

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter discusses: (1) concept of perception; (2) the characters of teaching-learning process; (3) the concept of English as a medium of instruction; (4) the benefits in using English as a medium of instruction; (5) the difficulties in using English as a medium of instruction; (6) the factor contributing to the students' difficulties in using English as a medium of instruction and (7) previous related studies.

#### **2.1. Concept of Perception**

Perception is the process of making sense that can be made by someone in an suitable response. Like most concepts within the social science disciplines, perception (or what other scholars refer to as social perception) has been defined in a variety of ways since its first usage. The word Perception comes from the Latin words *perception*, *percipio*, meaning receiving, collecting, action of taking possession, apprehension with the mind or senses. From the Chambers Dictionary perception is defined as an act of being aware of one's environment through physical sensation, which denotes an individual's ability to understand. According to Michener, DeLamater and Myers (2004), social perception refers to constructing an understanding of the social world from the data we get through our senses.

In Psychology, Philosophy and the cognitive sciences, perception is the process of attaining awareness or understanding of sensory information. Forgas and Melamed (1976) define that perception as the process of information extraction to determine how humans interpret their surroundings. Nelson and Quick (1997) also add that social perception is the process of interpreting information about another person. In addition, Rao and Narayan (1998) emphasize

that perception ranks among the important cognitive factors of human behavior or psychological mechanism that enable people to understand their environment. Then they define that perception is the process whereby people select, organize, and interpret sensory stimulations into meaningful information about their work environment. They also argue that perception is the single most important determinant of human behavior, stating further that there can be no behavior without perception. From many definitions and theories of perception, most define that perception as the process of recognizing (being aware of), organizing (gathering and storing), and interpreting (binding to knowledge) sensory information. Perception deals with the human senses that generate signals from the environment through sight, hearing, touch, smell and taste.

The brain is first of all an open system, genetically based yet responsive to environment and experience. It begins life with over a hundred billion neurons and sends the basic information from its unit system. Neuroresearcher V.S. Ramachandran (1998) writes that a piece of your brain the size of a grain of sand would contain one hundred thousand neurons, two million axons and one billion synapses, all talking to one another. According to LeDoux (1996), the process of visual perception involves several basic parts, there are including:

1. The sensing of information

Raw information is gathered from the external world in the form of light falling on and reflecting from surfaces. The light stimulus that hits the back of the retina is then converted into electrochemical messages that are fed through optic nerve to unconscious processing systems in the brain. As we look at the world around us, the right hemisphere of the brain scans the environment and the left hemisphere jumps in when attention is needed. Both cognitive and emotional systems work in parallel, and both store separate memories of the experience.

2. The use of past experience

Templates of past experience are compared and matched by executive functions in working memory to what is experienced now. These templates built and stabilized by neural circuits firing again and again, act as maps for understanding new stimuli and events. In the process, emotional feelings, generated by different sub-symbolic systems and involving many brain systems, provide the vast amount of material in the process. Feelings, unconsciously developed and processed, prepare us to cognitively understand what we see.

3. The processing of information along dual pathways

Visual information takes two routes in the brain. In the organization of the visual system, stimuli in the form of light travels through the cornea and lens to the retina, is transformed into electrical signals and sent through the optic nerve to the brain, where it then splits to follow two distinct pathways. The first, the thalamo-amygdala pathway, old in terms of evolution, links directly to the brain stem and acts as a kind of 'early warning system.' It is this system which allows for the kind of quick reflexive response we think of as "fight or flight." The second, the cognitive pathway, is a relatively new pathway in terms of evolution. It leads to the primary visual cortex, where it separates again and is relayed to other visual areas for specialized processing. The end result of this processing is the conscious cognitive and emotional awareness we think of as "seeing".

## 2.2. The Characters of Teaching-Learning Process

According to *Depdiknas* (2008), the teaching and learning process should have international characters. They are as follows.

- A. Bilingual school should be able to develop creativity, innovation, reason and experiment to discover new possibilities, a joy of discovery.
- B. Bilingual school should apply active, creative, effective and enjoyable learning model; student centered; reflective learning; active learning; enjoyable and joyful learning; cooperative learning; quantum learning; learning revolution; and contextual learning which have international standard.
- C. Bilingual school should apply learning process based on ICT in all subjects.
- D. Bilingual school should use English as a medium of instruction on the teaching learning process of math, science and ICT subjects.
- E. Bilingual school use assessment model of schools from member of OECD or other countries that have international quality in education field.

