek.

Though the handicrafts workers that is in this village do not understand geometry formally through the level of education. However, indirectly they have understood in a different way and can even applied it to produce merchandise that has high selling values. Based on the explanation, it is need to study the ethnomathematics existed in Banyumulek, especially about geometry concept in their life of local community.

2. Methodology

This is qualitative research with ethnographic method. Ethnography is used to describe, explain, and analyze culture element of a society or nations.

3. Results and Explanation

Based on the analysis of the domain and taxonomy, 31 types of pottery are found in Banyumulek village, West Lombok, in which 25 types of them included in geometrical shape. Potteries had a main shape of square, rectangular, equilateral triangles, ellips, circle, polygon, tube, beams, cube, pyramid, cone, ball, semisphere, truncated cone, and truncated pyramid. However, there are 6 categories of pottery that included in non-geometric shape. Those potteries had a major in the form of animal, a genus of plants, as natural element part of the body, and a tool. In other words, that variety of ornamental in the form of pottery become a certain symbol. So, it does not contain any geometrical shapes.

In relation to how ethnomathematics can be integrated into learning at school, educators and researchers conclude that mathematical knowledge is also obtained outside structured systems of mathematical learning such as school (Bandeira & Lucena, 2004; Rosa & Orey, 2010). In this perspective, mathematical ideas was applied in a unique socio-cultural context refer to the use of mathematical concepts and procedures obtained outside the school as well as the acquisition of other mathematical skills other than the school. Learning conditions that allow for contextual creation of meanings based on experience as a member of a cultural society are one of the basic principles of constructivism theory (Zhang and Zhang, 2010).

Pedagogically, artisan pottery has a concept of how to make a circle and determine its
center point and how to create square and triangle samasisi. Pottery artisans also teach their knowledge about the geometry of the next generation through the activity of making pottery to elementary school children. Techniques used to make pottery that has curved side with rotary techniques, plates, massage, and gyre with learning approach while doing. Mathematically, a symmetrical model of pottery can be obtained from rotating a function \( f \) against the \( x \)-axis. The function \( f \) is obtained from a three-point cubic interpolation with its midpoint as the peak point. To develop to another pottery model, it can be used transformation function. See figure 1 and 2 representing handicraft.

Figure 1 shows the type of Banyumulek handicrafts. Every handicrafts on the Figure can be formed by the graph of a function \( f \) (for example, as Figure 2) which is rotated toward \( x \)-axis. Let given five points \((x_1, y_1), (x_2, y_2), (x_3, y_3), (x_4, y_4), \) and \((x_5, y_5)\) with \(x_1 \leq x_2 \leq x_3 \leq x_4 \leq x_5\). By using cubic interpolation of three points with the midpoint as its extreme point (Burden et al, 1997), The function can be written by the following formula:

\[
\begin{align*}
\text{with } & \begin{bmatrix}
x_1^3 & x_1^2 & x_1 & 1 \\
x_2^3 & x_2^2 & x_2 & 1 \\
x_3^3 & x_3^2 & x_3 & 1 \\
3x_2^2 & 2x_2 & 1 & 0
\end{bmatrix} \begin{bmatrix} a \\ b \\ c \\ d \end{bmatrix} = \begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ 0 \end{bmatrix} \\
\text{and } & \begin{bmatrix}
x_3^3 & x_3^2 & x_3 & 1 \\
x_4^3 & x_4^2 & x_4 & 1 \\
x_5^3 & x_5^2 & x_5 & 1 \\
3x_4^2 & 2x_4 & 1 & 0
\end{bmatrix} \begin{bmatrix} p \\ q \\ r \\ s \end{bmatrix} = \begin{bmatrix} y_3 \\ y_4 \\ y_5 \\ 0 \end{bmatrix}.
\end{align*}
\]

Now, let \( A = \begin{bmatrix}
x_1^3 & x_1^2 & x_1 & 1 \\
x_2^3 & x_2^2 & x_2 & 1 \\
x_3^3 & x_3^2 & x_3 & 1 \\
3x_2^2 & 2x_2 & 1 & 0
\end{bmatrix} \) then by using Cramer’s Rule (Anton, 2010) we get \( a = \frac{\det A_1}{\det A} \), \( b = \frac{\det A_2}{\det A} \), \( c = \frac{\det A_3}{\det A} \), \( d = \frac{\det A_4}{\det A} \) where \( A_j \) is the matrix obtained by replacing the entries in the \( j \)th column of \( A \) by the entries in the matrix \( \begin{bmatrix} y_1 \\ y_2 \\ y_3 \\ 0 \end{bmatrix} \). On the other hand, if we...
let $B = \begin{bmatrix} x_3 & x_2 & x_3 & 1 \\ x_4 & x_2 & x_4 & 1 \\ x_5 & x_3 & x_5 & 1 \\ 3x_4 & 2x_4 & 1 & 0 \end{bmatrix}$ then by applying Cramer’s Rule, we have $p = \frac{\det B_1}{\det B}, q = \frac{\det B_2}{\det B}, r = \frac{\det B_3}{\det B}, s = \frac{\det B_4}{\det B}$

where $B_j$ is the matrix obtained by replacing the entries in the $j$th column of $B$ by the entries in the matrix $\begin{bmatrix} y_3 \\ y_4 \\ y_5 \\ 0 \end{bmatrix}$.

By moving the provided points in two dimensional direction which satisfy $x_1 \leq x_2 \leq x_3 \leq x_4 \leq x_5$, then we would obtain various form of different graph or other graph. In the following graphs (Figure 3 – 6) are the examples of the function resulted by moving the points

![Graphs](image)

Given function $f : [0, 5] \rightarrow \mathbb{R}$ with $f(x) = \begin{cases} -\frac{1}{4}(x - 2)^3 - \frac{3}{4}(x - 2)^2 + 2, & \text{if } x \in [0, 3] \\ \frac{1}{4}x^2 - 2x + \frac{19}{4}, & \text{if } x \in [3, 5] \end{cases}$.

The graph of the function is shown as Figure 7.

By rotating the graph toward $x$-axis, we would obtain the following surface as presented in Figure 8. We are also able to elicit the other graph by conducting function transformation.

4. Conclusion

Mathematical concepts emerge as a result of the culture of Sasak ethnic indicate that there has been a relationship between mathematics and their culture in which it always forms mathematics and so mathematics also shapes the culture so that both of them interact and form ethnomathematics. Pedagogically, this cultural eloquence effort is implemented in primary
school learning, while mathematically, the representation of handicraft found in the Sasak ethnic also indicate a mathematical concept, which is cubic interpolation of three points with its midpoint as the culminaton.

