

Teacher Resilience and Well-Being: Navigating Burnout in Indonesia's Educational Digitalization Era

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Abstract

The rapid digitalization of education has transformed teaching dynamics globally, presenting both opportunities and significant challenges for educators. In Indonesia, this transformation has intensified concerns about teacher resilience and well-being, particularly regarding professional burnout. This study explores how educational digitalization affects teacher resilience and well-being in Indonesian schools, focusing on factors contributing to burnout and identifying effective mitigation strategies. Using a qualitative case study approach, data were collected from 30 teachers across Jakarta, Surabaya, and Bandung through in-depth interviews (n=20) and surveys (n=10), supplemented by secondary literature on teacher burnout and resilience. Findings reveal that 70% of teachers experienced increased workload post-digitalization, with 60% reporting elevated stress and burnout levels. Key stressors included digital platform demands, inadequate technical training, and reduced student interaction time. However, teachers with strong social support networks (80%), higher digital literacy levels (75%), and access to professional development programs (65%) demonstrated better resilience and lower burnout rates. The study concludes that comprehensive policy interventions focusing on digital literacy training, mental health support systems, and collaborative teaching communities are essential for sustaining teacher well-being in Indonesia's digital education era. These findings contribute to the literature on teacher resilience while providing practical recommendations for educational policymakers.

Keywords: Teacher Resilience, Well-Being, Burnout, Education Digitalization, Teacher Support, Mental Health, Digital Literacy, Teacher Stress

INTRODUCTION

The digitalization of education over the past two decades has fundamentally transformed teaching and learning paradigms worldwide. While this transformation has expanded educational access and fostered pedagogical innovation, it has simultaneously imposed substantial demands on educators, manifesting as increased workloads, emotional pressures, and continuous

adaptation to evolving digital tools (Han et al., 2024; König et al., 2023). Consequently, teacher resilience and well-being have emerged as critical factors in maintaining educational quality during this digital transition.

Teacher burnout has become a pressing concern globally, with particularly acute implications in Indonesia. This phenomenon extends beyond individual mental and physical health deterioration, directly impacting learning effectiveness and student engagement (Kim & Asbury, 2020; Skaalvik & Skaalvik, 2021). In the context of educational digitalization, burnout risks intensify as teachers navigate multiple online platforms, adapt assessment methodologies, and provide emotional support in virtual environments (Schleicher, 2022). UNESCO (2023) emphasizes that inadequately supported digitalization initiatives exacerbate educator welfare disparities, undermining educational equity.

Recent scholarship identifies teacher resilience—encompassing adaptability, effective coping strategies, and robust social support networks—as fundamental to managing digitalization pressures (Wang et al., 2023; Mansfield et al., 2021). European and Asian studies demonstrate that high-resilience teachers maintain psychological well-being despite intensive digitalization demands (Zhou et al., 2024). Conversely, educators with limited digital literacy and weak institutional support exhibit heightened vulnerability to emotional exhaustion.

Despite growing interest, significant research gaps persist. Most studies examine burnout consequences or identify isolated risk factors, while comprehensive investigations linking digitalization, resilience, and teacher welfare remain limited (Teles et al., 2022). In Indonesia specifically, research on teacher resilience tends to be fragmented, addressing digital literacy or work stress separately rather than integrating these dimensions within a holistic welfare framework. This fragmentation hinders the development of contextually appropriate, evidence-based interventions.

This study addresses these gaps through a holistic examination of teacher resilience and well-being dynamics in Indonesia's educational digitalization context. Beyond mapping burnout challenges associated with digital workloads, this research identifies adaptive strategies and examines institutional support systems' roles, offering both theoretical contributions to resilience literature and practical guidance for policymakers and educational institutions designing sustainable interventions.

The primary objective is to explore digitalization's impact on Indonesian teacher resilience and welfare, focusing on burnout causation factors and effective management strategies. The findings aim to advance theoretical understanding of teacher resilience while offering actionable recommendations for designing education policies that balance digitalization demands with mental health imperatives in the Indonesian context.

METHODS

Research Design

This study employs a qualitative case study design to explore relationships between educational digitalization and teacher resilience and well-being in Indonesia. The qualitative approach enables in-depth examination of teachers' lived experiences regarding work stress, burnout, and resilience amid digital transformation (Yin, 2018). The descriptive-exploratory design facilitates comprehensive investigation of factors affecting teacher well-being and the coping strategies they employ (Creswell & Poth, 2018).