There are additional characters in elements of teaching and learning process in bilingual school. They are as follows.

- A. The learning process in all subjects in bilingual school should be a role model for other schools in developing characters, personality, and leadership, entrepreneurial, patriotic and innovative.
- B. The learning process in bilingual school is enriched by learning process model of the schools from the member of OECD or other developed countries that have certain excellence in education field.
- C. Bilingual school should apply ICT-based in all subjects.

D. Bilingual school should use English in the learning process of Math, Science and ICT subjects. On the other hand, other subjects except English use *Bahasa* Indonesia.

E. Besides using English and *Bahasa* Indonesia, bilingual school could use other languages often used in international forum such as French, Spanish, Japanese, Arabic and Chinese.

### **2.3. Concept of English as a Medium of Instruction**

English as a medium of instruction (EMI) can be defined as the use of the English language to teach academic subjects in countries or jurisdictions and implemented in some countries where the first language of the majority of the population is not English. Using English as the medium of instruction as the target language in the classroom is very important to do so for the process of language learning. Dickson (1996) states that the use of the target language in the classroom greatly increases the students' exposure to the target language. Using the target language in the classroom, students are receiving more comprehensible input thus leading to more complex language structures. From the explanation above, it can be concluded that by using the target language in the classroom can provide a source of modeling for the students both in regards to the production of the language and the attitude toward the language.

Additionally, Dearden (2013) states that there appears to be a fast moving worldwide shift, in non-anglophone countries, from English being taught as a foreign language (EFL) to English being the medium of instruction (EMI) for academic subjects. However, in universities, secondary schools and even primary schools use English as a medium of instruction. The main idea of EMI is to combine the conventional instruction of content area subjects with the foreign language learning instead of mother tongue, a foreign language used as a tool for communication in different subjects such as mathematics and physics.

Although using English as a medium of instruction or as the target language by the teacher can cause some stress, but it is more very important to do so for the process of language learning. According to Dickson (1996) the importance of using the target language in the classroom are; first, the use of the target language in the classroom greatly increases the students' exposure to the target language. This is very important, especially in foreign language classrooms where the target language is not heard outside of the classroom context. The goal is to make the context as close to a second language context (where the target language would be heard outside of the classroom) as possible in order to give students mazimum exposure to the language.

Second, by using the target language in the classroom, students are receiving more comprehensible input thus leading to ore complex language structures. By using the target language, students are not only learning 'about' the language but also learning 'through' the language. Certain classroom commands or common expressions can be acquired through routine use.

Last, using the target language in the classroom can provide a source of modeling for the students both in regards to the production of the language and the attitude toward the language. If the teacher is able to show proper use of the language daily, can use that teacher as an example or model for production. In addition, if the teacher treats the language as more than just a subject for study but shows the value of the language by using it, students will be more likely to gain a better appreciation for the language.

Many studies have examined the impact of EMI on education in non-English speaking countries. Phillipson (2015) argues that such a situation is an example of linguistic dominance. He called for the linguistic dualism that generates not an English-only policy that affects mother tongue, but rather maintains cultural heritage and linguistic diversity. Mahboob (2017) discussed

that the “imposition” of English language in Pakistani higher education and the effect it has on creating class discrimination among students in a single society. In Vietnam, Manh (2012) addressed some of the factors that could cause the long-term failure of education as a result of the application of a foreign monolingual policy in education programs. In the same context, Vu and Burns (2014) added that the problems on the use of English as a medium of instruction include the language proficiency of the students, learning methods, teaching methods and the availability of appropriate resources.

In a study linked to EMI challenges, Wiseman and Odell (2014) believe that lecturers in such an educational environment believe that their role is not to help students understand English, which is the language of scientific content, but to provide content in English whether the student understands it or not. Knagg (2013) said that from the perspective of the British Council, argues that this type of teaching requires highly educated students and strong English preparation. He also states that this type of education is either detrimental or helpful. It could harm due to the lack of coverage of the curriculum in depth which is caused by the language barrier; this view is shared by Kirkgoz (2005) and Darden (2014). According to Marsh (2006), the use of English as a language of instruction in schools in some poor countries is directly linked to educational failure and deprivation. Macaro (2015) addresses the situation inside the classroom and tries to discover whether the educational process becomes less interactive between parties due to the use of a foreign language as a teaching language. He concludes that contemporary scientific research supports this finding; Airey and Linder (2006) reach the same conclusion. Similarly, Sert (2008) and Tamtam et al. (2012) show the ineffectiveness of using English to present scientific content as well as its negative impact on students' critical thinking abilities. Teachers and students will learn is not ‘about’ English (as a subject) but ‘through’ English (as a medium). Ibrahim (2014)

