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Dear ICTL2016 Presenters and Participants,

Congratulations for successfully contributing and presenting your papers as well as participating actively at the International Conference on Teaching and Learning (ICTL2016) held on 5 - 6 October, 2016 in Kuala Lumpur, Malaysia. There were 40 full-text papers submitted for paper and poster presentations. I am indeed very happy to present to you these papers in their original form as proceedings in our conference website.

The aim of the conference was to provide an opportunity to educators and researchers to share their ideas and findings on their latest cutting edge innovations and ideas in teaching and learning. The theme of the conference was ‘Innovations in Teaching and Learning in the Digital Era’ with the following sub-themes: 1) Innovative teaching and learning approaches, 2) Creative teaching: Addressing current needs, 3) Early childhood

There were two keynote speeches and six workshop presentations, however, only two full text papers for the workshops were submitted. Both these workshops dealt with thinking: one on creative teaching and the other on computational thinking, thus emphasizing the importance of thinking in the teaching and learning processes in this era of fast-developing digital technology.

The parallel session papers were all research based and reported many cutting-edge findings which have the potential of moving their respective fields forward. For example, Chandrakala’s use of Metacognition in learning vocabulary and Project Based Learning in Engineering have shown some practical teaching approaches that educators can use to enhance learning.

The papers were presented in six parallel sessions concurrently and as such some participants may have missed some presentations. We hope with these proceedings, participants will be able to gain more information on those presentations they have missed.

Wishing all of you the best in your research and we look forward to your presentation in the next ICTL conference,

Prof. Dr. Ananda Kumar Palaniappan,
Director,
International Conference on Teaching and Learning, ICTL2016
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WORKSHOPS

WORKSHOP ID: P3

Creative Teaching for the Digital Age

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Creative graduates are much sought after in this era of stiff competition and globalization. Across cultures, every society needs generations who, through creative educational training, can efficiently use their creativity to solve life problems. Institutions of higher learning are committed to stepping up efforts to enhance students’ creativity as employers are finding it increasingly difficult to find creative graduates. Those employed have been found to be more academically than creatively inclined. Many have attributed this to the lack of efforts to promote creativity in institutions of higher learning. Universities were found to focus more on content knowledge and developing skills in relation to specific areas of specialization rather than on the soft skills required to be innovative and competitive in the real world. There is also general lack of knowledge and skills among lecturers on how to teach creatively and also on how to enhance students’ creativity. This workshop which is based on the findings of an international comparative study of creative teaching in Malaysia, Thailand, and England, will focus on the creative teaching model comprising the 4Ps – Process, Person, Product and Press – as well as the four dimensions of creative thinking proposed by Torrance – Originality, Flexibility, Fluency and Elaboration. Participants will learn what aspects of creative teaching they should focus on and how to overcome obstacles to achieving the goals of creative teaching. They will also benefit from the real-life classroom experiences of creative teachers in these countries and learn how they can adopt and adapt these practices to suit their teaching objectives and the need to teach creatively to enhance students’ creativity. Through simple activities, participants will learn several approaches that will enable them to make their lessons interesting and turn out creative individuals. This workshop will enable participants to incorporate
the current advances in Information and Communications Technology (ICT) to create an environment that will enhance student creativity. Participants will also learn how they can teach creatively and teach creativity within the current constraints and challenges in schools and higher learning institutions.

**Keywords:** Creative teaching, Digital age, Creative educational training

**Introduction**

Teachers shape future leaders and ultimately the world. Schools and teachers are seen as having the kind of impact on students that will determine their future career and life. Hence, what teachers do in the classroom determine the quality of students and in the case of universities, the quality of graduates. Teaching to enhance academic achievement is no longer seen as sufficient as more and more employers are looking for graduates who are not only academically talented but know how to use creatively knowledge gained in schools and problem-solve independently at the workplace. In this context, creative teaching is seen as an important approach for enhancing student creativity. Creative teaching has also been found to enhance academic achievement (Bereiter, 2002; Cheng, 2011; Schacter, Thum, & Zifkin, 2006), motivation (Hoang, 2007) and also future careers in life. However, there appears to be more focus on students’ academic achievement than on their creativity (Reilly, Lily, Bramwell, & Kronish, 2011) or the teachers’ ability to teach creatively. Teachers have also been found to lack knowledge and skills on how to teach creatively and also teach for creativity. Hence, this paper reports how teachers identified as creative by their students teach creatively with the view of providing practical suggestions to other teachers. The findings from this study will be used to provide training and practical applications for teachers in both schools and institutions of higher learning to use their creativity to generate effective ideas for creative teaching and effective strategies to enhance students’ creativity.

**The Problem**

The lack of a creative workforce in this information age where creativity and innovation is not an option is detrimental to any country. This lack of a “creative class” (Florida, 2002) together with the increase in jobless graduates has put university education under the sharp scrutiny of many policy makers and educators. Malaysian employers, for example, are finding it increasingly difficult to find graduates who are creative and those employed have been found to be more academically inclined than creative (Report of the meeting on multi-stakeholder approach to address graduate unemployment, 2006; The Advertiser, 2000; The Star, March 3, 2005). Many have attributed this to the lack of efforts to promote creativity in institutions of higher learning either through creative instruction or curricular changes aimed at enhancing student creativity. Generally, there appears to be a general lack of emphasis in promoting and researching creative teaching with the aim of producing a creative workforce (Reilly, Lily, Bramwell, & Kronish, 2011). However, some lecturers even with the seemingly never ending demands on their time and resources, are able to teach creatively and produce creative individuals. Hence, it is imperative to study these creative lecturers and their teaching strategies as well as the factors that influence their motivation to teach creatively and enhance student creativity. The findings may help inform teacher education and staff development initiatives on how instructors can teach creatively and teach for creativity.

**Objective**

With the above issue in mind, this paper reports on findings relating to what creative lecturers do, what factors contribute to or impede their ability to teach creatively and also what strategies they employ to enhance student creativity.
Research Questions

This study will address the following research questions: What do creative lecturers do? What influences or impedes lecturers to teach creatively? What strategies do creative teachers use to enhance students’ creativity?

Literature Review

Work on creativity and its relationships to all aspects of education, work and life began almost 60 years ago, most of which were in the 1960s. Some of the seminal works are still relevant today. Early work on creativity sought to uncover a single definition for creativity. However, a reviewer of work done on creativity will quickly become aware of the myriads of ways creativity has been defined and researched. Similar review on creative teaching will also indicate the diversity in its definition.

Creativity and Its Components

It is vital to understand that no single definition of creativity is able to encompass all ideas and findings about what creativity is (Friedel & Rudd, 2005; Sousa, 2011). Creativity means different things to different people. To a musician, it means producing some hitherto unheard of, yet appealing, music and to an artist, it is the depiction of an unusual mood or story by blending colors and figures. To a physicist, it may be an original and useful invention or discovery like Einstein’s theory of relativity. However, these different versions of creativity indicate an underlying fact: creativity includes among other things, the production of clever, original and useful ideas.

Rhodes (1961) classified the myriad definitions of creativity into four categories, namely, 1) Process, 2) Person, 3) Press and 4) Product. ‘Process’ definitions mainly describe the stages of creative processes working in the psyche of the creator. It refers to the behavior directed toward creative achievement. ‘Person’ definitions refer to the potential for creative achievement in which creativity is seen as a set of characteristics of the person. ‘Press’ definitions refer to the environmental conditions necessary for creative activities. ‘Product’ definitions refer to the end product where manifestations of a person’s creativity are located. It can be seen that creative teaching can also be looked at based on this classification of creativity (Figure 2).

The process by which creative people think has been said to occur in many different ways. One of the earliest ideas was proposed by a German physiologist and physicist, Herman Helmholz whose work was reported in a book by Graham Wallas (1926) titled “The Art of Thought.” Four stages of creative process were suggested: Preparation, Incubation, Inspiration (Illumination) and Verification. The preparation step involves observing, listening, asking, reading, collecting, comparing, contrasting, analyzing and relating all kinds of objects and information. The incubation step is both conscious and unconscious, involving thinking about parts, relationships and reasoning. Inspiration or Illumination appears during the fallow period following incubation where tensions are released so that one can be creative. Verification is a period of hard work involving converting ideas into objects. Understanding these processes is important as they inform creative teaching approaches and explain the theoretical basis of creative teaching and why some approaches are successful in enhancing student creativity.

Creative Teaching
Creative teaching has been variously defined (see, for example, Horng, Hong, ChanLin, Chang, & Chu, 2005; Rinkevich, 2011). Most of the definitions have focused on teaching creativity that is teaching creative thinking with the aim of enhancing creative thinking skills among students. Another aspect of creative teaching, however, has been neglected in the definition of creative teaching, namely teaching creatively (The National Advisory Committee on Creative and Cultural Education or NACCCE, 1999). This paper presents a model of creative teaching that combines both -- teaching creatively and teaching creativity.