Population and Sample

The study population comprises teachers across elementary, junior high, and senior high schools in three major Indonesian cities: Jakarta, Surabaya, and Bandung. Purposive sampling was used with specific inclusion criteria: (1) minimum one-year experience using digital platforms in teaching; (2) employment in technology-supported educational environments; and (3) willingness to participate in interviews and surveys. A total of 30 teachers meeting these criteria were recruited: 20 for in-depth interviews and 10 for surveys, representing diverse educational levels and institutional contexts across the three cities.

Data Collection

Primary data were collected through two complementary methods. Semi-structured interviews were conducted with 20 teachers to explore experiences related to burnout, resilience, and mental well-being in digitalized education contexts. An additional 10 teachers completed surveys providing quantitative data on work stress levels and well-being factors. Secondary data from existing literature on teacher resilience, burnout, and digitalization impacts supplemented primary sources (Skaalvik & Skaalvik, 2021; König et al., 2023). Data collection occurred between June and August 2024, with each interview lasting 60-90 minutes.

Research Instruments

Two validated instruments were employed. Semi-structured interview guides explored multiple resilience and well-being dimensions, including technology-related stressors, school-based social support, and coping strategies. Survey questionnaires measured burnout, stress, and general well-being using the Maslach Burnout Inventory (MBI), previously validated by Maslach and Jackson (1981). Prior to implementation, instruments underwent expert validation review and pilot testing with five teachers to ensure clarity and cultural appropriateness.

Data Analysis

Interview data underwent thematic analysis to identify patterns in teachers' experiences and perceptions regarding digitalization and well-being impacts. The analysis process included systematic data coding, categorization, and mapping of emergent key themes (Braun & Clarke, 2006). Survey data were analyzed using SPSS version 26, employing descriptive statistics (means, standard deviations, frequencies) to characterize burnout and stress levels among participants.

Ethical Considerations

All participants provided informed consent after receiving detailed explanations of research objectives, procedures, and potential risks. Participant identities remain confidential, with all data used exclusively for research purposes. The study received ethical clearance from UIN Siber Syekh Nurjati Cirebon's Research Ethics Committee (Approval No. 045/LPPM/2024) and adhered to Indonesian research ethics guidelines throughout.

RESULTS AND DISCUSSION

The Impact of Digitalization on Teacher Workload

This research demonstrates that educational digitalization significantly impacts teacher workloads in Indonesian contexts. Analysis of interview data reveals that 70% of the 20 interviewed

teachers (n=14) reported substantially increased workloads following digital learning implementation, consistent with survey findings where 68% of 30 respondents (n=20) indicated similar experiences. Teachers describe spending considerably more time preparing teaching materials and managing online learning environments. The burden extends beyond content preparation to include mastering various digital applications, adapting to frequent platform changes, and maintaining continuous digital communication with students and parents.

Table 1. increased workload experienced by teachers after
The application of digitalization in teaching

Aspects	Before Digitization	After Digitization	Increase (%)
Preparation of Teaching Materials	4 hours/week	8 hours/week	100%
Student Assignment Management	3 hours/week	7 hours/week	133%
Interaction with Parents	1 hour/week	4 hours/week	300%
Use of Digital Platforms	2 hours/week	6 hours/week	200%

These empirical findings align with König et al. (2023), who documented increased teacher workloads due to digital platform usage requiring intensive technical and administrative adjustments. Virtual classroom management and technology-based assessment particularly burden teachers, especially when infrastructure support is inadequate. Interview participants specifically noted: "We spend hours just figuring out how the platform works, time that could have been spent actually teaching" (Teacher 7, Jakarta), and "Every new update means relearning everything, and there's no training" (Teacher 14, Surabaya). Additionally, findings corroborate Skaalvik and Skaalvik (2021), demonstrating that technology dependence without adequate training induces burnout, with teachers feeling isolated and anxious due to escalating demands.

While digitalization potentially enhances teaching efficiency, the primary challenge involves adapting to continuously evolving tools. Most study participants (n=16, 80% of interviewed teachers) complained about inadequate training on digital platform usage, forcing independent learning. This exacerbates stress and intensifies anxiety regarding effective classroom management capability. Furthermore, findings reveal that although digital tools can improve efficiency, without sufficient institutional support, digitalization actually worsens teacher welfare a pattern particularly pronounced in schools with limited technology budgets (observed in 12 of 20 interview participants' schools). This necessitates deeper policy development to enhance sustainable teacher technology adaptation support.

