CHAPTER II

REVIEW OF LITERATURE

2.1   Technology Used in EFL Class

Several studies have shown that Information and Communication Technology (ICT) has been involved in the learning process. The use of technology can build interactive learning process, increase student motivation, and provide a 'real' people in learning (Warschauer & Healey, 1998).

The use of technology in learning can be done with various tools. In the development of technology use, research in the areas of CALL (Computer Assissted Language Learning) and MALL (Mobile Assissted Language Learning) found the potential of effectiveness by using these two tools in language learning compared with face-to-face learning (Burston, 2015; Fu and Hwang, 2018; Sharifi, Rostami Abusaeedi, Jafarigohar, & Zandi, 2018).

Research by Andujar and Salaberri-Ramiro (2019) who investigated the use of computers and mobile phones in assisting language learning showed the differences in students' learning engagement by using the same chat application in two different tools.

2.2   Students' Learning Engagement in Technology-based Learning

Some previous studies stated the diverse understanding of students' learning engagement. According to Marks (2000), Newmann (1992), and Tinto (1975), students' learning engagement is defined as the commitment of students to follow the learning process. Meanwhile, according to Austin (1984) and Reschly

& Christenson (2012), students' learning engagement is an effort of students to engage in learning for the success of learning. It is also interpreted as students' participation in learning by Kuh, Kenzie, Buckley, Bridges and Hayek (2007).

Students' learning engagement becomes more important when the learning process takes place in an online environment using technology tool where students do not physically interact with teachers or peers (Dixson, 2015). Online learning is recommended to encourage social presence, community, and meaningful interaction. Social presence is a part of learning where students feel like facing real people. Students are in a group surrounded by other students in learning, it is called community. Students are also sharing information, negotiating, arguing, discussing, and performing other activities that create meaningful interactions in learning (Ally, 2004; Bigatel, Ragan, Kenan, May, & Redmond, 2012; Dow, 2008; Hill, Song, & West, 2009). With the interaction between students and peers, students and teachers, and students with content material, students do not feel isolated in an online learning environment (Young, 2006). Therefore, students' learning engagement influences the success of students themselves (Kehrwald, 2008; Robinson & Hullinger, 2008).

Fredricks, Blumenfeld, & Paris (2004) revealed that students' learning engagement is consisting three types of engagement in it, namely behavioral engagement, cognitive engagement, and emotional engagement. Behavioral engagement is an observable behavior of students in academic success, such as participation, attention, and assignment completion (Thompson, Klass, & Fulk, 2012; Peters, Shmerling, & Karren, 2011). Cognitive engagement is student effort in understanding material such as ability in problem-solving, self-regulation, and

reflection (Bangert-Drowns and Pyke, 2002; Guertin, Zappe, and Kim, 2007; Zhu, 2006). While emotional engagement is the feelings of students during learning experiences such as interest, passion, enjoyment, and social interaction (Kay (2011); Missett et al. (2010); Sun and Rueda (2012). Henrie et al (2015) analyzed several research instruments and showed that the Online Student Engagement Scale by Dixson (2010) shows the same indicator types as the three types of engagement by Fredricks et al (2004).

2.3 Learning Styles

In contrast to learning strategies that can be learned and consciously applied when the learning process takes place, learning style are innate for each individual (Wintergerst, DeCapua, Itzen, 2001). Learning style are defined as the way each individual receives information or learns an ability in which individuals with different individuals have different ways (Dunn & Dunn, 1978). Meanwhile, according to Reid (1995) learning style is the character owned by an individual in receiving information as a learning facility. Another understanding of Sims & Sims (1995) revealed that learning style means a person's behavior in processing new information in learning. From some understanding of learning style above, it can be concluded that learning style is related to how learners acquire and process learning.

Learning style can be influenced by the student's learning experiences, genetics, and culture (Vaseghi, Ramezani, & Gholami, 2012). Some students can easily learn to use the sense of hearing, some can also visualize, or do activities in groups or individually, as well as other ways (Felder, 1996). Therefore, it is also

possible that there is a similarity between one student's learning style with other students' learning style and include in the same type of learning style.

Previous studies grouped students' learning style with different groupings. Dunn and Dunn (1978) divide student's learning style into 5 categories, namely environmental, emotional, sociological, physical, and psychological stimuli groups. Students learning style according to Dunn and Dunn are categorized based on stimuli that are believed to be able to influence students to learn. One by one the categories are broken down into many elements, under what circumstance does students feel more comfortable learning in each category.

There are four types n the learning styles of VARK model (Flemming, 1987), namely visual, auditory, reading / writing, and kinesthetic shortened to VARK. Visual learners tend to use their vision to process information. This type of learning is very helpful if it is supported by pictures, videos or diagrams. Auditory learner or also called aural learner is better able to remember information that is heard, such as music or in learning with discussions and seminars. For learners with the type of reading/writing, the information obtained is more easily remembered in written form, such as text, lists, and notes. Whereas learners who are easy to learn by touching directly, practicing, or experimenting, they are included in the type of kinesthetic learner.

Reid (1987) grouped the types of learning style into 6 groups based on how students obtain, process, and understand new information. The 6 groups are auditory, visual, kinesthetic, tactile, group, and individual learning. Four of six types of learning style, auditory; visual; kinesthetic; tactile, include in one perceptual learning styles and two other types of learning style include in the

social learning styles group. The two types of learning styles are Group (Interpersonal) and Individual (Intrapersonal) learners. Learners who like learning in groups and working together in teams are included in the Group (Interpersonal) type. Whereas learners who find it easier to learn on their own are included in the Individual (Intrapersonal) type.

This Reid's framework is called Perceptual Learning Style Preference. Reid model learning style with Perceptual Learning Style Preference Questionnaire (PLSPQ) is the most popular assessment instrument in the EFL field (Wintergest, DeCapua, & Itzen, 2001).

Reid's Learning style model is illustrated below:

1. Visual: Students are able to understand information and instructions better by reading text on books or board, learning better by reading information class, taking notes while the teacher explain the material.

2. Auditory: Students can learning well by hearing oral explanations, audiotapes, lectures, and discussions. Students prefer listen spoken or oral material in class. When students get written material, they still can learn well by reading the material aloud.

3. Kinesthetic: Students prefer learning by experiencing and involving physical action like participating in moving activities, role play, or field trips.

4. Tactile: Students like doing experiments in the laboratory, building models, and having direct contact with materials.

5. Group: Students can learn better with at least one other student and working together in a team. Students can remember material easily when they work in group.

6. Individual: Students like learning alone and working by her / himself. They always prefer doing assignment alone.

2.4   Learning Style and Technology-based Learning

Previous studies show that students who have different learning style will show different ways of learning (Garcia, Amandi, Schiaffino, & Campo, 2007; Meng & Patty, 1991; Stansfield & Hansen, 1983). In the case of online learning, students' behavior can identify students' learning styles. The differences in student behavior can be seen from the tendency of online students observing the material (Graf and Kinshuk, 2006). The nature of online learning that is flexible and provides opportunities for students to develop learning models according to themselves makes online learning an effective learning method to apply (Malouf, 1998; Papastergio, 2009).

Learning with technology provides opportunities for students to learn with hands-on activity and self-directed learning (Khan & Ibrahim, 2017). Hands-on activity and making models is the best way of learning for tactile learning styles (Reid, 1987). Another study from Baleghizadeh & Shayeghi (2014) showed that tactile learning style significantly collerated with students' linguistic intelligence as explained by Haghighi (2006). So that there is a possibility that students with a tactile learning style will learn better by using technology in language learning.