states that an English as a medium, English is likely to be used to perform academic tasks involving various classroom-related communicative activities like gaining information (listening and reading) and conveying information (speaking and writing). EMI will allow students and teachers to read in English (textbooks) more extensively can contribute to the success of acquiring the language. EMI offers students and teachers more opportunities to speak English (e.g. in lectures, comments, discussions, presentations, interactions, and tests), it means that it is a source of comprehensible output, another component responsible for second language acquisition.

Williams (2015) in South Korea argues that the challenges to the learning process of using English as a language of instruction are greater than opportunities for all parties, and this may be a natural consequence of implementing an accelerated language policy without paying attention to the necessary academic support. Kim (2011) believes that the purpose of this type of education is to upgrade the global and local ranking of institutions rather than the needs of students.

English education in some countries is limited English language has not been thought in primary school and the other country, English is taught at the secondary level. Nevertheless, some countries regulate the English language as a medium of teaching and compulsory right from primary school to high school. The use of English language as a medium of instruction is a policy that implemented in some countries where there is a tradition of using English in daily life or otherwise. In addition, Idris (2014) states that English is only a special foreign language usually taught as a subject in schools. The fact that the Indonesian language is also an important language (not just a vernacular) dominating important functions such as political, economic, academic, social, etc. In Indonesian society, it can certainly impose a barrier towards efforts in acquiring the English language.



Indonesia has made significant progress in access at all levels of the education system increased at a rapid rate in line with a sharp increase in the number of teachers, schools and institutions. In the world of globalization era, English has increasingly become the medium in every domain of communication. This shows that teachers in Indonesia should be communicatively competent enough in the English language to effectively teach their subjects in the classroom.

Unlike Indonesia, The impact of the global spread of English has affected language policy and language education policy in many countries all over the world. In Europe, Ferguson (2006) pointed to the escalation in the number of EMI programmes offered at European universities such as Germany, Sweden, Switzerland and Denmark. Wächter and Maiworm (2008 in Doiz, Lasagabaster & Sierra, 2013) note that there was a 340 percent increase in EMI programmes in European higher education between 2002 and 2007.

In China, which is a newcomer to EMI in comparison to European countries, the implementation of EMI is seen as essential for improving the quality of undergraduate University programs; a view that has been questioned by Hu, Li and Lei (2014) and Kirkpatrick (2011). Due to the rapidly growing global phenomenon of EMI, a research centre on EMI has been established with the collaboration of the British council in 2014 called "EMI Oxford". A study conducted by Dearden the centre on 55 countries concluded that the general trend is towards a rapid expansion of EMI provision (2015). The adoption of EMI at tertiary level is also very common in Asian countries as a review by Hamid, Nguyen and Baldauf (2013), Nunan (2003) and Fenton-Smith, Humphreys and Walkinshaw (2017) shows. In regard to the status of English in the Arab world, Habbash and Troudi (2015) assert that English has gained a higher status than ever before, particularly in the Gulf States where English, it is believed,

unquestionably brings many advantages to the millions who learn it. Therefore, most public and private higher education institutions in the Gulf have opted for EMI.

Despite all the potential benefits, there are some barriers to choosing EMI (Hu, 2009; Hu & Alsagoff, 2010; Kang, 2012; Park, 2009). Some authors argue that it is easier to learn in one's mother tongue than to learn in English (Christensen, 2009; Gottlieb, 2009). This implies that students' comprehension, participation, and exam performance could be negatively affected by EMI. Students are intrinsically motivated to strive for embodied cultural capital (H4a, English proficiency). Yet, students are also extrinsically motivated to strive for rewarding institutionalized cultural capital, manifested in high grades and their final diplomas (Bourdieu, 1979b; Elliot & Knight, 2005; Sullivan, 2009a; Sullivan, 2009b; Vallerand, Pelletier, Blais, Briere, Senecal, & Vallieres, 1992). Therefore, students from all strata may worry about receiving lower grades due to EMI (Abedi & Lord, 2001; Christensen, 2009). Yet, EMI signals distinction and a strong position in the educational and economic fields. Therefore, students will try to overcome barriers to EMI.

