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Research Article

The Role of Teachers in Forming a Superior Generation in the Digital Era

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Abstract

The role of teachers in shaping a superior generation in the digital era is very important considering the rapid development of technology that affects all aspects of life, including education. This study aims to explore the role of teachers in utilizing technology to create innovative, flexible, and relevant learning to the needs of students in the 21st century. The method used in this study is mixed methods, by combining qualitative approaches through in-depth interviews and quantitative through questionnaires. The results of the study show that most teachers have good digital literacy and have integrated technology into the learning process. However, the challenges faced include limited training time, uneven access to technology, and gaps in supervision of technology use at home. Technology-based learning can improve students' skills such as collaboration, communication, and problem solving. In addition, this study emphasizes the importance of the role of teachers in instilling digital ethics and overcoming social challenges posed by technology. Collaboration between teachers, parents, and the government is needed to create a learning environment that supports the formation of a superior generation that is able to face global challenges in the digital era.

Introduction

In the increasingly advanced digital era, the role of teachers as educators and learning facilitators has undergone significant transformation. Technological advances have changed the way humans communicate, work, and learn, thus requiring adaptation in the education process. Teachers now function not only as providers of material, but also as companions who guide students to become superior, critical, and innovative individuals. In this context, teachers have a responsibility to help students develop 21st-century skills, including digital literacy, critical thinking, and collaboration.

The superior generation in the digital era is a generation that is able to utilize technology for productivity and creativity, not just as passive users. Research shows that students' digital literacy skills are greatly influenced by the role of teachers in assisting the technology-based learning process (Ferrari, 2013). Teachers who are able to integrate technology into learning methods effectively will help students understand the complexity of the digital world while preparing them to face global challenges.

On the other hand, the digital era brings new challenges that require teachers to continue to improve their competence. Education must now respond to issues such as advances in artificial intelligence (AI), excessive use of social media, and cybersecurity threats. This requires teachers who are not only digitally literate, but also have the ability to educate students about the ethics of using technology, as well as how to deal with its negative impacts. As stated by Prensky (2010), teachers in the digital era must be digital immigrants who are able to understand and accompany digital natives.

Education is not only about transferring knowledge, but also about character building. In this context, teachers play an important role in instilling moral, ethical, and cultural values in students. A superior generation is not only a technologically savvy generation, but also a generation that has integrity, social responsibility, and empathy. Research by Zhao and Frank (2003) confirms that the role of teachers is very important in instilling a value-based learning culture in the digital era.

In addition, education in the digital era requires more flexible and personalized learning strategies. Technology provides opportunities to implement learning that is tailored to the needs of each student. Teachers must be able to utilize digital tools, such as online learning platforms, to create interactive and relevant learning experiences. However, this also requires teachers to have adequate technological literacy and an understanding of technology-based pedagogy.

As agents of change, teachers also play a role in connecting students with the outside world through technology. Student involvement in the global community through technology-based collaborative projects can increase their insight into cultural diversity and global challenges. However, this can only be achieved if teachers have the ability to utilize technology optimally and wisely.

Various studies show that countries with superior education systems, such as Finland and Singapore, place the role of teachers at the center of educational innovation. Teachers are given continuous training and supported by policies that allow them to continue learning and developing. This shows that the success of the education system in the digital era is highly dependent on the quality of teachers (Sahlberg, 2011).

However, the challenges faced by teachers are not small. In many countries, including Indonesia, there is a gap in access to technology and training for teachers. This hinders teachers' ability to provide learning that is relevant to the demands of the digital era. The government and educational institutions need to work together to provide adequate support for teachers, including access to technology infrastructure, training, and digital learning resources.

The digital era also opens up opportunities to integrate data-based learning. Data analysis can help teachers understand the needs and potential of individual students. However, this requires teachers to have a higher level of technological mastery. Data literacy is one of the new competencies that teachers must have to create evidence-based learning and measurable results.

Teachers also face challenges in managing students who were born and raised in the digital era, who often have multitasking habits and short attention spans. Therefore, teachers must be creative in designing interesting learning and motivating students to actively participate. Approaches such as gamification and project-based learning can be solutions to increase student engagement.

Furthermore, the role of teachers as shapers of superior generations cannot be separated from the support of families and communities. Collaboration between teachers, parents, and communities is very important in creating a conducive learning environment. Teachers also need to build effective communication with parents to ensure that learning in schools is in line with the values taught at home.

The transformation of education in the digital era requires commitment from all parties, including teachers as the main actors of change. Competent, integrated, and adaptive teachers are the key to creating a superior generation that is ready to face global challenges. Through innovation and dedication, teachers can inspire students to become creative, independent, and highly competitive individuals.