Five possibilities of how ethnomathematics is used in the mathematics curriculum and has a relatively similar role to mathematics formally, namely: (1) substitution for school mathematics; (2) school mathematical supply; (3) a stepping stone to school mathematics (4) motivation for school mathematics, or (5) as a local content of school mathematics and means of developing character.

5. References
PROMOTING GLOBAL CITIZENSHIP CHARACTERISTICS FOR THAI STUDENTS

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Abstract

This research not only examined policies and practices regarding global citizenship (GC) but also analyzed GC characteristics of the Thai students in 4 dimensions; namely, literacy, knowledge, skills, values and attitudes. Mix-methods approach was employed. Eighty educators, administrators and instructors were purposively selected as key informants. Findings indicated that Thailand has emphasized cognitive learning rather than inculcating skills. This was confirmed by the results from Priority Needs Index (PNI) questionnaire which showed that the skills dimension ranked highest (PNI = 8.529). In the skills dimension, “responsible mind”, “multi-lingual skill”, “information, media & technology competency” (PNI = 10.177, 9.747, 9.686) should be promoted. In the literacy dimension, we needed to promote “legal literacy”, “political literacy”, “environment and ecological literacy” (PNI = 9.897, 9.370, 9.350). As for the values and attitudes dimension, it was found that we needed to inculcate “concern for environment and sustainable development”, “capability of multiple belongings”, “respecting diversities” (PNI = 10.402, 8.957, 8.904). Finally, knowledge concerning “sustainable development”, “law and legal process”, “equality and social justice” should be promoted (PNI = 10.012, 9.035, 8.751).

Keywords: Global Citizenship, Global Citizenship Characteristics, Thai students.

1 This paper was part of the research project, “Guidelines for Promoting Global Citizenship: International Experiences”, studied by Professor Chanita Rukspollmuang, Ph.D. (Head of the Project), Assistant Professor Walai Isarangkura Na Ayudhaya, Ph.D., Assistant Professor Fuangarun Preededilok, Ph.D., Assistant Professor Pongsin Viseshsiri, Ph.D., Associate Professor Alexander W. Wiseman, Ph.D., and Associate Professor Archanya Ratana-ubol, Ph.D. The project was funded by Office of the Education Council, Ministry of Education.
Background of the Study

The impact of globalization has broadened and extended the concept of civic responsibility beyond national borders. After examining the meaning and definition of the concept such as GENE, 2010; Morais and Ogden, 2011; UNESCO, 2014 and Gaudelli, 2016, it could be concluded that global citizenship education (GCED) aims to enable learners to develop not only knowledge, skills, values and attitudes but also literacy needed to build a more just, peaceful, tolerant, inclusive, secure, and sustainable world. In Thailand, the significance of becoming a commit and responsible Thai and global citizenship has been emphasized in the National Education Act, National Education Development Plan, National Education Standards, and Basic Education Core Curriculum. However, there were still misconceptions about GC and concerns that attempts and effectiveness of enhancing global citizenship to the students were not cogent.

Objectives of the Research Project

The research project aimed to (1) investigate policies and practices regarding global citizenship (GC) in selected countries; (2) analyzed GC characteristics that should be promoted for the Thai students in 4 dimensions; namely, literacy, knowledge, skills, values and attitudes; and (3) propose educational guidelines to promote GC in Thailand. This paper will concentrate on findings of the second objective.

Research Methodology

Mix-methods approach was employed using documentary research, expert interview, questionnaire, and focus group discussion. Content analysis was used to analyze qualitative data from document, interview, and discussion. The questionnaire using Priority Needs Index (PNI) technique (Lane, Crofton, & Hall, 1983) was collected from 80 educators, university professors, school administrators, and instructors working in both Bangkok and other provinces. The formula for calculation was PNI = (I-D) x I (when I = Important or expected GC, D = Degree of success or existing state in promoting GC).

Findings of the Study

Examinations of policies and practices showed that GC policies and practices were implemented in both basic and higher education levels. The whole school approach is practiced in Singapore and the Oxfam’s curriculum of England to develop concerned GC and
responsible GC respectively. Hong Kong envisions “Belonging to Hong Kong and China and willing to contribute to the society, nation and the world”. The White Paper of Australia reflects the values of “freedom, democracy, the rule of law, equality and mutual respect”. The United States has no national standard for GCED but its importance is recognized as indicated in the 2012 Blue Ribbon Panel Report of the American Council on Education, “Today, colleges and universities are asked to prepare tomorrow’s citizens not for a single career but for a life of unpredictable velocity and volatility. Simultaneously, they are asked to produce graduates who are capable of communication across borders and citizens who are invested with the capacity to navigate a transparent, permeable world” (ACE, 2012).

As for Thailand, desirable characteristics of the Thai people as both citizens of the country and members of the world community have been identified in the 1999 National Education Act and 2004 National Education Standards (ONEC, 2005). Needed GC characteristics have been promoted since basic education level in the national core curriculum. Courses and activities aiming to promote global citizenship attributes have been offered in higher education institutions for quite some time. The question remains how well is the outcomes? Findings from the PNI questionnaire were as follows:

1. Thailand emphasized cognitive learning rather than inculcating skills. Results from the questionnaire showed that the Thai needed to put most effort in promoting the GC skills to the students since it was ranked the highest (PNI = 8.529). This was followed by the literacy dimension, the values and attitudes dimension, and the knowledge dimension (PNI = 7.906, 7.634, 6.742).

2. In the skills dimension of GC, the Thai were doing well in developing “career readiness and competence”, “flexibility and adaptability to changes and differences”, “social and intercultural collaboration”, “leadership skill”, and “communication skill” (PNI = 6.506, 6.636, 6.835, 7.785, 7.796). The characteristics that should be promoted more were “responsible mind”, “multi-lingual skill”, “information, media & technology competency”, “critical thinking” and “conflict management” (PNI = 10.177, 9.747, 9.686, 9.669, 9.485).

