CHAPTER I
INTRODUCTION

1.1.Background

Since the early year of 2020 the spread of Covid 19 pandemic has been massive and the pandemic has infected almost every countries in the world. Billion people are now infected and more than one billion across the world die caused by the pandemic. Many companies and schools are closed and should stay at home or work from home. Furthermore, several countries apply lockdown and quarantine to cut the spread of Covid 19 pandemic. People are requested to apply a new way of life called new normal such as social distancing, wearing masks, and using handsanitizers. The disruption caused by the virus not only impacts on sector of economic and social but it also has changed the face of education world.

Data from UNESCO reports that more than 1,2 billion children in 186 countries affected by school closures and several other countries have implemented localized closures impacting millions of additional learners due to the pandemic. Based on a report from World Bank, in Indonesia there are more than 530.000 schools have closed caused by the Covid 19 outbreak and affecting 68 million students from pre primary through tertiary levels. Therefore, the Ministry of Education and Culture has made a policy the implementation of online or digital learning for teachers and students. In response to the policy and significant demand of online learning media, many online learning platforms are offering free access to their services. Daheri et.al. (2020) revealed the use of common online learning microblogging platforms such as Google classroom, Quipper, Edmodo, Google Suite for Education, WhatsApp, and Youtube become solution implemented in many schools. Even local online learning platforms such as Ruangguru, Rumah belajar, Zenius and Cakap are also offered as learning media. However, the use of the learning platfors are not as easy as it looks. Many obstacles are faced by teachers or educators to apply them in learning and teaching process. According to Haines (2016), the obstacles faced by teachers

related to the use of technology in English Language Teaching (ELT) consist of three. They are the availability of technology and internet connection in the classroom, teacher techno phobia, and a problem of knowing how to use it for language learning purposes.

The direction and purposes of Indonesia national education have explicitly been explained in education constitution. The government has continually made an effort to improve the quality of education, for example, by renewing the curriculum. Each of the curriculum has its own emphasis and target. In the 2013 curriculum, the learning approach emphasizes on the importance of scientific approach through a step of learning process such as observing, questioning, collecting information, associating, and communicating. Therefore, in this curriculum the learning approach has been shifted to student centered learning as it is stated in the Regulation of Minister of Education and Culture (Permendikbud) Number 81 A. about the implementation of the 2013 Curriculum. It is implicitely stated in the regulation that learning mode needs to be changed. from a one way learning (teacher student interaction) to interactive learning, from isolated learning mode to networking learning mode.and from passive learning to student active learning. Hence, this point has been also emphasized by Kementrian Pendidikan dan Kebudayaan (2014) that the instrument of learning and assessment has to be able to measure students' higher order thinking skills (HOTS) in the level of analyzing, synthesizing, evaluating, and creating based on the Bloom's Taxonomy. and the notions of other educational researchers.

. The concept of Higher Order Thinking Skills (HOTS) has been implemented in Indonesia education system as a mandate of the education constitution. It is also implemented as a part of the 21 st century learning to face the era of Industry Revolution 4.0. In the Regulation of Ministry of Education Number 22 Year 2016 regarding process standard of elementary and secondary level of education has been used a scientific approach. Explicitly the regulation states that the aspect of knowledge is acquired through the skills of remembering, understanding, applying, analyzing, evaluating, and creating. Ahmad (2014) revealed that the policy issued by the government related to higher order thinking

skills is the integration of the skills into the classroom learning context via the implementation of 2013 Curriculum. According to Larson and Miller (2012), the skills include critical thinking, communication, collaboration, and creativity. The skills need to be mastered by students in the 21st century learning to make them be able to compete in global era. Consequently, classroom learning process needs to be adapted to the skills to develop students' ability of higher order thinking.

