CHAPTER II

REVIEW OF RELATED STUDY

A. Previous Studies

There were several of previous studies related to this research, and they were:

Firstly, the research done by Norudin Mansor, from University Teknologi MARA, Faculty of Business Management, Malaysia, and Mohamed Ishak Badarudin and Azman Che Mat, from University Teknologi MARA, Academy of Language Studies, Malaysia studied about teachers' perspective of using English as a medium of instruction in mathematics and science subjects. The implementation of the teaching of Mathematics and Science in English has given rise to unprecedented issues. This study has looked into the impact of prominent independent variables such as, environment, teaching methodology and attitude. The environment as a construct was discovered to be significantly associated with the achievement of students at school. This study also found that, attitudes relate to the teachers' and students' attitude. Performance of students is also affected by the attitude of teachers. The correlation between teachings as a construct was not able to provide a strong impact on the performance of the student.[1]

Secondly, the research done by Tsui Anna Po-yung and Ngo Hang-yue, from Chinese University of Hong Kong studied about Students' Perceptions of English-Medium Instruction in a Hong Kong University. After factor analysis and reorganizing some scale items, four factors have

clearly emerged with sufficient alpha reliability (ranging from 0.797 to 0.880). They were

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[1] Norudin Mansor, Mohamed Ishak Badarudin, and Azman Che Mat, *"Teachers' Perspective of Using English as a Medium of Instruction in Mathematics and Science Subjects"* International Journal of Instruction, University Technology MARA, Malaysia, . Vol.4, No.2 July 2011.

"English for career", "English for learning", "English for internationalization" and "Preservation of tradition" that had differential effects on students' university life satisfaction and intention of migration. While positive significant effects were found for two factors "English for career" and "English for internationalization" on "University life satisfaction", the other two factors "English for learning" and "Preservation of tradition" showed positive effects on "Intention of migration". But no effect was found regarding the four factors on the academic performance of the students.[2]

Thirdly, the research done by Nha T. T. Vu and Anne Burns from University of New South Wales, Australia studied about English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers. Based on the previously discussed challenges that the EMI lecturers were facing (language proficiency, student diversity, pedagogy, and resource availability), the study suggests a number of implications, not only in this context but also in similar Asian contexts initiating EMI programs. *First*, EMI lecturers should first be screened for their language abilities, especially their oral skills, and confidence in lecturing in English and handling questions from students. *The second* implication involves pedagogical support assisting lecturers with effective teaching techniques to encourage student participation and minimize teacher talk as Ball and Lindsay stated in Anne Burns. *The third* implication requires institutional investment in English materials and technology to ensure that adequate facilities are accessible. The final implication involves reviewing student recruitment procedures. Adequate English entry requirements are necessary to enhance the benefits for enrolled students.[3]

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[2] Tsui Anna Po-yung, Ngo Hang-yue, *"Students' Perceptions of English-Medium Instruction in a Hong Kong University "* Chinese University of Hong Kong, Hong Kong.

[3] T. T. Vu and Anne Burns*," English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers"* The Journal of Asia Tefl, University of New South Wales, Australia. Vol.11, No. 3, Pp. 1-31, Fall 2014

Fourth, the research done by Sahika Tarhan that studied about Perceptions of Students, Teachers and Parents regarding English-Medium Instruction at Secondary Education. Results indicated that students, teachers and parents do not favor English-medium instruction at secondary education. Regardless of their position on English-medium instruction, participants underscored problems of implementation of English-medium instruction at Anatolian high schools. A positive correlation was found between perceptions of English and perceptions of English-medium instruction for each group. Results also showed that all groups perceive English positively as a foreign language, and support the teaching and learning of English. According to students' and teachers' perceptions, English- medium instruction influences the instructional process in math and science in Anatolian high schools, and poses problems particularly in the learning of the subject matter. [4]

Finally, the research done by Chu Chun Pong from Hong Kong University studied about students' perceptions of the medium of instruction in science subjects -a case study. The research found that teachers use less English in the lessons than their students expected them to use. This is due to the perceived insufficient proficiency of English language of the students rather than the incompetence of teachers to use English as the medium of instruction. Other findings suggest that high achievers are more confident to study in English. They believe that they have no problems in understanding textbooks in English. They also believe the use of English as a medium of instruction enhances their English reading and writing skills without lowering their Chinese standard. On the contrary, low achievers in the English medium schools