3. In the literacy dimension, it showed that the Thai had enhanced “aesthetic (arts) literacy”, “information literacy”, “health literacy”, “cultural and multicultural literacy”, and “moral and ethical literacy” (PNI =6.143, 6.580, 6.689, 6.746, 7.145) but needed to put more effort in promoting “legal literacy”, “political literacy”, “environment and ecological literacy”, “economic and financial literacy”, and “civic literacy” (PNI = 9.897, 9.370, 9.350, 8.795, 8.460).
4. As for the values and attitudes dimension, it was found that the Thai students needed to be engaged more on “concern for environment and sustainable development”, “capability of multiple belongings”, “respecting diversities”, “belief in social justice and equality”, and “curiosity for knowledge and various information” (PNI = 10.402, 8.957, 8.904, 8.387, 8.064). “Empathy”, “respect others from different culture”, “positive thinking/attitudes”, “self-identification with the whole of humanity” and belief in “possibility to change the world” were well promoted (PNI = 4.664, 5.273, 5.997, 7.200, 7.695).

5. Thai students needed to know more about “sustainable development”, “law and legal process”, “equality and social justice”, “peace and conflict resolution” and “rights, liberty and responsibility” (PNI = 10.012, 9.035, 8.751, 8.265, 8.140). Knowledge about “international order”, “Thainess and positioning in regional/global context”, “multi-culture society”, “globalization and interdependency”, and “global trends and issues” were well provided. (PNI = 3.315, 3.966, 4.058, 5.345, 5.381).

Conclusions and Recommendations for Promoting GC to Thai Students

Empowering the young generation to assume active roles to face and resolve global challenges and to become proactive contributors to a more just and sustainable world is essential. How have the Thai promoted GC characteristics to the students? This study found that the idea of becoming a GC was recognized at national policy level but there were some problems in its implementations. It was found that the Thai had prepared learners to be a GC who recognized our world as an increasingly complex web of connections and interdependencies. They had learnt about international order, global trends and issues, globalization and interdependency which should help ensure that their choices and actions might have repercussions for people and communities locally, nationally or internationally. However, promoting GC should not mainly concentrate on “knowing” about global issues and the knowledge dimension. Yet, the research findings revealed that promotion of the skills dimension of GC was most needed. Educational institutions thus must do more work on inculcating some core competencies relating to social engagement and social responsibility or the “living together” skills. Promoting responsible mind, conflict management skill; belief in social justice and equality; legal literacy; as well as rights, liberty and responsibility to community, locality, national, and global should be prioritized. More concern should also be given to environment and ecological literacy, as well as values and attitudes and knowledge about sustainable development. A clearer understanding about the concept and expected
learning outcomes of GC and GCED is needed. Interestingly, since we believe that a “global citizen” must not only aware of and understand the wider world but also appreciate one’s own root and cultural heritage, it was found that knowledge about Thainess and our positioning in regional/global context was well transmitted. It was confirmed that education institutions must play a leading role in enabling young people with competencies which allow them to actively engaged GC. At HEIs, needed GC attributes should be embedded at least in general education courses. Professional development for instructors and administrators through systematic coaching and mentoring should be available. Finally, education for GC should be encouraged for learners of all ages – children, young people and adults alike.

References


8) UNESCO. (2014). *Preparing Learners for the Challenges of the Twenty-first Century.*
THE DEVELOPMENT OF A SOFT SKILL QUESTIONNAIRE FOR COMPULSORY UNIVERSITY COURSES BASED ON BLENDED LEARNING

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ABSTRACT

This study focuses on enrichment of soft skills elements embedded in a compulsory university course, namely, the Ethnic Relations through blended learning. A questionnaire was developed to measure the embedded soft skills elements i.e. teamwork, communication skills and problem-solving & critical thinking. A pilot study was done to test the reliability and validity of the instrument amongst first year students enrolled in the Ethnic Relations course. It also aims to measure the early stage of soft skills embedment amongst students. The questionnaire contains 5 parts, part A consist of demography information, part B on communication skills, part C on critical thinking & problem solving, part D team work skills and Part E – an open ended question on the respondents experiences and reflection. A total of 232 completed questionnaire were analysed using Statistical Package for Social Science (SPSS) version 22 and structure equation modelling (SEM). The findings of the study showed that the validity and reliability of the questionnaire was suitable in measuring the level of soft skills amongst the students.

Keywords: soft skill, questionnaire, validity, reliability, structure equation modelling

Introduction

The main role of universities is to become an organization that are able to supply human capital for the countries’ development especially in situation where there is transition in the industry from economic based to knowledge based (Altbach, 1991; Chew & Lee,1995). In order to achieve this, universities should have good and relevant academic programmes that can facilitate the students’ entry into the working world that demands a high level of soft skills. Salih (2008) reasoned that incorporating soft skills development into university curricula would contribute to the formation of a holistic human capital who can think of a future in which
environment, societal and economic considerations are balanced in the pursuit of development.

In Malaysia, the situation with regards to graduate unemployment has raised concerns among policy makers and the general public. The Malaysian government has ascribed the increasing number of jobless graduates to a low “product quality” by the country’s institutions of higher learning. They have asserted that the new graduates lack “expertise and skills, especially soft skills, required by employers and competitive job markets” (Ministry of Higher Education Malaysia, 2006 pp. 1–2). In an attempt to remedy the situation, in 2006, the Ministry of Higher Education, Malaysia (MOHE), recommended that all public institutions of higher learning in the country incorporate soft skills training into their curricula. MOHE had proposed a set of measures to ensure a more balanced approach to the infusion and acquisition of soft skills at the tertiary level, including the development of better instructional and assessment strategies, a wider integration of leadership skill in the formal curriculum and the addition of a training component solely based on coursework (Devadason et al., 2010).

University courses or general studies are compulsory courses that each undergraduate has to take in the universities. The main objective of the government to introduce all these university courses such as Ethnic Relations, Islamic and Asian Civilization (TITAS), and Basic Entrepreneurship Culture is to instil the much needed soft skills such as positive values, leadership, team work and communication skills among students (Jabatan Pembangunan Sumber Manusia, 2009). This study looks at one of the university course i.e. Ethnic Relations which aims to instil awareness while providing experiences in managing diversity, practising positive values, instil national identity and accepting socio-cultural diversity among multi-ethnic Malaysians towards achieving social harmony besides the above mentioned soft skills (Nazri Muslim & Mansor Mohd, 2011). The teaching and learning of this course is carried out in the form of blended learning i.e. class lectures, individual assignments, group activities and online learning. At the end of the course, students are expected to be able to practice positive values, strengthened national identity, and accept ethnic socio-cultural diversity besides developing the intended soft skills (Nazri Muslim & Mansor Mohd, 2011).

