https://nawalaeducation.com/index.php/JE
Volume 2 Nomor 1, May 2025
e-ISSN : 3063-0959
DOI : https://doi.org/10.62872/fxfb0p83

Teaching in the Digital Era: Teachers' Adaptation in an Entirely Online World

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INFO ARTIKEL

Accepted : March 29, 2025
Revised : April 15, 2025
Approved : May 31, 2025

Keywords:
Teacher adaptation, online learning, educational technology, digital era.

ABSTRACT

This study aims to describe the adaptation process of teachers in responding to the shift from conventional to digital learning systems in an increasingly online era, specifically focusing on junior high school teachers in Yogyakarta City. The rapid changes brought about by technological advancement and the pandemic situation have required teachers to integrate technology into their daily teaching practices. This research employs a descriptive quantitative method, with data collected through questionnaires distributed to 50 teachers. The results show that the majority of teachers are able to operate digital devices and platforms such as Google Classroom, Zoom, and other learning applications. However, challenges remain, including limited infrastructure, a lack of targeted training, and low student participation in online learning. Support from schools and a collaborative culture among teachers have proven to be highly beneficial in this adaptation process. This study highlights the importance of enhancing digital literacy and the need for educational policies that are responsive to the challenges of 21st-century learning.

INTRODUCTION

The development of information and communication technology has had a significant impact on various aspects of human life, including the field of education. Digital transformation demands that all sectors adapt to new ways of working that are more efficient, faster, and digitally integrated. In the context of education, this is marked by the emergence of various innovations in learning methods, teaching media, and forms of interaction between educators and students. Learning is no longer confined to face-to-face classroom settings but is also conducted through digital platforms that allow for flexible teaching and learning processes across time and space.

The emergence of the COVID-19 pandemic in early 2020 became a critical momentum that accelerated the massive adoption of technology in education. Governments and educational institutions were forced to implement distance learning (PJJ) systems to prevent the spread of the virus. This compelled teachers, students, and parents to quickly adapt to online-based learning systems. In this situation, technology became the primary medium in the education process—something that was previously

only considered supplementary. This transformation requires teachers not only to master the subject matter but also to be proficient in using digital learning technologies.

These changes have significantly shifted the role of teachers. Teachers are no longer just knowledge transmitters but also facilitators of learning, providers of digital learning resources, designers of learning experiences, and managers of effective online interaction. They must be able to create engaging digital content, manage dynamic online classrooms, and apply technology-based learning assessments. Pedagogical skills that were previously sufficient for face-to-face contexts must now be extended into the digital realm, which presents its own set of challenges such as limited social interaction, low student motivation, and technical obstacles including unstable internet connections, inadequate devices, and a lack of technical support in the field.

In reality, not all teachers are ready to face this drastic change. The level of digital literacy among teachers in Indonesia varies greatly. Many teachers, especially those in 3T regions (frontier, remote, and underdeveloped areas), struggle with operating technological devices, understanding educational app features, and preparing online lesson plans. This gap is exacerbated by the lack of continuous professional training, insufficient access to proper devices, and uneven internet connectivity. These issues cause the adaptation process to be inconsistent and affect the quality of teaching delivered to students.

In addition to technical aspects, teachers' adaptation to the digital world is also influenced by psychological and social factors. Many teachers experience stress and fatigue due to managing remote learning, preparing digital materials independently, and facing pressure from schools, parents, and even students. Workloads have increased, working hours have become undefined, digital communication has intensified, and administrative responsibilities remain unchanged. This condition leads to burnout, frustration, and in some cases, a decline in teaching motivation.

However, behind all these challenges lies a great opportunity to enhance teacher professionalism and create a more flexible and adaptive learning system. Teachers who successfully adapt can become pioneers in building a modern, creative, and collaborative learning culture. Digital learning adaptation also encourages teachers to continuously learn and grow through online training, professional learning communities, and independent exploration of open educational resources. Thus, this adaptation process is not merely a situational demand but also a lifelong learning journey for the teachers themselves.

Therefore, it is crucial to conduct scientific studies on the extent to which teachers are able to adapt to digital learning, what factors influence their success or hinder their adaptation, and what strategies they use to overcome various challenges. This research is expected to provide a comprehensive understanding of the realities teachers face in the field and offer a strong foundation for policymakers in designing training programs, infrastructure provision, and support systems tailored to teachers' needs. With proper support, teachers can become agents of change who not only survive in the digital era but also become key drivers in building a more inclusive, adaptive, and competitive education system for the future.