Teaching creatively is defined as a process of incorporating creative processes and creativity components in the teaching process. In also incorporates the teachers’ creative personality characteristics and creative thinking processes which they use to design the instruction strategies to enhance learning and motivate students. An example of creative teaching would be when a creative music teacher uses several tape recorders to teach the developmental section of Beethoven’s ‘Eroica’ which students find difficult understanding (Rubin, 1985). This exemplifies how creative teachers generate innovative ideas to enhance understanding of difficult topics.

Teaching creativity is defined as a process of designing and strategizing instruction to facilitate thinking skills especially creative thinking skills among students. For example, teachers teaching creativity to enhance originality in thinking in a language class may ask students to develop a new ending for a favorite story or rewrite an ending to a story they know. Based on the above interpretations of creative teaching, a systems model of creative teaching was developed (Palaniappan, 2008). It looks at creative and innovative teaching from a holistic viewpoint which enables not only teachers and trainers but also institutional administrators to ensure the successful implementation of creative teaching.

In the systems view of creative teaching, for creative teaching to take place, it is crucial that all significant factors affecting creative teaching are taken into account when designing the creative teaching and learning process. These significant factors can be categorized as those within school environment and those outside it. Significant internal school environment factors include the learners, teachers and the curriculum.

The success of any creative teaching strategy depends on the learner characteristics including, among others, their creative personality characteristics, creative motivation and creativity.

Figure 1. A systems view model for creative teaching (Palaniappan, 2008)
The teacher variable plays a major role in creative teaching. Many teacher related factors determine the extent to which creative teaching takes place. Among them are teacher’s level of motivation and attitude toward teaching creativity and creatively, teachers’ own creativity level, and teachers’ pedagogical experience (Davies et al., 2014).

The curriculum plays an equally important role. It sets the stage for creative teaching. There should be a deliberate attempt to provide for the presentation of content creatively and also to enhance student creativity. For example, the curriculum should indicate for each section of the topic being taught, the various pedagogical methods teachers could employ to teach or provide opportunities for teachers to use their own creativity to explore other strategies for presenting the material.

All three abovementioned factors depend on the school environment. The school environment encompasses other teachers and colleagues, principals, and students as well as the policies governing the daily running of the school, the school culture and the school infrastructure available to teachers and students (Hui & Yuen, 2010). For example, support from other teachers forms a valuable source of creative energy for teachers. A supportive principal who is willing to allow teachers to try unconventional teaching methods is crucial. Creative students also provide the creative climate that teachers and other students need to grow creatively. Students grouping together to think of an easier way to raise funds for a good cause or design a new way to build an intelligent traffic system for the local town council are just some of the creative activities that can be organized.

Among the factors outside the school environment vital for enabling creative teaching to occur in schools are parents, government policies, future employers and the industry demands on the schools (Hearn & Bridgstock, 2010). Parents play a vital role in creative teaching. Teachers wishing to take students on field trips which expose them to a multitude of stimuli crucial for creative thinking would need parental support.

Government educational policies especially relating to curriculum development and reference texts for teachers and textbooks for students play an equally important role. Teachers may not be motivated to teach creatively if they are constrained by the curriculum and the strict policies on testing and evaluation. Research has shown that rigorous testing may kill students’ creativity as students will be focusing more on studying for examinations rather than reflecting and exploring the world around them purposefully and meaningfully for the benefit of society (Gibson, 2010). The standards policies currently being adopted by many institutions have also been found to stifle not only teachers’ ability to teach creatively but students’ creativity as well (Beghetto & Plucker, 2006; Dobbins, 2009).

Employer or industry needs determine what is emphasized in schools especially in industry-oriented schools. If employers only seek creative and innovative individuals, the government and schools will be duty bound to produce creative and innovative employees. For example, if IT companies need employees who are able to foresee future software and hardware needs and design innovative software and hardware, they will seek out and employ creative individuals.

Creative teaching is pedagogically different from effective teaching and the approaches used are also found to differ from those used by effective teachers. While effective teaching may be seen as more teacher-centered, creative teaching is more student-centered involving playful and joyful learning experiences with mind engaging activities (Cheng, 2010) in an environment characterized by good student-teacher rapport (Sousa, 2007). Student-centered activities involving discussions and role play are also seen as creative and open ended forms of creative
teaching (Hottecke, Henke, & Riess, 2012). Other approaches considered as creative teaching are those involving problem solving, collaborative learning (Cornish, 2007), self-reflection and group presentations (Horng et al., 2005).

In this age of Information and Communications Technology, creative teaching has also taken a new dimension. There is an increasing creative use of iPods (Dale, 2008) and tablets in the classroom. Many social networking sites such as Facebook and Twitter are being used in creative ways in the classroom (Dawson, 2011). Hence, creative teaching has been conceptualized as relating to teaching creatively and teaching for creativity to enhance student creativity (NACCCE, 1999). However there appears to be considerable overlap between them (Jeffrey & Craft, 2004).

The 4P’s of creative teaching relate to not only the teacher but also to students. These four aspects have emerged from the definitions on creative teaching gleaned from literature and research published. For example, creative teaching from the teachers’ perspective is defined as their ability to generate novel solutions to problems relating to teaching (Process), and delivery of original lessons (Lin, 2002; Wu, 2003), fun (Lou, Chen, Tsai, Tseng, & Shih, 2012) and interesting lessons (NACCCE, 1999) (Product), with the teachers having the predisposition to be innovative, resourceful and motivated (Person) in an environment facilitating creative teaching or having had experiences enabling the ability to teach creatively (Press).

As for creative teaching in relation to students, it is defined as the ability of the creative teacher to encourage students to connect ideas from diverse areas and to generate new ideas (Cremin, 2009; Reid & Petocz, 2004) and also to improvise (Sawyer, 2004) (Process), be innovative and come up with new things (Lou, Chen, Tsai, Tseng, & Shih, 2012) (Product), be inquisitive and take risks (Reid & Petocz, 2004) (Person) and create an environment that gives students autonomy (Jankowska, 2008) and encourages them to solve problems creatively, free from constraints and evaluations (Reid & Petocz, 2004) (Press). This also relates to the educational policies and the curriculum.

**Creative Teaching as a Process**

This can be seen as what creative teachers do and what students gain as a result of these efforts. Looking from the angle of what creative teachers do, literature shows that creative teachers employ innovative strategies such as team teaching with other subject specialists (Chang & Lee, 2010), interact well with students (Sousa, 2007), motivate students (Chan, 2002) and give them freedom and autonomy (Davies et al., 2012; Jankowska, 2008) as well as teach beyond the syllabus (Davies et al., 2012; Simplicio, 2000).

Creative teaching as a process from the students’ aspect, involves all initiatives by teachers to enhance students’ creative thinking. A number of creative approaches have been documented as being successful in enhancing students’ creative thinking process. These range from the very common techniques used in schools such as brainstorming to the highly creative ones used by some creative lecturers observed in this study – using metaphors and analogies. Incorporating the 4Ps of creative definitions mentioned above, it can be seen that creative teaching can also be conceptualized as based on this classification of creativity (Figure 2).
Barriers to Creative Teaching

Requiring teachers to stick religiously to the curriculum and text book is inimical to creative teaching. Teachers are evaluated on how they perform and how close they teach to the examination or content that will be examined. This can pose problems for teachers who wish to incorporate elements of creativity in their teaching and enhancement of students’ creativity. Sawyer (2004) in addressing this problem advocates disciplined improvisation where teachers use these routines and structures of traditional teaching in a creative improvisation manner involving flexibility and resourcefulness.

Methodology

This paper is aimed at providing a glimpse of the many ways creative lecturers in institutions of higher learning in Malaysia and Thailand teach and how they enhance students’ creativity. The study involved construction of the questionnaires in the pilot study and administration of the reliable and validated questionnaires to selected creative lecturers and observation and interviews with them as well as their students.

Pilot Study

The first stage of questionnaire development involved developing a questionnaire to be used by students to nominate their creative lecturers. A thorough literature search on creative teaching was undertaken and items were constructed on a 5-point Likert scale format on characteristics of creative lecturers. These items were checked by experts on creativity and creative teaching on this research team and repetitive or irrelevant items were removed and those unclear were reworded.

The Lecturer Nomination Questionnaire (LNQ) comprised two sections. The first section elicited information on students’ majors, year and department as well as the name of the lecturer whose lectures they are currently taking.
whom they think are creative. The second part of the questionnaire asked students to rate this lecturer on 46 items relating to creative lecturers’ characteristics drawn from literature on creative teachers.

Sample

Two public and one private university in Malaysia and one public university in Thailand were chosen for the study. They were chosen on the basis of having a diverse number of courses offered which is useful to this study since it aims to elicit how creative teachers in the diverse classes ranging from the sciences to the social sciences tend to be creative in their teaching. Wherever possible, two Science based faculties and two Arts based faculties were chosen in each university. The Deans in each of the universities were approached to obtain permission to administer the LNQ to a second year class of at least 40 students. However, this was not possible for some faculties as they had fewer students in those cohorts and departments chosen.