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[4] Şahika Tarhan, "*Perceptions Of Students, Teachers And Parents Regarding English-Medium Instruction At Secondary Education*" Middle East Technical University, September 2003.

and students in the Chinese medium schools are much less confident to study in English. It is not unreasonable to say that they probably do not benefit from English medium education.[5]

B. English as a Medium of Instruction (EMI)

1. An overview of EMI

Defining EMI from the language teaching literature is not a straightforward task. EMI is usually traced to the European content and language integrated learning (CLIL) movement, content-based teaching (CBT) and bilingual education in native English-speaking (NES) contexts. However, the concept extends beyond methodology into policy-making and language planning. Moreover, Dudley-Evans in Burns that EMI contexts are not limited to so-called NES countries and every context has different focal concerns.[6]

Davison in Burns stated that EMI contexts vary according to the relationships to the first language (L1). Where English is the first language of the majority of the population and the main instructional language in schools, the main issues, such as language and content integration and the roles of language and content teachers, are at the "micro level" of the classroom.[7] Tollefson in Burns claimed that in non-NES situations EMI may be mandated as a medium of instruction by governmental or institutional language policies. In this context, EMI needs to be examined at both the macro level of language policies and the micro level of EMI practitioners.[8]

[5] Chu Chun Pong, "*Students' perceptions of the medium of instruction in sciencesubjects: a case study*", University of Hong Kong, August 1995.

[6] T. T. Vu and Anne Burns, *" English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers"* p.3

[7] Ibid.

[8] Ibid.

According to Tollefson, Chang, Coleman, and Crystal in Burns macro-level concerns include the socio-economic contexts of EMI policies, the role of English in language policies, the relationship between English and the local languages, the effectiveness of the EMI policies, and factors influencing EMI adoption.[9] On the one hand, English is assumed to play an important role in "increasing employability, facilitating international mobility (migration, tourism, studying abroad), unlocking development opportunity and accessing crucial information, and acting as an impartial language".

Therefore, Erling, Kyeune stated in Burs it is often greatly welcomed by governments as well as individuals with a tendency for English to be introduced at an early educational level.[10]

2. Challenges for Lecturers

The literature identifies four major EMI challenges facing teachers, including teachers' language abilities, students' proficiency, appropriate methods, and inadequate resources. First, teachers are reported to experience linguistic difficulties. Vinke et al. in Burns, for instance, report that EMI led to higher demands on the teaching skills of content lecturers' in the Netherlands: the lecturers employed slower speech rates and less flexibility in dealing with unpredicted incidents and various challenges in language use. They had difficulty in expressing themselves effectively, especially in paraphrasing, searching for words, and refining statements. Such factors potentially result in detrimental effects on students' learning, such as less content coverage and knowledge loss.[11] Similarly, Smith & Coleman in Burns identifies 15 common problems that European tertiary EMI programs are facing, for example, the need to improve language

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[9] Ibid.

[10] T. T. Vu and Anne Burns,*" English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers"* p.4

[11] Ibid.p.5

skills for local students and staff and the supply of competent English-speaking content lecturers.[12]

The second challenge for EMI teachers is a search for effective pedagogy. Wilkinson in Burns found that Dutch content lecturers had to spend more time using EMI; the communication became "poorer" as a result of their weaker ability to use the instructional language orally, which clearly lowered "the quality of education". His findings suggest that EMI can lead to effective content learning if instructional techniques (e.g. code-switching between L1 and L2) are adapted, more time is allocated, and most of the program is offered in EMI. However, the appropriateness of 'code-switching' in EMI remains controversial. When communication in English fails, teachers may take it for granted that the mother tongue will provide a substitute for learning.[13] Kyeyune, nevertheless, in Burns points out that this alternative is pedagogically "wrong" because it fails "to facilitate the development of learners' academic literacy".[14]

Dang et al in Burns stated that the final challenge causing implementation problems is limited resources.[15] Baldauf, Kaplan, Kamwangamalu, and Bryant in Burns, examining several Asian countries' language policies, conclude that "funding for normal programs, the training of teachers and money for textbooks are all inadequate".[16]

In short, lecturers face multiple challenges in adopting EMI. Although any specific context is unlikely to experience all these problems, it is worth examining one context as a case study to draw out implications that may be relevant to others.