Blended learning is also known as “new normal” in higher education learning (Norberg, Dziuban & Moskal, 2011). Currently, in Malaysia, the use of the term blended learning involves combining internet and digital media with established classroom teachings that require the
Blended learning is used as the teaching and learning approach in the Ethnic Relations course because it helps to generate the best and most suitable learning experience for our students in line with the expected learning outcome of the course. For the first few weeks of the semester, classes are conducted in the traditional manner; with the presence of the lecturers. Such face to face interaction between the lecturers and the students at the initial phase of learning Ethnic Relations is very crucial. The lecturers will explain the outline, the significance and expected learning outcome of the course. The lecturers will also introduce the activities and assignments required from the students in completing this course throughout the semester. Basically every student is required to work on three assignments besides participating in the class activities. One of the three assignment required is an individual assignment where students are required to go online to complete some activities related to ethnic relations. Some of these online activities include, watching ethnic relations you tube and giving the personal comments related to the story, answering questions related to the online text given, writing up their personal experience and uploading their photos and stories online to be shared with other friends. All of these give value added experiences to the students in the learning of the course.

The other two assignments required from the students are based on group work. Students are required to do a critical analysis of a journal document given to each group. The critical analysis will be based on the concepts and ideas the students have learnt in their class lectures and are to be supported by evidences found through their online searches on other related documents such as newspapers, journal articles, books and etc. As a group, the students are also required to produce a video that highlights the beauty and strength of the diverse cultures and religion in the country. Students will discuss among the group members and the lecturer during face to face class lectures as well as online interaction after class hours on the
development and production of this video assignment. Students will make use of the various technology and digital media in the production of their own group video. Hence, the teaching and learning of the Ethnic Relations course is made very interesting and fruitful; filled with different learning experiences with the use of the blended learning approach. It does not depend on the traditional rote learning; learning only from the lecturers but such blended learning approach has flipped the classroom to enable the students themselves to be able to learn independently and to empower them to produce the learning outcome they wish to experience. Through this teaching and learning experiences, the students were also able to develop the intended soft skills such as communication skills, teamwork and critical thinking skills.

Objective of the Study
The top ten soft skills required by Malaysian employers are integrity, willingness to learn, communication skills, initiative, achievement and orientation, teamwork skills, interpersonal skills, flexibility, high self-esteem and critical thinking skills (Yasmin Mohd Adnan et.al, 2012). Kashefi, Ismail & Yusof (2012) study showed that industries are not satisfied with the quality of graduates, especially in engineering graduates who lack technically incompetent, communication and critical thinking skills and team work. Among the most significant weaknesses of the local graduates is the weakness in the mastery of communication skills, one of the skills required by employers (Briggs & Hodgsm (in Ahmad Esa et al., 2005); Zaiton Mohd Hassan, 2003).

This study intends to see if the 3 soft skills elements that are embedded in the ethnic relations course does contribute to the holistic development of the student. To enable one to measure the soft skills, an instrument needs to be developed to measure the communication, critical thinking & problem solving and team work skills. Communication skills is defined as the ability to communicate the ideas clearly, effectively and confidently with others from different culture. Critical thinking and problem solving is defined as having the ability to analyze problems and make justified evaluation within a multicultural environment. Teamwork is defined as the ability to build good relations, interact with others from different culture and work effectively with the team in reaching the same objective. The findings of the study will provide a psychometrically sound and operationally valid measure of the 3 soft skills.
Methodology

Development of the questionnaire

The questionnaire was first designed by two of the authors who have more than 12 years of experience teaching the ethnic relations course. This was to ensure that the question asked were directly relevant to the Ethnic Relations course and was adaptable within the context of the Malaysian academic culture. The first draft of the questionnaire was then distributed to two focus groups of 12 students consisting of 1st year students both male and female. Each focus group session was moderated by two authors and two research assistant. Based on the comments of the students, some of the items were modified for greater clarity and depth. The amended draft was checked by another three independent lecturers teaching the Ethnic Relations course for clarity and that the questions were relevant in measuring the intended construct. It also aimed to measure early stage of soft skills embedment amongst students.

Pilot test

The pilot test was carried using a sample of first year undergraduates enrolled in the ethnic relations course in a public university. A total of 350 questionnaire forms were distributed to several teaching groups from the Ethnic Relations course. The questionnaire contains 5 parts, part A consist of demography information, part B on communication skills (13 items) (Appendix A), part C on critical thinking and problem solving (12 items) (Appendix B), part D team work skills (13 items) (Appendix C) and Part E – an open ended question on the respondents experiences and reflection, the expected time of completion was 15 minutes. The responses were measured using a five point Likert-type scale with anchors on “strongly disagree to strongly agree”. The students were asked of their responses by agree or disagreeing with the statements given.

From the total, only 232 forms were accepted and analysed for the pilot survey. As the highest number item in a section was 13, using a ratio of cases to variables of 10:1 (Netemeyer, Bearden, & Sharma, 2003), a sampling of 232 was considered sufficient to test the validity and reliability of the instrument. Data analysis was first carried out using Statistical Package for Social Science (SPSS) version 22. The reliability of the questionnaire was measured using the Cronbach’s alpha coefficient. Principle component analysis was used to determine the validity of the construct, after which the three constructs were also re validated using confirmatory factor analysis (CFA).
Findings

The reliability of each dimensions of the questionnaire was measured using internal consistency via Cronbach’s alpha coefficient. The results indicated that the Cronbach alpha for intention to measure was well above .70 as recommended by Nunnally (1978) (Table 1). The result determined that all items within the scales were stable enough to assess the intended construct.

Table 1: The Cronbach’s Alpha of the 3 construct

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach’s Alpha</th>
<th>Cronbach's Alpha Based on Standardized Items</th>
<th>No of items</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication Skills</td>
<td>.697</td>
<td>.736</td>
<td>13</td>
<td>Good</td>
</tr>
<tr>
<td>Critical Thinking and Problem Solving</td>
<td>.764</td>
<td>.845</td>
<td>12</td>
<td>Good</td>
</tr>
<tr>
<td>Teamwork</td>
<td>.791</td>
<td>.819</td>
<td>13</td>
<td>Good</td>
</tr>
</tbody>
</table>

The validity measurement used was construct validity i.e. convergent and discriminant validity. Principle component analysis was utilized to determine the construct validity using promax rotation.