Data Collection

The validated Lecturer Nomination Questionnaire (LNQ) was first administered to a random class of second year students about four weeks into the semester so that the students were familiar with the lecturers in order to nominate them. From their nominations lecturers were ranked based on the number of nominations received. Lecturers with the highest nominations were first approached and invited to take part in the study. If the first lecturer was unavailable or refused, the second lecturer was approached and so on as long as the percentage nominations were above 10%. Table 1 shows the percentage number of nominations the creative lecturers who took part in this study obtained against the total number of LNQ administered.

The nominated lecturers were then contacted to schedule the time for at least two classroom observations and an interview as well as focus group discussion with at least four students who nominated him/her as a creative lecturer.

Classroom observations were carried out using a Classroom Observation Schedule (COS) comprising items similar to those students used to rate their lecturers as creative. These observations afford valid assessments of creative teaching (Fleith, 2000). This is to provide additional data for triangulation. Observations were audio recorded and digital pictures were taken of at least three episodes taking place during the class for use during the interview sessions.
Table 1
Number of nominations received by the creative lecturers who took part in Malaysian (M) and Thai (T) study

<table>
<thead>
<tr>
<th>Lecturer Code</th>
<th>Department</th>
<th>University</th>
<th>Nominations received (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1</td>
<td>Engineering</td>
<td>Private</td>
<td>32.00</td>
</tr>
<tr>
<td>M2</td>
<td>Management</td>
<td>Private</td>
<td>41.67</td>
</tr>
<tr>
<td>M3</td>
<td>Computer Science</td>
<td>Private</td>
<td>21.11</td>
</tr>
<tr>
<td>M4</td>
<td>Creative Multimedia</td>
<td>Private</td>
<td>50.00</td>
</tr>
<tr>
<td>M5</td>
<td>Art and Design</td>
<td>Public</td>
<td>23.19</td>
</tr>
<tr>
<td>M6</td>
<td>Education</td>
<td>Public</td>
<td>68.18</td>
</tr>
<tr>
<td>M7</td>
<td>Health Sciences</td>
<td>Public</td>
<td>38.46</td>
</tr>
<tr>
<td>M8</td>
<td>Communications and Media Studies</td>
<td>Public</td>
<td>14.70</td>
</tr>
<tr>
<td>M9</td>
<td>Education</td>
<td>Public</td>
<td>33.33</td>
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After each class observation, an in-depth interview was conducted using the semi-structured interview protocol called the Lecturer Interview Protocol (LIP). This protocol comprised seven open-ended questions focussed on the creative lecturers’ background and training, their perceptions on creative teaching, strategies of creative teaching and on the enhancement of students’ creativity and finally on their thoughts relating to the three episodes of teaching observed in their classrooms. The lecturers were also invited to put their thoughts on creative teaching down in the form of a conceptual drawing on paper using colored pens and other materials if required. These interviews were audio-taped and transcribed for analysis.

Following each class observation, at least four students who nominated the creative lecturer were invited to a focus group discussion with the researcher. This discussion followed semi-structured open ended questions relating to their experience of creative teaching and learning, why they thought that lecturer was a creative teacher, and what strategies the lecturer used which enabled their creativity. They are required to represent these thoughts in the form of a conceptual drawing using colors and other materials if they so desire. These discussions were audio-taped and transcribed for analysis.

Data Analyses and Results
All class observations, interviews and focus group discussions were transcribed by competent English majors and these transcripts were cross-checked by the co-researchers for transcription accuracy.

These transcriptions were then coded by the co-researchers who observed, conducted lecturer interview and focus group discussions. Coding was done on all aspects of creative teaching as observed by the researchers who attended the classes using the Lecturer Observation Schedule as well as the interview and focus group transcripts which included the lecturer’s and the students’ conceptual drawing. The constant comparison method (Glaser & Strauss, 1967) was used in the coding process.

These codes were then categorized into Axial codes for each lecturer. Both codings and categorizations were cross-checked by other co-researchers during several cross-checking sessions until both co-researchers agreed on the codings and the Axial codings.

These Axial codes were then transferred into another table for comparison across lecturers. The Axial codes which were featured most prominently during the observations, interviews and focus group discussions and were also aspects that the creative lecturer felt most important were listed on top with the top most Axial codes representing the most dominant creative teaching characteristic of that lecturer.

**Ranking of the Axial Codes for Each Lecturer**

The determination of ranking of these Axial codes was undertaken during several verification sessions among the researchers in the team based on evidence from classroom observations, lecturer interviews and focus group discussions.

**Emerging Themes from the Axial Codes**

The following themes relating to characteristics of creative teachers emerged from the analyses: 1) Support 2) Multiple strategies, 3) Multiple media, 4) Classroom freedom, 5) Interactions, 6) Empathy, and 7) Student creativity.

**Discussion**

The seven themes exemplify most of the characteristics of creative teachers reported in the literature. As shown in Figure 1, support from all significant others in relation to the teacher is crucial to create an environment for creative teaching (Cheng et al., 2011; Davies et al., 2012). This includes the administrators, colleagues, parents and also the district education departments as well as the superintendents and the policies they formulate and enforce.

The class environment lecturers create is also crucial in providing the atmosphere facilitating freedom in thinking, expression and exploration (Hennessey, 2015). Referring to the classroom culture as ‘little c’ and the larger societal culture where the institution is situated in as the ‘Big-C’, Hennessey (2015) opines that class culture determines the level of creativity encouraged and fostered. The open-mindedness of the lecturers, the friendly nature of their interactions, their readiness to accept and respect students’ ideas tends to provide support for Hennessey (2015). The availability of ICT including WiFi facilities in the classroom affords students greater freedom in generating new ideas (Neo, 2003).
Using multiple strategies such as brainstorming, group discussions and presentations (Figure 1), inter-group debates on relevant issues, the use of authentic activities such as real-life interviews students engage in to improve their language skills, for example, tend to make the class interesting and enjoyable besides enhancing student creativity. The use of the internet, e-learning systems and social media such as Facebook in enhancing student collaboration is one example commonly used by the creative lecturers in this study.

Freedom in selecting approaches to present their work, in voicing their opinions as well as in choosing how they wish to be assessed tend to create an environment facilitative of creativity and creative production (Chien & Hui, 2010; Reilly et al., 2011). This is seen in both creative lecturers’ classrooms in Malaysia and Thailand.

Another common feature of creative lecturers’ classes is the high level of interactions between lecturers and students as well as between students whether in class or via the Internet. This close relationship between all individuals in the class creates a cohesive and friendly atmosphere that values and respects all ideas and hence fosters higher order thinking and creativity (Sousa, 2007).

![Figure 3. Using multiple presentation styles to allow for flexibility in thinking.](image)

Studies have also shown the creative lecturers have distinct personality characteristics as shown in this study. They are friendly, open-minded, inquisitive and caring. This endears well with most students who feel less stress and pressure to perform (Lee & Kemple, 2014). As exemplified by the Thai lecturer in this study who used the onion to teach a poem on love, (Figure 4) creative lecturers also tend to take risks with their teaching methods (Krom & Williams, 2011; Rinkevich, 2011) to test their teaching method efficacy.
Other than using creative teaching approaches, creative lecturers via these approaches tend to enhance their students’ creativity. They do not provide answers to all problems. They frame their questions so as to encourage students to explore on their own or in groups to find out the solutions. And this tends to facilitate creative thinking (Oreck, 2006).

Practical Applications of the Findings

Based on the findings the following suggestions may be useful for teachers and lecturers to teach creatively and to enhance student creativity:

- **Environment**: Create a classroom environment where all ideas are considered for class discussion, allow flexibility in presentations, discussion, assessments and also testing, use creativity to work around the cultural constraints brought about by policies and practices, work toward enhancing school creative culture by organizing activities for students to explore outside their classrooms. Provide easy access to ICT so that its full potential can be used to both teach creatively and to teach creativity.

- **Thinking processes**: Explore other ways of presenting your lectures and ways to make it more effective, use multiple strategies, vary your presentation styles, use creative idea generation techniques to come up with more creative techniques.

- **Personality**: Be more open minded, friendly and inquisitive. Take risks in selecting teaching approaches. Encourage students to explore on their own to solve everyday problems important and relevant to them. Have a more interactive classroom where students are free to discuss and debate issues.
**Product:** Generate ideas to produce new teaching aids effective for explaining concepts. Motivate students to use ICT to explore and create new methods or approaches to solve their daily problems or create useful and cost-effective products.

**Conclusion**

There are myriad ways to teach creatively and to teach creativity. Understanding the systems view of creative teaching and the Creative Teaching Model as well as understanding the various factors that impact on creative teaching and teaching for creativity are crucial in acquiring creative teaching skills. Creative teaching involves using multiple teaching strategies and modern technologies including the ever-improving ICT features, having a constellation of creative thinking personality characteristics as well as working around constraints and problems hindering creative teaching and teaching for creativity.

**References**


Cheng et al. (2011). Organizational climate for innovation and creative teaching in urban and rural schools. *Qual Quant, 45*, 935–951.


