

## **CHAPTER I**

### **INTRODUCTION**

This chapter initially presents the background of the study. Then, it continues to the research questions and the research objectives. Further, this chapter consist of (1) Background of the study; (2) Definition of Key Terms.; (3) Research Questions Objectives of the Study; (4) Objectives of the Study; and (5) Significance of the Study.

#### **A. Background of Study**

Education has undergone a significant transformation in response to technological advancements in the 21st century. The digital era has reshaped how we learn, teach, and interact with information, creating a more inclusive and interactive educational environment (Dede, 2010). Information and communication technology (ICT), including the internet, mobile devices, and digital learning software, has dramatically altered the educational landscape (Prensky, 2001).

This transformation has had a substantial impact on the role of technology in teaching and learning. Technology enables student-centered instruction with more efficient differentiation of learning (Papert, 1997). Furthermore, technology has expanded access to global educational resources (Lai & Bower, 2019)

The role of technology in education is closely related to the development of the 4C skills (Communication, Collaboration, Creativity, and

Critical Thinking), which are recognized as essential skills for preparing students for an

increasingly interconnected and rapidly changing world (Partnership for 21st Century Learning, 2007).

As technology continues to advance, the implementation of 4C skills in education becomes increasingly relevant. Technology supports the development of these skills through tools and platforms that enable students to communicate, collaborate, explore creativity, and think critically more effectively (Boling et al., 2012).

The concept of 4C skills, encompassing Communication, Collaboration, Creativity, and Critical Thinking, has emerged as a crucial component in preparing students for the unique challenges of the 21st century. The digital revolution has laid the foundation for the development and integration of these skills into educational contexts (Partnership for 21st Century Learning, 2007).

The emphasis on developing 4C skills corresponds with the role of technology in education, as elucidated previously. Technology provides students with the means to communicate effectively, collaborate seamlessly, unleash their creativity, and engage in critical thinking with the support of cutting-edge digital tools (Boling et al., 2012).

In the current educational landscape, digital technology plays an increasingly pivotal role in shaping how we teach, learn, and interact. It stands as a driving force behind the cultivation and reinforcement of the crucial 4C skills: Communication, Collaboration, Creativity, and Critical Thinking.

Integrating digital technology into education to enhance the development of 4C skills presents several challenges that must be carefully addressed. First and foremost, the unequal access to technology and internet connectivity among students creates a digital divide, potentially hindering the equitable development of 4C skills. Teachers should be mindful of these disparities and adapt their teaching strategies accordingly.

Secondly, the utilization of technology in education raises concerns about data privacy and security. It is imperative to safeguard students' personal information, necessitating proper policies and training for both teachers and students to ensure secure online practices. Thirdly, teachers play a pivotal role in this transition, but they may require comprehensive training to effectively incorporate technology into the curriculum, ensuring the successful development of 4C skills. Lastly, the importance of supervision and control in managing screen time cannot be underestimated, as excessive technology use without proper guidance may have adverse effects on students' overall development. In addressing these challenges, it is essential to consider the diverse needs and circumstances of students while promoting the use of technology as a valuable tool for fostering 4C skills (Partnership for 21st Century Learning, 2007)

In concerning the role of technology in education, the development of 4C skills, and the progress of society, a relevant Quranic verse is as follows :

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

This verse encapsulates the concept that Allah imparts knowledge to humanity that was previously unknown to them. In the context of this research, we can correlate this verse with the role of technology in education. Technology, including computers and the internet, has provided unprecedented access to information and knowledge. Technology allows people to expand their knowledge and learning through online resources.

Another Quranic verse that aligns with the relevance of technology in providing benefits for education and knowledge is:

وَفَوْقَ كُلِّ ذِي عِلْمٍ عَلِيمٌ

This verse emphasizes that knowledge can be acquired and enhanced through effort and understanding. Through the application of technology, especially in education, we can broaden the scope of knowledge and enrich understanding for the progress of individuals and society.

In the strengthening of 4C skills (Communication, Collaboration, Creativity, Critical Thinking), technology also plays a pivotal role. For instance, technology enables students to communicate and collaborate with individuals from around the world, fosters creativity in learning, and provides tools for critical thinking and improved information analysis.

This verse reminds us that progress in education and skill development can be seen as the imparting of new knowledge acquired through technology, which, in turn, can help individuals become more competent and competitive in the modern era.

*Kurikulum Merdeka*, an innovative educational curriculum in Indonesia, aims to revamp education by integrating technology and fostering 4C skills—critical thinking, creativity, collaboration, and communication. This curriculum places technology at the core of learning, making it essential for teachers and emphasizing its role in nurturing these vital skills (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2021). Through *Kurikulum Merdeka*, education isn't just about subjects but also about empowering students with essential life skills, aligning closely with the advancement of 4C skills (Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi, 2021).