However, the implementation of HOTS in learning process in Indonesia still faces many challenges.. The challenges and problems appear to mostly come from the aspect of teachers, students, and teaching learning process. In term of teachers, they actually play a crucial role and one of the main factors for the success or failure of the implementation of HOTS learning. Several study results prove that teachers still face constraint in applying HOTS learning such as how to make test items, the use of technology, and HOTS assessment. Tyas et al. (2019) conducted a study concerning how teachers make HOTS based questions. The study result indicates that there are four aspects that challenge the teachers in developing the questions. They are teachers' limited understanding about the assessment and concept of HOTS, limited sources of learning, limited experience in developing HOTS based questions, and student' s competence and the level of EFL subject materials. They further explain that students' cognitive competence plays a significant role in answering HOTS based questions. It means that students with high cognitive ability will be easier to give respons than students with lower cognitive ability. At the end, they conclude the need of development programs for teachers' quality improvement such as workshop and training of HOTS. Furthermore, Setiawan et al. (2018) outlined teachers' knowledge of HOTS as a challenge in teaching and learning process. In their study, they found that teacher's lack of knowledge especially in designing instructional activities such as creating creativity and critical thinking impede the implementation of HOTS especially in developing learning tasks to facilitate HOTS. Daud (2017) investigated that the development of HOTS in language classroom by teachers needs to be focused not only on subject matter but also on HOTS content and how it is integrated into curriculum. The integration is closely related to national curriculum policy, textbook availability, teachers, and students' cognitive skill.

However, some obstacles are still found from the aspects such as EFL subject textbooks that is distributed by government are not sufficient available to facilitate students' higher order thinking skills.

The challenges toward English teachers in East Indonesia, for example, appears from a study carried out by Ginting (2020) related to designing HOTS assessment. She found that 60% of the teachers have poor digital literacy and they are not able to use technology such as searching for information and learning materials from internet for teaching learning process. Similar study has been also conducted by Ramadhana et al. (2018) in Padang. They made a research on how English teachers develop HOTS based test items. The result shows that 33% of the iterms are HOTS in mid semester examination and only 17 % of the items contain HOTS in semester exam. There is an indication that English teachers in the area do not have enough skills in developing HOTS questions. It is in line with a research by Muaddab (2011) citing a data released by Balitbang Depdiknas (2008) concerning teachers' low quality showed that 34.71% of secondary school teachers in public schools and 35.27% in private schools do not deserve to teach. This indication shows that there is something wrong with the government' s policy and programs especially in the stage of implementation. In fact, a number of teachers are not well prepared for the improvement of their quality so that when they are requested to make HOTS based questions for examination, they are not able fully to do that. Yusoff and Seman (2018) revealed that another problem is most of them do not know how to integrate HOTS into the teaching and learning process especially in EF classroom. They still find difficulties in designing HOTS based questions and assessing the learning process, whereas the assessment is one of the indicators to measure teacher's quality through their performance in developing classroom tasks.

From the aspect of Indonesian students' quality, the challenges are reflected from various studies carried out by organizations and researches. Programme for International Student Assessment (PISA) in 2018 reported a study on students in Indonesia in which the score is lower than the OECD average in reading, mathematics, and science. In reading literacy, for example, the score is 371, while the score for international average is 487. It is lower even than the

previous PISA result in 2012 and 2015. It was also reported that the rank of Indonesia students is in 75 of 80 PISA participating countries.The fact is also proven from the research conducted by Fanani (2018). He argues that Indonesian students have low skills in four areas namely the first is understanding complex information; second is about theory, analysis and problem solving; third is about the use of tools, procedure, and problem solving, and fourth is conducting investigation. The poor skills may be caused by the fact that the students get poor couching or training related to the situation that need contextual problems, creativity and collaboration. Particularly in completing HOTS test items, Alhassora et al. (2017) found that it is due to the students are not accustomed to reading long words or texts and low reading skill. Consequently, the problems cause them make errors in answering HOTS test iterms. This is in line with what Thrilling and Fadel (2009) reported. They state that the students of secondary school and higher education have less competence in oral or written communication, critical thinking and problem solving, work ethics and professionalism, team work and collaboration, working in different group, technology utilization, and project management and leadership. These abilities certainly require high logic thinking. A more specific study has been conducted by Ahmad (2016) regarding English National Examination in Senior High School level. He found that 87,4% of test items are in the domain of LOTS (Lower Order Thinking Skills) and only 10.6% contains HOTS. This condition is considered not effective in motivating students to encourage their critical thinking skill. Similary with the study conducted by Putra and Abdullah (2019). The study was focused on the English National Examination iterms from 2013 to 2018. The result demostrated that from 210 test iterms, 157 (74.8%) items are LOTS and only 53 (25.23%) of the iterms are HOTS. Still in the same study, it was found that 14.5% of the items is classified in C1 (remembering), 60.4% C2 (understanding), and 25.2% C3 (applying). It means that the level of students' thinking skills is mostly classified into the category of understanding or in the domain of LOTS. The similar study result is also shown via the research conducted by Utami et al. (2019). They found more than 50% of test items in English National Examination held from 2016 to 2019 are LOTS questions. These