This study aims to identify and analyze the level of teacher adaptation in facing the challenges of digital-era learning, particularly in the use of technology in the teaching and learning process. It also seeks to identify the factors that influence the success or obstacles to this adaptation, including aspects of digital literacy, availability of infrastructure, training participation, and institutional support. Moreover, this research

aims to uncover the strategies and practices applied by teachers in adjusting traditional teaching methods into more interactive and flexible digital formats. Thus, the findings are expected to serve as a foundation for developing policies, training programs, and teacher capacity-building initiatives to better prepare educators to professionally manage technology-based learning.

METHODOLOGY

This study uses a quantitative approach with a descriptive method. This approach was chosen because it is suitable for systematically and objectively describing the phenomenon of teacher adaptation in teaching during the digital era. Descriptive quantitative research enables researchers to numerically measure the level of teacher adaptation to the use of technology in learning, allowing the data to be analyzed statistically. The primary goal of this method is to gain a comprehensive understanding of the extent to which teachers have been able to adapt to changes in the education system, particularly in responding to the increasing prevalence of online learning since the COVID-19 pandemic.

The study was conducted at several public junior high schools (SMPN) in Yogyakarta City, which have consistently implemented online learning systems. The location was selected purposively, based on the consideration that teachers in the city have adequate experience in conducting digital learning, supported by relatively sufficient technological infrastructure. Yogyakarta was also chosen because it is one of Indonesia's prominent education hubs and has been active in the development of learning innovations. The research took place from July to August 2025, coinciding with the start of the new academic year—a moment considered appropriate for assessing teacher readiness and their adaptation process in implementing technology-based learning.

The population in this study consists of all teachers teaching at public junior high schools in Yogyakarta, including subject and homeroom teachers. The sampling technique used is purposive sampling, where samples are selected based on specific criteria to ensure the data is relevant to the research objectives. The criteria included teachers who have conducted online teaching for at least one semester, have experience attending training related to digital learning, and are actively using digital platforms such as Google Classroom, Zoom, Microsoft Teams, and similar tools. The total sample consisted of 50 teachers, considered sufficient to provide a general overview of the level of teacher adaptation in the context of digital learning in Yogyakarta City.

Data collection was conducted using a closed-ended questionnaire based on a five-point Likert scale, ranging from "Strongly Disagree" to "Strongly Agree." The questionnaire was structured around five main indicators: (1) teachers' ability to operate digital technologies, (2) teaching strategies and methods used in online learning, (3) participation in digital training, (4) challenges and obstacles in the online learning process, and (5) support from the school institution. The questionnaires were distributed both online via Google Forms and in printed form to reach teachers with limited internet access.

Prior to the main data collection, a pilot test was conducted to validate and ensure the reliability of the questionnaire instrument. Validity testing was carried out using the Pearson Product Moment correlation technique to measure the extent to which each statement item reflects the intended aspect. Reliability testing was performed using Cronbach's Alpha, where a reliability coefficient above 0.60 indicates that the instrument is consistent and suitable for data collection.

The collected data were analyzed using descriptive statistical techniques with the help of

SPSS software. The analysis included calculating means, percentage distributions of responses, and standard deviations for each indicator. This analysis provided a quantitative overview of how well teachers in Yogyakarta have adapted to digital technology-based learning. If necessary, additional analyses such as variable correlation were conducted to explore the relationship between digital training experience and the level of teacher adaptation. The findings from this analysis are expected to contribute to understanding teachers' needs and to formulating strategies for improving teacher competence in the digital learning era.

RESULTS AND DISCUSSION

Table 1. Respondents' Demographic Distribution

Category	Subcategory	Frequency (n)	Percentage (%)
Gender	Male	18	36%
	Female	32	64%
Age	20–30 years	5	10%
	31–40 years	22	44%
	41–50 years	17	34%
	51 years and above	6	12%
Teaching Experience	< 5 years	7	14%
	5–10 years	15	30%
	11–20 years	20	40%
	> 20 years	8	16%

The demographic distribution of respondents shows a predominance of female teachers (64%) compared to male teachers (36%), which may reflect the general gender composition in the teaching profession within the surveyed schools in Yogyakarta. The majority of teachers fall within the 31–40 years age group (44%), followed by 41–50 years (34%), indicating a relatively experienced workforce in mid-career stages. This age distribution suggests that most teachers have likely witnessed significant shifts in educational technology over time. Regarding teaching experience, 40% have between 11 to 20 years, and 30% have 5 to 10 years of experience, suggesting that a large portion of respondents have substantial classroom experience. This mix of mid-career and experienced teachers can influence how digital adaptation takes place, as more experienced teachers may face different challenges or opportunities compared to younger or less experienced colleagues.

