

CHAPTER I

INTRODUCTION

1.1 Research Background

The present of 21st century learning in education is used to reference the core skills and the competency to readily adapt to change, think creatively, innovatively, and critically (Seitz & Hill, 2021). Wasik and Barrow (2018) added that successful 21st learners focus on creativity and Higher Order of Thinking Skills (HOTS) to get well prepared for the new century life and work. This issue places creativity and Higher Order of Thinking Skill (HOTS) as two integral parts of education nowadays (Cummings & Blatherick, 2017; Nachiappan et al., 2018). According to Sani (2019), Higher Order of Thinking refers to the cognitive ability to evaluate, analyze, and create something. Meanwhile, creativity is the capability to combine and modify new ideas (Boden, 2003; Brookhart, 2010; Cummings & Blatherick, 2017; Robinson, 2016). Both of them are holistically needed to support the core skills needed for 21st century learners named Higher Order of Thinking skills (HOTS) (Sani, 2019). In relation to this, teachers play an important role to stimulate students with activities that trigger their creativity and Higher Order of Thinking Skill (HOTS) since teachers contribute to the quality of education (Ariyana et al., 2018).

As teachers were demanded to adapt the 21st skills in the implementation of the teaching strategies, teachers should enrich the pedagogical, social, and

technical competencies to deliver meaningful learning (Beetham & Sharpe, 2013; Padmadewi et al., 2020; Seitz & Hill, 2021; Sugden et al., 2021). Especially in the insertion of creativity and HOTS, the teacher employs the 21st skills, and the selected teaching strategies in set learning activities. It is where teacher sequencing sets of activities that conduct the teaching and learning process show their ability and creativity to manage the classroom through Higher Orders Thinking Skill-based instruction provides chances to improve the students' and education quality (Robinson, 2016). Therefore, the ability to think creatively, relating the previous knowledge and skills in dealing with new contexts or problem, as well as proposing ideas, synthesizing, and making judgment of any sources of information, show the present of creativity and Higher Order Thinking Skills (HOTS) as inseparable dimension of thinking (Anderson et al., 2001; Ariyana et al., 2018; Brookhart, 2010; Sani, 2019).

The important points of creativity and Higher Order Thinking Skills (HOTS) are also taken into consideration by the Republic of Indonesia government. According to the result of PISA and National Examination in 2018, Indonesian students' Higher Order of Thinking skills was low (Ariyana et al., 2018; Dikdas, 2019; OECD, 2016). Thus, the government set a strategic plan by improving the quality of teachers in some episodes of transformation of Indonesian Education programs known as *Merdeka Belajar*, namely *Guru Penggerak and Sekolah penggerak*, as well as many forms of professional Development programs, such as *Guru Belajar dan Berbagi*, *Indonesia Edu Webinar with REFO*, ect. As mentioned in the Indonesian Ministry of

Education and Culture strategic plan in the regulation number 22 Year 2020, creativity and critical thinking are two among six characteristics of Indonesia future generation known as “*Profil Pelajar Pancasila*”, the characteristics of future citizen which are compatible to face the industrial revolution (<http://www.jdih.kemdikbud.go.id>). It implies that teachers should implement Higher Order of Thinking Skills-oriented teaching and learning activities and assessment (Ariyana et al., 2018).

Additionally, the ministry of National Education in *Permendikbud* Number 22 Year 2016 mentioned that the teaching and learning activities involve the insertion of 21st century skills. As mandated in this regulation, the teaching and learning activities are defined as a set of activities to reach the learning objectives. The activities employ teachers to manage the teaching and learning activities in interactive, fun, creative, inspiring, challenging, and student-oriented ways. To do so, the learning activities should provide chances for the students to develop innovation, creativity, and independent in problem solving activities that employs higher order of thinking skills (Ariyana et al., 2018; Astawa et al., 2017; Nachiappan et al., 2018; Salmento & Murtonen, 2019; Sani, 2019). Teachers, therefore, should develop a mindful activity that fosters collaboration, creativity, critical thinking, and communication skills in a set of teaching and learning activities planning and practices.

