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TEACHER COMPETENCE IN THE DIGITAL ERA A PHENOMENOLOGICAL STUDY

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Abstract
This study aims to understand teachers' experiences in developing their digital competence in the era of educational digitalization through a phenomenological approach. The research focuses on the factors influencing teachers' digital competence, the challenges they face, and the role of institutional support such as schools, education policies, and professional training. The research method used is qualitative with a phenomenological approach, where data is collected through in-depth interviews with participating teachers and field observations. The data is then analyzed using thematic analysis techniques to identify key themes that emerge from the teachers' subjective experiences. The findings show that teachers' digital competence is influenced by access to technological infrastructure, prior experience with technology, and institutional support. Teachers in urban areas are generally better prepared to face digitalization compared to teachers in remote areas, who experience limitations in technological access. Additionally, relevant professional training and supportive education policies play a crucial role in enhancing teachers' digital competence. However, challenges such as psychological pressure and ethical dilemmas in maintaining social interaction with students also emerge as barriers in this adaptation process. In conclusion, holistic support, both technical and emotional, is essential to help teachers effectively develop their digital competence.
Keywords: Digital competence, phenomenology, teachers, educational digitalization

Abstrak
Penelitian ini bertujuan untuk memahami pengalaman guru dalam mengembangkan kompetensi digital di era digitalisasi pendidikan melalui pendekatan fenomenologi. Penelitian ini berfokus pada faktor-faktor yang mempengaruhi kompetensi digital guru, tantangan yang dihadapi, serta peran dukungan institusi seperti sekolah, kebijakan pendidikan, dan pelatihan profesional. Metode penelitian yang digunakan adalah kualitatif dengan pendekatan fenomenologi, di mana data dikumpulkan melalui wawancara mendalam dengan guru yang berpartisipasi dan observasi lapangan. Data kemudian dianalisis menggunakan teknik analisis tematik untuk mengidentifikasi tema utama yang muncul dari pengalaman subjektif para guru. Hasil penelitian menunjukkan bahwa kompetensi digital guru dipengaruhi oleh akses terhadap infrastruktur teknologi, pengalaman awal dalam penggunaan teknologi, serta dukungan institusi. Guru di daerah perkotaan lebih siap menghadapi digitalisasi dibandingkan guru di daerah terpencil yang mengalami keterbatasan akses teknologi. Selain itu, pelatihan profesional yang

relevan dan kebijakan pendidikan yang mendukung memainkan peran penting dalam meningkatkan kompetensi digital guru. Namun, tantangan seperti tekanan psikologis dan dilema etis dalam menjaga interaksi sosial dengan siswa juga muncul sebagai hambatan dalam proses adaptasi ini. Kesimpulannya, dukungan yang holistik, baik dalam bentuk teknis maupun emosional, sangat diperlukan untuk membantu guru mengembangkan kompetensi digital secara efektif.
***Kata kunci**: Kompetensi digital, fenomenologi, guru, digitalisasi pendidikan*

INTRODUCTION

In the ever-evolving digital era, the education system has undergone significant transformations. Digital technology has changed the way teachers teach and students learn, bringing both new opportunities and challenges for educators. Teacher competence in utilizing technology has become crucial to ensuring relevant and quality education. Education in Indonesia, which has traditionally been face-to-face and paper-based, must now adapt to the rapid changes in the digital world. Technologies such as Learning Management Systems (LMS), e-learning platforms, and mobile-based learning applications have become primary tools in the teaching-learning process. (Zhao dkk., 2005). The education system now demands that teachers not only master the subject matter but also have good digital literacy. Teachers must be able to use digital devices to develop innovative and interactive teaching methods and manage classrooms effectively, both in physical and digital environments. However, not all teachers are equally prepared to meet these demands. Many still struggle to adapt to new technologies, either due to limited skills or a lack of supporting facilities. Therefore, enhancing teacher competence in the digital era is an urgent matter and a primary concern in education today. (Yusof dkk., 2023).