#### **2.4. The Benefits on the Use of English as a Medium of Instruction**

There are a number of benefits on the use of English as a Medium of Instruction (EMI), one of them is improving L2 proficiency. Arno Marcia and Mancho Bares (2015) claim that the teachers believed that their students would be advantaged by this, having more opportunities for obtaining employment after graduation. Additionally, Basibek et al. (2014) add that the use of EMI will improve students' academic and social environment, students in an EMI program would benefit in their business lives after university. Rogier (2012) conclude that EMI is necessary for students to be able to compete in a global world. Meanwhile, according to Dearden

and Macaro (2016), two of the most prominent reasons relate to the desire for international status and the desire to attract the revenue associated with international students.

Subsequently, Hood (2010) points out another benefit of the use of EMI as follows: improving students' interest, motivation and self-esteem. Lasagabaster (2011) also claims that the students' motivation increased and this contributed to their English learning progress. One other notable benefit of English as a medium of instruction mentioned by one participant was that the school attracts more students. This participant further explained that many parents have more confidence in the school's ability to provide quality education, and the wider community is generally more interested in schools where the medium of instruction is English. Also, the school becomes accessible for international or diaspora students due to the language of instruction. One of the respondents also considered that this language policy of the school demonstrates the ideals of world citizenship.

Similarly, Norm and Marconnet (2013) showed that the increased motivation had contributed to positive outcomes in bilingual students' writing in their first language compared to their monolingual counterparts. Yang (2015) stated that positive correlation between the students' significant improvement in their receptive linguistic skills and their improved productive English competence. Language use, assessment, and learning materials through to the challenges the teachers encountered when practising EMI.

## **2.5. The Difficulties on the Use of English as a Medium of Instruction**

Despite the benefits on the use of English as a Medium of Instruction (EMI) point out above, there are some difficulties faced by the students in practicing EMI. In terms of classroom considerations, identifying the problems and difficulties learners and teachers encounter during EMI is of worth discussion. As Kırkgöz (2009) said that students have difficulty in

understanding main concepts in their subject area. Accordingly, students stated a lack of understanding subject matter through EMI courses as challenges (Kırkgöz, 2005). Al-Issa (2011) added that many students have difficulties understanding the lectures, taking part in class discussions and understanding exam questions. Similarly, Kırkgöz (2009) states that students did not favour EMI courses as they considered these courses inadequate to learn academic subjects. Moreover, students' academic success decreases in EMI courses (Sert, 2008). However, there are also some authors (e.g. Seikkula-Leino 2007; Hunt 2011; Bruton 2013) that argue that there may be a loss of self-esteem linked to the fact that students are required to use a language they do not really know for academic communication, resulting in decreased language use and demotivation, which may hamper language acquisition.

## **2.6. Factors Contributing to the Students' Difficulties in using English as a Medium of Instruction**

Indonesia is a country that English language has been taught as a second or foreign language starting from primary schools up to higher educational institutions all over the country. Indonesia has made significant progress in access at all levels of the education system increased at a rapid rate in line with a sharp increase in the number of teachers, schools and institutions. In the world of globalization era, English has increasingly become the medium in every domain of communication. In Indonesia for example, beginning from grade five onwards and grade nine onwards in all high schools, colleges and universities English is used as a medium of instruction. This shows that teachers in Indonesia should be communicatively competent enough in the English language to effectively teach their subjects in the classroom. In fact, through teaching and learning process, teachers use English as a medium of communication with students in their

subjects at Elementary school, Junior secondary, high schools and universities. However, most of the time, teachers pay attention to students' understanding and acquisition of some knowledge from their subjects rather than their use of English as a communication tool in their subjects. This may be one factor for the students' failure to develop their language competence. Sultan, Borland, and Eckersley's (2012) study of EMI practice at the school level indicated that in their national English examination students in an EMI program performed better in terms of their grades than their counterparts who were enrolled in a non-EMI program. They attributed this outcome to their improved attitude towards using English in and outside school.