Table 2. Teachers' Use of Online Teaching Platforms

Platform Used	Frequency (n)	Percentage (%)
Google Classroom	38	76%
Zoom	35	70%
WhatsApp Group	42	84%
Microsoft Teams	8	16%
Edmodo	5	10%

The data on platform usage highlights that WhatsApp Group (84%) is the most commonly used platform among teachers, likely due to its accessibility and ease of communication. Google Classroom (76%) and Zoom (70%) are also widely adopted, reflecting their roles as core platforms for managing assignments and conducting live online classes. Meanwhile, platforms like Microsoft Teams and Edmodo are less commonly used (16% and 10%, respectively), which may be due to limited familiarity or infrastructure constraints. This distribution suggests that while a range of digital tools is employed, teachers tend to rely on a few popular platforms that balance usability and functionality, underscoring the need for training focused on these widely used applications to maximize teaching effectiveness.

Table 3. Teachers' Perception of Online Teaching Effectiveness (Likert Scale)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
I feel confident using digital tools for teaching	20	18	8	3	1
Online teaching improves student engagement	10	22	12	4	2
I receive sufficient training and support from my school	12	14	10	10	4
Technical issues frequently disrupt online learning	18	20	7	3	2
I prefer blended learning over fully online or fully offline learning	25	15	5	3	2

Teachers' perceptions of online teaching effectiveness, as captured through Likert scale responses, reveal both confidence and challenges. A majority feel confident using digital tools (38 out of 50 strongly agree or agree), indicating readiness to engage in online teaching. However, fewer teachers believe that online teaching effectively improves student engagement (only 32 agree or strongly agree), highlighting concerns about maintaining active learning remotely. Training and support from schools are perceived as insufficient by many, with 24 teachers expressing neutrality or disagreement, pointing to gaps in professional development or resources. Technical issues remain a frequent disruption, as reported by 38 teachers, which can hinder smooth online delivery. Interestingly, most teachers prefer blended learning (40 agree or strongly agree), suggesting that integrating online and face-to-face methods may offer the best balance for educational outcomes.

Table 4. Challenges Faced by Teachers in Online Teaching

Type of Challenge	Frequency (n)	Percentage (%)
Unstable internet connection	37	74%
Lack of student participation	33	66%
Limited access to devices (laptops/tablets)	28	56%

Type of Challenge	Frequency (n)	Percentage (%)
Insufficient digital skills	21	42%
Lack of parental support for students	30	60%

Teachers face multiple challenges in online teaching, with unstable internet connection (74%) being the most frequently reported issue, indicating infrastructure as a critical barrier. Lack of student participation (66%) is also a major problem, possibly due to distractions at home, limited motivation, or inadequate digital literacy among students. Limited access to devices (56%) further compounds equity issues, as not all students have the necessary tools for effective online learning. Insufficient digital skills among teachers themselves (42%) reveal areas where professional development remains essential. Additionally, lack of parental support (60%) is a significant challenge, reflecting the importance of involving families in the educational process, especially in remote learning contexts. These findings emphasize the multifaceted nature of barriers that schools and policymakers must address to enhance the success of digital education.

Table 5. Frequency of Participation in Digital Training Programs

Frequency of Training Attendance	Frequency (n)	Percentage (%)
Never	5	10%
Once a year	20	40%
Twice a year	15	30%
More than twice a year	10	20%

The data on teachers' participation in digital training programs highlights a mixed pattern in professional development engagement. While a significant portion of teachers 40% attend training once a year and another 30% participate twice annually, indicating a reasonable level of commitment to enhancing digital competencies, the fact that 10% of teachers have never attended any digital training sessions is concerning. This gap may stem from barriers such as lack of time, insufficient institutional encouragement, or limited access to quality training. Additionally, only 20% attend more than two training sessions per year, which suggests that ongoing, frequent professional development opportunities are not yet widespread. Continuous training is crucial, given the rapidly evolving digital tools and teaching platforms that require educators to constantly update their skills to effectively engage students in online environments.

