

Original Article

Prospects for Digital-Based Character Education Management in the Era of Industrial Revolution 4.0

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Abstract: *This research aims to evaluate the prospects and obstacles in implementing digital-based character education in the Industrial Revolution 4.0 era. This research uses phenomenological methods and a qualitative approach. The phenomenological approach was chosen because it allows researchers to explore and describe the meaning given by a number of individuals to experiences related to certain phenomena or concepts. The research results show that in the current digital era, there are a number of challenges in education, including issues such as national unity, decentralization of education management, democratization of education, and improving the quality of education. Due to a conceptual lack of understanding about character education, character education is difficult to apply in the context of educational performance today. This results in implementation that is not on target and serious problems related to evaluation. One step to face this digital era is to focus on character education which aims to shape and maintain students' morals, which is the essence of all types of education. This can help direct the development of human physical and mental behavior, thereby creating a balanced individual. Apart from that, the moral aspect is also an irreplaceable foundation for maintaining the integrity of character education in the school environment. Based on the results and discussion, it can be concluded that efforts to develop digital-based character education require careful planning and strategies because of the large challenges faced.*

Keywords: *Education Management, Character, Digital Era, Industrial Revolution 4.0.*

I. INTRODUCTION

In population development in the 21st century, there are several generational groups that influence the characteristics of a particular time period. It begins with the Baby Boomer generation which includes those born between 1946 and 1964. After the end of World War II, this generation emerged and often had many siblings, as many couples of that time decided to have many children. They are known as a generation that tends to adapt easily, accept change, and are considered to have a lot of life experience (Putri, 2018).

Generational development continues into Generation Data storage at that time used floppy disks or diskettes. Music and video games, as revealed by Jane Deverson's research, are very popular among this generation. The next generation is Generation Y, born between 1981 and 1994, also known as the millennial generation or millennials. The term "Generation Y" first appeared in an editorial in a major newspaper in the United States in August 1993. This generation has adopted many instant communication technologies such as email, SMS, instant messaging, as well as social media such as Facebook and Twitter. They also like playing online games (Yuniarto & Yudha, 2021; Kosim, 2020).

Then, in the period from 1995 to 2010, Generation Z was born. They are often referred to as the i-Generation, net generation, or internet generation. This generation has similarities with Generation Y, but they have the ability to carry out many activities simultaneously, such as tweeting, using cellphones, surfing the internet via PC, and listening to music using headsets (Kezia, 2021). They tend to be connected to the virtual world from an early age and have an affinity with advanced technological devices, which indirectly influences their personality (Albany, 2021).

Then, between 2011 and 2025, Generation Alpha was born. This generation is a continuation of Generation Z and is the offspring of late Generations. They are also always connected to the internet, with a high level of connectivity, both in Indonesia and Asia (Kulsum & Muhid, 2022). The Digital Generation, especially in Indonesia, has a better understanding of technology compared to previous generations, such as their parents (Tsoraya et al., 2023). Around 75 percent of this generation in Indonesia has technological knowledge, while in Asia as a whole, the figure reaches 74 percent. Many of them, around 54 percent in Indonesia and 55 percent in Asia, actively interact on the internet, and social media is an important part of their lives, with 69 percent in Indonesia and 46 percent in Asia feeling incomplete without access to these platforms.



Observing the nature and character of today's generation, we can identify three main challenges. First, challenges in the context of maintaining the unity and integrity of the nation and state. Second, they need to increase their competitiveness and collaborate globally. Third, they must lead their nation towards achieving Golden Generation status by 2045 (Farid, 2023).

The definition of education in Article 1 (1) of Law Number 20/2003 states that education is a conscious and planned effort to create a learning environment that allows students to actively develop their potential. It includes spiritual aspects, self-control, personality, intelligence, morality, and skills necessary for individuals, communities, nations, and states.

