CHAPTER I

INTRODUCTION

An overview of the study that covers the background of the study, research questions, research purposes, research significances, research framework, and previous research is presented in this chapter

A. Background

This study is intended to explore Indonesian EFL students' critical thinking skills. Critical thinking becomes one of the skills highly required in current times. National Education Association (NEA) declares that thinking critically is a skill needed for people to survive in this 21st century. Furthermore, critical thinking skill has been perceived as one of the most important skills to survive in this global era.

Trilling and Fadel (2009), as cited in Talvio et al. (2016), state that educated people in the 21st-century must-have skills to think rationally and logically so that they can solve problems in life independently and effectively. Besides, Trilling and Fadel (2009), cited in Talvio et al., (2016), state that the crucial skills for 21st-century education and occupation are divided into four domains and critical thinking as the second domain of those crucial skills that people must have in this global era. Also, in today's society, there is so much information that is not confirmed to be valid or reliable. Critical thinking is crucial for students to anticipate this condition so that they can choose the right information.

However, regardless of the importance, PISA (Programme for International Student Assessment) shows that more than fifty percent fifteen years old students in Indonesia do not have the important ability to think critically (*Publications—PISA*, 2018). This survey puts Indonesian students in the lowest rank of literacy of reading, mathematics, and science. In the literacy of the reading category, Indonesia ranked 6th from the bottom (74), with an average score of 371, down from the 64th rank in 2015. Then in the mathematics category, Indonesia is ranked 7th from the bottom (73) with an average score of 379, down from the 63rd rank in 2015. While

in the category of science performance, Indonesia is ranked 9th from the bottom (71), which is an average score of 396, down from the 62nd rank in 2015. In other words, the literacy, mathematics, and science abilities of Indonesian students are still below the world's average.

Therefore, critical thinking as a crucial objective should be developed in college (Tabačková, 2015). One of the main goals for education in the 21st century is critical thinking. Students' proportions who demonstrate an advanced ability to think, communicate effectively, and solve the problem will increase sustainably (Facione et al., 2000). Critical thinking is also included in the Indonesian curriculum. Curriculum 2013 (revised version in 2017) asserts the skills that should be required by students as a bold to face the 21st century. This skill is 4C, communication, collaboration, critical thinking and problem solving, and creativity and innovation (Doringin & Oktriono, 2017).

One of the most crucial skills learned in a college education is critical thinking. As proof of this assertion, the 2013 Employer Survey conducted by the Association of American Colleges and Universities, Hart (2013) conveyed that almost all of the employers surveyed (ninety-five percent) settle that the candidate's established ability to think critically, communicate effectively, and address complex issues is more important than their undergraduate major. Therefore, "higher education" is not just about discovering more information or acquiring new skills; college experience has also included developing critical thinking and problem-solving skills. In certain disciplines, such as accounting, engineering, and medicine, students assume that much of what they know may be out of date in upcoming years. However, the analytical skills that they gain should serve them well in the evolving contextual world of their personal lives (Hart, 2013). Hart also noted that college graduates who earn degrees without learning critical thinking skills have been short-lived. Thus, one of the most important duties of college educators is to teach these skills.

Moreover, teaching critical thinking may face a new challenge in this 4.0 era. The technique or the media that already change needs some innovation when

teaching critical thinking. Several innovations can be used to teach critical thinking. One of the innovations to teach CT is using game-based learning as a method. Game-based learning is a learning method that uses game applications/games that have been specifically designed to assist in the learning process. Students provide the stimulus of three important parts of learning by using game-based learning, which is emotional, intellectual, and psychomotor (Bakan & Bakan, 2018). Game-based learning is one of the learning methods suitable for the current condition of the current 4.0 era.

Besides, critical thinking can be taught using technology as a tool. Using technology in communication and networking includes access to social media appropriately. According to Mason (2006), social media plays an enormous role in providing high-quality education that corresponds to the social learning environment and fosters students ' critical thinking skills. Social media is a significant part of life today. Many people spend many hours on social media, such as Facebook, Twitter, and YouTube.

The limited interview to several English education department student of UIN Sunan Gunung Djati Bandung shows that a student still faces the difficulties to think critically, especially when they are in a classroom session. Even though sometimes the lecturer gives them the question related to the material which engaged their critical thinking, they still face the difficulties to think critically. It may make a general phenomenon about other students' critical thinking skills.

Therefore, this current study investigates how game-based learning method in virtual class (Twitter) foster students' critical thinking skills. There are several researches relevant to the current study. The first research is research by Iman (2017) shows the effect of applying debate instruction in the classroom in EFL learners' critical thinking and speaking skills. Second, McDonald's (2017) study explains that the problem-based learning method can improve students' critical thinking skills. The third is from Ebadi (2018) that explore the impact of using Web Quest-based classroom method on EFL learners' critical thinking and academic writing skill. Moreover, this current study is different form the earlier studies above.