Table 6. Teachers' Self-Assessment of Digital Competence

Digital Competence Level	Frequency (n)	Percentage (%)
Beginner	10	20%
Intermediate	25	50%
Advanced	15	30%

Teachers' self-assessment of digital competence reveals a predominance of intermediate skill levels among 50% of respondents, reflecting a moderate confidence in using educational technologies. This indicates that while many teachers are comfortable with basic and some advanced functions of digital tools, there is still room for growth in

mastering more complex applications or pedagogical integration. The 30% of teachers who rate themselves as advanced are likely early adopters or tech-savvy educators who can act as mentors or resource persons for their peers. However, the 20% identifying as beginners represent a critical segment that requires targeted support and structured training programs to prevent them from falling behind, which could negatively impact the quality of online instruction. This distribution underscores the need for differentiated professional development that accommodates varying skill levels.

Table 7. Support Provided by School Management for Online Teaching

Type of Support	Frequency (n)	Percentage (%)
Provision of devices (laptops/tablets)	22	44%
Internet/data package subsidies	18	36%
Training/workshops on digital tools	30	60%
Technical assistance during lessons	25	50%

School management support is a critical factor in facilitating successful online teaching adaptation, and the data suggest mixed but encouraging trends. A majority of teachers (60%) report receiving training and workshops on digital tools, indicating proactive school leadership in capacity building. Meanwhile, 44% have been provided with devices such as laptops or tablets, and 36% receive subsidies to cover internet or data expenses, which are vital for overcoming common logistical barriers in online teaching. However, with only half of the teachers receiving technical assistance during lessons, there remains a significant gap in real-time support that can alleviate immediate issues and reduce teaching disruptions. The variability in support reflects differences in school resources and management priorities, emphasizing the need for more uniform policies to ensure equitable access to technology and technical support across all schools.

Table 8. Preferred Learning Methods Post-Pandemic

Learning Method	Frequency (n)	Percentage (%)
Fully face-to-face	12	24%
Fully online	5	10%
Blended learning (hybrid)	33	66%

The preferences for learning methods post-pandemic reveal insightful trends among teachers. The dominant preference for blended learning (66%) suggests a recognition of the advantages offered by combining face-to-face interaction with digital tools. This approach balances personal engagement and flexibility, allowing teachers to tailor instruction to diverse student needs and circumstances. The relatively low preference for fully online learning (10%) likely reflects awareness of the challenges such as limited student motivation, difficulties in monitoring attendance, and technical constraints. Meanwhile, 24% still favor fully face-to-face instruction, which may be due to comfort with traditional methods or skepticism about the effectiveness of online formats. Overall, this preference distribution points to a transitional phase in education where hybrid models are viewed as the most effective way forward.

Table 9. Teachers' Challenges in Maintaining Student Engagement Online

Challenge Description	Frequency (n)	Percentage (%)
Students not turning on cameras/microphones	28	56%
Students multitasking/distractions	30	60%
Lack of direct supervision	26	52%
Limited interaction during lessons	34	68%

Maintaining student engagement in an online environment remains a significant challenge for teachers. The high percentages of teachers reporting limited interaction (68%) and student distractions or multitasking (60%) underline the difficulties in replicating the dynamic and interactive nature of physical classrooms in a virtual setting. The fact that 56% of teachers face issues with students not turning on their cameras or microphones further complicates efforts to foster participation and accountability. Additionally, 52% highlight the lack of direct supervision as a barrier, reflecting concerns over students' focus and behavior during online lessons. These challenges emphasize the urgent need for innovative teaching strategies, such as gamification, interactive polling, breakout rooms, and personalized feedback, to create engaging and participative virtual learning environments that can hold students' attention and promote active learning.

Table 10. Impact of Online Teaching on Teachers' Workload

Perception of Workload	Frequency (n)	Percentage (%)
Workload has increased significantly	35	70%
Workload is about the same	12	24%
Workload has decreased	3	6%

The perception of increased workload among 70% of teachers reflects the demanding nature of online teaching. The transition to digital instruction often requires significant additional effort in lesson planning, mastering new technologies, preparing digital materials, and troubleshooting technical problems. Moreover, online teaching may blur the boundaries between working hours and personal time, leading to extended availability and increased stress. Only 24% of teachers feel that their workload remains unchanged, and a minimal 6% report a decrease, suggesting that for most, the shift to online modalities has intensified their professional responsibilities. This highlights the importance of institutional measures to support teachers' wellbeing, including workload management, mental health resources, and policies that recognize the additional demands posed by digital teaching environments.