[ Several papers not listed in this copy]
Development of Moral and Ethics Indicators and Practical Guideline for Desirable Attributes of Graduates in Higher Education in Central Region Institutions Network

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This research aims at developing desirable attributes in moral and ethics indicators for the graduates in higher education in central region institutions network; and to present practical guidelines for desirable attributes of graduates. Data were collected from documents and interviews with administrators and instructors. Data were analyzed by content analysis, frequency, and percentage. The results are as follows: 1. There are fifteen moral and ethics indicators composed of honesty, self and public responsibility, disciplinary, public sacrifice, tolerance, diligence, gratitude, professional ethics literature, unity, economical, consciousness, listen to the opinions of others, humbleness, religious faith and situation understanding. 2. For practical guideline there should be two levels. Firstly, at the policy level: a) make moral and ethics as a main policy of institutions, b) make clear and serious rules and legal punishment of moral and ethics violation, c) set a practical guideline for moral and ethics both inside and outside curriculum with clear ways of teaching, monitoring, and evaluation. Secondly, at the practitioner level: a) make moral and ethics in every program, project or activity with clear wanted indicators, time, budget, responsible person and how to evaluate, b) make moral and ethics be in every activity and have to act variously and continuously in all year long activities, c) teachers and supporting staff have to be good models in moral and ethics issues, d) set wanted moral and ethics indicators clearly, e) have a key person in each activity, f) praise activity is recommended g) make practical guideline known for everyone.

Keywords: Moral and ethics, Indicator, Higher education

Principle and Reason

Morality and ethics are an important basis in living and root of prosperity, stability and peace of individual, society and nation. Therefore, the person who wants peace and self and national stability must practice himself to maintain the morality and ethics. If not, it will be difficult to live peacefully in the society. Furthermore, the lack of morality and ethics affects himself and others, and might cause the disorder to the society as seen from the current social problems e.g. corruption, crime, drugs, etc.

Therefore, morality and ethics are important and necessary for people in society. As there are many persons talk about the necessity of moral and ethical support in society such as, Dhamma (2541:118), which talks about a way of moral and ethical support in Thai society that the most wanted thing Thai society needs is a power of morality and ethics which will trust people together in hospitality and create the pleasant society. Besides, Dhamma also talks about the moral and ethical support for encounter the developing age’s problem. Morality and ethics are essential for life and for the society where people are asking for them at the mental decadent state. It has to specially hasten the moral and ethical support and mental development.
In the age of educational reformation since 1997, there has been an attempt to develop the moral and ethical teaching form by considering effectiveness as priority, but it is found that the moral and ethical teaching’s development in many universities is not advance and unsuccessful. On the one hand, this is because of the fact that universities and communities do not use their resource good enough. On the other hand, the Office of the Higher Education Commission has specified the standard of higher national education. The standard of learning result states that the graduate should have at least 5 essential characteristics. Morality and ethics are one of them. The study found that there is obviously no research of the way to behave in the behavior development with conducting morally. So, we need to have a research of condition and education of the morality and ethics in university in order to develop the moral and ethical indicator and to have a way to educate morality and ethics and create the ideal graduate of the university in the future.

**Research Purpose**

1. To develop the moral indicators in order to create the desirable graduates
2. To present the guidelines of morality and ethics education in order to create the desirable graduates

**Method**

This research used mix methods consisting of qualitative research in the form of documentary research, content analysis and quantitative research.

**Key Informant and Source of Document**

1. Source of document for this research documents, books, textbooks, academic articles and researches from libraries, internet and organization under Central Region University Network
2. Key informant consisting of:
   - Group 1: executives and teachers for answering the questionnaire.
   - Group 2: executives and teachers for focus group
   - Group 3: experts representing 3 university groups: general university; technical university; and medical and nursing university/college for criticizing the research

**Instrument**

The instruments of this research consisted of: 1) data record for development of moral indicators and guidelines to create the desirable graduates for universities in Central Region University Network; and 2) questionnaire of guideline for educating and inserting the morality and ethics of Central Region University Network in order to develop desirable graduates.

**Procedure**
There were 3 procedures of data collection:

1. **Documentary Research**
   1.1 Search and study documents, books, textbooks, academic articles and researches as a key information in order to determine the moral indicator in October 2014.
   1.2 Survey the condition of morality and ethics education by sending the questionnaire of guideline for educating and inserting the morality and ethics of Central Region University Network in order to develop desirable graduates to 85 universities in Central Region University Network during November to December 2014. The questionnaires done by 25 universities could be collected.

2. **Focus Group**
   The focus group was arranged for 41 executives and teachers from 85 universities in Central Region University Network.
   The data collected under the above procedures from 66 universities in Central Region University Network was 77.65%.

3. **Research Criticizing**
   Verification of suitability of moral indicator and guideline of morality and ethics education by sending the draft of research to the experts representing the relevant group or having interest with development of moral indicator in order to criticize the research regarding the suitability of moral indicator and guideline of morality and ethics education in January 2016.

**Data Analysis**

The statistics used to analyze the data were:

1. **Documentary Research**: content analysis
2. **Focus Group**: frequency, percentage and content analysis
3. **Research Criticizing**: content analysis

**Result**

Part 1: There were 15 moral and ethics indicators as follows:

1. Honesty means directed behavior, be sincere, straightforward, aboveboard, Academic honesty and professional honesty.
2. Self and social responsibility means to be concern about self-responsibility and cooperate responsibility, accountancy in self-mantle, acceptance of good and bad affection of self-behavior including entire of self-responsibility and social responsibility.
3. Discipline means belong to rules and discipline strictly as well as self-discipline.
4. Dedication means public minded, dedication vitality, property and wisdom to help people and society.
5. Patience means unflagging with doing good things although has any obstacles or in the uncomfortable situation such as inconvenience, suffering and any other irritate.

6. Diligence means hard working, pay attention, regularly hard work and sedulous.

7. Gratitude means to concern about kindness of benefactors sincerely, respect, comply with them and repay by help them in any activities.

8. Professional ethics means belong to code of behavior, manner regulation which professionals in any field has been defined for preserving and encouraging prestige reputation and virtue of members including happiness and prosperity of profession and society.

9. Harmony means unanimity, unite and harmonize in working to be succeed without confliction.

10. Economy and sufficiency means to be economize, using properties worthy, frugal, in conceited, spending life barely, sufficiency, knowing self-financial status, paying anything carefully.

11. Appreciation means to be consciousness, careful, awareness, recognize, self-control and integrity.

12. Tolerance means respect of man, acceptance, amenable, and giving other opportunity to express their opinion to get new experience.

13. Humility means do not show your ability to boast or suppress others, don’t be arrogant, to be modest, cringe, mellifluously and gentle minded.

14. Faith in religion means strongly believe, appreciate, confident with the reason about consideration to belong with moral principle, belong to moral principle and good governance.

15. Tact means to be in proper behavior in any situation, be a good manner in express to public in manner, gesture and converse.

Part 2: Guidelines to educate morality and ethics in order to create the desirable graduates for universities in Central Region University Network were as follows:

1. Guidelines on policy level: 1.1) determine the morality and ethics education as main policy of the university; 1.2 create an organization or committee in order to control the morality and ethics education; 1.3) clearly prescribe and strictly enforcing rules, regulations, and disciplines related to the morality and ethics; and 1.4) determine the guideline in order to insert the morality and ethics into the students in both curricular and extracurricular activities.

2. Guidelines on operation level: 2.1) create a committee in charge of determine the plan, project and activity (procedure, indicator, period, budget, person in charge and evaluation); 2.2) strategy for the morality and ethics development (preventive, developing and incentive); 2.3) determine the moral behavior; 2.4) continuously conduct the activity with various procedures; 2.5) the teacher should educate the morality and ethics with the various methods; 2.6) the executives and teachers should act as example of morality and ethics; 2.7) arrange the students to participate in the activity regarding morality and ethics and volunteer once per semester and use
the students as mechanism of morality and ethics education; 2.8) clearly determine the criteria and guideline of evaluation; 2.9) create the journal or portfolio of morality and ethics to be presented as medium of good behavior and morality and ethics; and 2.10) organize the activity to admire the well-doer or model person in order to create the well-doer value in the university.

Discussion

1. From the 15 proper indicators in educating the morality and ethics to enhance the ideal graduate of the Universities in Central Region University Network, it is found to be in accordance with the learning standards of Office of the Higher Education Commission, Ministry of Education (2009) bachelor’s degree on morality and ethics, the graduates must have the behaviors in morality and ethics such as having discipline, responsibilities, honesty, dedication, being the role model, understanding other people, understanding the world, etc. This complied with the concept of morality and ethics of Wichit Kunlawanit stating that the morality and ethics which should be educated to the university students is the gratitude. This also complied with the research of Naruemon Osathanukho (2006) stating that the morality and ethics which should be educated to the university students is the honesty, disciplines, responsibilities, determination, patience, diligence, appreciation, prudence, faith and sincerity, having skills of life, dedication, having generosity, having the mind of democracy and voluntary, loving harmony, having the professional ethics, understanding other people, understanding the world, and using self-sufficiency economics. Nongluck Wiratchai et al. (2009) studied the exploration and synthesize the indicators of morality and ethics to find that the indicators of morality and ethics consist of 3 sets and 14 indicators. The first set was the basic indicators of morality and ethics consisting of independence, determination, work effectiveness, discipline, and the patience. The second set was the current indicators of morality and ethics consisting of satisfaction, diligence, economy, honesty, and appreciation. The third set was the future indicators of morality and ethics consisting of responsibilities, justice, harmony, friendliness, and gratitude. Moreover, it also complied with the research of Saireudi Worakitphokathorn et al. (2009) studying the features and processes in educating the morality and ethics in Thailand. The research results revealed that 10 morality and ethics which should be hurriedly educated to Thai people especially children and juvenile are 1) discipline, 2) patience, 3) diligence, 4) honesty, 5) responsibilities, 6) appreciation, 7) economy and sufficiency, 8) generosity, 9) gratitude, and 10) dedication.