In addition, the digital era offers opportunities to create inclusive and personalized learning. Technology allows students with special needs to gain better access to education. For example, artificial intelligence-based software can be used to create adaptive learning tailored to the individual needs of students. Teachers have an important role in ensuring that this technology is used optimally to accommodate student diversity and provide equal opportunities to all learners.

The changing role of teachers in the digital era also raises questions about how they can maintain relevance in this profession. Teachers must continue to develop their professional skills through training and continuing education. However, the challenges faced are not only technical, but also involve the ability to understand the social and cultural changes brought about by technology. Teachers who are able to combine technological competence with a deep understanding of social dynamics will be more successful in forming a superior generation.

It is undeniable that technology also brings ethical challenges to the world of education. Teachers now have to deal with issues such as technology abuse, cyberbullying, and the negative impact of social media on student development. This requires teachers to not only be educators, but also mentors who are able to guide students in using technology responsibly. Education about digital ethics is one important aspect in creating a superior generation, both intellectually and morally.

Finally, the relevance of education provided by teachers is greatly influenced by national education policies. The government has a strategic role in supporting teachers through the provision of digital infrastructure, adequate training, and progressive policies. Teachers cannot work alone in facing the challenges of the digital era; they need strong support from various parties, including the government, society, and educational institutions. With good synergy between teachers and their supporting environment, the education system can move towards a more adaptive and innovative direction.

In addition, technological developments have also brought changes in the way teachers assess and measure student progress. In the digital era, traditional assessment methods such as written exams are starting to be replaced by project-based assessments, portfolios, and more flexible digital assessments. Teachers are now required to have the ability to design assessment instruments that are in accordance with the needs of technological developments, as well as understand how the data obtained can be used to improve student learning outcomes more objectively. Research by Anderson (2015) shows that technology-based assessments are able to provide faster and more relevant feedback for students, and allow for more detailed assessments.

The role of teachers as classroom managers has also changed in the digital era. Technology makes it easier to monitor and manage students' learning processes, especially in distance learning or blended learning. Teachers can now use digital platforms to monitor student progress in real-time, identify difficulties faced, and provide direct feedback. In addition, technology allows students to study independently outside of class hours, accessing learning materials anytime and anywhere. This requires teachers to be more creative in creating learning experiences that remain structured even though they are carried out outside the classroom.

Teachers are also expected to be able to develop sustainable professional skills. Education in the digital era is developing very rapidly, so teachers must continue to update their knowledge and skills through relevant training and professional development. Through continuous training, teachers not only improve their competence in technology, but also learn about the latest learning methodologies and managerial strategies for managing digital classes. This is important to ensure that teachers can continue to face the challenges that arise along with the development of technology.

In an effort to prepare students to face future challenges, teachers must also act as mentors in developing life skills that are very much needed in the 21st century. Skills such as communication, collaboration, creativity, and problem solving are becoming increasingly important in an increasingly automated and technology-based workplace. Effective teachers must be able to provide learning experiences that stimulate the development of these skills outside of formal learning, for example through collaborative projects, group discussions, or technology-based extracurricular activities.

As educators, teachers must also understand the various social and cultural issues that develop along with technological advances. In the context of globalization, students need to be trained to understand cultural diversity, both locally and internationally. Technology facilitates students' access to interact with different cultures and increases their global awareness. In this case, the role of teachers is very important to guide students to understand and appreciate differences, and develop a broader perspective on the world.

Method

1. Research Design

This study uses a mixed methods method (a combination of qualitative and quantitative). This approach was chosen to gain a comprehensive understanding of the role of teachers in shaping a superior generation in the digital era. Qualitative methods are used to explore the perspectives of teachers, students, and other stakeholders through in-depth interviews, while quantitative methods are used to measure the relationship between certain variables, such as teacher competence in technology and student learning outcomes.

2. Research Subjects

The research population is teachers and students at elementary to secondary education levels in certain areas that have used technology in learning. Samples were taken using purposive sampling techniques for qualitative methods and random sampling for quantitative methods, taking into account the diversity of demographic backgrounds and access to technology.

3. Data Collection Techniques

In-depth Interviews: Conducted with teachers to understand their role in guiding students in the digital era. Questionnaires: Used to measure teacher competence in digital literacy, technology-based learning methods, and their impact on student learning outcomes. Classroom Observations: To directly observe how teachers integrate technology into the learning process. Documentation: Collecting data from education policies related to technology, curriculum, and student learning outcome reports.

4. Research Instruments

The research instruments used included semi-structured interview guidelines, closed and open questionnaires, and checklists for classroom observations. Instrument validation was conducted through trials on small groups of respondents before being applied in the main research.

5. Data Analysis Techniques

Qualitative Analysis: Data from interviews and observations were analyzed using thematic analysis techniques to identify patterns and key themes related to the role of teachers. Quantitative Analysis: Data from questionnaires were analyzed using descriptive and inferential statistics. Correlation and linear regression were used to see the relationship between teacher competence in technology and student learning outcomes. Data Triangulation: Integrating data from various sources to increase the validity of the findings.