An examination of the correlation matrix revealed that for Communication Skills Item 4, 5, 6, 8, 10 and 11, had many coefficients below .3 indicating or suggesting a really weak relationship between the variables (Tabachnick & Fidell, 2007). Upon deleting these items communication skills had only 7 items, following which, the suitability of the factor analysis was proven as the value of Kaiser-Meyer-Olkin (KMO) was .803 which was good (Hutcheson & Sofroniou, 1999, p 224-225) and the Bartlett test of sphericity was highly significant (p < .001; df=21; Approx. Chi-Square=433.593) (Table 2). The determinant value for communication skills was .150, which indicates absences of multicollinearity (Tabachnick & Fidell, 2001). Going over the anti-image correlation matrix divulged that the measure of sampling adequacy for all of the individual items was between .760 and .857, supporting their retention in the analysis (Hair, Black, Babin, Anderson & Tatham, 2006). The communalities for all of the items were greater than .40 (Costello & Osborne, 2005) except for Item No.7 (.350) however, since the items was not lower than 0.2 thus it was not dropped (Child, 2006) (Table 2). Furthermore, according to Child (2006) factor with low loadings can be considered for removal after examining the rotated factor matrix.
The analysis divulged the presence of a single factor with eigenvalues exceeding 1; the first factor accounted has a variance of 3.226 explaining 46.086 % of the total variance (Table 2). The interpretation of the one factor was consistent with the definition of communication skills, i.e. the ability to communicate the ideas clearly, effectively and confidently with others from different culture. The factor loadings in the rotated factor matrix for all the individual items were more than .6, thus proofing convergent validity (Table 2). Furthermore, all items had loaded significantly on to one factor, hence proofing discriminant validity.

Table 2: One factor solution for communication skills

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Aktiviti ini menjadikan saya lebih bertanggungjawab untuk mewujudkan konumikasi yang lebih baik dengan etnik lain.</td>
<td>.715</td>
<td>.511</td>
</tr>
<tr>
<td>2 Saya dapat menyampaikan mesej kepentingan hubungan etnik yang baik melalui video.</td>
<td>.688</td>
<td>.473</td>
</tr>
<tr>
<td>3 Saya gembira dapat melakukan perbincangan bersama ahli kumpulan untuk menghasilkan video.</td>
<td>.683</td>
<td>.467</td>
</tr>
<tr>
<td>7 Saya selesa bertanya apabila arahan yang diberikan oleh ketua kurang jelas.</td>
<td>.586</td>
<td>.350</td>
</tr>
<tr>
<td>12 Saya dapat berkomunikasi dengan rakan yang mempunyai budaya yang berlainan.</td>
<td>.648</td>
<td>.420</td>
</tr>
<tr>
<td>13 Saya merasa gembira mendengar pembentangan yang dibuat oleh rakan/kumpulan lain.</td>
<td>.686</td>
<td>.471</td>
</tr>
<tr>
<td>7 Aktiviti yang dilakukan mengajar saya untuk berkomunikasi dengan lebih baik bersama rakan daripada pelbagai kaum.</td>
<td>.735</td>
<td>.540</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>3.226</td>
<td></td>
</tr>
<tr>
<td>% Variance</td>
<td>46.086</td>
<td></td>
</tr>
<tr>
<td>KMO and</td>
<td>.803</td>
<td></td>
</tr>
</tbody>
</table>
An examination of the correlation matrix revealed that for critical thinking & problem solving Items 7 and 9 had many coefficients below .3 indicating or suggesting a really weak relationship between the variables (Tabachnick & Fidell, 2007). Upon deleting this items critical thinking & problem solving skills had 10 items, the value of Kaiser-Meyer-Olkin (KMO) was .898 which was superb (Hutcheson & Sofroniou, 1999, p 224-225) and the Bartlett test of sphericity was highly significant (p < .001; df=45; Approx. Chi-Square=1068.211) (Table 3). The determinant value was .009, which indicates absences of multicollinearity (Tabachnick & Fidell, 2001). Going over the anti-image correlation matrix divulged that the measure of sampling adequacy for all of the individual items was between .854 and .948, supporting their retention in the analysis (Hair, Black, Babin, Anderson & Tatham, 2006). The communalities for all of the items were greater than .40 (Costello & Osborne, 2005) except for Item No.11 (.375) and Item No. 3 (.370), however since the items was not lower than 0.2 thus it was not dropped (Child, 2006) (Table 3).

The analysis divulged the presence of a single factor with eigenvalues exceeding 1; the first factor accounted has a variance of 5.160 explaining 51.596 % of the total variance (Table 3). The interpretation of the one factor was consistent with the definition of critical thinking and problem solving is defined as having the ability to analyze problems and make justified evaluation within a multicultural environment. The factor loadings in the rotated factor matrix for all the individual items were more than .6, thus proofing convergent validity (Table 3). Furthermore, all items had loaded significantly on to one factor, hence proofing discriminant validity.

**Table 3: One factor solution for critical thinking & problem solving**

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Saya dapat membuat kritikan yang membina tentang isu-isu semasa berkaitan hubungan etnik.</td>
<td>.652</td>
<td>.425</td>
</tr>
<tr>
<td>2 Saya dapat memikirkan secara kritikal setiap</td>
<td>.746</td>
<td>.556</td>
</tr>
</tbody>
</table>
An examination of the correlation matrix revealed that for teamwork, Items 1, 2, 5, 10 & 13 had many coefficients below .3 indicating or suggesting a really weak relationship between the variables (Tabachnick & Fidell, 2007). Upon deleting this items teamwork skills had 8 items, the value of Kaiser-Meyer-Olkin (KMO) was .908 which was superb (Hutcheson & Sofroniou,
(1999, p 224-225) and the Bartlett test of sphericity was highly significant (p < .001; df=28; Approx. Chi-Square=993.412) (Table 4). The determinant value was .013, which indicates absences of multicollinearity (Tabachnick & Fidell, 2001). Going over the anti-image correlation matrix divulged that the measure of sampling adequacy for all of the individual items was between .877 and .944, supporting their retention in the analysis (Hair, Black, Babin, Anderson & Tatham, 2006). The communalities for all of the items were greater than .40 (Costello & Osborne, 2005) except for Item No.7 (.350), however since the items was not lower than 0.2 thus it was not dropped (Child, 2006) (Table 4).

The analysis divulged the presence of a single factor with eigenvalues exceeding 1; the first factor accounted has a variance of 4.748 explaining 59.354 % of the total variance. The interpretation of the one factor was consistent with the definition of teamwork is defined as the ability to build good relations, interact with others from different culture and work effectively with the team in reaching the same objective. The factor loadings in the rotated factor matrix for all the individual items were more than .6, thus proofing convergent validity (Table 4). Furthermore, all items had loaded significantly on to one factor, hence proofing discriminant validity.

