

## **CHAPTER 2**

### **LITERATURE REVIEW**

This chapter presents a brief explanation of some theories that support the study. The theories are related to teacher's hand gestures in ELT classroom viewed from Systemic functional multimodal discourse analysis perspective.

#### **2.1 Gestures Studies**

When people have spoken on several occasions, it is mostly accompanied by gestural movements to convey their ideas. Moreover, Hewes (1973) has reintroduced the concept that speaking is a significant acquisition in humans' development, with gestures providing the initial representation of linguistic ability. His argument is supported by the claim with several distinct forms of empirical data. He began by stating that language formed by the stimulus and physical apparatus which was before humans previously possessed. As the evolution of speech that evolved by stimulus and physical specialization (Kendon, 1975). In addition, since gestures and speech are so closely linked, gestures can be used as a secondary input for observing the cognitive events occurring throughout language creation, whereas the first input remains the speech alone. Integrating verbal utterances and synchronous gestures into a single perception consists of two contemporaneous perspectives with the same activity, a significant influence on visual triangulation (McNeill, 1985). Moreover, McNeill (1985) also pointed out that hand gestures functioned as a cue that is related to the speaking terms in both time and semantic. Gestures arise as a response to the process of lexicon syntactic

formulation. As a result, co-speech gestures are a by-product of the utterance processes. They might assist the speaker with verbal sequencing, however, any communication purpose they serve is accidental (Kendon, 1994). Therefore, on some occasions, people tend to produce gestures while delivering a speech.

According to Kendon (1975) gestures are more than just a description of those people's things, activity, manner, or attitude. It is employed to capture the speaker's additional abstract characteristics of speech. It contributes to the overall ideas of the speaker's speech instead of specific sections of it. For instance, when a speaker said 'today's weather is so nice', when she said that she raised her right hand and waved it up and down right the next side of it, depicting as if she was making wind so that she would not be too hot because of the good weather at that time. Once exhibited independently, such customary rhythms might assume a condition of gesture which assigned meanings. A continuous hand motion seen in this case, it appeared to indicate the type of statement made. Moreover, McNeill (1985) claimed that gestures produced mean to translate the utterance into the visual action. Thus, gestures are an important source of communication to convey ideas.

## **2.2 Teacher's Hand Gestures**

Gestures are the natural hand movements produced by teachers to deliver a variety of ideas and feelings at the moment of speaking (McNeill, 1992). While Arnheim & McNeill (1994) argue that gestures are the symbol designed by a teacher which is different from the spoken language. However, it is accompanied by words and sentences of speech. In addition, Kendon (1994) proposes that hand gestures

are the process of direct role to play and it occurs as the elemental part of the teacher's communication effort. Such hand gestures are in aid of communication and are thus intentional; additionally, presenters are frequently unaware of their own actions, making them inadvertent (Scherr, 2008). Particularly, Arzarello et al., (2009) claimed that hand gestures can be understood as a linguistic resource which the instructors could use to test and improve ideas. Following all the arguments, it concludes that a teacher's hands accompanied by words and sentences to communicate the ideas are part of gestures of the natural movement.

This has claimed that hand gestures serve both internal and external roles to the teacher. The first aids output by assisting communicators in organizing their thoughts, whereas the latter aids understanding by listeners (Sato, 2020). Hand gestures have been created from non-redundant combinations of the language elements with which they are associated. When a teacher lifts her hands, it indicates that a figure in a plotline is ascending. Both the raising hand and the spoken sentence show upward (Martinec, 2000). Even though it is widely acknowledged that hand gestures can serve a variety of purposes in interaction, substantial debate exists about whether hand gestures' main purpose is to aid teachers or students (McNeill, 1992). The internal role of gestures of this argument is to assist the teacher by enabling thoughts and speech. One of the functions of gestures is to aid teachers to gain more information and expressiveness (Krauss, 1996). Meanwhile, Engle (1998) stated that based on the current opposing viewpoint an external role of hand gestures in communication is to aid the students' perception and understanding. As shown by this perspective, gestures offer communicative

functions that whilst assisting listeners to understand what is being said (as cited in Lozano & Tversky, 2006). Originally, gesturing was once considered an afterthought to speech usage. Hence, when hand gestures aid communications, either for the teacher or the students, it is because they do it in a roundabout way, after all, by augmenting or increasing the quality of the language they accompanied (McNeill, 1992). In conclusion, the utilization of gestures is beneficial for both teachers and students.

