CHAPTER 2

LITERATURE REVIEW

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

2.1 Facial Expression Studies

Through the configuration of the face, people communicate silently but perfectly. Therefore, the face can be seen as the most complex part of the human body. Many researchers embarked on this topic for its prominence in human communication. The pioneer of this study is Charles Darwin in his book "The Expression of Emotion Man and Animals (1872) then developed by Paul Ekman, a professor at the University of Francisco and the foremost researcher in the field of facial expression. In his study, the area around the eyes and the mouth is so important when looking at the person because human scans the face but only focus on the eyes and the mouth which is represent facial expressions. A set of facial expression is innate such as happy, sad, anger, fear, disgust, surprised and contempt. It means that the person making that face is experiencing an emotion (Ekman, 1975). For example, brow rising means "I feel surprised", jaw drop means "fear". The sixth of facial expressions that mentioned before is called basic emotion or expression.

However, many more facial expressions of emotion exist and are used regularly by humans which called as compound facial expressions that can be

constructed by combining basic expressions to create a new one, for example, happiness can blend with the other basic feelings like happy with surprised, happy with anger etc. (Ekman & Friesen, 1978; Du et al., 2014). Physiologist estimate that human can produce up to 2000 different facial expressions of emotion (Hall, 1980). This may be true, but definitely, not all human can produce this wide variety of expressions because of the problem with facial muscles. Besides that, there are culturally acquired facial expressions use to modulate the innate emotional expressions called display rules which used for communication. For examples (a) an eyebrows flash used to mean "Hello", (b) eyebrows movement during a speech emphasize certain words. According to this view, some facial expressions are readouts of inner emotional state and they have a meaning to the observer (Elliot & Jacobs, 2013). However, facial expressions are an essential means of communication, not only within the same community but throughout the whole world.

2.2 Teacher's Facial Expression in ELT Classroom

The ELT classroom is an environment where the most prevalent activity is to communicate. Unlike common everyday communication, classroom communication is between individual, the teacher on one hand and a group, the students on the other hand. Moreover, the objective of ELT classroom communication is learning the English of which students have a little or no command yet, especially the beginners. Given all these aspects, nonverbal communication like teacher's facial expression seems to have reason to exist in the ELT classroom. Teacher's facial expressions have a role for the quality of

the entire educational process in ELT classroom and it is usually reflected in the degree of motivation in the students (Dragon et al, 2008).

To put it in the simple term, the students' feeling and emotions and the teachers as well are very important variables in the teaching-learning process. Many students fail to learn a language because of a negative attitude towards a teacher. The face is considered as an outlet for individuals' feeling and can hardly prevent the feeling from showing on their face. Thus, the teacher's facial expressions should normally be encouraging for the students since it is an effective way to make them learn. Like the teachers detect their students' attitude and mood through the students' face and eyes, the students tend to do the same. There will be a pleasant expression that can be encouraged for the students such as happiness, satisfaction, affection and hope. Those expressions keep students motivated and interested during the learning process (Dragon et al., 2008; Shapiro, 2010; Cowie, 2011; Hosotani & Imai-Matsumura, 2011).

Likewise, teacher's facial expressions like anger and smile could help the students to understand the messages which would be helpful to change their behaviours according to the learning process requirement in the classroom during the teaching-learning process. Not only that, but the impact of teacher's facial expressions also powerful to appreciate the performance of the students in the classroom and create a good classroom atmosphere (Butt & Iqbal, 2011). The types of facial expressions produced by the teachers in teaching process depend on their appraisal of the situation in the classroom. Those appraisals appear depends upon the teacher's individual goals, personal resources, and previous

experience (Sutton, 2007). Using the appraisal, the teacher can make the proper use of facial expressions during the teaching-learning process. Proper use of this technique would make students pay heed to the teacher's facial expressions in the ELT classroom which would eventually lead to the achievement of desired students' learning outcomes.

2.3 Systemic Functional Multimodal Discourse Analysis (SFMDA)

A researcher has been investigated classroom discourse from disparate disciplinary orientations. Contemporary methodologies to research classroom interaction or discourse are generally categorized into three main approaches, they are interaction analysis, discourse analysis, and conversation analysis (Lim, 2011). These three approaches identify salient features of pedagogic discourse in the classroom research and the focus has been placed on the semiotic resource of language itself. On the other hand, other modalities of communication and semiotic resource are neglected as ancillary in pedagogic discourse. The focus on Language itself provides a partial understanding of multimodal pedagogic discourse.