The theory used in this research is the competency theory Spencer, which defines competency as the underlying characteristic of a person that is related to effective or superior performance in a job. (Yang dkk., 2020). In the context of teachers, this competency includes various skills, knowledge, and attitudes that must be mastered to carry out their duties effectively. Another theory used is the theory of digital literacy Gilster, which emphasizes the importance of an individual's ability to understand and use information in various formats obtained from computers. (Wong, 2016). Both theories are relevant in evaluating how teacher competence must transform in the digital era to address challenges and make the most of technology in education.

Several previous studies have discussed teacher competence in various aspects, particularly concerning the use of technology in education. Research by Papadakis, (2022) developed the TPACK framework (Technological Pedagogical Content Knowledge), which emphasizes that teachers must master not only the content of education but also the technology and pedagogy appropriate for teaching in the digital era. Another study, such as that conducted by Onishchuk dkk., (2020), showed that the adoption of technology among teachers is influenced by various factors, including attitudes toward technology, the training received, and institutional support. These studies provide a solid foundation for understanding the importance of digital competence for

teachers. However, there is still a lack of understanding of the subjective experiences of teachers in facing this digital transformation. Most research has focused on quantitative aspects, such as the frequency of technology use or the technical skills required, without addressing the qualitative aspects of how teachers interpret their experiences in using technology.

This study uses a phenomenological approach to deeply explore how teachers interpret their competence in facing the challenges of the digital era. This approach differs from previous research, which mainly focuses on the quantitative measurement of technological skills. This study seeks to understand how teachers subjectively experience changes in their roles due to digitalization and how they adapt emotionally and professionally. The phenomenological approach provides a deeper perspective on the personal and social experiences of teachers in dealing with technology, which is often overlooked in quantitative research. Furthermore, this study emphasizes the importance of contextual factors, such as school culture, peer support, and institutional policies, in influencing teacher competence in the digital era. These factors are rarely explored in previous studies, which generally focus on individual competencies in isolation.

The novelty of this research lies in the use of the phenomenological method to understand teacher competence in the digital era. This method allows researchers to uncover in-depth experiences from the teachers' own perspectives, something that has not been widely done in the context of education in Indonesia. Additionally, this research also provides insights into how contextual factors, such as support from schools and education policies, influence teachers' digital competence. By highlighting teachers' subjective experiences, this research can make an important contribution to designing more effective training programs that are relevant to the needs of teachers in the field. It can also help policymakers develop education policies that are more responsive to the challenges of digitalization.

The urgency of this research cannot be overlooked, given the acceleration of digitalization in education over the past few years, especially as a result of the COVID-19 pandemic, which forced many schools to shift to online learning. Although the pandemic is subsiding, digital learning remains an integral part of the education system. Therefore, teachers who do not possess adequate digital competence risk falling behind, which will ultimately negatively impact the quality of education delivered to students. Moreover, the digital competence gap among teachers could worsen educational inequality in Indonesia. Teachers in remote areas may face greater obstacles in accessing technology and adequate training. This research is expected to provide guidance on how to overcome these challenges and enhance teachers' digital competence more equitably.

This research aims to gain a deep understanding of teachers' experiences in developing their competencies in the digital era through a phenomenological approach. The study seeks to explore not only the objective aspects of digital competence but also the subjective experiences of teachers as they navigate the challenges and opportunities presented by the increasing digitalization of education. Specifically, the first objective of this research is to identify the various factors that influence teachers' digital competence.

These factors may include individual characteristics such as technological proficiency and attitudes towards technology, as well as external elements like access to resources, institutional support, and professional development opportunities. Understanding these factors is crucial for creating a comprehensive picture of what drives or hinders the development of digital competencies among teachers. The second objective focuses on revealing the subjective experiences of teachers as they confront the realities of digitalization in education. This involves delving into how teachers perceive and interpret the changes in their roles due to the integration of technology in teaching. By exploring their emotional, psychological, and professional responses, this research aims to provide insights into how teachers cope with the demands of digital teaching and how they adapt their teaching practices in a rapidly changing environment.