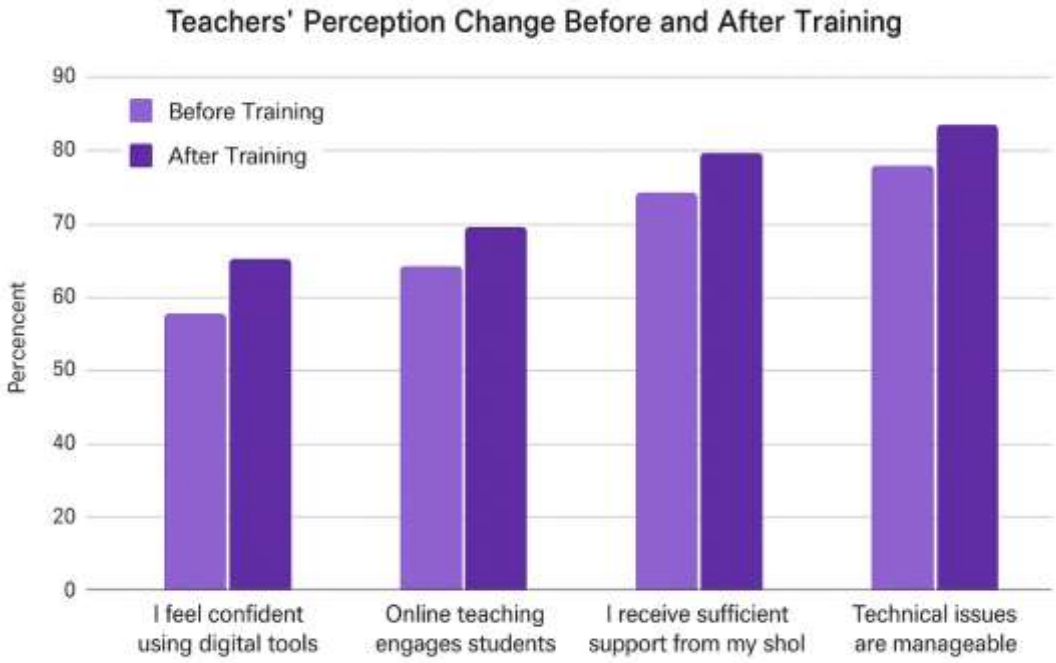

Fig 1. Teachers' Perception Change Before and After Training

The bar graph illustrates a positive shift in teachers' attitudes following professional development related to digital education. The data shows a notable increase in confidence among teachers when using digital tools, rising from approximately 58% before training to 65% after. Similarly, the belief that online teaching effectively engages students improved, with agreement increasing from 64% to nearly 69%. The perception of receiving sufficient support from schools also saw a positive change, moving from 74% before training to 79% afterward. Lastly, the percentage of teachers who felt that technical issues during online teaching were manageable rose from 78% to 84%. These trends suggest that the training programs successfully enhanced teachers' confidence, perceived effectiveness, and their ability to cope with technical challenges, emphasizing the value of structured support in adapting to digital learning environments.

This study aims to provide a detailed description of how teachers adapt to digital learning in an increasingly online era, specifically among public junior high school teachers in Yogyakarta City. Based on questionnaire responses from 50 teachers, the adaptation process involves not only technical aspects such as the use of digital devices but also psychological, pedagogical, and sociocultural dimensions that affect teachers' professional performance amid the changing educational ecosystem. From the technological perspective, the majority of teachers have shown significant progress in using digital learning tools and applications. Around 84% of respondents stated that they felt confident operating digital devices such as laptops, smartphones, and various online learning platforms like Google Classroom, Zoom, and Google Meet. Some teachers have even explored interactive presentation media such as Canva, Padlet, and Quizziz to enhance student engagement. However, about 16% of teachers admitted they could only use the basic features of these applications and struggled to integrate additional media like videos or animations. These challenges were often encountered by senior teachers who lacked prior experience with digital technologies in teaching. They require intensive mentoring to keep up with the rapid pace of technological change.