Table 4: One factor solution for teamwork

<table>
<thead>
<tr>
<th>Items</th>
<th>Factor Loadings</th>
<th>Communalities</th>
</tr>
</thead>
<tbody>
<tr>
<td>3  Saya sedia memberi pertolongan kepada rakan yang menghadapi masalah.</td>
<td>.831</td>
<td>.691</td>
</tr>
<tr>
<td>4  Saya akan melakukan tugas yang telah dibahagikan sesama ahli kumpulan dengan rasa tanggungjawab.</td>
<td>.802</td>
<td>.643</td>
</tr>
<tr>
<td>6  Saya selalu meminta pendapat dan persetujuan rakan sekumpulan sebelum memutuskan sesuatu perkara.</td>
<td>.775</td>
<td>.601</td>
</tr>
<tr>
<td>7  Saya tetap meneruskan tugas yang diamanahkan meskipun terdapat rakan sekumpulan yang menarik diri.</td>
<td>.591</td>
<td>.350</td>
</tr>
</tbody>
</table>
Confirmatory factor analysis

The three constructs i.e communication skills, critical thinking & problem solving skills and teamwork skills were re validated using confirmatory factor analysis (CFA). CFA was done separately for every construct. The results indicate that the construct reliability for the 3 constructs was well above the recommended value of .7 (Table 5). Validity was achieved as the Fitness Indexes for each construct achieved the required level (Figure 1,2 and 3) and the AVE was above .5 except for communication skills which was .4 (Table 5). Discriminant validity was measured via the Modification Indices (MI). High value of MI indicates the respective items are redundant, for the three constructs the MI was below 10.0.

Table 5: Results summary for the Measurement Model

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Items</th>
<th>Outer Loading</th>
<th>Composite Reliability</th>
<th>Cronbach’s Alpha</th>
<th>AVE</th>
<th>Discriminant Validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication skills</td>
<td>1</td>
<td>0.796</td>
<td>0.801</td>
<td>0.400</td>
<td></td>
<td>Yes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Eigenvalue</th>
<th>% Variance</th>
<th>KMO and Barlett’s Test</th>
<th>Appx Chi Square</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>4.748</td>
<td>59.354</td>
<td>.908</td>
<td>993.412</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>df</td>
<td>Sig</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>28</td>
<td>.000</td>
<td></td>
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<tr>
<td>2</td>
<td>.658</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.629</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.499</td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>9</td>
<td>.565</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>12</td>
<td>.539</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>13</td>
<td>.612</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Critical thinking &amp; Problem solving</strong></td>
<td>0.892</td>
<td>0.894</td>
<td>0.506</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>0.554</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>0.675</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3</td>
<td>0.519</td>
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<td><strong>Teamwork</strong></td>
<td>0.900</td>
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<td>0.532</td>
<td>Yes</td>
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<td>12</td>
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</table>
Figure 1: Summary of Fit Indices for Communication skills using CFA

Chi-square (df) = 36.245 (13); P value (>=0.05) = .001
;Relative Chi-Sq (<=5) = 2.788; AGFI (>=0.9) = .913
;GFI (>=0.9) = .959; CFI (>=0.9) = .944; IFI (>=0.9) = .946
;RMSEA (<=0.08) = .088
(Standardized estimates)
Figure 2: Summary of Fit Indices for Critical Thinking and Problem Solving skills using CFA

Chi-square (df) = 86.773 (33); P value (>=0.05) = 0.000
Relative Chi-Sq (<=5) = 2.629; AGFI (>=0.9) = 0.884
GFI (>=0.9) = 0.930; CFI (>=0.9) = 0.948; IIF (>=0.9) = 0.949
RMSEA (<=0.08) = 0.084
Discussion and Conclusion

Based on the result of both the principle component analysis and confirmatory factor analysis, the items measuring the Communication skills, Critical Thinking & Problem Solving skills and Teamwork skills constructs demonstrated reliability, unidimensionality, validity and stability across the Malaysia sample. Only in the second part of the study, the instrument was used to measure the soft skills via pre/post test to measure the shift in the soft skills after the course was taught via blended learning. The pre/post test learning outcome data provides in an objective manner in which to assess the degree of value created via the teaching of blended learning and soft skills development among the student’s.

Conversely, we reviewed Part E of the questionnaire on the respondents experience and reflection of the ethnic module course to understand the student’s readiness. The findings showed that the knowledge that the students gained from the teaching and learning of the
module had opened their mind towards establishing a concept of tolerance among ethnic. The students also came up with suggestions to include in the ethnic relations course, topics from other countries, having open discussions on the subject and relating the subject to contemporary issues, locally and globally (The Sun Daily, 11/08/2006). Hence, the methods of teaching must be suitable and varied enough to attract the student’s interest, and increase the student’s understandings. Lecturers must play their roles and always be ready to follow student’s trend of learning which is now leading towards the use technology-based teaching.

References


Appendix A

Items measuring communication skills

<table>
<thead>
<tr>
<th>Bil.</th>
<th>Item</th>
<th>STS</th>
<th>TS</th>
<th>AS</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Aktiviti ini menjadikan saya lebih bertanggungjawab untuk mewujudkan konumikasi yang lebih baik dengan etnik lain.</td>
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<tr>
<td>2.</td>
<td>Saya dapat menyampaikan mesej kepentingan hubungan etnik yang baik melalui video.</td>
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<td>3.</td>
<td>Saya gembira dapat melakukan perbincangan bersama ahli kumpulan untuk menghasilkan video.</td>
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<td>4.</td>
<td>Saya sering mengelak dari bertanya kerana tidak yakin dengan jawapan yang akan saya berikan</td>
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<tr>
<td>5.</td>
<td>Saya cenderung bercakap lebih banyak daripada rakan lain apabila berada dalam kumpulan.</td>
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<td>7.</td>
<td>Saya selesa bertanya apabila arahan yang diberikan oleh ketua kurang jelas.</td>
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<td>8.</td>
<td>Saya sentiasa merasa gugup apabila mengemukakan idea di hadapan rakan-rakan.</td>
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<td>9.</td>
<td>Saya dapat berkomunikasi dengan rakan yang mempunyai budaya yang berlainan.</td>
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<td>10.</td>
<td>Saya akan mengelak situasi yang memaksa saya berhubung dan berinteraksi dengan orang lain.</td>
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<td>11.</td>
<td>Saya dapat membentangkan hasil tugas dengan baik di hadapan rakan-rakan.</td>
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<td>12.</td>
<td>Saya merasa gembira mendengar pembentangan yang dibuat oleh rakan/ kumpulan lain.</td>
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<tr>
<td>13.</td>
<td>Aktiviti yang dilakukan mengajar saya untuk berkomunikasi dengan lebih baik bersama rakan daripada pelbagai kaum.</td>
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</table>
**Appendix B**