2. It was found that the disinclining students to participate the university’s activities including the little number of participants as well as the conflict activity schedule resulted in the discontinuity of activity organization. There were only a few well-doers regarding morality and ethics and the university personnel did not cooperate in educating and inserting the morality and ethics to the students, conforming to the study of Naruemon Osanukho (2006) that the problem found in the moral and ethical activity was the monotonous form and lack of participation; that the teaches did not recognize the importance of morality and ethics insertion and had no knowledge and technique in moral and ethical teaching. Pramaha Vuttichai Wachiramatee talked about the guideline to develop morality and ethics for the students in the university that the teacher must behave as example for the students, award and admire the well-doers.

3. The research found that there were 2 main guidelines to educate the morality and ethics: policy level and operation level. The main points were as follows: the morality and ethics education to the students should be determined as the urgent policy; the operation and result should be regularly monitored; the relevant rules, regulations, and disciplines should be clearly determined. This conformed to the research of Naruemon Osanukho (2006) that the integrated development plan should be determined and the development on the quality of graduates and teachers should be prioritized by determining it as the key mission of the university. Pramaha
Vuttichai Wachiramatee and Aphinya Manarot had the accordant opinion that the proper way to educate morality and ethics to the juvenile is that the teachers must be an example for the students, award and admire the well-doers. The research of Suwimon Wongwanit and Nonglak Wiratchai (2000) found that the process supporting the moral and ethical development is that the development from the surrounding people: parents played the most important role to educate the morality and ethics, followed by teachers and friends. However, the research of Thapani Phasitnaowakun and Phonsawan Suwannasi (2009) found that the development of morality and ethics of students must be cooperated by every sector of the university.

**Benefit**

1. Universities in Central Region University Network know about their situation including the problem to educate the morality and ethics to students under their responsibility.

2. Universities in and out of Central Region University Network can use moral and ethical indicators and guideline morality and ethics education as principles to create desirable graduates of each university and conform to national framework of university standard.

3. An interested person can apply this research methodology for researching design in order to develop other indicators.

**Suggestion**

1. Suggestions on the application of research:

   1.1 Suggestion on Policy:

   a) University should pay attention to continually create moral and ethical model for the executives, teachers, personnel and students as an important and urgent policy.

   b) University should create university network for moral and ethical development to the teachers, personnel and students

   c) University should clearly determine moral and ethical indicators and professional ethics of graduate.

   d) Should establish institute / Moral and ethics Promotion committee

   e) University should make an agreement between stakeholders of result from the development of morality and ethics including revise morality and ethics process for teachers, personnel and students, and should create morality and ethics development plan both in short term (1-3 years) and long term (4-5 years).

   f) University should support sufficient budgets for morality and ethics development.

1.2 Suggestion on Operation:
1) Establish a working group /committee to manage the insertion of morality and ethics for students. Organize the moral and ethical activities for the personnel and students both curricular and extracurricular as follow:

- Create morality and ethics development plan both in short term (1-3 years) and long term (4-5 years)
- Define form, methodology, project and activities for goal achievement. Define the significant detail of methodology, project and activities clearly such as goal, methodology, period, budget, indicators, monitoring and evaluation and person in charge.

2) The relevant working group studies and reviews the process of morality and ethics education for the personnel and student in the university in order to obtain the information to determine the proper guideline.

3) Define and strictly enforce rules, regulations and penalty regarding morality and ethics.

4) Define and publicize moral and ethical behaviors.

5) Executives, teachers and personnel must be an example of students in morality and ethics such as wearing decent clothes, being punctual, reasonable so that students are familiar with virtue, moral and ethical environment and ashamed in doing bad things.

6) Organize meeting for executives, teachers and personnel to publicize and make agreement between parties related to the support and encouraging the morality and ethics to the students.

7) Adjust the curriculum to suit for and conform to moral and ethical encouragement policy such as course improvement, including teacher seminar in order to understand the philosophy and concept of course creation.

8) Educate morality and ethics to student both in curricular and extracurricular activities.

9) Monitor and evaluate the result or morality and ethics activity.

10) University should sufficiently support the development of morality and ethics e.g. budget, materials, equipment, vehicles.

11) Organize the activity to admire the moral and ethical person in order to create the well-doer value.

12) University should organize at least 2 activities and determine the participation of at least 90% of the students per semester.

2. Suggestion for Further Research
2.1 It is suggested to research the guidelines and instrument to measure and evaluate morality and ethics for each indicator. Therefore, the teachers will have the clear aspect on what to teach and how to organize the activity to achieve the moral and ethical indicators as required in the course they teach.

2.2 It is suggested to research the monitoring and evaluation of morality and ethics of students in the university in Central Region University Network in accordance with the developed moral and ethical indicators during the period of study in the university and after the graduation in order to compare and monitor the development and improvement of the graduates, so that it can be applied to other students as well.

Selected Reference


PAPER ID: P92

Pembinaan Data Korpus Bahasa Arab untuk Tujuan Pengajaran di Peringkat STAM

Zainur Rijal B. Abdul Razak\textsuperscript{1}

Kata Kunci: Pembinaan korpus, Buku STAM, Analisis korpus, Frekuensi perkataan

Several studies in corpus linguistics has shown that the corpus data plays an important role in helping students to understand their textbooks. This is because the corpus data provides information about the important vocabularies and keywords according to subjects. Thus, the purposes of this paper are, firstly, to describe the steps that have been taken in building the corpus data for two textbooks used for the subject of Fiqh and Hadith in STAM level. Second, to identify the important vocabularies and keywords in the textbooks through automatic analysis. In order to achieve these objectives, the data that contains around 124,500 words were scanned and transferred into softcopy. Then, the data were analyzed using the Wordsmith 6.0 software to generate the frequency of word usages and keywords for each subject. The findings show that a larger corpus covering all subjects at the STAM is possible to be built. An analysis of the corpus found there are a number of important vocabularies that are commonly used and keywords for each subject.

Keywords: Corpus building, STAM textbooks, corpus analysis, word frequency, keyword

Memiliki perbendaharaan kata yang luas dalam mempelajari sesuatu ilmu dalam bahasa asing merupakan salah satu faktor penting kepada kefahaman menyeluruh terhadap ilmu yang dipelajari. Ini kerana ia dapat membantu pelajar

Permasalahan yang timbul pada masa kini khususnya di peringkat Sijil Tinggi Agama Malaysia (STAM) adalah para pelajar tidak mengetahui apakah kosa kata yang sepatutnya diberi keutamaan untuk mereka fahami. Sebahagian besar pelajar sekadar menghafal makna sejumlah sejumlah perkataan tanpa mengetahui tahap kepentingannya dalam sesuatu subjek, sebaliknya perkataan yang tidak diberi keutamaan pula amat penting dan menjadi kata kunci bagi subjek tersebut. Justeru, pembinaan korpus berdasarkan buku-buku teks yang digunakan dalam aktiviti P&P pelajar di peringkat ini dilihat mampu memberikan gambaran jelas tentang apakah kosa kata yang mesti diberi keutamaan dan sebaliknya. Bukan sekadar itu, proses pembelajaran akan menjadi lebih pantas dan sistematik jika pelajar dapat mengaitkan pula antara setiap kosa kata penting yang menjadi kata kunci dengan topik yang dipelajari.

Penyataan Masalah

Lazimnya, penggunaan sesuatu kosa kata di dalam buku teks ditentukan oleh bidang dan peringkat pengajian itu sendiri. Semakin tinggi peringkat pengajian dan semakin khusus bidang yang dipelajari semakin sukar perkataan yang digunakan dan semakin banyak pula kosa kata yang perlu dikuasai. Pengajian di peringkat STAM di sekolah menengah yang menggunakan bahasa Arab sebagai bahasa pengantar dianggap amat penting kerana ia menjadi satu bidang khusus kepada pelajar-pelajar jurusan agama serta menjadi penentu hala tuju mereka meneruskan pengajian di peringkat yang lebih tinggi. Namun begitu, hasil kajian lepas mendapati bahawa pelajar dalam bidang ini menghadapi kesukaran untuk mengikuti pengajian mereka di universiti (Nur Zafirah, 2011).