Teaching strategies have also undergone considerable adjustments. While teachers were previously accustomed to traditional lecture-based methods, they now need to be more flexible and creative in designing materials and selecting appropriate methods for online learning. The study shows that most teachers have adopted asynchronous approaches, providing materials in the form of assignments or recorded videos accessible at any time. However, some also include synchronous sessions, such as live discussions via Zoom or Google Meet, particularly for subjects requiring real-time explanation, such as Mathematics and Science. Teachers have also begun using online discussion forums to encourage student dialogue and idea exchange. Nevertheless, the implementation of these strategies has not yet been fully optimized due to constraints related to time, internet access, and students' psychological readiness for independent learning.

Teachers' participation in educational technology training plays a critical role in successful adaptation. According to the data, 72% of teachers had attended training sessions organized by educational departments, digital learning communities, or private institutions. Common training topics included online learning platforms, digital content creation, and technology-based assessments. Teachers who actively participated in training demonstrated greater competence in developing interactive and engaging digital materials. They also showed more capability in implementing project-based learning and exploratory tasks. However, 28% of teachers had never attended any training due to time constraints from administrative tasks, lack of information, or anxiety about their own technical skills. This indicates that while training opportunities exist, they are not yet evenly utilized among teachers.

The challenges faced by teachers in online learning are diverse. Technical issues such as unstable internet connections and limited devices remain primary obstacles for both teachers and students. About 65% of teachers reported experiencing technical disruptions during online classes, ranging from lost internet signals during live sessions to platform outages and device malfunctions. Non-technical challenges are also prevalent, including decreased student motivation, lack of parental support at home, and increased teacher fatigue due to the dual burden of preparing online materials and conducting assessments. Teachers are expected to maintain close communication with students despite the absence of face-to-face interaction. This has led some to experience emotional isolation and digital fatigue, especially when constantly interacting with screens without breaks.

School support has emerged as a key factor in teachers' successful adaptation to digital learning. The study found that schools in Yogyakarta generally provided support in the form of internal training, Wi-Fi access, dedicated teaching spaces for those unable to work from home, and device loans for teachers lacking adequate tools. Principals actively supported teachers through regular briefings and by forming tech-assistance teams to help with technical difficulties. A culture of teacher collaboration has also emerged, where educators share learning materials, tech usage tips, and moral support via WhatsApp groups or school forums. This has created a kind of digital solidarity that boosts teachers' morale and motivation to keep learning and innovating.

Student engagement in digital learning has also been a critical point. Teachers observed changes in student learning behavior during online learning. While some students were highly enthusiastic, enjoying the comfort of learning from home, many experienced a decline in participation, particularly those from economically disadvantaged backgrounds or lacking parental support. Teachers recognized that not all students had a conducive home learning environment. As a response, some adopted flexible systems, such as extended deadlines, personalized consultations via WhatsApp,

and lighter media formats like short videos or podcasts to reduce students' data usage burden. Overall, teachers' perception of digital learning was fairly positive, although they acknowledged that it could not fully replace in-person instruction. Most teachers expressed hope that technology would continue to complement learning in the future enriching materials, expanding access to information, and enhancing teaching creativity. However, they emphasized the need for policies that promote comprehensive digital literacy development among teachers, students, and parents. Digital education transformation is not merely about device usage, but about building an inclusive, adaptive, and sustainable learning ecosystem.

The findings indicate that most teachers in Yogyakarta have adapted to online learning systems, albeit with ongoing challenges. Viewed through the Technology Acceptance Model (TAM) framework developed by Davis (1989), it is evident that teachers exhibit high levels of perceived usefulness regarding digital technology in teaching. They recognized that technology facilitates information access, accelerates communication, and offers flexibility in content delivery. However, levels of perceived ease of use varied, especially among senior teachers or those less familiar with digital tools. This supports the TAM premise that technology acceptance is significantly influenced by users' subjective perceptions and personal experiences.

These findings align with previous research by Handayani (2021), which highlighted that teachers' ability to manage online learning is influenced by training, facility availability, and personal motivation. In Yogyakarta's context, most teachers have participated in training from various institutions, but the effectiveness of such training still needs to be reviewed, as not all participants felt confident afterward. This underscores the importance of practical, ongoing training programs tailored to teachers' actual needs.