6. Research Stages

Preparation: Problem identification, instrument development, and instrument trials. Data Collection: Conducting interviews, distributing questionnaires, and classroom observations. Data Analysis: Processing and analyzing qualitative and quantitative data. Conclusion and Reporting: Preparation of research reports based on findings and analysis.

Results And Discussion

Result

This study produced several key findings that are relevant to the role of teachers in shaping a superior generation in the digital era. These findings were obtained through qualitative and quantitative data analysis as follows:

Teacher Competence in Digital Literacy

Most of the teachers who were respondents had a good level of digital literacy (85%). Teachers demonstrated the ability to use digital devices such as computers, online learning applications, and social media to support the learning process. However, around 15% of respondents still experienced technical constraints, especially related to mastery of complex software.

Implementation of Technology-Based Learning

Classroom observations showed that 78% of teachers had successfully integrated technology into learning through the use of platforms such as Google Classroom, Kahoot, and Canva. Teachers utilize technology to create a more interactive and engaging learning experience for students. However, there are challenges in accessing technology in areas with inadequate internet infrastructure.

The Influence of Technology on the Formation of Student Character

Based on interviews, teachers assessed that the use of technology not only supports improving students' academic competence, but also encourages the development of skills such as collaboration, communication, and problem solving. However, around 20% of teachers noted that students tend to be distracted by social media, so stricter supervision is needed.

Challenges in Technology Integration

Teachers face various challenges, such as limited time for training, gaps in technology infrastructure, and lack of support from parents in supervising technology use at home. This affects the effectiveness of implementing technology-based learning.

Education Policy Support

Documentation studies show that government policies in supporting the digitalization of education are quite adequate, such as the provision of teacher training and technology devices. However, the implementation of this policy is still not evenly distributed across regions.

The results of the study also showed that although most teachers have adopted technology in their learning, there is still a gap in their ability to use more sophisticated digital tools. This shows that despite the commitment to integrating technology, there is still a need for improvement in terms of training and mastery of the latest technology, such as data analysis software and artificial intelligence-based learning tools.

Although the majority of teachers feel that technology has a positive impact on the quality of learning, there are challenges in adapting technology to the different characteristics of students. Most students are more interested in entertainment applications and social media than learning tools. Therefore, teachers must be more creative in adapting technology to make learning more interesting and relevant to students' lives. This reinforces the importance of a more interactive and project-based learning approach.

Another challenge is the issue of digital ethics faced by students. Teachers expressed that they need to emphasize more on learning about digital ethics and online responsibility to students. Uncontrolled use of social media can affect students' emotional and social development. Therefore, teachers in the digital era must be able to accompany students in building ethical awareness and acting responsibly in the use of technology.

In terms of infrastructure, although there have been improvements in some areas, research results show that access to technology in rural and remote areas is still limited. This limitation hinders the optimal implementation of digital learning. Therefore, more inclusive and equitable policies in terms of the distribution of technological infrastructure are very important to create equality in access to education.

Conclusion

The Role of Teachers as Digital Facilitators. The results of the study show that teachers in the digital era no longer only act as material deliverers, but also as digital learning facilitators. Teacher competence in digital literacy is the key to the success of technology integration in learning. In line with Ferrari's findings (2013), teachers who have high digital literacy tend to be more effective in utilizing technology to improve the quality of learning. The Importance of a Personal Approach in Digital Learning. Teachers who are able to utilize technology to create personalized and interactive learning can help students develop 21st century skills. However, this study also shows that teachers need further training to understand the individual needs of students in the context of technology-based learning. This supports Prensky's view (2010) that digital learning must pay attention to differences in student learning styles. The Influence of Technology on Student Character and Ethics. Although technology provides many benefits, uncontrolled use can have a negative impact on the development of student character. Teachers have an important role in instilling digital ethics, such as respecting privacy and using social media wisely. As explained by Zhao and Frank (2003), education about digital ethics must be an integral part of learning in the digital era. Technology Access Gap. This study highlights the gap in technology access across regions, which affects the effectiveness of digital-based learning. Equal

infrastructure support is essential to ensure that all students have equal opportunities to receive quality education. This is in line with Sahlberg's (2011) recommendation on the importance of inclusive education policies. Collaboration Between Teachers, Parents, and Government. To create a superior generation, synergy is needed between teachers, parents, and the government. Teachers need support in the form of ongoing training, technology infrastructure, and supervision of technology use at home. This shows that the success of digital education does not only depend on the role of teachers, but also on collaboration with other parties. Finally, the results of the study indicate that the success of technology integration in education is highly dependent on support from various parties, including parents and the government. Close collaboration between teachers, parents, and the community will ensure that the use of technology in education can have a positive and maximum impact on student development.

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