C. Perception

[12] Ibid.p.5

[13] T. T. Vu and Anne Burns,*" English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers"* p.4

[14] Ibid.

[15] T. T. Vu and Anne Burns,*" English as a Medium of Instruction: Challenges for Vietnamese Tertiary Lecturers"* p.6

[16] Ibid

1. Perception in Psychology

Perception can be defined as our recognition and interpretation of sensory information. Perception also includes how we respond to the information. We can think of perception as a process where we take in sensory information from our environment and use that information in order to interact with our environment. Perception allows us to take the sensory information in and make it into something meaningful.[17]

Perception (from the Latin perceptio, percipio) is the process of attaining awareness or understanding of the environment by organizing and interpreting sensory information. All perception involves signals in the nervous system, which in turn result from physical stimulation of the sense organs. For example, vision involves light striking the retinas of the eyes, smell is mediated by odor molecules and hearing involves pressure waves.[18]

Psychologist Jerome Bruner has developed a model of perception. According to him people go through the following process to form opinions:

1. When a perceiver encounters an unfamiliar target we are opened different informational cues and want to learn more about the target.

2. In the second step we try to collect more information about the target. Gradually, we encounter some familiar cues which help us categorize the target.

3. At this stage the cues become less open and selective. We try to search for more cues that confirm the categorization of the target. At this stage we also actively ignore and even distort

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[17] Yolanda Williams, http://study.com/academy/lesson/what-is-perception-in-psychology-definition-theory-quiz.html (online on Thursday, May 14, 2015)

[18] Academic Room. http://www.academicroom.com/topics/what-is-perception (online on Thursday, May 14, 2015)

cues that violate our initial perceptions. Our perception becomes more selective and we finally paint a consistent picture of the target.

According to Alan Saks and Gary Johns, there are three components to Perception.

1. The Perceiver, the person who becomes aware about something and comes to a final understanding. There are 3 factors that can influence his or her perceptions: experience, motivational state and finally emotional state. In different motivational or emotional states, the perceiver will react to or perceive something in different ways. Also in different situations he or she might employ a "perceptual defense" where they tend to "see what they want to see".

2. The Target. This is the person who is being perceived or judged. "Ambiguity or lack of information about a target leads to a greater need for interpretation and addition."

3. The Situation also greatly influences perceptions because different situations may call for additional information about the target.

2. Perception and Reality

In the case of visual perception, some people can actually see the percept shift in their mind's eye. Others, who are not picture thinkers, may not necessarily perceive the 'shape-shifting' as their world changes. The 'esemplastic' nature has been shown by experiment: an ambiguous image has multiple interpretations on the perceptual level.

This confusing ambiguity of perception is exploited in human technologies such as camouflage, and also in biological mimicry, for example by European Peacock butterflies, whose wings bear eye markings that birds respond to as though they were the eyes of a dangerous predator.

There is also evidence that the brain in some ways operates on a slight "delay", to allow nerve impulses from distant parts of the body to be integrated into simultaneous signals.

Perception is one of the oldest fields in psychology. The oldest quantitative law in psychology is the Weber-Fechner law, which quantifies the relationship between the intensity of physical stimuli and their perceptual effects (for example, testing how much darker a computer screen can get before the viewer actually notices). The study of perception gave rise to the Gestalt school of psychology, with its emphasis on holistic approach.

D. Measuring Perception

Based on the theory stated by Jusuf Ibrahim in his journal entitled "The Implementation of EMI (English Medium Instruction) in Indonesian Universities: Its Opportunities, its Threats, its Problems, and its Possible Solutions.", he stated that there are at least four factors supporting the possible implementation of EMI at Indonesian universities: 1) The fact that bilingualism gives cognitive advantages, 2) The fact that the important role of English would motivate students and teachers to learn the language, 3) The fact that EMI would give students and teachers more exposure to English and more

chances to acquire it, and 4) The fact that literacy skills and strategies acquired in a learner's native language, Indonesian, transfer to her/his second language, English.

This research had questionnaire (see appendix of questionnaire) as the instrument. It consisted of 14 questions related to English-Medium Instruction. To measure the students' perception, it was used questionnaire where the items led to the theory of Jusuf Ibrahim above, so that the perception could be measured by comparing the theory and the item on questionnaire. The explanation was as follows:

1. The fact that bilingualism gives cognitive advantages. It was match with the item on questionnaire number 14 and 8.

2. The fact that the important role of English would motivate students and teachers to learn the language. It was match with the item on questionnaire number 1, 2, 3, 4, 10, 11, 12.