The approach that focuses on the complex multimodal semiotic in the classroom is called Systemic Functional Multimodal Discourse Analysis (SFMDA). Jewitt (2006) classifies contextual and grammatical approaches as social semiotic multimodality and multimodal discourse analysis. It has resulted in an approach called Systemic Functional Multimodal Discourse Analysis (SFMDA) the extension of the Systemic Functional Theory developed by Halliday (1978, 1985). Kress & van Leeuwen (2006) and O'Toole (2010) adopt

a contextual approach with a particular orientation to ideology, developing general principles of visual design which is illustrated in text analysis, whereas O'Toole develops a grammatical approach by working with specific text to draw frameworks which can be applied to other works. For examples, the contextual approach has been developed for speech, sound and music (van Leeuwen, 1999), action and gesture (Martinec, 2000; 2001), and educational research (Jewitt, 2006).

Moreover, the grammatical approach has been developed for mathematics (O'Halloran, 2005). SFMDA involves developing theoretical and practical approaches for analysing written, printed and electronic texts, three-dimensional sites and other realms of activity where semiotic resources (e.g. spoken and written language, visual imagery, mathematical symbolism, sculpture, architecture, gesture, facial expression and other physiological modes) combine to make meaning.

2.4 Systemic Functional Multimodal Discourse Analysis (SFMDA) to Facial Expression

Systemic functional perspective in studying facial expression offers a detailed analysis of the decision and consequently used as a tool to find out the meaning produced. It is over the ideational, interpersonal and textual metafunctional meaning (Hood, 2011 & Lim, 2017). Working within the systemic functional perspective requires a developed system that is capable of describing and comparing a complex facial expression. Because facial is a part of gesture which called affective display. According to Matthiessen (2009), the

face is a key resource for expression of the interpersonal meaning. To describe that interpersonal meaning comprehensively, a systemic functional theory is required. Martin & White (2005) have been developing the Appraisal Theory as the framework to describe the interpersonal meaning in relation to the meaning of other kinds. The dimension of the Appraisal that proposed the interpersonal meaning is Attitude, Graduation and Engagement. From the three of Appraisal dimensions, the dimension which relevant with the interpersonal meaning of the facial expression is Attitude dimension. Attitude dimension is concerned with feelings, including emotional reaction, a judgement of behaviour and evaluation of things. The attitude itself divided into three regions of feeling: affect, judgement, and appreciation.

2.4.1 Affect

Affect is related to positive and negative feelings or emotions which predominantly occur in the face known as expression. Affect is a complex area of interpersonal meaning and only certain emotions will be dealt with it. The affects are happiness, sadness, fear, surprised, anger, disgust and interest (Martin & White, 2005). To analyse and interpret the affect or expressions, developing a systemic description of the facial action and the head movements by the theoretical framework is required because the facial action and the head movements are important resources for the communication of emotion (Feng & O'Halloran, 2012). The emotion influences the facial expressions so it can convey a meaning.