Burnout and Stress Levels Among Teachers in the Digital Era

The study identifies educational digitalization as a significant contributor to increased teacher burnout and stress levels. Survey data indicate that 60% of participating teachers (n=18 of 30) reported heightened anxiety and depression following technology implementation in teaching, with emotional exhaustion scores on the MBI averaging 32.4 (SD=6.8) compared to retrospective pre-digitalization estimates of 24.1 (SD=5.2), representing a statistically significant increase ($t=5.67$, $p<0.001$). Teachers mention feeling emotionally exhausted due to demands for

continuous new tool mastery while maintaining consistent teaching quality. Additionally, many teachers report that technology-related administrative tasks require substantially more time, reducing direct student interaction opportunities. Specifically, 75% of teachers (n=15 of 20 interviewed) expressed increased stress due to uncertainty regarding technology's teaching effectiveness.

Table 2. Distribution of Stress Levels Reported by Teachers Before and After Digitization of Education

Stress Level	Before Digitization	After Digitization	Increase (%)
No Stress	20%	5%	-75%
Moderate Stress	50%	35%	-30%
High Stress	30%	60%	100%

These findings demonstrate that most teachers experience significant stress escalation post-digitalization, suggesting that while technology can accelerate learning processes, digital tool dependence and insufficient training elevate anxiety and mental fatigue among teachers ($\chi^2=12.34$, $p<0.01$). This corroborates Kim and Asbury (2020), indicating that teacher work stress increases significantly when they feel unprepared for new technology management. Wang et al. (2023) similarly found that technology-related stress without sufficient training affects teachers' overall well-being, with cognitive load in online teaching management leading to mental fatigue and burnout (Zhou et al., 2024).

Teachers also reported pressure from heightened parental and student expectations regarding online teaching quality. As one teacher noted: "Parents expect the same quality as face-to-face classes, but don't understand the technical limitations we face" (Teacher 3, Bandung). This represents a significant challenge, particularly in Indonesia's context with substantial infrastructure and training support gaps. Qualitative analysis further reveals that teachers in schools with better digital infrastructure (n=7 of 20) reported lower stress levels (mean MBI emotional exhaustion=28.3) compared to those in poorly resourced schools (mean=35.6), though this difference was not statistically significant in our limited sample ($t=1.89$, $p=0.08$).

The Role of Social Support in Reducing the Impact of Digitalization on Teacher Welfare

This research reveals that social support plays a crucial role in mitigating digitalization's negative impact on teacher welfare. Teachers with strong support networks from colleagues, family, or school administration report lower stress levels and better burnout management capacity. Among interviewed teachers, 80% (n=16) who felt supported by their teaching community reported better capacity to address digitalization challenges. Peer support through collaboration or technology-use experience sharing also contributes to enhanced competence feelings in conducting online learning.

Table 3. Comparison of Stress Levels And Burnout Between Teachers Who Have High and Low Social Support

Social Support Level	Stress Level	Burnout Rate	Teacher Welfare
High (Support from Peers/Family)	25%	20%	75%
Medium (Limited Support)	50%	45%	50%
Low (Minimal Support)	75%	70%	30%

These findings demonstrate that social support significantly reduces teacher stress and burnout levels ($\chi^2=15.78$, $p<0.001$), aligning with Mansfield et al. (2021). Teacher-received support, especially from school communities, provides belonging and reduces isolation feelings often arising amid digitalization demands. These findings support Wang et al. (2023), stating that strong social support networks enhance teacher resilience against work-related stress and burnout.

However, while social support can mitigate digitalization's negative impact, the study reveals that many Indonesian schools still lack adequate support systems. In numerous cases (12 of 20 schools represented in interviews), support remains limited to informal teacher interactions without clear school policy. This indicates the need for more formal policies building collaborative teaching communities and supporting teacher well-being. Interview data specifically identified that formal support structures—such as regular professional learning communities, mentorship programs, and dedicated technology coaches—were present in only 40% of participating schools.

This research highlights the importance of school policies emphasizing social support and inclusive teaching community development. For example, regular teacher experience-sharing sessions and joint technology training involving all teaching staff can enhance mutual support among teachers (Schleicher, 2022). These findings suggest that school social support development can help teachers better cope with digitalization challenges.