The previous studies focus on fostering students' critical thinking using debate and problem-based learning methods. This current study centers on how game-based learning called werewolf foster students' critical thinking skills.

B. Research Question
There are two research questions regarding the problem mentioned in the background:

1. How is the process of teaching critical thinking using Game-based learning through Twitter?
2. What aspects of Paul and Elder's 2008 critical thinking framework emerge during the process of using game-based learning to teach critical thinking?

C. Research Purposes
Regarding research problems above, this study aims:

1. To find out the process of teaching critical thinking using Game-based learning through twitter
2. To find out what aspects of Paul and Elder's critical thinking 2008 framework emerge during the process of using game-based learning to teach critical thinking

D. Research Significances
This current study is intended to become a new source for the educator about the information on how to foster students' critical thinking skills use Game-based learning methods through twitter. *Practically*, this current study gives significance to:

1. Students: helping students to increase their critical thinking skills use Game-based learning method.
2. Educators help educators establish a new approach to foster students' critical thinking skills and know students' critical thinking skills.

Theoretically, this current study helps to promote some method to foster students' critical thinking skills.

E. Research Framework
According to Watson and Galser (2012), in Zulmaulida et al. (2018) critical thinking is the ability to consider and recognize the problem and investigate and

assess the knowledge that is important in order to obtain information appropriately. Another definition comes from Scriven and Paul, 2003 in Xu, 2011, where they described critical thinking as the process of conceptualizing, implementing, analyzing, synthesizing and evaluating knowledge gathered from observation, experience, input, reasoning, or communication as a way of believing and acting. Some of the main elements of academic life are critical thinking–while writing, reading, and cooperating with other students. (Open University, 2008)

Critical thinking is the way of thinking about issues, factual, or any problem where thinkers take over the systems by enhancing the quality of their thought that is inherent in thought and placing analytical requirements on them (Paul & Elder, 2001 in Elmansy, 2017). There are three components of Paul and Elder Framework:

a. The elements of thought

Paul, Elder, & Bartell, (1997) in Welch (2015) show that the element of thought is part of the reasoning. There are two essential aspects of thought that students need to master to learn how to enhance their thinking. The students are expected to be able to recognize the part of their thinking and analyze their use of these parts of thinking. As Paul and Elder (1997) described, these parts of thinking consist of eight elements: purpose, the question at issue, assumption, *point of view*, information, concept and main ideas, inferences or interpretations, and implications and consequences. These parts are used to examine the reasoning that relies on the form of thought. This can be argued that the more objective or critical people can be, the better part of reasoning comes.

b. The intellectual standards

Paul & Elder (2001) in Elmansy (2017) state that the style of thought in which the thinker increases their efficiency is through skilfully captivating care of the framework inherent in thought and enforcing intellectual standards.

The intellectual standards introduced by Paul and Elder are also known as "The Common Intellectual Standards". It is a standard that should be applicable to thought. In order words, the element of thought is designed to enactive its quality. Moreover, these standards aim to shape their internal voice

and direct them to be better people when they are reasoning. (Paul & Elder, 2008).

c. The intellectual traits

When standards of thinking are applied to the students, they can become people who exhibit the intellectual character defined by Paul & Elder, the Intellectual Traits. The intellectual traits include Intellectual Courage, intellectual humility, intellectual autonomy, intellectual empathy, intellectual perseverance, intellectual integrity, reasoning confidently, fair-mindedness.

Based on Paul and Elder (1997) in Welch et al. (2015), Students need to understand the two-part dimensions of thought in order to know the way to enhance their learning. The necessity to be able to define the "part" of their thought and they need to be able to assess their use of the parts of their thought. Critical thinking is essential, especially for students. Critical thinking allows students to evaluate the facts that they read or watch, and recognizing incorrect issues or illogical reasoning. Critical thinking helps students construct their strong opinions (for example, when doing their assignments).

The element of thought is the main focus of this study. Among eight parts of the element of thought, two are the main focus of this study, which is a *point of view* and question at issue. According to (Welch et al., 2015), when someone thinks about something, they do lots of things at once. They look it from the *point of view* such who they are, what they value. After that, they have a question at issue that they are trying to answer.