Furthermore, the study aims to explore how institutional support, education policies, and professional training impact teacher competence in the digital age. The role of schools, policymakers, and professional development programs is vital in shaping teachers' ability to integrate technology effectively into their teaching practices. This research will investigate how these elements contribute to or impede the development of digital competencies and provide a clearer understanding of what kind of support is most effective for teachers. Finally, the research will offer recommendations for more effective training programs that can enhance teachers' digital competence. Based on the findings, these recommendations will focus on creating tailored training initiatives that address the specific needs of teachers, considering both the technical skills required and the emotional and professional challenges they face. In this way, the research aims to contribute to the development of comprehensive strategies that will better equip teachers for the digital demands of the future education landscape.

METHOD

This research employs a qualitative approach using the phenomenological method to deeply understand teachers' experiences in developing their competencies in the digital era. The phenomenological approach was chosen as it is suitable for exploring the subjective experiences of teachers regarding the challenges and opportunities they face in the digitalization of education. (Purwanza, 2022). The main focus of this method is on how teachers interpret their experiences in using digital technology, both from emotional, psychological, and professional perspectives. The participants in this study are teachers from various educational levels in Indonesia who have been exposed to the use of technology in teaching. Participants were selected purposively, with the criterion that they must have at least one year of experience in using digital technology in the learning process. Data will be collected through in-depth semi-structured interviews, with questions designed to explore teachers' understanding, feelings, and strategies in addressing the digital transformation in education.

In addition to interviews, field observations will also be conducted to directly observe how technology is used in the classroom and how teachers manage the learning process with the aid of digital tools. The data collected from interviews and observations will be

analyzed using thematic analysis, where the main themes emerging from teachers' experiences will be identified and interpreted to provide a deeper understanding of teachers' digital competencies. The validity of the data in this research will be maintained through source triangulation, by comparing data from various participants and data collection methods. Thus, this study is expected to provide a comprehensive picture of how teachers develop their digital competencies and the factors that influence this process, including institutional support, policies, and professional training.

RESULTS AND DISCUSSION

1. Factors Influencing Teachers' Digital Competence

Based on in-depth interviews and field observations, several key factors influencing teachers' digital competence in the digital era were identified. The first factor is access to infrastructure and technology. Many teachers feel limited in developing their digital competence due to inadequate access to technological devices at their schools, especially in remote areas. On the other hand, teachers in urban areas tend to be better prepared for the demands of digitalization due to better infrastructure. The second factor is prior experience and skills in technology. Teachers who already have previous experience with digital devices tend to adapt more easily to the demands of technology-based teaching. In contrast, teachers who were previously less familiar with technology faced challenges in understanding how to integrate digital tools into the learning process. Another factor that emerged is support from schools and education policies. Teachers who feel supported by their schools through adequate training and policies facilitating the use of technology are more confident in developing their digital competence. Conversely, teachers in schools with limited support feel isolated and less motivated.

2. Teachers' Subjective Experiences in Facing the Digitalization of Education

The interview results reveal that teachers' subjective experiences in facing the digitalization of education vary significantly. Most teachers described feelings of pressure and stress due to the rapid shift toward technology-based learning, especially during the COVID-19 pandemic. They felt that the demands to master technology in a short period added to their already heavy workload. However, some teachers also expressed that they felt motivated and challenged to learn more about technology, particularly when they saw positive outcomes from using digital tools in teaching. Teachers also face ethical dilemmas regarding the use of technology, especially in maintaining social interaction with students. Many teachers felt that technology reduced the face-to-face interaction that is vital in education, which could result in the loss of emotional connection with students. However, on the other hand, technology allows them to access a broader and more varied range of resources that were previously unavailable.

3. Impact of School Support, Education Policies, and Professional Training on Teacher Competence

One important finding is the role of institutional support in developing teachers' digital competence. Teachers who received continuous training from schools or educational institutions felt more confident in using technology in teaching. Effective training

programs not only focus on technical skills but also on how to integrate technology into the curriculum and classroom management effectively. Teachers receiving this support reported being able to design more creative and interactive learning sessions.