As conveyed the representations of the meaning, in the classroom teachers coordinate the semantic relations and contextual congruence between gestures and speech to communicate a single sense of expression. Generally, due to the modality's affordances, it often encodes additional information that is not conveyed in speech (Özyürek, 2017). In particular, McNeill (1992) claimed that teachers indeed produce a group of hand gestures used to describe sources, in which the iconic gestures show the imaginary representations while speaking. For example, Streeck (1993) describes a teacher who said, "She has like these two microphones in her hand like this, right?" Whilst illustrating two clenched fists of how the person she described is holding the two microphones in front of her (as cited in Hostetter, 2011). In fact, the definitions reflect that a teacher produces the hand gestures and it will encourage students to look and notice the movements due to constructing the effectiveness of communication.

There are obviously many hand gestures produced that can contribute to the students' comprehension and maintain their attention while learning (Hostetter, 2011). For example, a study conducted by Cook et al., (2013) showed that hand

gestures aid students comprehension and enhance their attention while learning in the classroom, even the instruction presented via videotaped. Thus, utilizing hand gestures is one way to facilitate students in learning mathematics. Furthermore, the knowledge that learners gain from teachers is indeed part of the overall classroom learning experience. It also contributes to the way students think and feel about what they have learned, and how they have learned it (Kelly & Goldsmith, 2004). Moreover, there is a suggestion of gestures study in mathematics classrooms within bilateral symmetry as a target concept. It refers to the effect of teacher's hand gestures that can facilitate students' learning comprehension (Valenzano et al., 2003). Hence, by studying hand gestures, a teacher will gain more knowledge of how to facilitate students' understanding while teaching and learning process.

Moreover, there are many other previous studies of using hand gestures in classroom settings. Such McNeill (1992) classified types of gestures that could be utilized by teachers while teaching. These classifications defined below:

1. Emblems. Speakers utilize hand and arm movements to represent visuals of actual things which all participants of the similar particular culture can understand (McNeill, 1992). For instance, in some cultures, encircling the thumb and index finger symbolizes "OK." (Sato, 2020).
2. Metaphoric. According to McNeill (1992) speakers show visuals of abstractions instead of actual items by raising their hands or arms. For instance, as conveying the thought of neglecting an infant, the teacher assists the student through her sentence construction and gestures (Wang & Loewen, 2016) .

3. Deictic. Speakers utilize their fingers to point the things that represent abstract or actual stuff (McNeill, 1992).
4. Iconic. Speakers present the real shape images of items by raising their hands or arms that are directly relevant to contextual information (McNeill, 1992).
5. Beats. Speakers raise their hands up and down or back and forth at the same time their speech (McNeill, 1992).

