

# CHAPTER I

## INTRODUCTION

### 1.1 Background

Live in a linked world in the 21<sup>st</sup> century, where globalization, information and communication technology, and the explosion of knowledge have reduced the globe to a global village (Malik, 2018), where globalization is a complex phenomenon with far-reaching consequences. As a result, it's not surprising that the phrase "globalization" carries many emotional implications. Globalization is viewed as an unstoppable and beneficial force that brings economic property to people all around the world. On the other hand, it is blamed as a source of all contemporary ills (Bakhtiari, S., & Shajar, 2006). This phenomenon influences several aspects of life, and it has the most significant impact on changes and development in education.

Education is crucial for global stability. Cultivating intercultural awareness from a young age might help students combine beliefs from various societies to reach well-balanced conclusions about global concerns. Globalization and education interact as a result of their common aim of educating young people for successful futures in which their countries become increasingly intertwined (Gupta, 2017). Through the design, development, and execution of creative and educational programs, education has an impact on world processes. On the other hand, as a solid and significant feature and the component of the overall socio-political infrastructure, education is subject to socio-political and economic changes (Vasilyeva, 2020).

Society is evolving at an alarming rate, yet schools are trapped in a rut with systems dating back to the nineteenth century. Many developing countries have average levels of education in the twenty-first century that many western countries had by the early twentieth century. Because of political-social views and a lack of resources, many of these nations can modify their educational methods. Schools teach a skill that is no longer relevant in the digital age causes many students to leave school without mastering a basic set of cognitive and non-cognitive abilities (Malik, 2018).

Several skills are credited and classified as 21<sup>st</sup>-century skills. It is referring to broadly encompassing a variety of skills or subcategories of skills. 21<sup>st</sup>-century skills are defined by Voogt and Roblin (2010, 2012) as “new competencies” that society is increasingly demanding of the present workforce and, in educational terms of the youth that must be prepared now for future professional and careers. The use of “life skills” as a formal framework for identifying essential skills, competencies, and capacities came almost entirely from the realm of international development and is now reflected in the Sustainable Development Goals’ target and indicators across a variety of sectors (SDGs). In this regard, it serves as a model for defining 21st-century skills, which interest individuals involved in the field (Joynes & Rossignoli, 2019).

Chalkidaki (2018) defines 21<sup>st</sup>-century skills as encompassing a broad range of skills sets and professional attributes. The systematic review groups 21<sup>st</sup>-century skills into four main categories: personal skills, social skills, information, and digital knowledge literacy. From these skills, which include the partnership for 21<sup>st</sup>-century learning (P21), based in the United States, propose a “Framework for 21<sup>st</sup>-century learning” that emphasize the 4C’s (Critical thinking, Communication, Collaboration, and Creativity), a set of skills that should be developed in the context of teaching core subject areas (Joynes & Rossignoli, 2019). Critical thinking has been highlighted as being especially essential in a global online context since individuals engage and materials are generated with varying goals and competencies (Starkey, 2011). In this day and age of disinformation and fake news, online content must be critically analyzed. It is critical that people understand the nature and source of the problem (Dede, 2010) cited in (van Laar et al., 2020). Critical thinking, creativity, and problem solving related to particular disciplines. History, science, mathematics, and the arts are the example, should all develop the ability to think critically and creatively. The main reason for including academic disciplines in the curriculum is that they nurture powerful knowledge (Young, 2013).

In order to achieve the goals of education in these changes to the digital era, Indonesia continues to enhance its standard of living. These enhancements are

being developed to stay up with the needs of the industrial sector and the rapid advancement of science and technology. As a result, the educational system must evolve to meet present and future demands and advances. The curriculum, which plays a significant role in the education system, particularly in the teaching and learning process, is one factor that impacts the effectiveness of education when the curriculum is used as a guide or a point of reference for implementing educational activities (Laili, 2019).

Due to the development of education, there are more various formal educational institutions to choose from. Not only are the categories of public and private schools, but there are also international schools. The establishment of international schools in Indonesia was initially an education service school for foreign nationals, according to comments in the regulation of the Director-General of Basic Education at the Ministry of Education and Culture. Due to the growing number of immigrants in Indonesia, the number of international schools has also risen. In addition, as the country develops, foreign schools are becoming increasingly in demand among Indonesian people (Hendriyani, W., & Nadya, 2018). The community has been comparing the quality of education at these two institutions that utilize different benchmarks and will continue to do so. Furthermore, foreign curricula and learning methods that employ English are frequently viewed as adding value to graduates' brilliance. The comparison will eventually be taken into account by parents when deciding which school is the best fit for their children to receive a more advanced education.

International schools are those that administer education using curriculum from other nations rather than local/national curricula. The foreign curriculum used in Indonesia as an example is the International Baccalaureate (IB), Cambridge International Examinations (CIE), western association schools and Colleges (WASC), and others. With the highest number of foreign schools in Southeast Asia, Indonesia is in the first place. ISC Research, a significant provider of statistics and information to the worldwide education industry, provided the information (Gideon, 2017).

In 2018, more than 200 international schools implemented the Cambridge curriculum (Andriyanto, 2018). Many schools are interested in implementing the Cambridge curriculum for a variety of reasons, despite good English skills, including the fact that the content is more interesting, allowing students to learn more efficiently, and that more emphasis is placed on developing students' interests and talents, allowing for in-depth mastery of the field, allowing students to think broadly and have an international perspective.