The proposed system that has developed a variety of facial action in human faces known as the Facial Action Coding System (FACS) by Ekman & Friesen (1978). Ekman & Friesen (1978) derived a face into three areas, the brow/forehead, the eyes/lid and the lower face which mainly include the cheeks, the moth, and the nose. It is displayed in Figure 2.1 and called the facial dimensions.
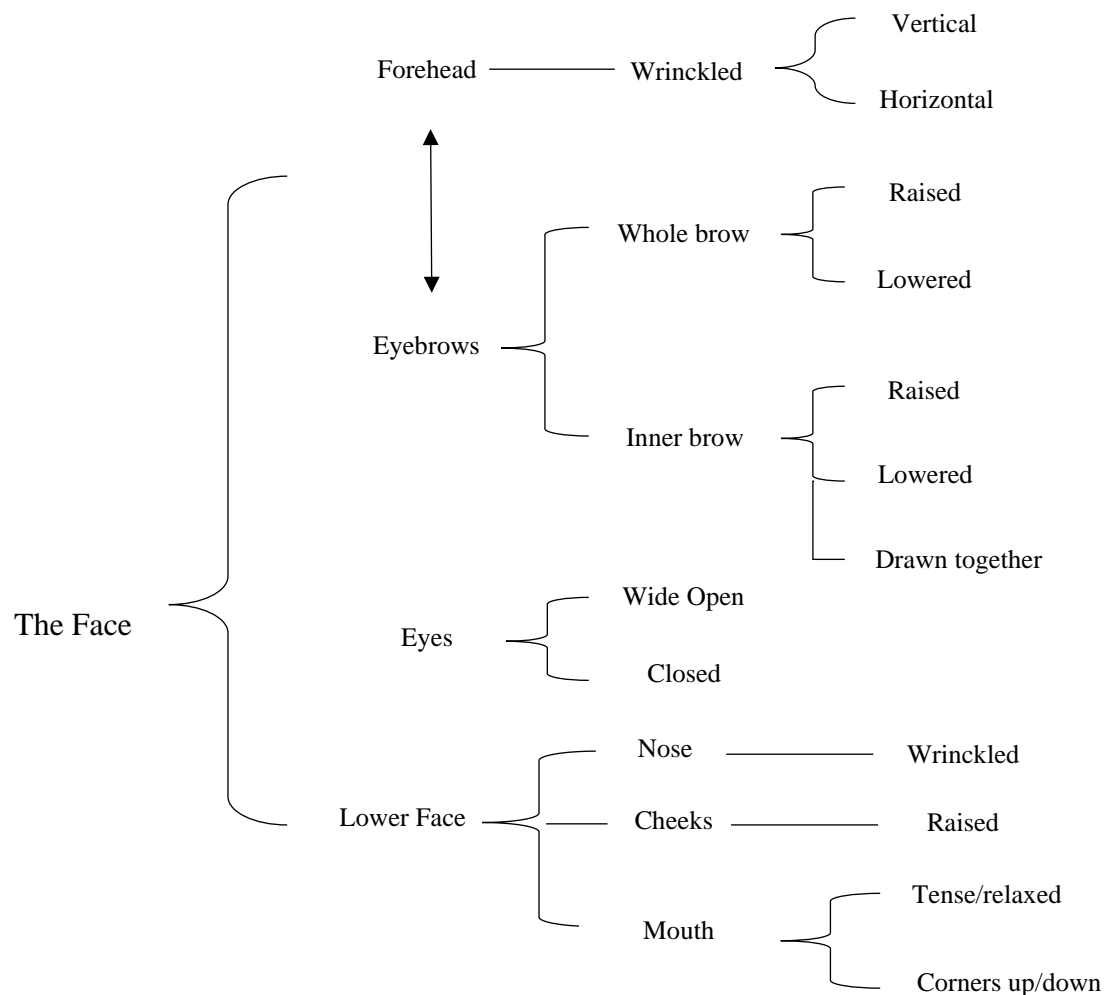
Figure 2.1 The Facial dimensions

Ekman & Friesen (1978) also derived 46 facial action units which alone or in combination account for visible facial movement. Each action unit

has a contribution to the expression Here the list of the major of Action

Units (AUs) that are used to determine the emotion:

Table 2.1 Main Action Units (AUs)

Dimension	Action Unit	Description	Contribute to Expression	Example
	1	Inner brow raiser	Surprise Fear Sad	
Eyebrow	2	Outer brow raiser	Surprise Fear	
	4	Brow lower	Confusion Fear Anger Sad	
Eyes	5	Upper lid raiser	Surprise Fear Anger Interest	

7	Lid tightener	Fear Anger Confusion	
41	Lid drop		
42	Slit		
43	Eyes closed	Boredom Anger Sad	
44	Squint		
45	Blink		
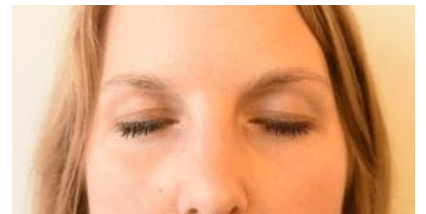
	46	Wink		
Nose	9	Nose wrinkle	Anger Sad Disgust	
	11	Nasolabial deepener	Disgust	
Lower Face	6	Cheek riser	Happy	
Cheeks	13	Cheek puffer		
	14	Dimple	Contempt	