Justeru, permasalahan kajian ini adalah bertitik tolak daripada kesukaran pelajar menguasai bahasa Arab dan subjek-subjek agama di peringkat STAM. Masalah ini mengakibatkan kesan lebih parah apabila mereka melanjutkan pengajian di peringkat universiti yang banyak bergantung kepada kaedah pembelajaran kendir. Salah satu punca masalah yang dapat dikenalpasti adalah ketidakfahaman mereka terhadap sebahagian kosa kata yang digunakan dalam buku-buku teks serta ketidakmampuan mereka mengenal pasti apakah kata kunci dalam subjek tersebut. Akinat masalah ini juga, dalam sesetengah keadaan, para pelajar tidak menyedari bahawa terdapat sebahagian kosa kata bersifat ulangan di dalam buku teks yang digunakan. Gabungan masalah-masalah ini secara tidak langsung telah melambatkan proses pemahaman isi kandungan subjek itu dan merencatkan pencapaian akademik mereka.

Permasalahan ini dapat diatasi apabila satu korpus khas di peringkat STAM yang membolehkan pelajar mengetahui apakah perkataan-perkataan yang kerap digunakan dalam buku-buku teks dan kata kunci bagi setiap subjek dapat dibina. Keadaan ini amat mendesak pada masa kini memandangkan korpus yang mengumpulkan data dari buku-buku teks di peringkat STAM masih belum pernah dibangunkan oleh mana-mana pihak.
Dengan menganalisis korpus yang dibina, para pelajar dapat mengetahui apakah kosa kata penting mengikut subjek yang perlu difahami terlebih dahulu. Melalui pemahaman terhadap kosa kata penting dalam subjek yang dipelajari, proses pembelajaran akan menjadi lebih pantas dan sistematik.

**Kajian Literatur**


Hal ini tidak kurang hebatnya dalam bahasa Arab walaupun agak terlewat bermula berbanding bahasa lain. Jadual di bawah menunjukkan beberapa contoh korpus dalam bahasa Arab yang pernah dibina (al-Sulaiti & Atwell, 2006).

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</tbody>
</table>
Dalam pembinaan korpus lazimnya, para sarjana mengkategorikan data yang dikumpul mengikut kategori teks dan dinamakan sebagai subkorpus, contohnya korpus Al-Hayat mengkategorikan teks kepada teks umum, kereta, komputer, berita, ekonomi, sains dan sukan, manakala korpus An-Nahar membahagikan kepada kategori umum, politik, berita, komputer, sastera, ekonomi dan sukan (ELDA Home page, t.t.). Dalam korpus STAM ini, pengkaji telah membahagikan subkorpus mengikut kategori subjek iaitu Fiqh dan Hadith.


Pada tahun 1982, Mustafa Ruslan telah menjalankan kajian korpus ke atas 65,966 perkataan dari penulisan kefahaman 120 orang pelajar tahun 6 di sekolah rendah di Mesir. Beliau mendapati pelajar di bandar memiliki lebih banyak perbendaharaan kata iaitu sebanyak 35,298 perkataan berbanding pelajar di kampung dengan hanya 30,654 perkataan. Sementara Nation dan Waring (t.t.), menyatakan bahawa seseorang pelajar yang menguasai 1000 perkataan, ia secara amnya mampu memahami 72% dari sesuatu teks yang dibaca, 2000 perkataan dapat memahami sebanyak 79.7% dari keseluruhan teks dan sehingga kepada 15,851 perkataan yang meliputi 97.8% teks. Secara keseluruhan, mereka menyatakan bahawa penguasaan sebanyak 3000-5000 perkataan sudah memadai untuk pemahaman asas sesuatu teks yang dibaca.

Menurut kajian Xue dan Nation (1984), pelajar perlu menguasai lebih kurang 830 perkataan dalam sesuatu bidang subjek di peringkat universiti. Ini bermaksud, sebagai contohnya di bidang pengajian Islam, pelajar perlu

---

**Table:**

<table>
<thead>
<tr>
<th>Arabic Newswire Corpus (1994)</th>
<th>Penulisan</th>
<th>80 juta</th>
<th>Pendidikan pengembangan teknologi pendidikan</th>
<th>buku sekolah rendah</th>
</tr>
</thead>
<tbody>
<tr>
<td>CALLFRIEND Corpus (1995)</td>
<td>Perbualan</td>
<td>60 perbualan telefon</td>
<td>Pembangunan teknologi bahasa</td>
<td>Penutur jati Mesir</td>
</tr>
<tr>
<td>CLARA (1997)</td>
<td>Penulisan</td>
<td>50 juta</td>
<td>Perkamusan</td>
<td>Jurnal, buku, dan Internet</td>
</tr>
<tr>
<td>An-Nahar Corpus (2001)</td>
<td>Penulisan</td>
<td>140 juta</td>
<td>Penyelidikan</td>
<td>Surat khabar an-Nahar, Lubnan</td>
</tr>
<tr>
<td>Al-Hayat Corpus (2002)</td>
<td>Penulisan</td>
<td>18.6 juta</td>
<td>Kejuteraan bahasa</td>
<td>Surat khabar Al-Hayat, Lubnan Internet</td>
</tr>
<tr>
<td>Classical Arabic Corpus (2004)</td>
<td>Penulisan</td>
<td>1.6 juta</td>
<td>Analisis perkamusan</td>
<td></td>
</tr>
</tbody>
</table>

*Sumber: http://www.comp.leeds.ac.uk/eric/latifa/arabic_corpora.htm*
memahami 830 perkataan dalam subjek bahasa Arab dan 830 perkataan lagi berkaitan al-Quran atau hadith dan sebagainya. Hasil dari perbincangan ini dapat disimpulkan bahawa pembinaan korpus dan analisis ke atasnya dapat memberikan maklumat yang tepat tentang kosa kata penting dalam sesuatu subjek yang mereka pelajari dan seterusnya dapat meningkatkan kefahaman mereka.

Kepentingan Korpus di Peringkat STAM

Umumnya, penguasaan pelajar terhadap kosa kata penting dan kerap digunakan di peringkat STAM banyak membantu mereka menguasai subjek-subjek yang dipelajari. Dalam proses mengenal pasti dan memilih perkataan-perkataan penting dan sering digunakan di peringkat pengajian mereka, buku-buku teks yang menjadi rujukan utama dalam proses pengajaran dan pembelajaran boleh dijadikan sandaran utama.

Kepentingan membina korpus khas di peringkat STAM dapat dilihat melalui kemampuannya mengumpulkan semua teks yang terdapat di dalam buku-buku teks STAM bagi membolehkan analisis dilakukan terhadap frekuensi penggunaan sesuatu perkataan dan disusun mengikut susunan (ranking). Susunan perkataan bermula dari yang paling kerap hingga ke senarai yang paling jarang digunakan. Oleh itu, pelajar dapat mengetahui apakah kosa kata penting yang kerap digunakan dalam buku-buku teks mereka dan kata kunci bagi sesuatu subjek itu. Kosa kata yang paling tinggi frekuensinya merupakan kosa kata yang paling kerap digunakan dan penting untuk dikuasai. Selain daripada itu, dengan membandingkan antara data mengikut subjek, memberikan gambaran kepada pelajar tentang kata kunci bagi subjek yang dianalisis.

Oleh itu, dapatan kajian ini juga diharap dapat menghasilkan senarai kosa kata penting yang mestil dikuasai pelajar di peringkat STAM khususnya dalam dua subjek yang dikaji. Lanjutan dari hasil kajian ini juga satu perisian korpus di peringkat STAM akan dibina yang boleh dimuat turun di makmal-makmal komputer di setiap sekolah menengah bagi pelajar mempelajari dan membuat kajian tentang penggunaan bahasa Arab di peringkat STAM bukan saja untuk mengetahui aspek kosa kata dan kata kunci tetapi juga aspek morfologi, sintaksis, gaya bahasa dan sebagainya.

Objektif

Kajian ini dijalankan bagi mencapai objektif di bawah:

1. Membina korpus bagi dua subjek yang dikaji diperkeikan STAM melalui data dari buku-buku teks STAM.
2. Mengenal pasti kosa kata yang kerap digunakan di dalam dua buku teks di peringkat STAM dan kata kunci-kata kunci bagi subjek-subjek tertentu di peringkat ini.

Metodologi

Oleh kerana semua buku teks STAM hanya diperolehi dalam bentuk hardcopy, dua buah buku teks yang dipilih diimbas dan dipindahkan dalam bentuk softcopy. Dua buku ini merangkumi dua subjek di peringkat STAM iaitu subjek Fiqh dan Hadith. Secara keseluruhan korpus ini mengandungi sekitar 124,500 perkataan. Data yang telah dipindahkan ke bentuk softcopy disunting semula agar bersesuaian dengan perisian komputer yang akan digunakan dalam analisis frekuensi perkataan dan kata kunci.