Creativity refers to the competency to bring up new ideas and artifacts which are important in human’s life (Boden, 2003; Brookhart, 2010; Robinson, 2016). From a teacher's perspective, creating learning activities involving the

idea of creativity presented in a constructive learning environment can motivate and challenge students to get involved in the learning process (Khikmah, 2019). Meanwhile, Higher Order Thinking Skills refer to the competency to display the three-upper level of Bloom's cognitive skills levels in learning hierarchy, that includes the ability and skill to analyze, synthesize, and evaluate things (Anderson et al., 2001; Marzano & Kendall, 2008). It needs special competency of teachers to create and implement engaging learning environments that allow students to develop their critical thinking and creative thinking (Artini & Padmadewi, 2021; Brookhart, 2010; Nachiappan et al., 2018). Moreover, the widely accepted scientific learning approaches that include problem-based, inquiry, discovery, and project-based learning assign teachers as educators to insert tasks, practices, or other deeds for students as the presentation of teachers' creativity and higher order of thinking skills (Ariyana et al., 2018).

Some researches related to the perspective of effective learning activities for online classroom have been conducted to get insights of the important role of teachers' idea to bring creativity and insert Higher order of Thinking skills in creating constructive learning environment (Akatsuka, 2019; Aldujayn & Alsubhi, 2020; Amin & Ikhsan, 2021; Asari et al., 2019; Dorn et al., 2021; Ganapathy et al., 2017; Nachiappan et al., 2018). Teachers' competency in creating learning activities is affected by the digital literacy skills (Ramirez & Ganaden, 2008; Sugden et al., 2021; Wasik & Barrow, 2018). It can be seen from the use of various ICT tools and the use of questioning and authentic tasks

and practice for promoting higher order of thinking skills. This skill made teachers feel free to develop activities that at the end can promote students' higher order of thinking skills. Furthermore, supporting the highlight of creative teaching, teachers' creativity also affects students' learning outcome and motivation.

Meanwhile, in the current situation, the outbreak of pandemic Covid-19 leads to a crisis and forces schools to close. Consequently, learning should be conducted online. Adoption of online learning to the emergence of remote learning emerges the need for teachers to consider 21st century skills in the learning activities (Lopriore, 2020; Seitz & Hill, 2021). The insertion of technology that enable teachers to work out on the content of learning, use engaging strategy, and knowledge of the topic being studied (Ferri et al., 2020; Gou et al., 2020; Inpeng, 2020; Lie et al., 2020; Lopriore, 2020; Metz, 2021; Randall & Marangell, 2021; Richards, 2017). To confirm this, the creativity of teacher in designing the learning activities is significantly needed (Artini & Padmadewi, 2021; Atmojo & Nugroho, 2020; Lee & Lai, 2017; Simamora, 2020; Vidhiasi et al., 2021; Q. Wang & Huang, 2018). The shift from online learning to the emergency remote learning applies the immersion of learning management system (LMS), social media or Social Networking Systems, Zoom, Webex, Screencast O'matic, Camstudio, YouTube, etc. for synchronous and asynchronous online learning hybrids (Dorn et al., 2021; Ferri et al., 2020; Gyamfi & Suksemuang, 2018; Lestari et al., 2021; A.; Lie et al., 2020;

Polydoros & Alasona, 2021; Salmento & Murtonen, 2019; Smith, 2002; Wu et al., 2017).

In responding to the emergency situation and the shift of online learning, teachers need to adapt the learning activities without denying the needs of students to gain knowledge and skills that relates to the curriculum requirements (Lopriore, 2020) the development of technology, as well as the needs of curriculum for developing Higher Order of thinking Skills and creativity (Amin & Ikhsan, 2021; Indasari et al., 2020; Woodill, 2010). To do this, teachers need to alternate the significant opportunities that include all online learning aspects, namely pedagogical, social, and technological aspects (Ferri et al., 2020; Vidhiasi et al., 2021). Besides, the limitation of affordability, economic condition, and limited ICT access in some areas strongly affect teachers in maximizing online learning (Asari et al., 2019; Indasari et al., 2020; Perveen, 2016). Therefore, teachers need special focus and skill in creating constructive learning activities that conform the ideas of creativity and higher order of thinking skills (HOTS) in synchronous and asynchronous online learning.

In Indonesia, research on teachers' creativity and insertion of Higher order of thinking skills are conducted separately (Arifin et al., 2020; Artini & Padmadewi, 2021; Atmojo & Nugroho, 2020; Hikmah, 2017). Furthermore, in Bali particularly, previous research in the High School level found that learning activities with the insertion of creativity and Higher order of thinking skill have not been much conducted. Meanwhile, the government regulation assigns

teachers to consider the new paradigm of teaching and 21st century skills such as creativity, productivity, critical thinking, collaboration, and communication to create *pelajar Pancasila*. It acquires teachers to conduct careful lesson planning and creative design of online learning activities that insert both creativity and Higher order of thinking skills with the help of technology. Especially, to respond to remote learning, research on both creativity and HOTS is needed.