3. The fact that EMI would give students and teachers more exposure to English and more chances to acquire it. It was match with the item on questionnaire number 5, 6, 7.

4. The fact that literacy skills and strategies acquired in a learner's native language, Indonesian, transfer to her/his second language, English. It was match with the item on questionnaire number 4, 8, 9.

E. The Effective Language Teaching

1. Target language use

Judd, Tan, & Walberg in Harris stated that one of the principles of L2 learning is that learners would receive comprehensible input. This implies that teachers must use the target

language in their teaching. Curtain in Harris examined the relationship between teacher target language use and pupils proficiency in the L2. In a study investigating foreign language teaching the US, elementary language teachers were asked to self-report of the amount of Spanish – the pupils' L2 – that they used in the classroom. The findings of the research supported the hypothesis that greater use of the target language by the teacher results in higher L2 proficiency levels in the pupils.[19]

2. Why use English?

The language used as the main language for communication in the classroom, during an English lesson can be fairly extensive and very idiomatic, particularly at 'intermediate 'and more 'advanced' 'levels' of learning. In a beginners class, gesture and tone of voice are at first more important than the actual words or phrases used to tell students what to do and how to do it. But if beginners get used to hearing nothing but English spoken during their English lesson, they will very soon understand and later learn to say words like 'good', 'altogether' etc. So, as well as learning the specific language items that are actually being taught in the lesson, they will also be practicing unconsciously a number of language skills, learning how to listen, to pick up key words, and beginning to think in English for themselves, thereby reducing the amount of interference from L1, their mother tongue. So, at the end of the year, a class taught English mainly in English, will have learnt how to listen to the flow of English, to infer points from intonation and stress. They will be familiar with using the language for two-way communication, asking as well as answering questions; they will have had extra practice in the structures they have been taught, they will have acquired patterns and lexis they have not specifically being taught, owing to the repetitive nature of classroom

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[19] John Harris and Pádraig Ó Duibhir, "*Effective Language Teaching: A Synthesis of Research*" p.65

situations. They will learn to recognize 'advanced' structures at an early stage. This will be a great help to them later when they are asked to produce these structures themselves. Language is much better learnt through real use than through patterns drills and exercises.[20]

3. EMI in use

There is now irrefutable evidence that the world is experiencing a rapid increase in the teaching of academic subjects through the medium of English in countries where the first language of the majority of the population is not English. English Medium Instruction (EMI) is a growing global phenomenon taking place primarily in tertiary education.[21] EMI students and teachers will learn not 'about' English (as a subject) but 'through' English (as a medium). As a medium, English is likely to be used to perform academic tasks involving various classroom-related communicative activities like gaining information (listening & reading) and conveying information (speaking & writing). This situation certainly provides students and teachers with more exposure to the language and more chances to use it, which are important conditions for second language acquisition. The fact that the goal of EMI is the content of instruction (meaning) rather than the English language (form) suggests that a second language can be acquired simultaneously or unintentionally. This idea finds justification in Krashen's Monitor Model that had pointed out in Jusuf Ibrahim[22], which believes that it is 'acquisition' (subconscious process) rather than 'learning' (conscious process) which accounts for language

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[20] Jane Willis,"*Learning English Through English*" Language Handbooks for language teachers, Longman, P.16

21 Ernesto Macaro*,"English Medium Instruction: Time to start asking some difficult questions"*https://www.modernenglishteacher.com/english_medium_instruction_time_to_start_asking_some_difficult_questions_25769821842.aspx accessed on 20 may 2015.

[22] Jusuf Ibrahim "*The Implementation of EMI (English Medium Instruction) in Indonesian Universities: Its Opportunities, its Threats, its Problems, and its Possible Solutions*" P.3

development. 'Learning', in his opinion, serves only as a monitor polishing what the acquired system has produced.

In addition, the fact that EMI will allow students and teachers to read in English (textbooks) more extensively can contribute to the success of acquiring the language. Krashen in Jusuf also believes that second language acquisition can occur only when there is comprehensible input. If the input contains forms and structures just beyond the learner's current proficiency level in the language ('i + 1'), then comprehension and acquisition will take place. Thus, textbook-reading is certainly a good source for rich language input for students, which is a potential source for intake or language acquisition.