phenomenon impact to the result of English National Examination (UN) in which the average score for senior high school students in 2016 was 66.52, in 2017 the score fell lower to 49.92 and in 2018 the score was a bit higher to 51.12. Unfortunately overall the score was still under the average of minimal completeness criterion (KKM) determined by school that is 75.

Furthermore, online discussion forum (ODF) or simply online discussion has a close relationship to Computer Mediated Communication (CMC). It is a subdivision of CMC formats such as instant messaging, email, chat rooms, online forums, and social network services. The online discussion formats emerge a high quality of information to be exchanged since students have sufficient time to prepare tasks. According to Thurlow et al. (2004), CMC is also applied in the form of text based interaction such as text messaging. CMC alone, as defined by Wikipedia, is any human communication that occurs through the use of two or more electronic devices. It has two forms which consitst of synchronous and asynchronous. The former term refers to communication which occurs in real time and not all in the same location such as video chats, live streaming, and face time audio calls. Conversely, the later term, asynchronous, refers to communication which occurs when parties engaged are not communicating simultaneously such as text messages, online discussion board, and email. Research on the benefits of CMC in language teaching is studied by Goertler (2009). He states that the benefits are in three areas : language use and development, classroom dynamics, and student attitudes.

Online discussion forum has been defined by some scholars. Biriyai and Thomas (2014) defined online discussion (OD) as a web based application that enables people to share interest and opinions. They argue that OD is an effective tool to engage students in social interaction where they can post ideas, debate, and discuss with peers. Through online discussion, students can interact and receive feedback from other students and instructor. Cheng et al. (2010) viewed online discussion as a new technology that can be used in a blended learning environment and considered as the implementation of social constructivism theory. Al Ibrahim and Al Khalifa (2014) argued that online discussion in a social environment can enhance communication skill and collaboration among students.

In a study conducted by Alamri et al. (2014) found that students have a positive tendency in using online discussion due to its supports to social interaction and teamwork. This is also in line with a study carried out by Ismail et al. (2013) which found that students in online lab performed a more significant collaboration than students in traditional computer laboratory.

During the Covid 19 outbreak, asynchronous learning environment such as online discussion plays a significant role in teaching learning process. One of its roles can be seen from its massive use for second or foreign language learning. This function is emphasized by Godwin-jones (2003) and Lamy & Hampel (2007) revealing that online discussion can improve EFL language learning by facilitating group interaction, higher order information process, reflection, and peer collaboration. However, according to Liaw (2007), the use of online discussion in L2 learning mostly focuses on text based communication which support written text exchanges. In term of the benefits online discussion offers, Ragupathi (2018) mentioned some of them such as demonstrating knowledge of key concepts, stimulating higher order thinking skills, encouraging peer interaction and teamwork, and promoting meaningful reflection. It means that online discussion may improve students' English proficiency, cognitive aspect and social skills. In addition, Sutherland-Smith (2002) stated that online discussion can support learning performace since students have more preparation to choose appropriate vocabulary and reading tasks compared to traditional face to face discussion. Furthermore, the evidences of the benefits of online discussion can also be found through a study conducted by Jose and Abidin (2016). They found that online discussion learners can improve their writing skills by sharing ideas and grammatical errors checking. Similarly with a study carried out by Omar et al. (2012) investigating EFL learners' responses toward the use of Facebook in online discussion. Its result shows the rise of students' confidence and collaboration during teaching learning process.