**Carta alir 1: Proses pembinaan dan analisis korpus**

**Pembinaan Korpus**

**Kandungan Data**

Korpus yang dibina meliputi data dari dua buah buku teks bagi subjek Fiqh dan Hadith. Tajuk dua buku tersebut dan jumlah perkataan bagi setiap buku adalah seperti dalam Jadual 2 berikut:

<table>
<thead>
<tr>
<th>Subjek</th>
<th>Tajuk Buku Teks</th>
<th>Jumlah Perkataan</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiqh</td>
<td><em>Al-Iqna’</em></td>
<td>93,508</td>
</tr>
<tr>
<td>Hadith</td>
<td><em>Al-Ahadith al-Mukhtarah min Fath al-Mubdi</em></td>
<td>31,049</td>
</tr>
<tr>
<td></td>
<td>Jumlah</td>
<td>124,557</td>
</tr>
</tbody>
</table>

(1) Proses Pembinaan Korpus

<table>
<thead>
<tr>
<th>Pengumpulan data</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Buku Teks 1</td>
<td>PDF</td>
</tr>
<tr>
<td>Buku teks 2</td>
<td></td>
</tr>
</tbody>
</table>

(2) Proses Analisis Korpus

<table>
<thead>
<tr>
<th>Kekerapan perkataan</th>
<th>Dapatan</th>
<th>Wordsmith</th>
<th>Fail Plain Text</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Kata kunci</th>
</tr>
</thead>
</table>
Perbezaan jumlah perkataan yang jelas antara kedua buku teks tidak menjejaskan analisis perbandingan kerana ia telah disetarakan dengan menggunakan ujian _likelihood-ratio_ yang terdapat di dalam perisian Wordsmith yang dipilih.

**Langkah Pembinaan Korpus**

Pembinaan korpus dalam kajian ini melibatkan 3 langkah:

**Mengumpul data**

Bagi membolehkan analisis korpus dilakukan secara saintifik menggunakan perisian komputer, pengkaji mesti memastikan data disediakan dalam bentuk salinan lembut (_softcopy_). Oleh kerana pengkaji hanya mempunyai data buku teks STAM dalam bentuk salinan keras (_hardcopy_), langkah ini melibatkan proses memindahkan teks-teks tersebut ke dalam bentuk _softcopy_. Semasa proses pemindahan tersebut, banyak kesalahan ejaan berlaku dan ini menuntut pengkaji melakukan proses suntingan berpandukan kepada teks asal.

**Mengkod data**

Sejauh mana proses mengkod data diperlukan adalah ditentukan oleh tujuan dan kemampuan perisian komputer yang akan menganalisis korpus yang dibina. Ia penting dijelaskan supaya data yang dimasukkan ke dalam perisian komputer dapat dianalisis dengan tepat berdasarkan ciri bahasa yang dikehendaki pengkaji. Bertitik tolak dari hal ini, pengkodan data hanya melibatkan proses mengasingkan tambahan huruf di hadapan perkataan.

Dalam membincangkan hal ini, bahasa Arab secara umumnya merupakan bahasa yang kompleks dari pelbagai aspek bermula dari sebutan hurufnya hingga kepada aspek tatabahasa, sastera dan ilmu linguistiknya. Antara ciri bahasa Arab ialah kewujudan sambungan huruf tambahan di hadapan dan belakang perkataan seperti _ال_ _معرفة_، _ل_ _ر_ _ك_ _ب_ _م_ dan sebagainya. Semua huruf bersambung ini akan merubah bentuk fizikal sesuatu perkataan itu. Memandangkan perisian yang digunakan menganalisis sesuatu perkataan mengikut sela di antara dua ruang kosong, maka proses mengkod dilakukan dengan memisahkan huruf sambungan ini dari perkataaanannya. Contohnya perkataan _حديث_ akan menjadi _ف_ _يكتب_ _فيكتب_ dan perkataan _فيكتب_ akan menjadi _ف_ _يكتب_ _فيكتب_ setelah dipisahkan. Ini dilakukan supaya perisian tersebut dapat menganggap perkataan _حديث_ dan _حديث_ sebagai satu perkataan yang sama dan dianalisis dalam satu entri.


**Menyimpan data**

Data yang telah dikod disimpan di dalam MS Word di dalam dua fail, pertama, fail yang diberikan tajuk _al-Iqna’_ dan kedua, bertajuk _al-Ahadith al-Muhtarah fi Fath al-Mubdi_. Oleh kerana perisian Wordsmith yang digunakan
dalam kajian ini tidak dapat memproses data dalam bentuk Word (*.docx), satu salinan data dipindahkan dalam bentuk plain text (*.txt) dengan tajuk fail yang sama.

**Pengecualian Perkataan**

Seperti kelaziman dalam kajian teks, tidak semua perkataan dianalisis. Lebih-lebih lagi jika sesuatu kajian itu melibatkan jumlah perkataan yang sangat besar. Justeru, hanya perkataan yang membawa erti signifikan kepada objektif kajian sahaja akan dianalisis. Dalam kajian ini, perkara yang menjadi tumpuan adalah kosa kata penting dan khusus dalam dua buku teks yang dikaji seperti yang telah dijelaskan.

Oleh itu, perkataan yang dianggap terlalu umum penggunaannya serta tidak dapat menggambarkan gaya penggunaan perkataan yang signifikan telah dikecualikan. Ini termasuklah beberapa kategori perkataan seperti penanda wacana dan kata penghubung. Kategori perkataan ini memang banyak terdapat dalam apa jua jenis buku dan tidak memberikan banyak indikasi kepada gaya penggunaan perkataan. Atas alasan ini, hanya kategori kata nama dan kata kerja diambil kira sementara huruf diabaikan.

**Analisis dan Dapatan**

Perbentangan dapatan dalam kajian ini dibahagikan kepada tiga komponen utama:

1. Kosa kata penting dalam buku teks 1 - *al-Ahadith al-Muhktarah min Fath al-Mubdi*
2. Kosa kata penting dalam buku teks 2 – *al-Iqna’*
3. Kosa kata khusus mengikut buku teks (kata kunci)

**Kosa Kata Penting dalam Buku Teks 1 – *Al-Ahadith Al-Muhktarah Min Fath Al-Mubdi***

Dalam kajian ini perkataan yang paling kerap digunakan dianggap paling penting dan mesti difahami pelajar. Kepentingannya dalam sesuatu subjek itu digambarkan melalui kekerapan penggunaannya. Selain daripada itu, kata kunci bagi sesuatu subkorpus juga mesti difahami pelajar bagi penguasaan menyeluruh ke atas sesuatu subjek. Jadual 3 berikut menunjukkan senarai 30 perkataan paling kerap digunakan mengikut susunan.

<table>
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<tr>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
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<th>%</th>
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<td>0.24</td>
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<td>کسر</td>
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<td>3</td>
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<td>0.69</td>
<td>13</td>
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<td>0.22</td>
<td>23</td>
<td>مراد</td>
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</tr>
<tr>
<td>4</td>
<td>سلم</td>
<td>253</td>
<td>0.65</td>
<td>14</td>
<td>نسخة</td>
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<td>0.20</td>
<td>25</td>
<td>أول</td>
<td>48</td>
<td>0.12</td>
</tr>
</tbody>
</table>
Jadual 3 menunjukkan senarai kekerapan 30 perkataan yang paling kerap digunakan dalam buku teks 1 (al-Ahadith al-Muhktarah min Fath al-Mubdi). Ia menunjukkan bahawa perkataan yang paling kerap diulang adalah نبي صلى الله عليه وسلم dengan perkataan sebanyak 138 kali, 253 kali. Perkataan tidak dianalisis kerana ia dari kategori huruf yang diabaikan. Dari aspek kata kerja, kata kerja (telah berkata) merupakan perkataan yang paling kerap digunakan dengan 546 kali. Ini bertepatan dengan ciri hadith yang dipindahkan dari satu generasi ke satu generasi melalui perturutan sebelum zaman pembukuananya. Variasi lain bagi kata kerja ini juga terdapat di dalam senarai iaitu قول (pengucapan), قول (berkata) dan قول (telah dikatakan) dengan 92, 72 dan 53 frekuensi. Sementara itu, kewujudan perkataan KESR جمع، Fتح، مهملة mendapat perhatian yang lebih kerana menunjukkan bahawa buku ini amat mengambil berat terhadap ketepatan sebutan perkataan terutama perkataan yang jarang ditemui. Ia bukan sahaja diletakkan baris secara fizikal tetapi dinyatakan jenis barisnya dalam bentuk perkataan.