Therefore, considering the importance of teaching HOTS and creativity as a part of 21st century skills, especially in adapting to the emergency remote learning, the researcher interested in investigating the learning activities created by English teachers in Senior High schools in synchronous and asynchronous online teaching in Klungkung regency to conform the idea of creativity and higher order of thinking skills. Briefly, the research will focus on the creativity of EFL teachers in designing the teaching and learning activities and how the students' Higher Order of Thinking Skills are inserted.

1.2 Problem Identification

The declaration of micro social distancing in Indonesia due to Covid-19, especially Java and Bali, resulted in a shifting learning from face to face to online learning. As mentioned by Seitz and Hill (2021) there was a shifting from online learning to emergency remote learning due to the global health crisis. Meanwhile, adapting to the rapid development of technology, teachers are mandated to insert 21st century skills in the learning activities. The skills are

used to reference the core skills in education to help students to be creative, innovative, critical, and reflective (Ferri et al., 2020). The statement indicates the importance of two skills in the 21st, such as creativity and HOTS as two important skills to be counted in designing and implementing learning activities. Furthermore, the shifting learning and the demand of implementing creativity and HOTS, especially in conducting online learning, contributes to challenges for teachers to insert them in the three segments of learning activities (pre-, whilst, and post activities).

Generally, in face-to-face teaching, insertion of HOTS and creativity in the learning activities and the interaction may be easier. This condition resulted from the fact that teachers could put students into various grouping activities. However, during the implementation of remote learning, the teacher had to have adaptive skills in deciding on teaching strategies that fit into the new learning mood. Teachers need to alternate the shift from online learning to emergency remote teaching with the insertion of creativity and HOTS. Thus, teachers also need to correlate the principle of online learning to 21st century skills in their teaching practice.

Besides, the use of technology to assist the process is undeniable. Technology use and engagement to it assists the teaching and learning process in online learning. The teaching and learning are not only about transferring knowledge but also adapting to the student's digital literacy as well as about engaging them with the technology. In this context, the teacher's creativity in

designing the learning activities and the digital skills in embedding the activities in technology are challenged.

The above situation contributes to challenges for teachers socially, pedagogically, and technologically. Due to the challenges faced by the English teachers during the implementation of the emergency Hybrid of online learning, the skills of critical thinking need to be exposed. Furthermore, it was argued that HOTS and creativity correlate each other, therefore the insertion of both of them is significant in the learning activities to encourage students to develop their creativity and critical thinking. Consequently, the teacher's implementation of online learning activities needs to be investigated. The investigation concerns the conformation of learning activities to the lesson plan and learning objective. Especially in the Indonesian context, the implemented curriculum places the importance of higher order thinking skills and creativity to be integrated in the teaching and learning process to help students with solution finding and innovation in real life challenges.

Several researches were conducted on implementation of HOTS and creativity. The investigation of them was done separately. Besides, research on the insertion of HOTS and creativity in online learning are not found. Therefore, research on this creativity and HOTS in online learning activities implemented by teachers in Synchronous and Asynchronous learning mode need to be conducted. As a result, the proper program of professional development and strategies for conducting online learning with HOTS and creativity support

students to achieve the learning goal and 21st century competency more accurately.

1.3 Limitation of the Problem

In order to make the research focus, the researcher limits the scope of the study. The scope of the research is the learning activities created by EFL teacher in synchronous and asynchronous teaching that conform the criteria of Creativity and Higher Order Thinking Skills (HOTS) and problems that teacher found in creating the learning activities that conform to the criteria of Creativity and Higher Order Thinking Skills (HOTS). The school selected was SMAN 1 Semarang, since it implemented both synchronous and asynchronous online learning mode. The data were gathered from observing synchronous and asynchronous learning activities implemented by a female English teacher who taught class MIPA 1,2,3,4, and 5 in grade 10.

1.4 Research Questions

Based on the above background, the research questions are:

Based on the above background, the research questions are:

1. What learning activities are implemented by English teachers in senior high schools in Klungkung Regency in online learning?

1.1 What learning activities are implemented in synchronous online learning?

1.2 What learning activities are implemented in asynchronous online learning?

- 2 How do the activities conform to the criteria of teaching creativity?
- 3 How do the activities conform to the criteria of the Higher Order of Thinking Skills?
- 4 What are teachers' problems in creating activities that conform to the criteria of creativity and Higher Order Thinking Skills (HOTS)?