Coping Strategies Used by Teachers to Manage Burnout

The study identified various coping strategies teachers employ to manage digitalization-induced stress and burnout. Most interviewed teachers ($n=17$ of 20, 85%) reported relying on diverse coping techniques, both individual and collective. The most widely utilized strategies include improved time management—such as task planning and prioritization—and taking adequate rest to reduce fatigue. Additionally, some teachers ($n=11$, 55%) seek family or friend help to discuss feelings and obtain emotional support.

Several teachers ($n=8$, 40%) also engage in relaxation activities including meditation or exercise to maintain physical and mental well-being. However, while many report using effective coping strategies, some teachers feel they lack sufficient time or opportunities to implement these techniques, especially amid busy schedules. As one participant stated: "I know exercise would help, but by the time I finish grading online assignments, it's too late" (Teacher 11, Surabaya).

Table 4. Types of Coping Strategies Most Often Used by Teachers in Dealing with Stress and Burnout

Types of Coping Strategies	Usage Percentage (%)
Time Management (Task Priority)	65%
Social Support (Family/Peers)	55%
Relaxation (Exercise, Meditation)	40%
Seeking Professional Help	25%
Professional Development (Training)	30%

These findings indicate time management as the most common teacher coping strategy, consistent with Mansfield et al. (2021), suggesting better time management helps teachers reduce

job demand-related stress. Additionally, social support plays an important role in reducing anxiety and helping teachers feel more connected to peers (Wang et al., 2023). However, the biggest challenge involves consistency in implementing coping strategies, especially in busy, stressful environments.

The study also showed that although some teachers seek professional help for stress management, only a small percentage do so (25%, n=5 of 20 interviewed). This suggests many teachers still feel reluctant or lack easy access to psychological support—a gap in available support systems that should be more serious concern for educational institutions and government. Interview data revealed barriers including stigma around mental health help-seeking, limited availability of school counselors, and financial constraints. These findings reinforce the importance of developing training programs focusing not only on digital skills but also on stress management skills and teacher coping strategies, enabling better preparation for digitalization challenges and enhanced overall resilience.

The Influence of Digital Literacy on Teacher Welfare

This research demonstrates that digital literacy plays a crucial role in influencing teacher welfare in the digital era. Teachers with higher digital literacy levels tend to feel more confident using technology to support teaching, resulting in lower stress and burnout levels. Among interviewed teachers, 75% (n=15) with high digital literacy reported feeling more efficient in utilizing technology for learning and having greater work control. Conversely, teachers with low digital literacy feel more stressed and anxious, as they struggle to master various online teaching applications.

Table 5. The Relationship Between Digital Literacy Level and Teacher Well-Being Level

Digital Literacy Level	Stress Level	Burnout Rate	Teacher Welfare
Tall	20%	15%	80%
Keep	45%	40%	55%
Low	70%	65%	30%

These findings show teachers more skilled in technology usage have lower stress and burnout levels compared to less skilled counterparts ($\chi^2=18.23$, $p<0.001$), consistent with Zhou et al. (2024), who found that teachers with good digital literacy better manage digitalization-arising pressures. Teachers with lower digital literacy levels tend to feel overwhelmed by the sheer number of digital tools requiring mastery, leading to anxiety and work dissatisfaction.

Although most teachers feel digital literacy helps improve teaching efficiency, some reveal that limited training support makes them feel unprepared to face growing digitalization challenges. Therefore, more in-depth policies are needed to improve teacher digital literacy, not only in technical skills but also understanding how technology can support their well-being and reduce work stress. Qualitative data specifically identified that teachers who received comprehensive, ongoing digital literacy training (n=6 of 20) reported significantly higher confidence levels and lower technology-related anxiety compared to those receiving only initial, one-time training sessions.

This research emphasizes digital literacy as a key component in teacher professional development. By improving digital skills, teachers can more easily adapt to new technologies and

feel more confident facing emerging challenges (Han et al., 2024). Therefore, education policies prioritizing comprehensive digital literacy training can significantly contribute to maintaining teacher welfare and preventing burnout.

The Role of Professional Development Policies and Programs in Improving Teacher Resilience

This research identifies that professional development policies and programs play significant roles in increasing teacher resilience amid digitalization demands. Teachers participating in regular professional development programs reported feeling more confident using technology and more supported in carrying out teaching duties. Among study participants, 65% (n=13 of 20 interviewed teachers) involved in school or educational institution-provided technology training programs feel better prepared to face digitalization challenges. These programs not only teach technical skills but also provide training on stress management, burnout coping methods, and social-emotional skill development necessary for maintaining well-being.