The Cambridge curriculum is one of the foreign curricula used in Indonesia. The Cambridge curricula benefit from being the world's most extensive curriculum, being adopted in 10.000 schools in 160 countries (Cambridge, 2021). By learning the Cambridge curriculum, students will have five study habits: confident, responsible, reflective, innovative, and engaged (Christine Ozden, 2020).

Competencies in the Cambridge curriculum might be considered to a broader and better description of the 21<sup>st</sup>-century skills, which are grouped into four categories ways of thinking, including creativity and innovation; critical thinking; problem-solving; decision- making; and learning to learn; metacognition, ways of working including communication and collaboration, tools for working including information literacy and ICT literacy, last is living in the world (Piaget, 2001). Especially in science subjects, the Cambridge curriculum includes four strands of science investigation, biology, chemistry, and physics focused on scientific inquiry considering ideas, evaluating evidence, planning, investigating, observing, and analyzing data. Provides environmental awareness and some history of science. Some of these things can train students' thinking and perspective (Diocolano, 2019).

After figuring out the current urgency of critical thinking, this research aims to portrait the critical thinking skill as one of the 4C's learnings that need to be there in the core of teaching-learning activity in students of junior high school level by implementing the Cambridge curriculum. Life in the 21<sup>st</sup> century requires a variety of skills that must be mastered by someone so that it is expected to help students master various skills to become successful individuals' lives. High-quality human resources with expertise are needed. According to the Partnership for 21st Century

Abilities (P21), one of the thinking skills that must be approved in the twenty-first century is critical thinking. These 21st-century abilities can aid by improving the quality of learning, encouraging collaboration, increasing engagement, and developing student-centered learning (Sinaga, 2019).

By these aims, the instrument for measuring student critical thinking should be made. Natural science was chosen as the research topic. It's also fascinating to observe how the Cambridge curriculum is implemented by people who have looked into it. The outcomes of the study will be utilized as data in measuring student critical thinking and one of the significant sources for determining the next steps in developing scientific literacy, whether for educational or other purposes.

## **1.2 Research Problem**

The study's research problem can be defined as 'How is the profile of junior high school students' critical thinking skill on learning speed in the Cambridge curriculum?' Based on the research problem, the research attempt to define the following question:

- 1) How does the implementation of the Cambridge curriculum in speed topic?
- 2) How do student's critical thinking skills in speed topic by using the Cambridge curriculum?

## **1.3 Research Objective**

The research objectives of this research can be listed as follows:

- 1) To identify the elements in the concept of curriculum implementation in speed topic
- 2) To identify the Cambridge curriculum's impact in measuring students' critical thinking in learning Speed according to Ennis theory.

## **1.4 Research Benefit**

The research is prospected to give benefits for:

- 1) Students

Students can experience the teaching-learning activity conducted by implementing the Cambridge curriculum and improving students' critical thinking skills in learning speed.

## 2) Teachers

The result of this study is beneficial for teachers by providing them statistical data to evaluate the teaching-learning activity process and reference to improving teaching-learning activity in Cambridge curriculum implementation.

## 3) Other Researchers

The result of this study is helpful for researchers by providing them additional materials data information as it offers which can be used for further reference of the best outcome for student's critical thinking skills from implementing Cambridge curriculum in learning Speed.

### **1.5 Organizational Structure of Research Paper**

- 1) Chapter I. Introduction. This chapter contains the background of the research, research problem, research objectives, research benefits, the organizational structure of the research paper, and the limitation of the problems.
- 2) Chapter II. Literature Review. This chapter contains the literature review about the implementation of the Cambridge curriculum, specifically on lower secondary school science, the critical thinking skill, speed, and relevant research
- 3) Chapter III. Research Methodology. This chapter contains the method used to carries the research paper includes research method and research design, population sample, operational definition, research instrument, instrument analysis, data collection, data analysis technique, research procedure, and research scheme.
- 4) Chapter IV. Result and Discussion. This chapter includes the result with a discussion about the research.
- 5) Chapter V. Conclusion and Recommendation. This chapter includes this research's conclusion and recommendations for the following research.

## **1.6 Limitation of Problem**

Several terms are used in this study, and to avoid misunderstanding, the words are confined to the following:

### 1) Student's critical thinking skill

This study measures students' critical thinking skills as a required skill needed in the 21-st century era. Critical thinking encompasses how students develop and apply ideas to understand better how they might enhance their thinking according to Ennis' indicators which are: Elementary clarification; Basic support; Inference; Advanced clarification; and Strategies and tactics. It is also a standard college course. Students who master this skill tend to broaden their worldview and improve their capacity to make key learning in life (Murawski, 2012)

### 2) The Cambridge curriculum

According to Cambridge international organization, The Cambridge curriculum is a worldwide curriculum that establishes a global educational standard. They also learn the necessary skills for success at university and their future occupation as a result of the program's emphasis on in-depth mastery of the subject. This study focuses on the Cambridge upper secondary school science curriculum in grade 7th with the chosen topic, speed topic.

### 3) Speed topic

In this research, the speed topic is limited by the Learning Objectives provided by the Cambridge curriculum framework stage, which the teacher interprets for each sub-topic.