	10	Upper lip raiser	Happy
	12	Lip corner puller	Happy Contempt
Mouth	15	Lip corner depressor	Sad Disgust Confusion
	16	Lower lip depressor	Surprise Disgust Happy
	17	Chin raiser	Contempt Interest Confusion
	18	Lip puckered	

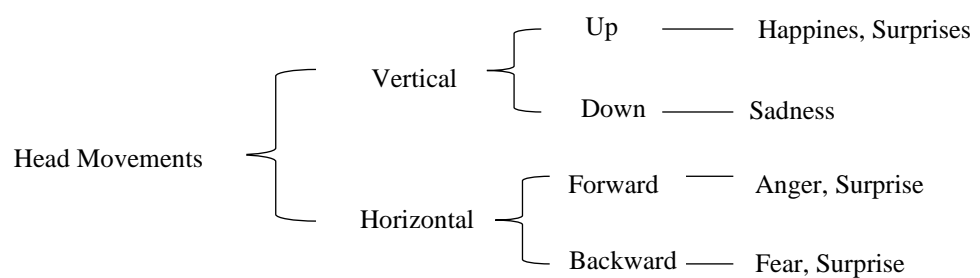| 20 | Lip stretcher | Fear | |
22	Lip funnel		
23	Lip tightener	Anger Confusion Boredom	
24	Lip pressor	Boredom	
25	Lips part	Surprise Disgust Happy	
26	Jaw drop	Surprise Fear	

| 27 | Mouth stretch | |
| 28 | Lip suck | |

From the table above, the FACS can differentiate every change in muscular action. Instead, it is limited to what humans can reliably distinguish since it is used by human operators viewing facial behaviour, not a machine-based classification. While the system of head movements displayed in Figure 2.2 is similar to the system of body language by Feng & O'Halloran (2012) and also similar to Martinec (2001). This system can support the Facial Action Coding System (FACS) distinguishes the emotion which is the vertical orientation often indicating value-based emotion of un/happiness and horizontal orientation indicates activity-based emotion of anger and fear (Martinec, 2001).

Head Movements
- Vertical
  - Up — Happines, Surprises
  - Down — Sadness
- Horizontal
  - Forward — Anger, Surprise
  - Backward — Fear, Surprise

Figure 2.2 The system of Head Movements

2.4.2   Judgement

Judgement is the region of meaning construing our attitudes to people and the way they behave their character (how they measure up). The examples of judgements are admired or criticize, praise or condemn.

2.4.3   Appreciation

Appreciation contains an evaluation of semantic and neutral phenomena. It modifies feelings as propositions about the value of things. In general, appreciation can be divided into reactions to the things (how the reaction of people: do they catch our attention), composition (balance and complexity: was it hard to follow), and valuation (how innovative, authentic, etc.).

2.5 Relevant Study

This study is relevant to the study conducted by Feng & O'Halloran, 2012. Their study was designed to examine how embodied semiotic resources like facial action, touch and body orientation are used to represent emotion in visual images. The similarity between the study done by Feng & O'Halloran and this study is both the research use Facial Action Coding System (FACS) by Ekman & Friesen (1978) to analysis the facial action that represented by the face or the image. The differences in the study are the data sources and the data collection technique. The data sources of their study are the images from the comics and the graphic novels. While this study, the data sources are from the

photograph of the teacher during the teaching process in the classroom. The data collected using non-participant observation and stimulated recall to gain more credible, and confirmable data.

2.6 Framework

Based on the literature review, the configuration of facial muscles as known as facial expression produced by a human can communicate some emotion, thought, or behaviour. Similarity with the teacher in the classroom, they used a facial expression to create a positive environment in the educational process. This phenomenon appeared in ELT classroom at the Vocational High School. The expression that appeared during the teaching process indicated signals that can control the classroom interaction and communication.

The systemic functional multimodal discourse analysis (SFMDA) will be used in this study as an approach to find out how are the teacher's facial expression represented in the classroom and to find out the interpersonal meaning of the expression used by the teacher. According to Martin and White (2005) developing the appraisal theory to more comprehensively describes the interpersonal meaning made in the language is required. The facial expression as the part of appraisal theory and known as affect will be annotated using the system network. FACS developed by Ekman and Friesen (1978) will allow the precise specification of the dynamics of facial movement which form a meaningful sign. Therefore, this present study will emphasize on the multimodal representation of teacher's facial expression in ELT classroom.