Most game-based learning definition highlights that it is a type of gameplay which defined the results of learning. (Shaffer et al., 2005). Game-based learning provide a fun way of complementing conventional teaching methods and instilling excitement in teaching, sparkling creative thought, and highlighting discrepancies for teaching approaches. By using games, learning action and ideas will be extra consistent with students and will provide students through a forum to rebound on their creative thinking. Games are perfect icebreakers and inspire student imagination. Games often catalyze an

educational method that promotes a lively conversation or discussion of the idea of learning between students after gaming (Lowensten and Bradshaw, 2001).

Games are useful as didactic instruments. Games can boost a teaching subject and are particularly beneficial for dealing with critical concepts and problem-solving. Based on the previous study, games specifically shape student self-confidence and may decrease the gap between faster and slow learners. (Lowenstein and Bradshaw, 2001).

Trybus (2015) says that Game-based learning applies for borrowing and adjusting such game concepts to real-life settings to engage students. Motivational psychology convoluted in game-based learning encourages students to involve instructional resources positively and engagingly. Game-based learning is not only about developing games that can be played between students, but it is also about forming a learning method that introduces concepts gradually and directs students concerning their target. Modern games can include competition, ratings, excitement, and feedback loops. Old-style games can chain amongst a clash, scores, excitement, and feedback loops. These principles become more prevalent in libraries and higher education as a technique of engaging students in education (Pho & Dinscore, 2015).

Werewolf is a fun game that can be played with several people. This current study requires at least nine students to join to play this game. In addition, the researcher takes action as a moderator. The purpose of the game is to recognize and find the Werewolf among the villagers. By shuffling the cards and giving it to the players, the game has started. Make sure it is including two Werewolf, a Doctor, a Seer, and villager's cards. After that, the daily round begins. The players have to introduce their self. They have to hide their identity, especially for werewolves and seers, to protect themselves and avoid a vote. Next activity, the students have to take a vote on who they believe is the werewolf, in this stage, the students have to take a simple note why they voted on the people they think is the Werewolf among the players. Then, the night begins, the Werewolf has to kill one of the villagers, the Doctor can save one villagers or seer or even can save him/herself, and the seer can guess on a person he/she thinks is the

Werewolf among the players. The game continues to play till the Werewolf, or the villagers win. The Werewolf can win if they are still alive till the end of the game, while villagers can win if they can find and kill the werewolves.

F. Previous Research

Related to the topic of this study, there are several previous studies which are relevant to teaching critical thinking such as the study by Iman (2017), McDonald (2017), Ramezani (2016), and Cicchino (2015). First, the study by Iman (2017) discusses the effect of applying debate instruction in the classroom on Indonesian EFL critical thinking and speaking skill. The aim of this study is to investigate how debate instruction gives the effect on Indonesian EFL critical thinking and speaking skills. The author uses a quasi-experimental as a method in this study. As a result, a debate can significantly improve both critical thinking and speaking skills among EFL in Indonesia. It is different from the current study, this current study uses game-based learning as a method through Twitter to foster critical thinking skills, while this previous research uses debate as a method to improve critical thinking skills.

Second, McDonald (2017) discusses the use of problem-solving games called Coffee Shop to enhance students' critical thinking skills in secondary school. This study aims to offer a solution to improve students' critical thinking skills because they face so many challenges in improving that skill. Using a survey as a design of the study, the result shows that by using this method in a time-limited setting, students' critical thinking is significantly improved. The difference with this current study is in the game selection, this study using a game called Werewolf and played on Twitter while the previous study using a game called Coffee Shop.

Third, the study from Ebadi (2018) shows the effect of using Web Quest-based classrooms on EFL learners' writing and critical thinking skills. This previous study is aims to investigate how Web Quest-based classroom affects EFL learners' critical thinking skills. An explanatory mixed-method design was used in this study as a method. In the light of these findings, by using Web Quest-based classroom method, EFL learners' CT and academic writing is significantly improved. To

foster critical thinking skill, the current study uses game-based learning method through twitter while the previous study using Web Quest-based classroom method.

The fourth study was conducted by Cicchino (2015). He evaluated the game-based learning method in improving critical thinking in students' discourse. The author uses an explanatory mixed-method design to collect the data. The aims of this previous study is to know the implications for GBL system developers, academics interested in exploring GBL, and teachers trying to incorporate GBL into their classrooms. This study's outcome emphasizes that the game-based learning method effectively promotes critical thinking in students' discourse. Even though this previous study uses the same method as the current study, yet it is still different because this current study uses the Werewolf game and played on Twitter to foster critical thinking skills. In contrast, the previous study used the French-Indiana game.

Nonetheless, this current study is unlike the earlier studies above. The previous studies using some methods such as debate Instruction, problem-solving, and game-based learning enhance students' critical thinking. This study centers on how GBL method called Werewolf played on Twitter fosters students' critical thinking skills.