Education policies also play a crucial role in supporting or hindering the development of teachers' digital competence. Teachers working in schools with proactive policies regarding digitalization, such as budget allocation for purchasing technological devices and internet access, reported increased motivation to learn new technologies. In contrast, teachers in schools with unsupportive policies felt hindered in their efforts to develop digital competence. Professional training organized by the government or private institutions also has a significant impact. Teachers who regularly attended training programs felt that they acquired new skills that could be immediately applied in the classroom. However, some teachers complained that the existing training programs were often not relevant to their needs in the field, particularly in adapting technology to different teaching conditions.

Discussion

1. Challenges Faced by Teachers in Developing Digital Competence

From the findings, it is evident that one of the biggest challenges teachers face in developing their digital competence is the inequality of access to technology. The uneven distribution of infrastructure between urban and rural areas creates a gap in teachers' ability to access technology and improve their digital competence. This is a major concern in the context of education in Indonesia, where geographical diversity affects access to technological resources. In addition, teachers face psychological adaptation challenges. The significant shift in teaching methods, especially the rapid transition to online learning during the pandemic, has caused mental strain and stress. Teachers feel that their workload has increased due to the demands of mastering technology in a short period. This discussion highlights the importance of providing psychological and emotional support for teachers during this technological transition, not just technical training. (Amzat, 2022).

2. Opportunities and Benefits of Developing Teachers' Digital Competence

Despite the challenges, developing teachers' digital competence offers many benefits. The use of technology in teaching allows teachers to create more interactive and engaging lessons. Students can participate more actively through digital tools such as learning apps, interactive videos, and online quizzes, which boost their motivation and learning outcomes. Teachers who successfully integrate technology report improvements in student engagement and the overall quality of learning. Technology also opens up opportunities for teachers to develop professionally by accessing a wider range of learning resources and materials. With the internet, teachers can easily access the latest research, innovative teaching materials, and professional discussion forums that help them enrich their teaching methods. (Bereczki & Kárpáti, 2021).

3. Recommendations for Developing Teachers' Digital Competence

Based on the findings, several recommendations can be made to improve teachers' digital competence. First, providing relevant and continuous training is essential. Training

programs should be tailored to the specific needs of teachers in the field and focus on the practical application of technology in the classroom. Additionally, there needs to be more proactive policy support from the government in providing adequate infrastructure and resources, particularly in remote areas. Second, school support in terms of providing technological devices and better internet access is critical. Schools should also promote a digital culture among teachers and students, encouraging teachers to experiment with new technologies without fear of failure. Third, it is important to provide emotional and psychological support for teachers who are adapting to digitalization. This support could come in the form of counseling or mental health programs that help teachers cope with the stress and pressure of technological demands (Calavia dkk., 2021).

CONCLUSION

Based on the findings and discussion, it can be concluded that teachers' digital competence in the era of educational digitalization is influenced by various factors, including access to infrastructure, prior technological experience, and institutional support. Teachers in urban areas with better access to technology are generally more adept at utilizing digital tools in their teaching, whereas those in rural areas face significant challenges due to limited infrastructure. Additionally, teachers' prior experience with technology plays a crucial role in determining how easily they adapt to the demands of digitalization. Those with more experience are more confident, while those less familiar with digital tools struggle to integrate them effectively into their teaching practices. Teachers' subjective experiences with digitalization reveal both challenges and opportunities. Many feel overwhelmed by the rapid changes and increased workload that digitalization brings, particularly in the wake of the COVID-19 pandemic. However, some also express a sense of motivation and excitement about the potential of technology to enhance the learning experience. Ethical concerns about reduced social interaction with students were also raised, reflecting the tension between embracing technology and maintaining traditional teacher-student relationships.

Institutional support, including professional training and government policies, is vital in shaping teachers' digital competence. Schools that provide ongoing, relevant training, coupled with supportive policies, empower teachers to effectively integrate technology into their classrooms. Conversely, the lack of such support hinders progress, leaving teachers feeling isolated and underprepared. In conclusion, developing teachers' digital competence requires a holistic approach, involving not only technical training but also emotional and psychological support. Recommendations include improving infrastructure, offering tailored and continuous professional development, and fostering a supportive policy environment to ensure that all teachers, regardless of location, have the tools and confidence to thrive in the digital age.

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