1.5 Research Objectives

Based on the aforementioned research questions, the objectives of the research are:

1. Identify the learning activities implemented by the English teachers in high school in Klungkung regency in online learning;
 - a. Identify the learning activities implemented by the English teachers in high school in Klungkung regency in synchronous online learning
 - b. Identify the learning activities implemented by the English teachers in high school in Klungkung regency in asynchronous online learning
2. Describe how the learning creativity conform to the criteria of the teaching creativity
3. Describe how the learning activity conform to the criteria of Higher Order Thinking Skills (HOTS)

4. Investigate the problem problems in creating activities that conform to the criteria of creativity and Higher Order Thinking Skills (HOTS)

1.6 Research Significance

The result is going to be conducted to find out how the senior High schools' English teachers design learning activities that conform the ideas of creativity and Higher order of Thinking Skills. Theoretically, the result of this research is expected to contribute to EFL pedagogy, especially when the teaching and learning is conducted online, both synchronously and asynchronously. It is expected also to give a contribution in English as Foreign Language (EFL) pedagogy conducted through online teaching and learning. Furthermore, it enriches other researchers with empirical reviews relating to investigation of online learning activities and teaching creativity and Higher Order of thinking Skills. In a more specific and practical way, the findings of this research are essential for:

- a. Students

The result is expected to help students in understanding the purpose of doing some activities in the teaching and learning process and the importance of composing the creativity and critical thinking or higher order of thinking skills.

- b. Teachers

The finding gives teachers insights for applying creative teaching that conform the ideas of creativity and higher order of thinking skills for good

and effective learning activities. Besides, it can be used as topics for doing or following a continuing self-development program for improving teachers' competency.

c. School

The management of the school can use the result of this research to conduct professional training for teachers.

1.7 Definition of Key Terms

1.7.1 Conceptual Definition

1. Learning Activities

The Ministry of Education and Culture Republic of Indonesia in regulation (Permendikbud), number 22 year 2016 define learning activities as the teacher implementation of activities that help teacher to meet the (Perveen, 2016) learning goal. The activities implement teaching strategy, use technology, and learning media to make students learning.

2. Online Learning

Perveen (2016) states that instructional activities which is conducted over internet. It is conducted in three environments, namely synchronous (online face-to-face meeting where teacher and students interact in the same time), asynchronous (non-real time learning with the use of platform), and hybrid learning (combination of synchronous and asynchronous learning) environments.

3. Creativity

Robinson (2016) defines creativity as process of emerging valuable new ideas or innovation and use of imagination. In education, the core idea of creativity is imagination, reflection, and innovation. Imagination is about the beginning. It brings people to the environment that not exist in the present. The empathy and compassion reflect the emergence of ideas. It helps to bring newness or innovation in to real practices.

4. Higher Order of Thinking Skills (HOTS)

Higher Order of Thinking Skills refers to the competency to display the three-upper level of Bloom's cognitive skills levels in learning hierarchy, that includes the ability and skill to analyze, synthesize, evaluate, and creating things (Ganapathy et al., 2017; Marzano & Kendall, 2008)

1.7.2 Operational Definition

1. Learning Activities

It is a set of activities implemented by teachers to lead students to achieve the learning objective. It is developed by adapting the basic competency, learning objectives, indicator of achievement, learning topic/material, learning strategy, and use of technology. It is implemented by the teacher in SMAN 1 Semarang both in synchronous and asynchronous online learning.

2. Online Learning

It is the teaching and learning activities which are conducted in adapting to the crisis because of the pandemic. The online learning

activities refers to the synchronous and asynchronous online learning environment where the teaching and learning takes place during the limitation of social distancing (PPKM) in Klungkung regency.

3. Creativity

It deals with the activities implemented by the EFL teacher in SMAN 1 Semarang that indicate the process of using imagination and reflection to come up with new ideas. The newness can be in the form of the use of technology, variation of learning media and activities that assign students to develop new products and use imagination.

4. Higher Order of Thinking Skills (HOTS)

It refers to the three upper levels of thinking skills that are developed based on the level of basic competency. In the Senior High school curriculum in SMAN 1 Semarang, the HOTS is defined as the activities that trigger students' thinking skills to meet the level of analyzing and can be developed into evaluating and creating levels.