### **2.3 Systemic Functional Multimodal Discourse Analysis (henceforth SFMDA) to Gestures**

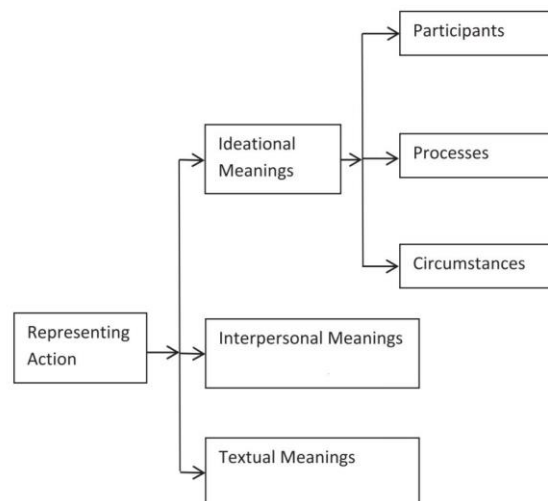
The Systemic Functional Multimodal Discourse Analysis is the extension theory of Systemic Functional developed by Halliday (1978, 1985) (Lim, 2011). It involves the development of theoretical and practical methods to analyze a published, printed, and electronic documents, three-dimensional locations, and other accessible activity where semiotic tools are associated to make the meaning, for example in the field of written and spoken language, gestures, visual imagery, mathematical symbolism, sculpture, architecture, and other physiological modes (O'Halloran, 2008). Moreover, Lim (2017) proposed that there are some researchers doing work in the Systemic Functional approach to Multimodal Discourse Analysis such as O'Toole (2010) on visual images; Lim (2011) on gestures and positioning; as well as Lim (2017) on the teacher's use of space in the classroom. The Systemic Functional Multimodal Discourse Analysis approach is concerned with the integrative meaning of semiotic choices in the multimodal discourse, as well as the meaning capacity of semiotic tools spread through strata

(i.e. context, discourse semantics, lexico-grammar and phonology, and typography/graphology) (O'Halloran, 2008). In short, Systemic Functional Multimodal Analysis is one of the tools to analyze the meaning produced.

The SFMDA approaches gesture study provides a detailed overview of discourse choices based on the meaning options spanning the ideational, interpersonal, and textual metafunctions. Martinec (2000) defined gestures as an action that produces metafunctional meaning based on formal measurable parameters. The ideational meaning classified into three parts namely Presenting Action, Representing Action, and Indexical Action.

1. Presenting Action commonly utilized for a particular purpose and conveyed non-representational meanings, which called Performative Gestures, which reflects the movements that are done practically to carry out the task and it cannot be semantically loaded or executed to communicate meaning (Martinec, 2000). Examples of performative gestures include rectifying the glasses that are being used, taking the pen, rubbing the chin, and scratching a little bit of itchy head. Whereas the main intention of those actions is not to communicate, and sometimes they may be interpreted to deliver meaning, so it functions as a communicative movement. For instance, the action of rectifying the glasses used is the reflex movement to put something used correctly.
2. Representing Actions constitute highly encoded representations, which are named as Communicative Gestures (Martinec, 2000). In

particular relation to language, it is also defined as Language Independent Gestures and Language Correspondent Gestures. In this case, it translated as a Communicative Gestures if it is accompanying by the language, for instance “alright, back to the topic of discussion.” This means the teacher terminates something uncertain and out of the line while having the discussion. As observed, the limit between the classification of communicative gestures and the performative gestures is, sometimes, unsaturated. Nonetheless, when the gesture is interpreted in context, both in its co-text and inter-text, the meanings are generally disambiguated.

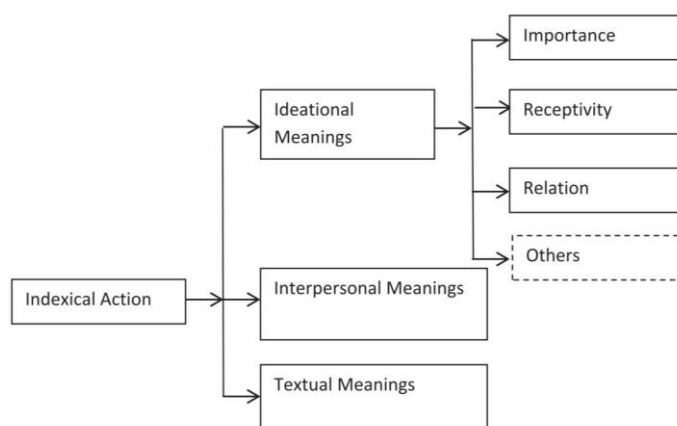


**Figure 2. 1 Representing Action**

3. Indexical Action is also classified as Communicative Gestures and Language Dependent Gestures (Martinec, 2000). It co-occurred with speech and obtains its entire meaning, once one has direct exposure



to the secondary order of context, which is conveyed in indexical action as well as contemporaneous utterance at the same time.