Jadual 4
Senarai Frekuensi Kata Nama Selepas 30 Perkataan Pertama dalam Buku Teks 1

<table>
<thead>
<tr>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
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<td>ترك</td>
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</tr>
<tr>
<td>2</td>
<td>ناس</td>
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<td>أهل</td>
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<tr>
<td>4</td>
<td>مسلم</td>
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<td>0.09</td>
<td>14</td>
<td>مسجد</td>
<td>30</td>
<td>0.08</td>
<td>24</td>
<td>صفة</td>
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<td>5</td>
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<td>36</td>
<td>0.09</td>
<td>15</td>
<td>يوم</td>
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<td>6</td>
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<td>33</td>
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<td>7</td>
<td>حان</td>
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<td>نبوة</td>
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<td>8</td>
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<td>0.07</td>
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<td>راء</td>
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<tr>
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<td>همرة</td>
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<td>حق</td>
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<tr>
<td>10</td>
<td>سكون</td>
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<td>0.08</td>
<td>20</td>
<td>نصب</td>
<td>28</td>
<td>0.07</td>
<td>30</td>
<td>واحد</td>
<td>24</td>
<td>0.06</td>
</tr>
</tbody>
</table>

Jadual 4 menunjukkan senarai kekerapan kata nama selepas 30 perkataan pertama dalam buku teks 1. Ia menunjukkan bahawa perkataan yang membawa maksud baris dan kaedah mengebut huruf sesuatu perkataan seperti yang telah dibincangkan masih kerap digunakan. Ia diwakili oleh kekerapan penggunaan perkataan سكن، همرة، معجمة huruf ميم dan راء. Perkataan-perkataan ini muncul antara perkataan yang kerap digunakan kerana ia terdapat dalam hampir semua subjekt berbanding kebanyakan kata nama lain yang digunakan mengikut topik pembincangan sesuatu hadith.

Jadual 5
Senarai Kekerapan Kata Kerja Selepas 30 Perkataan Pertama dalam Buku Teks 1

<table>
<thead>
<tr>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
<th>Bil</th>
<th>Perkataan</th>
<th>F</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>قال</td>
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<td>11</td>
<td>أجيب</td>
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<td>0.05</td>
<td>21</td>
<td>يتكلم</td>
<td>14</td>
<td>0.04</td>
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<td>جم</td>
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<td>ينذل</td>
<td>13</td>
<td>0.03</td>
</tr>
<tr>
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<td>كانت</td>
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<td>0.08</td>
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<td>ذهب</td>
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<td>0.07</td>
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<td>ستعت</td>
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<td>25</td>
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</table>
Jadual 5 menunjukkan senarai kekerapan kata nama selepas 30 perkataan pertama dalam buku teks 1. Ia menunjukkan bahawa pada frekuensi di antara 39 bagi perkataan قالت (telah berkata) dan frekuensi 11 bagi perkataan تعلم (mengetahui) merupakan perkataan yang dianggap umum dan rata-rata pelajar peringkat STAM memahami. Walaupun begitu, dalam proses P&P yang sedang berjalan, para guru masih perlu memastikan semua pelajar memahami maksud perkataan-perkataan tersebut. Selain daripada itu, kewujudan perkataan seperti تكلم يتكلم dan قالت قول (الحديث) yang membawa maksud ‘menyatakan sesuatu’, mengukuhkan daptan sebelum ini bahawa topik perbincangan dalam pengajaran hadith berkisar tentang ucapan Rasulullah yang disampaikan melalui perantaraan hadith. Sementara kewujudan perkataan رضى (telah diredhoi) dengan 22 frekuensi adalah disebabkan variasi ejaan yang digunakan pada huruf ي (ya). Dalam kebanyakan keadaan di dalam buku ini, perkataan رضى dieja menggunakan huruf ي dengan dua noktah di bawahnya tetapi terdapat 22 frekuensi dieja tanpa noktah. Frekuensi yang lebih banyak bagi perkataan ini menggunakan dua noktah terdapat dalam jadual 3 dengan 156 frekuensi.

Kosa Kata Penting dalam Buku Teks 2 – al-Iqna’

## Jadual 6

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</table>

Jadual 6 menunjukkan senarai kekerapan 30 perkataan tertinggi di dalam senarai kekerapan bagi buku teks 2 (al-Iqna’). Jadual menunjukkan bahawa perkataan yang paling kerap diulang adalah الله dengan dengan 583 frekuensi atau 0.48% dari jumlah keseluruhan perkataan. Oleh kerana perbincangan buku ini berkaitan hukum-hukam, kewujudan kata kerja قال (telah berkata) menunjukkan bahawa setiap hukum yang dibincangkan banyak mengaitkan ayat al-Quran. Sementara perkataan-perkataan lain seperti مال (harta), قال (membunuh), نية (diat), ولد (anak lelaki), زوج (suami) dan يمن (sumpah) menunjukkan tajuk-tajuk perbincangan dalam buku ini berkaitan jenayah, wasiat dan perkahwinan. Berbeza dengan buku teks 1, perkataan-perkataan khusus yang merujuk kepada tajuk tertentu berada pada 30 perkataan tertinggi. Sedangkan perkataan khusus pada buku 1 banyak terdapat pada frekuensi yang lebih rendah. Ini adalah disebabkan tajuk-tajuk yang dibincangkan dalam buku teks 2 lebih besar berbanding buku 1. Oleh itu kekerapan penggunaan perkataan yang sama adalah lebih tinggi.

## Jadual 7

Senarai Kekerapan Kata Nama Selepas 30 Perkataan Pertama dalam Buku Teks 2
Analisis Perbandingan Antarabukut Teks1 dan 2

Kosa kata khusus mengikut buku teks (kata kunci)

Jadual 9

Analisise Perbandingan Antara Bukut Teks 1 dan 2
Jadual 9 menunjukkan keputusan perbandingan antara buku teks 1 dan 2 dari dua perspektif, pertama, perbandingan buku 1 kepada buku 2 dan kedua, perbandingan buku 2 kepada buku 1. Dua analisis ini dijalankan serentak bagi menjelaskan perbandingan yang menjadi kata kunci bagi setiap buku teks. Pada analisis pertama (buku 1 kepada buku 2), didapati bahawa penggunaan ungkapan قال نبي/رسول الله صلى الله عليه وسلم paling banyak digunakan dalam buku teks 1 dan menjadi kata kunci bagi buku tersebut. Begitu juga dengan perkataan رواية (riwayat) danحديث (hadith) yang merujuk secara langsung kepada percakapan aspek hadith. Berbanding buku teks 2, buku teks 1 lebih mementingkan sebutan sesuatu perkataan dengan tepat. Ini dibuktikan dengan kewujudan perkataan ضم danفتح yang merujuk kepada baris bagi perkataan-perkataan tertentu.


Kesimpulan

Hasil dari pembinaan korpus dan analisis frekuensi perkataan dalam dua buku teks STAM adalah seperti berikut:

1. Kejayaan membina korpus ke atas dua buah buku teks di peringkat STAM sebagai projek awal memungkinkan pembinaan korpus yang lebih menyeluruh bagi mencakupi semua buku teks di peringkat tersebut yang bejumlah 19 buah semuanya bagi 12 subjek. Korpus yang dibina boleh diprogramkan agar boleh dimuat turun di makmal komputer di setiap sekolah menengah bagi pelajar mempelajari dan membuat kajian tentang penggunaan bahasa Arab diperingkat STAM bukan sahaja untuk mengetahui aspek kosa kata dan kata kunci tetapi juga aspek morfologi, sintaksis, gaya bahasa dan sebagainya.


4. Kewujudan perkataan yang merujuk kepada baris dalam buku teks 1 seperti معجمة مهملة، فتح، ضم، فتح، كسر، مهملة menunjukkan bahawa ia amat mengambil berat tentang ketepatan sebutan beberapa perkataan penting kerana kesalahan sebutan akan membawa kepada kesalahan maksud. Ini berbeza dengan buku teks 2 yang tidak menekankan ciri ini. Sebaliknya buku teks 2 banyak merujuk kepada penulis Matan Abu Shuja’ dengan kekerapan yang tinggi pada penggunaan perkataan مصنف. Selain daripada itu, pada setiap permulaan subtajuk, penulis buku ini banyak memulakannya dengan perkataan تنبيه yang untuk menarik perhatian pembaca.

5. Dari aspek kata nama, dapatan menunjukkan bahawa buku teks 1 amat mementingkan ketepatan sebutan sesuatu huruf seperti yang telah dijelaskan. Sementara situasi yang berbeza di dalam buku teks 2, di mana kata nama yang kerap digunakan sama ada lebih menjurus kepada tajuk yang dibincangkan atau bersifat umum. Dalam proses P&P subjek tersebut, perkataan yang menurut kepada tajuk-tajuk tertentu mesti diberi keutamaan untuk difahami tanpa mengabaikan pemahaman perkataan umum.

6. Dalam aspek kata kerja, dapatan menunjukkan bahawa buku teks 1 didominasi oleh perkataan-perkataan yang membawa maksud ‘berkata dan bereka’ dalam pelbagai variasi. Ini sesuai dengan sifat hadith yang disebarkan melalui percakapan sebelum penulisannya. Dalam buku teks 2, kata kerja-kata kerja yang kerap digunakan tidak merujuk kepada mana-mana tajuk yang dibincangkan kecuali beberapa perkataan. Sebaliknya, kata kerja yang merujuk kepada perkataan hukum dan umum kepada semua tajuk fiqh lebih banyak digunakan.

7. Analisis kata kunci bagi kedua-dua buku teks menunjukkan bahawa buku teks 1 banyak merujuk kepada ucapan hadith Rasulullah s.a.w kerana ia menjadi topik utama perbincangan. Sementara dalam buku teks 2, perkataan-perkataan yang menurut kepada sesuatu tajuk fiqh yang dibincangkan menjadi kata kunci buku tersebut.


Rujukan