**Items measuring Critical Thinking and Problem Solving**

<table>
<thead>
<tr>
<th>Bil.</th>
<th>Item</th>
<th>STS</th>
<th>TS</th>
<th>AS</th>
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<tbody>
<tr>
<td>1.</td>
<td>Saya dapat membuat kritikan yang membina tentang isu-isu semasa berkaitan hubungan etnik.</td>
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<tr>
<td>2.</td>
<td>Saya dapat memikirkan secara kritikal setiap perkara yang saya buat dan lihat.</td>
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<td>3.</td>
<td>Saya suka memikirkan masalah-masalah yang rumit dan mencabar minda.</td>
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<tr>
<td>4.</td>
<td>Saya berminat untuk mencipta idea baru berhubung permasalahan yang berlaku dalam masyarakat.</td>
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<td>5.</td>
<td>Saya dapat mencari penyelesaian terhadap sesuatu isu/permasalahan dalam hubungan etnik.</td>
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<td>6.</td>
<td>Saya berpeluang menafsir isu-isu semasa secara akademik melalui dokumen rasmi yang ditetapkan.</td>
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<td>7.</td>
<td>Saya dapat menyampaikan mesej yang terdapat dalam dokumen rasmi semasa sesi pembentangan.</td>
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<td>8.</td>
<td>Saya mahir dalam menyusun idea dan pemikiran saya dengan teliti sebelum memulakan perbualan.</td>
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<td>9.</td>
<td>Saya selalu membiarkan rakan sekumpulan memikirkan penyelesaian terhadap sesuatu isu berkaitan masyarakat pelbagai etnik.</td>
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<td>10.</td>
<td>Saya dapat menganalisis segala permasalahan daripada isu-isu hubungan etnik melalui kajian yang dilakukan.</td>
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<td>11.</td>
<td>Saya dapat menyesuaikan diri kepada pelbagai budaya rakan sekumpulan yang berlainan kaum.</td>
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<td>12.</td>
<td>Saya dapat membuat penilaian yang tepat dalam pelbagai situasi yang kompleks.</td>
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<tr>
<td>1.</td>
<td>Saya suka melakukan sesuatu mengikut cara tersendiri daripada mengikut struktur yang ditetapkan.</td>
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<td>2.</td>
<td>Saya mempunyai keinginan supaya rakan sekumpulan menganggap diri saya sebagai pemimpin.</td>
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<td>Saya sedia memberi pertolongan kepada rakan yang menghadapi masalah.</td>
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<td>4.</td>
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<td>5.</td>
<td>Saya selalu membuat keputusan penting secara bersendirian tanpa mengharapkan bantuan ahli kumpulan yang lain.</td>
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<td>6.</td>
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<td>8.</td>
<td>Saya percaya bahawa menolong rakan lain adalah sama penting dengan menolong diri saya sendiri.</td>
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<td>Saya sanggup menyelesaikan segala tugas yang diamanahkan walaupun saya terpaksa bekerja lebih masa.</td>
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THE CHALLENGES OF HASANUDDIN UNIVERSITY WITHIN GLOBAL PERSPECTIVE

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Abstract

In the globalization era, the globalization of management education is expected to play a role in nurturing human resources to meet the needs of the times. The Hasanuddin University have 2097 academic staff which 53.6 % of them is Ph.D holders. Number of student body is 31.000 that studying in 60 study programs. The main question in globalization era, how to use the existing capacity to deal with issues at international level. In the other hand we have international issues like AFTA (demand of quality of graduate that has academic capacity and willing to collaborate with other universities graduate), GATS (General Agreement of Trades in Services), Foreign Universities promotion and On-line and E-Learning (offer by overseas provider). In the future, with a strong identity, Unhas is capable of improving self-organizing capacity and has to play a role to ensure its roles as a culture guardian and as a dependable place for capability development to weave reality by maintaining a strong interconnectivity with strategic environments.

Keywords: Globalization, Education, University

Introduction

As the processes of globalization have prevailed in the world systems, higher educational institutions include amongst the stakeholders not immune towards the very phenomenon. By the end of the 20th century, we have witnessed a trend in the globalization of education, as institutions of higher learning have been influenced by global perspectives, leading to the opening of borders for both student and lecturer mobilizations, English language positioned having a role as the primary language for the conduct of Sciences and Scholarships,
advancements of the Information Systems, and many more. These abundances of phenomena reflects an inevitable trend in the education system, with the inclusion of numerous stakeholders from government, private actors, and intergovernmental donor agencies, that have also shown a specific interest in the educational sector since the 1990s, from a standing position of ignorance, to the prioritization of that particular field to be empowered [1]. The globalization of education have reached the most rural parts of nations, and the educational sector is one highly influenced, providing immense benefits, as well as downfalls.

Universitas Hasanuddin (Unhas), a Public University located in Makassar, South Sulawesi, Indonesia, is among the Universities that also are pressured with the impacts of globalization on the educational sector. Unhas is known to be the best in Eastern Indonesia (ranked by the Indonesian Ministry of Research, Innovation, and Higher Education), and 8th best in Indonesia. Equipped with 2097 academic staff and facilitating 60 study programs, it still though faced with numerous obstacles amid the rise of globalization. It is thus essential to have a fundamental understanding of the globalization of education that has occurred several decades past.

Challenges Amid the Globalization of Higher Educational Systems

Educational institutions have for many decades, been vulnerable towards International trends taking place globally. The interconnectivity of institutions, scholars, and research beyond borders reflects just how significant the globalization process is in reality. Albrow and King in 1990 outlined a well-known description of globalization, as “all those processes by which the people of the world are incorporated into a single world society, a global society” [2]. The profound impacts of education have always been evident. The phases of Internationalization can be marked with the series of events taking place, including overseas joint programs, dual-degree programs, utilization of information technologies, International mobility, even to the individually prioritized English language for academic research publications (or known to be superior).

But the Internationalization of the educational sector hasn’t always been the case. In the 1960s, Universities existed mainly in the national contexts. No competition among Universities prevailed, as global university rankings seized to exist during that period. Field of research though has always been of global nature. Collaborations have been profoundly inevitable to be worked with overseas counterparts, comprising of researchers originating from different
nations. The English language also marks the process of Internationalization, as the majority of scientific publications and books are published in English (research and publications in English have been favored and highly regarded in Universities too). The positioning of English being the language of scholarly communication reflects not the process of replacing local languages, but a form of supplementing them. Global mobility, specifically students, though, have reflected the reality of how impactful globalization and the opening of borders can result to. By 2014 approximately 200 million students were enrolled in graduate studies worldwide, with figures expected to be 400 million by the year 2030 [3], with the majority comprised of Asian nationalities headed to English-speaking states.