When examining the connection between *Kurikulum Merdeka*, technology, and the development of 4C skills, it becomes evident that technology plays a central role in the successful execution of *Kurikulum Merdeka*. Technology empowers teachers to create contextual, inclusive, and student-centered learning experiences. Teachers can harness technology to support the development of students' communication, collaboration, creativity, and critical thinking skills (Lai & Bower, 2019). The integration of technology within *Kurikulum Merdeka* requires thorough preparation, encompassing both technological infrastructure and teacher training (Dede, 2010).

This research relevance to previous studies that have explored the development of 4C skills within the educational context. Prior research conducted by Sunardi and Ferry Doringin shed light on the significance of the

4C learning model within teacher professional development programs, highlighting its positive impact on teachers' technological skills, with an emphasis on communication, creativity, collaboration, and critical thinking. Similarly, Lina Febriani's study emphasized the role of technology in 4C learning, albeit identifying implementation challenges. Furthermore, Putri Agnes Ainuningsih's research focused on the incorporation of 4C skills by prospective teachers, revealing that a majority of them integrated these skills, albeit encountering specific difficulties.

Based on the above, this study focuses on pre-service teachers utilizing digital technology to strengthening 4C skills in teaching practice by students of the sixth semester at UIN Antasari Banjarmasin's English Teacher Education Department. When choosing how to teach 4C skills, pre-service teachers thought about how they could be taught in the classroom. The study aims to provide a deeper understanding of the use of technology in fostering 4C skills in the teaching practices of educators following the *Kurikulum Merdeka*, that represents a recent educational implementation in Indonesia, gaining insights into its effectiveness in seamlessly integrating technology and enhancing 4C skills becomes immensely valuable.

Furthermore, the research will also address the potential challenges educators may face when employing technology within this context. Identifying and comprehending these obstacles will enable the development of more effective strategies to overcome them, thus maximizing the benefits of technology use in education. Therefore, this research, titled “**The Role of**

## **Digital Technologies in Strengthening 4C Skills in Student Teaching Practice”**

### **B. Definition of Key Terms**

In the context of this study, key terms are defined to provide clarity and understanding of the concepts under investigation.

1. **4C Skills:** Refer to the core skills of Communication, Collaboration, Critical Thinking, and Creativity. These skills are essential for enhancing the quality of education and preparing students to meet the challenges of the 21st century (Partnership for 21st Century Learning, 2007).
2. **Digital Technology:** Based on Selwyn, (2011) Digital technology in this internet-based technology employed within an educational context. This encompasses software and applications that support the learning process.
3. **Pre-Service Teachers:** Van de Pol (2019) explained pre-service teachers are the students undergoing teacher education or training programs aimed at preparing them to become educators in the future.
4. **Teaching Practice:** Van de Pol (2019) Constitutes the real-life experiences of pre-service teachers in teaching within a school environment. This includes observation, assistance, and direct experience in classroom management and the application of teaching methods.
5. **Role of Digital Technology:** Refers to the contribution and impact of digital technology in enhancing the 4C skills of pre-service teachers during their teaching practice. This involves the ways in which digital tools facilitate communication, collaboration, critical thinking, and



creativity in the educational context (Bolling, 2012)

6. **Challenges in Technology Integration:** This term refers to the various obstacles and hindrances encountered by pre-service teachers when attempting to integrate digital technology into their teaching practices. These challenges may encompass limited access to digital devices and resources, insufficient training in technology usage, or school-level policy issues that impede effective technology integration (Hodges, 2019)

### **C. Research Question**

1. What digital technology are used in strengthening 4C skills in student teaching practice?
2. What are the roles of digital technology in strengthening 4c skills in students' teaching practice?
3. What are the challenges faced by pre-service teachers of the English Teacher Education Department in using digital technologies to strengthen skills in teaching practice?

### **D. Objectives of Study**

1. To identify the various digital technologies utilized in student teaching practices aimed at strengthening 4C skills, encompassing communication, collaboration, creativity, and critical thinking
2. To investigate the role of digital technology in strengthening 4C skills (Communication, Collaboration, Critical Thinking, and Creativity) in students' teaching practice.
3. To identify and analyze the challenges faced by pre-service teachers in the

English Teacher Education Department when using digital technologies to enhance their teaching practice.

#### **E. Significance of Study**

1. **Enhancing Pre-Service Teacher Preparation:** The paramount significance of this study is its potential to augment the preparation of pre-service teachers through a comprehensive exploration of the role of digital technology in fortifying 4C skills within the realm of teaching practice. By accomplishing this objective, the research aspires to make a substantive contribution to the amelioration of teacher education programs, ensuring that prospective educators are more adeptly equipped with the requisite competencies to excel in pedagogical endeavors.
2. **The Challenges Confronted by Pre-Service Teachers:** The discernment and alleviation of the predicaments encountered by pre-service teachers when incorporating digital technologies into their pedagogical pursuits constitute another fundamental facet of significance in this study. By fulfilling this objective, the research can proffer pragmatic recommendations and efficacious remedies to surmount these impediments, thus buttressing and enhancing the efficacy of teacher training initiatives.