The teaching strategies applied by teachers in this study reflect an attempt to align with 21st-century pedagogy. Teachers are trying to implement student-centered learning and blended learning through a mix of video lessons, online quizzes, and virtual discussions. While not yet fully optimized, these efforts indicate a shift in how teachers perceive teaching and learning. Some even started adopting flipped classroom models, where students learn the material at home first and then discuss it interactively during online sessions. This indicates a willingness to innovate despite technical and psychological limitations faced by students.

Challenges faced by teachers are not only technical but also social and cultural. Many have to deal with students from lower socioeconomic backgrounds who lack proper devices or stable internet. Moreover, the absence of parental guidance is a significant barrier, particularly for junior high students who still need supervision. These challenges reflect the digital divide that persists in Indonesia—even in relatively advanced cities like Yogyakarta. School support and leadership have proven crucial to teachers' successful adaptation. Schools with collaborative cultures, adaptive management, and internal training programs tend to produce more confident and prepared teachers. This finding is in line with Oktaviani (2020), who emphasized the importance of transformational leadership in digital-era educational management. Principals who actively support teachers, provide room for exploration, and encourage innovation are better able to foster collective enthusiasm among teachers facing online learning challenges.

The implications of this study are highly relevant for education policymakers. The findings reinforce the idea that digital learning is not merely a response to the pandemic, but part of a long-term transformation of the education system. Therefore, policies are needed to systematically enhance digital literacy among teachers, improve educational

infrastructure, and develop adaptive learning models for the changing times. Continuous evaluation of educational technology implementation is also essential to ensure that it genuinely improves student learning quality, rather than becoming a mere formality in using online platforms. However, the author acknowledges several limitations in this study. The respondents were limited to one city Yogyakarta so the results may not be generalizable nationwide. Additionally, this is a descriptive quantitative study, which does not explore in depth the psychological dynamics of teachers during the adaptation process. Further research is recommended using qualitative or mixed-methods approaches to more thoroughly investigate non-technical factors such as work stress, teaching satisfaction, and changes in communication patterns in digital learning.

CONCLUSION

Based on the results of research conducted on junior high school teachers in Yogyakarta City, it can be concluded that the process of teacher adaptation to digital learning in this all-online era takes place dynamically and gradually. The majority of teachers have been able to operate digital devices and utilize various online learning platforms to support the teaching and learning process. Nevertheless, this adaptation still faces various challenges, both technical such as limited infrastructure and internet connectivity and non-technical, such as teachers' psychological readiness, declining student motivation, and lack of support from students' families. Teachers' efforts to adjust their teaching strategies, participate in training, and collaborate with colleagues demonstrate a strong commitment to continuous growth amidst changing times. Support from schools especially in the form of adaptive leadership and the provision of necessary facilities has also helped accelerate this adaptation process. Therefore, digital learning not only requires technological proficiency but also a collaborative, inclusive, and sustainable educational ecosystem so that teachers can perform their roles optimally in this digital era.

LITERATURE

Agudo, J. D. D. M. (2023). Adaptation challenges in learning to teach EFL in a VUCA world: What have we learned from the COVID-19 experience?. *DELTA: Documentação de Estudos em Lingüística Teórica e Aplicada*, *39*(4), 202339461489.

Ahmad, F. B. (2024). Degree of Teachers' Adaptation to Digital Teacher Skills Considering Sustainable Professional Development.

Ahmad, F. B. (2025). Degree of Teachers' Adaptation to Digital Skills Sustainable Development. *Asian Journal of Education and Training*, *11*(1), 22-30.

Bandura, A. (2002). Growing primacy of human agency in adaptation and change in the electronic era. *European psychologist*, *7*(1), 2.

Blyznyuk, O., Kachak, T., Blyznyuk, T., & Nazaruk, S. K. (2025). Quality Education in the Digital Age: Adapting to 21st Century Primary School Learners. *Journal of Vasyl Stefanyk Precarpathian National University*, *12*(1), 58-68.

Blyznyuk, T. (2018). Formation of teachers' digital competence: domestic challenges and foreign experience. *Journal of vasyl stefanyk precarpathian National University*, *5*(1), 40-46.

Budiman, J. (2023). Adaptation Of Technology In Learning As An Effort To Face Global Challenges. *Jurnal Scientia*, *12*(04), 2026-2031.

Coman, C., Țîru, L. G., Meseșan-Schmitz, L., Stanciu, C., & Bularca, M. C. (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability*, *12*(24), 10367.