In contemporary times, the advancements amid the globalization processes have resulted in an unprecedented series of events. With the increase of access towards higher educations, higher education has evolved expansion wise from elite, mass, to universal [4]. Public Universities are given the burden of not only widening its access to education but to become parts of exclusive classifications, such as ‘World Class University,’ ‘World-Class research orientated university,’ and many other classifications that in reality, would be difficult to grasp with limited resources.

The persistence of the contemporary challenges to the globalization of education is one highly evident. The opening of borders through AFTA (ASEAN Free Trade Agreement) and GATS (General Agreement of Trades in Services), as well as the promotions of overseas institutions and On-line and E-learning, all reflects both benefits, and the need to be cautious of the impacts it may cause. AFTA for example, in full effect after the 2010 tariff levels reduction for agricultural commodities, is mainly marked by the decrease of tariffs becoming 0-5% among the states of ASEAN [5]. But a crucial aspect of the opening of borders relates to the demand of highly qualified graduates with the academic capacity to collaborate with other university graduates. Foreign university promotions that have been highly evident this past couple of years have been the major competition of the Graduate School established by Unhas, with aims of empowering locals with post-graduate study programs. The term of studying overseas has been known to be of great attraction for students, therefore neglecting in border post-graduate education programs, including those facilitated in Unhas.

But the major effect comes with the presence of GATS. Established in 1995, GATS that was adopted along with the Trade Related Intellectual Property Rights (TRIPS) is an agreement under the World Trade Organization, taking into effect for all 140 of its members [6]. GATS promotes trade liberalization of any particular service, including higher education [7]. To
conclude, the agreement would push state actors to eliminate barriers associated with the entrance of Foreign Service providers on the field of education. The matter becomes a concern, as higher education is a million dollar business that would attract the conduct of spreading higher education influences in universities worldwide [8]. The commercialization of services may take in the form of numerous exports of services, including cross-border supply, overseas student travels, commercial presence, and professional travels to foreign countries [9].

**Overcoming Obstacles: Universitas Hasanuddin’s way forward**

As globalization raised the stakes of competition in the higher education sector, the conduct of reformations evolves being of essence. A fundamental principle of educational institutions is to seek efficiencies and reforms continuously, Unhas as well is not immune to the natural process. The market-driven system that has embraced the educational sectors has made Unhas make reforms and establish programs that would build a firm reputation for educational excellence, especially in Eastern Indonesia. In realizing such a statement, organizational management to maintain university performance, attractiveness, and institutional capacity, thus becomes the key. Therefore Unhas through rigid processes of application since several years ago, have been granted the Autonomous Status (to fully be in effect starting 2017). Not many can attain such a status. Therefore it is hoped that the challenge may establish the initiative of Unhas academics and staff, to be more innovative.

Numerous organizational reforms have been adopted. One that goes in align with the Internationalization of capacity building measures is by laying the foundations of quality assurance standards, that is now under the responsibility of the Internal Quality Assurance Institution of Unhas. But the reforms taking place only empowers the abundance of resources that Unhas comprises of. Unhas as of now, consists of the Tamalanrea Campus (220 hectares), and Gowa Campus (for the Faculty of Engineering, 40 hectares). Since 1956, the capacities have developed rapidly, which now encompasses 2097 lectures (53.6 % of them is Ph.D holders), with 629 among the academic lecturers being female, a testament to the Universities willingness to be relevant with the contemporary global demand for gender equality. Unhas further facilitates 60 Bachelor Degree Programs, 44 Masters, 10 Doctoral, 5 Profession Education and 20 Specialists Programs, that has consistently raised the number of students registered in Unhas. And as the University highly regards the ideal lecture to student ratio,
annually, Unhas has accepted approximately 5% of the total registrants to the University, another testament to the rising interest of locals to enroll in Unhas.

Being a university striving to be of excellence, being Internationally relevant is a key element. The element would prove of its sustainability capacity amid the rise of the commercializations of educational services, as well as competitions. For years, Unhas has engaged upon International partnerships with numerous overseas higher education institutions, as well as research institutions, to exchange contemporary academic information and resources, primarily, to become further relevant with the global advancements in the higher education sector. As of now, Unhas has 84 active partnerships overseas, with 39% institutions located in Asia. Until this very time, the figures will be expected to be on the rise. Unhas has also dedicated its academic resources to have a distinctive specialization of research, which based on the constructed ‘Strategic Plan of 2030,’ has been defined as the ‘Maritime Continent of Indonesia,’ considering the Core Competence of Unhas being of Maritime Sciences. Such specifications have led to constant attractions of donors and research grants, further proving of the Universities relevance in the global context.

The Unhas research capacity has been recently empowered to achieve the status of being a World Class University. Scopus indexed publications are currently on the rise, with 1,553 articles by 2017. Unhas is home to an abundance of facilities, hoped to excel the research quality, as well as the academic resources of the University. Unhas Educational Hospital, Unhas Dentistry and Mouth Hospital, Teaching Industry, Technopark and Maiwa Breeding Center, Marine Station, Unhas Fishpond, are among the facilities that Unhas consists of. GDLN (Global Development Learning Network) of Unhas also has facilitated the dissemination of information and knowledge that is suitable for National and International requirements, resulting in the rise of global competitiveness through intellectual properties development and International networking. With the additional factor of the inauguration of 3 International classes (Management, Accounting, Public Health and civil engineering), Unhas has never been more relevant in the global context. Though have shown significant progress, challenges still await.

Summary

Globalization is a process that would inevitably encompass sectors deemed vital for the development of a state. The rise of influence attained to that has also embraced the higher educational sector, resulting in advantages, but also obstacles that must be responded.
International relevance amid the globalization processes would push higher education stakeholders to conduct reforms and raise its levels of competitiveness through measures of capacity building, an action currently taken by Universitas Hasanuddin. With numerous progress taking place, Unhas is hoped to be of high global relevance with the advancements of research, provision of facilities, and the constant expansions of International networks taking place, as the University approaches the full effect of the Autonomous Status granted to the University. The progress made have been more than sufficient, yet the relevance and capacity to compete will be dictated by the decisions made for the upcoming decade to come.

References