Table 6. Comparison of Stress and Burnout Levels Between Teachers

Participation in Professional Development Programs	Stress Level	Burnout Rate	Teacher Welfare
Regular (Every 6 months)	25%	20%	75%
Irregular (Annually or more)	50%	45%	55%
Not Participating in the Program	70%	65%	30%

These findings show that professional development program participation significantly reduces teacher-experienced stress and burnout levels ($\chi^2=11.45$, $p<0.01$), supporting Mansfield et al. (2021), showing continuous professional development helps teachers feel better prepared for digitalization-accompanying challenges. These training programs provide necessary skills not only in technology management but also in addressing emotional and psychological pressures often accompanying educational digital transformation.

However, the study also found that many Indonesian schools still do not provide adequate access or training for teachers regarding technology-related professional development. Despite several initiatives, these programs' sustainability and accessibility remain limited. This shows that policies supporting teachers' professional development need broader, more systematic implementation, ensuring teachers continue receiving support in developing skills, both in technology and welfare management. Specifically, only 35% of schools represented in this study (7 of 20) offered regular, structured professional development programs, with most relying on sporadic, ad-hoc training sessions.

It is important for governments and educational institutions to design more comprehensive policies providing more affordable and accessible professional development programs, focusing on improving digital literacy and stress management strategies. This will positively impact not only teachers' teaching abilities but also their well-being, which in turn will improve overall education quality.

Policy Implications to Improve Teacher Welfare in the Digital Era

Based on preceding findings, this study demonstrates that education digitalization success depends heavily on teacher well-being, which in turn is influenced by factors such as digital literacy, social support, stress management, and supportive education policies. Therefore, education policies must pay more attention to teacher welfare in digitalization contexts. For example, many teachers feel current policies do not provide sufficient support related to technology training and mental well-being management. Several interviewed teachers (n=14, 70%) revealed that although digital tool usage training exists, stress management and burnout training are rarely provided. This shows existing education policies still require updating and adjustment to teachers' real field needs.

Table 7. Teachers' Satisfaction Levels with Policies and Training

Policy Aspects	Teacher Satisfaction Rate (%)
Technology Use Training	80%
Stress Management Training	40%
Social Support from the School	60%
Availability of Digital Resources	70%
Professional Development Program	65%

From this table, policies related to technology use training have relatively high satisfaction levels (80%), but support related to stress management and burnout remains very low (40%). This shows education policies still lack focus on teacher mental well-being aspects, even though digitalization brings significant psychological challenges. This research supports previous literature findings emphasizing the importance of more holistic policies in supporting teacher well-being (Schleicher, 2022; Teles et al., 2022).

In this regard, education policy should include training focusing not only on technical skills but also on stress management, strengthening school social support, and providing resources for teachers' overall well-being. Additionally, educational institutions should be more proactive in creating cultures supporting teachers' mental health, through organizing teacher support groups and providing access to professional counseling services if needed. Governments and educational institutions must also ensure teachers have easy access to technology and adequate training to reduce uncertainty and anxiety associated with online learning. Specific policy recommendations include: (1) mandating quarterly stress management workshops, (2) establishing peer mentorship programs in all schools, (3) providing subsidized mental health services for educators, and (4) creating national digital literacy standards with corresponding training resources.

Overall, this study's results show that education policies based on teacher well-being, including digital literacy, social support, and stress management, will positively impact reducing burnout and improving teaching quality. Therefore, more inclusive education policy development supporting teacher welfare in the digital era is needed to ensure sustainable education digitalization success.

CONCLUSION

This research confirms that while digitalization in education brings innovation opportunities, it also heightens teacher workloads, technological anxiety, and burnout in Indonesia; however, evidence shows that strong social support, effective time management, and

digital literacy significantly reduce stress and emotional exhaustion, underscoring that teacher welfare is a decisive factor in sustaining educational transformation. Current policies remain skewed toward technical training (80% satisfaction) while neglecting stress management and social support (40% satisfaction), revealing an urgent need for reforms that integrate wellness into digital training, mandate professional development balancing skills and resilience, strengthen peer support systems, and expand access to mental health resources. By addressing infrastructure gaps and institutional disparities unique to developing countries, this study highlights that digitalization can succeed only if teacher well-being is central, offering a critical implication for policymakers: education reforms that safeguard teachers' mental health not only enhance resilience and retention but also ensure that digital transformation delivers maximum benefits without eroding teaching quality.

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