Corbi, A., & Burgos, D. (2020). From classroom to online lessons: Adapted methodology for teachers. In *Radical solutions for education in a crisis context: COVID-19 as an opportunity for global learning* (pp. 115-129). Singapore: Springer Singapore.

Dalipi, F., Jokela, P., Kastrati, Z., Kurti, A., & Elm, P. (2022). Going digital as a result of COVID-19: Insights from students' and teachers' impressions in a Swedish university. *International journal of educational research open*, *3*, 100136.

Eden, S. (2024, October). Cognitive and technological recourses in teachers' adaptation to emergency remote teaching. In *Frontiers in Education* (Vol. 9, p. 1450620). Frontiers Media SA.

Eyal, L. (2012). Digital assessment literacy—The core role of the teacher in a digital environment. *Journal of Educational Technology & Society*, *15*(2), 37-49.

Huda, M., & Teh, K. S. M. (2018). Empowering professional and ethical competence on reflective teaching practice in digital era. In *Mentorship strategies in teacher education* (pp. 136-152). IGI Global Scientific Publishing.

Inderawati, R., Meyers, K. F., Novarita, N., Awalludin, A., & Anam, S. (2024). Students'virtual Drama Performance Of English Language Teaching In The Digital Era: Creativity And Adaptation In Learning. *English Review: Journal of English Education*, *12*(3), 1239-1250.

Joshi, D. R., Khanal, J., & Dhakal, R. H. (2023). From resistance to resilience: Teachers' adaptation process to mediating digital devices in Pre-COVID-19, during COVID-19, and post-covid-19 classrooms in Nepal. *Education Sciences*, *13*(5), 509.

König, J., Jäger-Biela, D. J., & Glutsch, N. (2020). Adapting to online teaching during COVID-19 school closure: teacher education and teacher competence effects among early career teachers in Germany. *European journal of teacher education*, *43*(4), 608-622.

Lee, E., & Lee, S. (2024). Exploring the Relationship Among Teacher Transparency, Self-Efficacy, and Digital Adaptation of English Teachers. *English Teaching*, *79*(4).

Li, C. (2024). Challenges and Adaptations of EFL Teaching Amidst Global Crises. *Lecture Notes in Education Psychology and Public Media*, *77*, 34-39.

Meylina, M., Ardiasih, L. S., & Rahmiaty, R. (2021). Teachers' digital competences: An overview on technological perspectives. *Linguists: Journal Of Linguistics and Language Teaching*, *7*(2), 29-43.

Mîndreci, G. (2020). New Challenges Of Adapting To Teaching English In The Online Academic Environment. *Management Strategies Journal*, *50*(4), 109-113.

Nguyen, N. H., Tran, T. L. N., Nguyen, L. T., Nguyen, T. A., & Nguyen, M. T. (2022). The interaction patterns of pandemic-initiated online teaching: How teachers adapted. *System*, *105*, 102755.

Psoinos, D. I. (2021). *Adapting Approaches and Methods to Teaching English Online: Theory and Practice*. Springer Nature.

Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online university teaching during and after the Covid-19 crisis: Refocusing teacher presence and learning activity. *Postdigital science and education*, *2*, 923-945.

Sia, J. K. M., Chin, W. L., Voon, M. L., Adamu, A. A., & Tan, S. C. K. (2023). Transitioning from online teaching to blended teaching in the post-pandemic era: What has COVID-19 taught us?. *Cogent Education*, *10*(2), 2282313.

Singh, G. (2016). Challenges for Teachers in the Era of E-learning in India. *Scholedge International Journal of Multidisciplinary & Allied Studies*, *3*(2).

Sk, R. (2024, August). Adapting To The Future: Technology Integration In Teacher Education. In *Artificial Intelligence In Education* (p. 189).

Supriyanto, A., Hartini, S., Irdasari, W. N., Miftahul, A., Oktapiana, S., & Mumpuni, S. D. (2020). Teacher professional quality: Counselling services with technology in Pandemic Covid-19. *Counsellia: Jurnal Bimbingan dan Konseling*, *10*(2), 176-189.

Zhang, P., & Yang, H. (2025). The GETAMEL model: Features of the adaptation of teachers in the transition to On-line learning. *International Journal of Human–Computer Interaction*, *41*(1), 102-114.