**Figure 2. 2 Indexical Action**

In this study, the researcher used Multimodal Analysis as in the SFMDA framework to discover the sense representation of instructor's hand gestures and Ideational Meaning was a significant point to represent the meaning. The researcher then limits the scope of the study that will only focus on the Representing Action and Indexical Action.

## 2.4 English Teaching Materials

English teaching materials are described as anything to aid language learning, such as course books, videos, graded readers, flashcards, games, websites, and mobile phone interactions, though most of the literature will undoubtedly concentrate on printed materials. It also includes any collection of materials, both theory, and practical resources that a teacher uses effectively in teaching to aid the achievement of desired educational objectives (Tomlinson, 2012). Teaching materials can help a student strengthen a learning experience, attempting to make it

more exciting, informative, and responsive. They are instruments that are used in teaching programs (Tomlinson, 2012). In short, the English teaching material is constantly necessary for the teaching-learning process.

Given the significance of English language materials, the material should be information that can advise the student about the target language, directing them in implementing the language, offering the student hands-on experience with the language in use, encouraging the student's use of the language, and assisting the student in making language discoveries. All of these terms of material have to be considered by the teacher as every student learns the English language in a different way (Tomlinson, 2012). English teaching material is an important aspect of teaching and learning, as it assists students in learning subjects in which they have limited or developing abilities. It has two purposes: first, it offers students the language they need to learn subject concepts, and second, it teaches them how to effectively use their cognitive resources in both language and subject knowledge learning (Afitska, 2016). In addition, the material resources typically serve as the foundation throughout most of the language feedback and practice that takes place in the classroom (Richards, 2001). To summarize the statements above, a teacher should consider the appropriate material for students to achieve learning objectives.

## **2.5 Relevant Study**

The present study was relevant with the study conducted by Lim (2017). Lim's (2017) paper built on gestures' groundbreaking work done by Martinec (2000, 2004) in the Systemic Functional theoretical paradigm. The result of this study

showed that multimodal classroom theory acknowledges that the utilization of multiple linguistic features by instructors enhances the classroom students' experiences. The fact that multimodal study in the educational system concentrated and planned to the utilization of semiotic systems for teaching and learning process. People are sociocultural actors who employ semiotic assets to produce meaning. The research design applied in this paper was classroom research. Moreover, the data collected through the video recording and the participants were two teachers from one of two schools in Singapore and analyzed by Martinec (2000). Meanwhile, the similarities with the current study were in the data collected and the technique of analyzing data. Both present study and Lim (2017) collected the data through video recording and analyzed by Martinec (2000). Moreover, the differences were in the research design and the participants of the study. The research design applied in Lim (2017) was classroom research, while the current study applied qualitative content analysis.

In addition, this study also was relevant to the study conducted by Valenzano et al., (2003). The result showed that teacher's gestures on children's learning in the mathematics classroom by which symmetry as one of the course topics, they succeeded at some posttests by receiving a lesson along with teacher gestures before posttests and it comprises 2.08 lesson with gestures vs. 0.85 lesson without gestures, out of 6 points (Valenzano et al., 2003). The similarity with this study was in the background of the research where they explain the phenomenon shown of the teacher gestures while delivering the materials. Whereas, the differences between the study done by Valenzano et al., (2003) and this study were

in the research design. Their study is conducted by using a quantitative research design, the participants are students of Elementary School in the mathematics classroom, and the data collected by using pre-test and post-test. Whilst, this study used qualitative content analysis, in which the participants was an English teacher from madrasah tsanawiyah, the data collection used in this study was the photographs of video recorded of the teaching-learning process. However, the data analysis of this study adapted the Systemic Functional Multimodal Discourse Analysis (henceforth SFMDA) by the perspective of Martinec (2000) which elaborated with (McNeill, 1992). In this study, the researcher assigned the “meaning-making” produced by the teacher.