The potential of online discussions to facilitate higher order thinking has been proven from several studies. The studies outline not only the analysis of higher order thinking in online discussions, but also some conflicting issues appear to accompany them. Cheung and Hew (2005) asserted that online

discussions have the potential to improve higher order thinking due to the reasons such as the asynchronous environment can be done at anytime and anywhere, the ability to store discussion threads for the next analysis, the web based environment that omits the barriers in traditional face to face context, and more time availability for participation and expressions. Similarly with the statement of MacKnight (2000) stating that higher order thinking can be taught through online discussions. However, a study result from Hew and Cheung (2003) showed that online discussion postings are still superficial, memorizing and sharing information. The postings did not foster significant higher order thinking. In another study, DeLoach and GreenLaw (2007) also reminded the importance of instructor's effective questions and sufficient skills to present higher order thinking skills in online discussions. This statement is supported by Yang et al. (2005) argueing that the use of socratic questions in online discussion forums allow students to develop their critical thinking skills. That's why, the role of an instructor should be put in critical position. Paulsen (1995) and Cheung & Hew (2005) stated that typically there are three types of roles that instructor manages in online discussion namely organization, social, and intellectual. Organizational role is to encourage participation such as comments and responses. Social role is to make responses to every contributions and strengthen good discussion activities; and the last role, intellectual, is to challenge students' opinions and ideas.

Furthermore, the issue of student' motivation can not be separated from the success of online learning. According to Bransford et al. (2000) maintaining student' motivation to learn is one of the key principles for effective education. Fyans and Maehr (1987) in their research supported that motivation has a positive correlation to student's academic achievement. It means that if students get more motivation, it is very likely they will not drop out of online courses. However, Park and Choi (2009) argued that some facts show that the rate of dropping out in online courses is higher than in traditional face to face courses and a study by Aragon and Johnson (2008) showed that the lack of motivation in online learning is the main factor of student withdrawal from online courses. Paulus and Scherff (2008) asserted that less motivation caused by feeling of isolation, anxiety,

unsufficient time, and frustration of technology could be the source of the problems above. Therefore, student motivation is regarded as a critical factor for the success of online learning.

Thus, from the facts above the author catches an opportunity and a gap to step further from the situation and condition with some considerations namely the massive use of Whatspp as the easiest, the most popular and effective tool used in daily life and education, very few studies have attempted to elaborate the use of online discussion forum in facilitating higher-order thinking as stated by Kanuka and Garrison (2004), and the importance of higher order thinking skills in the era of the 21 st century where teaching HOTS is a crucial goal of modern education since it equips students with the competency needed to reason about social affairs in a rapidly changing world. By integrating the critical points above, it is expected that this study may contribute to the formation of critical thinkers to achieve a better generation.

1.2 Research questions

The research questions in this study are as follow :

a. How can students' higher order thinking skills   be promoted through Whatsapp mediated online discussion ?

b. What are the students'perceptions about using whatsapp application in online discussion for learning and thinking ?

1.3 Aims of the Study

The aims of the study comprise as follow :

a. To identify whether online discussion mediated with whatsApp application can promote students' higher order thinking skills (HOTS)

b. To investigate the students'perception about using whatsapp mediated online discussion for learning and thinking.

1.4 Scope of the Study.

The term higher order thinking used in this study refers to the skills available in Bloom's taxonomy revised by Anderson and Krathwohl (2001). such

as remembering, understanding, applying, analyzing, evaluating and creating. The The focus of analysis lies on the last three categories namely analyzing, evaluating and creating as the core domain of higher order thinking skills. These skills involve manipulation of information, not simply memorization or remembering or recall. Meanwhile, the term Online discussion forum or online discussion points out a form of asynchronous computer mediated communication in which the platform used as media of online intraction is WhatsApp application.