It is important to remember that the essence of education remains relevant in this digital era. Although the context changes, human nature does not change, and education must facilitate individual development in different contexts. In the 21st century, people must have creative, innovative, critical and problem-solving skills in thinking (Sukarno, 2020). They must also be able to communicate and collaborate at work, have information literacy, and understand information technology. Apart from that, they need to be able to interact well at local and global levels, have social responsibility, achieve success in their careers, and have a broad cultural understanding. All of these skills are essential to creating a prosperous life. This research aims to evaluate the prospects and obstacles in implementing digital-based character education in the Industrial Revolution 4.0 era.

II. RESEARCH METHODS

This research uses a phenomenological method approach and qualitative research methods. This method allows researchers to explore and describe the meaning generally given by a number of individuals regarding a phenomenon or concept in the choice of phenomenological research method carried out (Creswell, 2015). Teachers and principals were collected through in-depth interviews from two types of schools, namely schools that are generally known as favorite schools and schools that are not favorite.

In the event that the informant is a school principal, the researcher gives the code "KSC." Meanwhile, informants from Gifted High School were given the code "B." Thus, "GB" is the code for the teacher of the Gifted High School and "KSB" is the code for the principal of the Gifted High School. The data collection process began in October 2023. During the research, researchers also tested the validity of the research data through triangulation and examination by members.

Triangulation is a technique used to examine data from various sources studied (Sugiyono, 2012). Therefore, in this research, researchers also verified the data obtained from informants with other sources. Apart from that, the researcher also carried out member checks, namely by asking informants to read and evaluate the manuscript prepared by the researcher (Creswell, 2015). In other words, the researcher presents the manuscript to the informants to read and evaluate, so that there is an understanding between the researcher and the informants regarding the data obtained. Next, research data analysis was carried out by following the steps suggested by Creswell (2015), including organizing data, taking notes, describing data, classifying data, interpreting data, and presenting data.

III. RESULTS AND DISCUSSION

The learning process must experience rapid development, no longer applying the educational methods used 100 years ago. In terms of global talent competition, the availability of terabytes of information from the digital revolution is crucial for the future. The global talent market is now characterized by a shift in power from organizations to employers to the talent workforce. The demand for global intelligence is increasing, and every organization is trying to attract the best talent. Our future depends largely on our ability to source these resources and attract the workforce that can keep our organizations at the forefront. This is in line with the sustainable development goals outlined by UNESCO, such as eliminating poverty, hunger, improving health and well-being, providing quality education, promoting gender equality, and ensuring access to clean water, clean energy and adequate sanitation.

UNESCO is considered a leader in achieving the 2030 Global Education Agenda through SDG 4, which is part of the Sustainable Development Goals. There is a roadmap or action plan that has been set out in the 2030 Education Framework of Reference (EFA) to achieve this goal. However, in the context of national education, there are still several challenges that need to be overcome. One of them is the targets that have not been achieved from the EFA and MDGs agenda in the field of education, as well as handling educational problems on a global and national scale. This involves issues of human rights, participation, protection, cultural, linguistic and ethnic diversity, as well as collective responsibility and accountability (Suryana & Muhtar 2022).

Fundamental human rights and the basis for ensuring other rights are realized are considered the public good of education. Peace, tolerance, human fulfillment, and sustainable development are essential for Education to achieve. . It is also key to achieving economic empowerment and ending poverty completely. Factors such as equity, accessibility, quality, inclusion, and learning outcomes must be considered in an approach to lifelong education for all (Sahronih, 2018)

Violent behavior that often occurs among teenagers can range from verbal behavior to physical actions. Violent behavior like this includes bullying, gossip, threats, exclusion, ridicule, physical actions such as hitting and kicking, and so on. These kinds of actions can result in fighting, conflict, and psychological distress, possibly even suicide. Unfortunately, this violent behavior does not only occur between fellow students but also involves teacher behavior towards students. This kind of violent behavior can create an unsafe and peaceful school environment, which does not support the development of students' character. The character development process should be more than just a cognitive understanding of concepts, but should involve the internalization of deeper values (Hendayani, 2019).