The third component present in EMI and necessary for second language acquisition is comprehensible output, the language produced by the learner. Swain stated in Jusuf[23], comprehensible input alone is not a sufficient condition for second language acquisition. The opportunity to engage in meaningful oral exchanges (in the classroom or in the community) is also a factor necessary for second language acquisition, because it allows learners to test their hypotheses about their inter language system, receive feedback on it, and develop fluency and accuracy. The fact that EMI offers students and teachers more opportunities to speak English (e.g. in lectures, comments, discussions, presentations, interactions, tests, etc.) means that it is a source of comprehensible output, another component responsible for second language acquisition.

The general assumption underlying EMI implementation at Indonesian universities that it will improve students' and teachers' general proficiency in English is not entirely wrong, because using English as a medium to teach content subjects (EMI) allows students and teachers more

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[23] Ibid jusuf Ibrahim "*The Implementation of EMI (English Medium Instruction) in Indonesian Universities: Its Opportunities, its Threats, its Problems, and its Possible Solutions*" P.4

exposure to the language (comprehensible input) and opportunity to use it (comprehensible output) rather than teaching English as a subject.

F. EFL Teaching Methodology

It is important to use English in the classroom as the target language and as the teaching language. There are times, however, when the limited use of the students' first language can be useful. Be careful though. Some native speakers lose their value when they begin teaching in the L1. Most EFL students have already studied English for years in their L1 but still cannot speak fluently. Therefore, though there are many approaches to teaching methodology in TEFL/TESOL, two teaching methods are most commonly taught in TEFL certification program. Methodology taught in certification and training programs is generally either "PPP" (present, practice and production) or "ESA" (engage study and activate). That does not mean they are the best approaches. They are just the most well known approaches and more likely to be requested by employers or Directors of Studies (DOS).[24]

1. "PPP" Presentation, Practice and Production

"Presentation" involves presenting the target language (the language to be taught to the students) to the students generally through eliciting and cueing of the students to see if they know it and then providing the language if no one does.

The target language is usually put on the board either in structure (grammar-type) charts or in dialogs. Presentation features more "teacher talk" than the other

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[24] EFL Teaching Methods TEFL Methodology: Methods for Teaching English in the EFL Classroom http://teflbootcamp.com/teaching-skills/teaching-methods for-tefl/ online on may 20 2015

stages of the lesson, generally as much as 65-90% of the time. This portion of the total lesson can take as much as 20-40% of the lesson time. Next comes "Practice" where the students practice the target language in one to three activities that progress from very structured (students are given activities that provide little possibility for error) to less-structured (as they master the material).

These activities should include as much "student talk" as possible and not focus on written activities, though written activities can provide a structure for the verbal practices. Practice should have the "student talk time" range from 60-80 percent of the time with teacher talk time being the balance of that time. This portion of the total lesson can take from 30-50% of the lesson time.

"Production" is the stage of the lesson where the students take the target language and use it in conversations that they structure (ideally) and use it to talk about themselves or their daily lives or situations. Production should involve student talk at as much as 90% of the time and this component of the lesson can/should take as much as 20-30% of the lesson time.

As you can see the general structure of a PPP lesson is flexible but an important feature is the movement from controlled and structured speech to less-controlled and more freely used and created speech. Another important feature of PPP (and other methods too) is the rapid reduction of teacher talk time and the increase in student talk time as you move through the lesson.

One of the most common errors untrained teachers make is that they talk too much. EFL students get very little chance to actually use the language they learn and the EFL classroom must be structured to create that opportunity.

2. "ESA" Engage, Study and Activate

Roughly equivalent to PPP, ESA is slightly different in that it is designed to movement back and forth between the stages. However, each stage is similar to the PPP stages in the same order. Proponents of this method stress its flexibility compared to PPP and the method, as defined by Jeremy Harmer (its major advocate), uses more elicitation and stresses the "Engagement" of students in the early stages of the lesson.

ESA is superior method to PPP when both are looked at from a rigid point of view. But, EFL is not rigid and you should not adhere to any one viewpoint or method. PPP is often an easier method for teacher-trainees to get a handle on but probably more programs teach ESA than PPP these days, especially those that teach only one of the approaches.