1.5 Significance of the Study.

Through the study the author tries to open a new insight on the learning and teaching process particularly in improving higher order thinking skills for high school students. This effort is conducted through the practice of whatsapp application usage in online discussion. In traditional classroom activities, it is still found teacher student interaction or student student interaction with the approach of memorisation and teacher centered learning. This results in students's low achievement performance and at the end this situation will certainly impact to unexpected instructional outcomes. One of the solutions to overcome the problems is applying a digital technology based learning. Through the application of whatsapp in online discussion teachers not only teach learning platform and sharing information but also dig deeper by integrating their english course into cognitive domain such as higher order thinking. This strategy gives impact to students and make them more creative and with high spirit of learning. They will no longer think that English is difficult and boring. In addition, this study can provide awareness to teachers or educators that social media applications have multi benefits especially for instruction. Thus, this study may become one of the alternatives in teaching English for more understanding.

1.6 Definition of terms.

a. Bloom's Taxonomy.

Bloom (1956) stated that the taxonomy is a behavioral classification system to define different levels of human cognition and sorting tool for developing educational objectives. The original version of Bloom's taxonomy

consists of three cognitive domains namely cognitive, affective and psychomotor. According to Chang and Chung (2009), the framework of the taxonomy specify six categories which consist of six categories namely knowledge, comprehension, application, analysis, synthesis and evaluation. The hierarchical models of Bloom's taxonomy are commonly used in education fields.

b. WhatsApp Messenger.

Whatsapp (WA) messenger is a freeware, cross platform messaging and Voice of IP (VoIP) service. According to Cade (2016), WA messanger enables its users to send text or voice messages, video calls, share images, documents, user location, and other media. WhatsApp application is also accessible from desktop computers as long as the user's mobile device remains connected to internet while they use the desktop. Similarly, Barhoumi (2015) revealed that WA application facilitates online collaboration and cooperation among online students connected from school or home in a blended mobile instruction.

c Online Discussion or Online Discussion Forum (ODF)

Corich et al. (2004) state that Online Discussion is asynchronous online learning forum which does not need all participants to be online simultaneously. It provides to the online learning community the ability to interact at a time that suits the individual learner.

d .Higher Order Thinking Skills (HOTS).

According to Bloom (1956), higher order thinking refers to the mental processes of synthesis, analysis and evaluation, and is generally used in activities such as problem solving, reasoning, thinking, assessing, and infering. McLoughlin and Mynard (2009) defined Higher Order Thinking Skills (HOTS) as the skills such as comprehension, analysis, synthesis, evaluation, and application. The skills involve the manipulation of information, not simply memorisation. According to Brookhart (2010), HOTS is defined as transfer, critical thinking, and problem solving. Transfer refers to the teaching goal behind any of the cognitive taxonomies which is enable students to do transfer. In the other word, the students

has the ability to relate their learning to other elements or prior knowledge. Critical thinking refers to student's ability to apply judgement and produce a reasoning critiques. In the other word, students are expected to reason, reflect and make a decision. Problem solving refers to student's ability to identify and solve problems which include new problems that they define themselves and creating new things as the solution.

1.7 Organization of Thesis.

This thesis organization includes subsequent chapters as follow: Chapter I presents a general description of introduction to the topic of the research, the background of the study, the research questions, the aims of the study, scope of the study, the significance of the study, the definition of terms, and the organization of thesis.While Chapter II explores conceptual frameworks that shape this study. It comprises five subsections : Mobile Assisted Language Learning (MALL), Social Media and Language Learning, Whatsapp and English Language Learning, Higher Order Thinking Skills, and Online Discussion Forum. Each of the subsections outlines their basic frameworks. In Chapter III, it highlights research methodology. It comprises research design of the study, research setting and participants, data collection procedure, and data analysis. In chapter IV, it elaborates findings and discussion in which data from the research are analyzed and finding the result. In chapter V, conclusion, implication and recommendation are presented and described. At the end of study, references and appendices are included as supporting materials.