Another issue contributing to the lack of success at the school level was the students' limited English proficiency. Lower proficiency learners feel demotivated earlier during their learning experience and blame internal factors such as unsatisfactory performance or reduced self-confidence, while higher proficiency learners tend to blame the teachers (Falout & Maruyama 2004). Horwitz et al. (1986) refer to the foreign language classroom environment as a context where learners are very likely to have difficulty understanding others and making themselves understood. Research shows that the effects of foreign language anxiety on the learner include forgetting previously learned material, decreased participation, negativity and avoidance behavior (Gregersen & Horwitz 2002). Consequently, learners will only be confident in their linguistic abilities if they lack anxiety and have positive feelings about their proficiency. The relationship between richness and L2 confidence is mediated by two variables: (1) frequency of contact; and (2) proficiency. This resulted in challenges for them in processing information conveyed in English and in interacting with their teachers (Hadisantosa, 2010). In addition, language proficiency of teachers and students might be an obstacle to EMI. It is further argued by Sumitomo et al., (2012) that the lack of availability of clear policy details about EMI from the

Indonesian Ministry of Education contributed to the problems that occurred. Clearly, implementing EMI is not without challenges. In addition to the problems encountered by the teachers in Indonesian schools, other studies in different contexts (e.g., Europe and other Asian countries) have also found similar problems. Klaassen and De Graaff's (2001) study of the EMI practice in Delft University of Technology in the Netherlands found that methodological and language-related challenges were common in EMI programs.

Similarly, Coleman's (2006) study of EMI practice in some universities in Europe and Kırkgöz's study in Turkey (2009) concluded that students and lecturers had insufficient language skills, and that there was a need for training of the local lecturers and students in the practice of EMI. Joe and Lee's (2013) study in the Korean context provided a different perspective about EMI practice. Even when English proficiency was high, the medical students in their study still needed a lesson summary in their L1 at the completion of each EMI class. Although this may reflect the level of English competence and practices of the individual lecturer involved, it may also be that the English proficiency required by the students was insufficient for the EMI learning environment.

For a variety of reasons, including those that can be described as pragmatic, Indonesia is loosening its control over the Indonesian language as a medium of instruction in favor of English. As in other Asian contexts, this is being done, at least in part, to attract international students. Both private and several state HE institutions offer international classes with EMI for this particular purpose. This is supported by the findings of one of the few studies about EMI in Indonesia. The study was conducted by Floris (2014) at a private university in Java. She found the enactment of a policy of EMI, commencing in 2011 was in response to globalization

Thus, it can be seen that English as the lingua franca of many contexts worldwide has triggered HE institutions to adopt English as the medium of instruction. The adoption of EMI practice is considered to enhance students' English language skills. Therefore, the introduction of EMI practice is seen to be both proactive Coyle et al., (2010) and strategic.

In order for this practice to succeed, however, clear guidelines and resources for implementation are needed. As mentioned the failure of the introduction of EMI at the Indonesian schools was caused by the unavailability of clear guidelines from the government. Insufficient clear policy had caused confusion among the stakeholders (schools and teachers).

## **2.7. Previous Related Studies**

In order to support this research, some related studies are discussed. First, Tarhan (2003) conducted a study to determine perceptions of students, teachers and parents concerning English-medium instruction and their perceptions of English as a foreign language. The sample for the survey consisted of 982 students, 383 teachers and 988 parents in 42 Anatolian high schools across 32 provinces in Turkey selected using stratified and criterion sampling. The participants of the interviews were six students, four teachers and four parents. The result of his study was 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.

In addition, the same field of study was conducted by Rahmadani (2016), This study aims to uncover what extent of the students' expectation of English as a medium of instruction (EMI)

used by the English teacher in teaching English at senior high schools in Palangka Raya, Indonesia. The survey was conducted at the four schools: MAN Model, MA Muslimat NU, SMAN 4, and SMKN 2 in Palangka Raya. To collect the data, the study employs the questionnaire with 10 items given to 134 students of the second grade taken from one class of each of the schools. The result of his study was that most of the students agree of EMI dominantly applied by the English teacher in the teaching of English subject. By implementing EMI in this classroom.

Finally, Dewi (2017) conducted a study to investigate Lecturers' Perceptions of English as a Medium of Instruction in Indonesian Higher Education. The results reveal that perceptions of EMI at the tertiary level in Indonesia are complex, involving not only linguistic matters, but also larger issues such as national identity and sentiment towards English as an instructional language originating in the West.