Peaceful character and behavior develop within the school environment and through learning experiences and activities outside the classroom. In this context, technology cannot replace the important role of a teacher. On the other hand, technology as a tool for building an educational culture must be able to be used by teachers who promote the development of students' personalities. Aggressive thinking styles and behavior among students in grades 4-5 often follow a uniform pattern, reflecting linear thinking that relies more on the left side of the brain. There is a belief among children that violence can be used as an excuse to retaliate. The pattern of acts of revenge often involves physical aggression. This style of thinking can potentially damage national unity, international peace and human well-being. Preventing violent behavior, radicalism and conflict can be achieved through educational efforts that promote non-violent thinking from an early age (Ma'rufah, 2022).

All members of the school community, parents and society must strive for character education to help children and adolescents have caring, moral, responsible and strong personalities. The main aim of character education is so that good norms accepted by society can be understood and applied by students. Intellectual intelligence (IQ) and appropriate behavior must be possessed by students. The moral quality of the younger generation is currently experiencing a decline, so character education which includes moral aspects, life values, religion and ethics is very important in all educational institutions. Character reflects individual behavior patterns. The pillars of character education that need to be taught include respect, trust, responsibility, caring, justice and citizenship (Isman & Agussani, 2020).

Improving academic achievement, building strong character, respecting others in society, preparing behavior in the workplace, and teaching cultural values are character education that must be taught to students because this helps ensure that they have a good personality. Students who have good and strong character are not just born, but through the introduction and application of character education from an early age, both in the family, school and community. For example, the family environment teaches children to ask for blessings and greet their parents before going to school. At school, students are taught to smile, greet, and greet their friends when entering the school building. There is a tradition of greeting when meeting other people and asking about their news regarding culture in society. . All of this reflects the pillars of character education such as respect and caring. Characters such as trust, honesty and responsibility can create opportunities to achieve better achievements. Responsible character can increase student achievement, open the door to awards, such as funds, scholarships, or opportunities to excel at institutions or companies without having to pass a selection test.

The importance of government policies to support public education in facing the digital era is very large. This is important so that people can understand and make optimal use of the internet. Until now, many educational programs are still limited, only focusing on internet access skills and promoting healthy behavior on the internet. In fact, digital education covers more than that, covering aspects of digital behavior and culture.

It is hoped that improving the quality of education in schools can implement structured and sustainable character education, which is integrated into the curriculum. This aims to shape the character and morals of students in an integrated, comprehensive and balanced manner in accordance with graduate competency standards. Students are expected to be able to increase their knowledge, internalize character and moral values, and apply them in everyday life. Students who can integrate character education into their lives will have good personalities, as well as a balance between intellectual intelligence (IQ) and emotional intelligence. This emotional intelligence will be a valuable asset in preparing children for their future. They will be able to easily and successfully face various life challenges, including academic achievement.

IV. CONCLUSION

Educational challenges in the digital era, such as global and national challenges in education, human rights, participation, protection, cultural, linguistic and ethnic diversity, as well as shared responsibility, can be more easily overcome through the consistent implementation of character education in the learning process. Character education is very important for every individual in an educational environment. This is because, in order for someone to become a responsible citizen of society, they need to develop their various potentials, especially strengthening the moral values that will guide their behavior in the educational environment. There are several essential character values that need to be instilled in a person, including love for God and all His creation, independence, responsibility, honesty, trustworthiness, wisdom, respect and politeness, generous attitude, spirit of mutual cooperation, self-confidence, creativity, hard work, leadership, justice, kindness, humility, tolerance,

peace, and unity. Future research in this area must pay attention to developments in digital technology, culture, and the growing need for character education. In addition, collaboration between academics, practitioners and policy makers will be key in developing and implementing effective solutions to support positive characters in future generations.

V. REFERENCES

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