

The Impact of Educational Technology on Teacher and Student Wellbeing in Madrasah Ibtidaiyah: A Systematic Literature Review

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Abstract: This study aims to assess the impact of educational technology on the well-being of teachers and students in Madrasah Ibtidaiyah through an integrative literature review approach. This study reviewed literature published between 2015 and 2024 from four leading databases: Google Scholar, Scispace, DOAJ and Scopus. Inclusion criteria included articles that were relevant to the topic of educational technology and well-being in the context of basic education, available in full text and had a clear methodology. The results of the review show that educational technology has the potential to improve teacher well-being through professional development and work efficiency, as well as increasing students' comfort and engagement in the learning process. However, challenges such as lack of training, limited infrastructure and resistance to change are the main obstacles. This research recommends adaptive and inclusive strategies, such as continuous training, strengthening supporting policies and collaboration between stakeholders. This study highlights the importance of continuous evaluation and policy support for technology to be a transformative instrument in creating an educational ecosystem that supports the well-being of all school members.

Keywords: Educational Technology, Teacher Welfare, Student Welfare, Madrasah Ibtidaiyah, Systematic Literature Review.

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A. INTRODUCTION

Education has become an important element in the transformation of teaching and learning processes at various levels of education, including Madrasah Ibtidaiyah (MI). The integration of technology in learning aims to improve the effectiveness and efficiency of the educational process and expand access to learning resources. However, the adoption of technology also brings challenges, especially related to the readiness of teachers and students to use it optimally (Hidayati et al., 2023). The well-being of teachers and students is a crucial aspect that needs to be considered in the implementation of educational technology, given its potential impact on mental health and the quality of interactions in the learning environment (Qamariyah, 2023).

Some studies show that the use of technology in education can affect teachers' well-being. Teachers who are underprepared or do not have adequate support are likely to experience stress and anxiety when integrating technology in learning (Hidayati et al., 2023). Lack of training and adequate infrastructure are major contributing factors to teachers' psychological distress (Qamariyah, 2023). In addition, the demand to master various digital

platforms in a short time can increase workload and reduce teachers' job satisfaction (Hidayati et al., 2023). The implementation of technology in learning also has an impact on student well-being. Overuse of digital devices can lead to fatigue, distraction and decreased motivation to learn in students (Khomsiah et al., 2023). The lack of social interaction due to online learning can affect students' social and emotional development (Hidayati et al., 2023). In addition, dependence on technology can reduce students' ability to think critically and solve problems independently (Qamariyah, 2023).

Technology readiness, adequate training and institutional support are important factors that influence teacher and student well-being in the context of using educational technology. Teachers who receive sufficient training and support tend to be more confident and able to integrate technology effectively in learning (Hidayati et al., 2023). Conversely, a lack of resources and infrastructure can be a significant barrier to the implementation of technology that impacts on the well-being of all parties involved (Qamariyah, 2023). Collaboration between education stakeholders is necessary to create a learning environment that supports well-being through technology (Khomsiah et al., 2023).

Several strategies have been proposed to reduce the negative impact of technology on teacher and student well-being. The implementation of active and collaborative learning can increase student engagement and reduce boredom (Khomsiah et al., 2023). The development of learning communities for teachers can be a means to share experiences and solutions to technological challenges (Hidayati et al., 2023). In addition, periodic evaluations of technology use and its impact on well-being need to be conducted to adjust learning strategies that are more humanistic (Qamariyah, 2023).

From the various studies that have been discussed, it appears that although educational technology has great potential in improving the quality of learning, its implementation can pose challenges to the welfare of teachers and students, especially in the Madrasah Ibtidaiyah environment. The research gap lies in the lack of studies that comprehensively examine the impact of technology on well-being in the context of MI, as well as effective mitigation strategies. The novelty of this study is the systematic approach in reviewing literature that focuses on the well-being of teachers and students in MI related to the use of educational technology. The purpose of this study is to identify the impact of educational technology on the well-being of teachers and students in Madrasah Ibtidaiyah and formulate strategic recommendations for the implementation of technology that supports the well-being of all parties.

B. METHOD

This study uses a library research approach with an integrative literature review. This approach was chosen because it is able to combine and synthesise findings from various relevant sources to build a comprehensive understanding of the impact of educational technology on the welfare of teachers and students in Madrasah Ibtidaiyah. This approach allows researchers to identify patterns, gaps and potential theoretical and practical contributions from previous studies (Torraco, 2016).

The data sources in this study were obtained from several reputable databases, namely Google Scholar, Scispace, Directory of Open Access Journals (DOAJ), and Scopus. The inclusion criteria used in this study are: (1) articles published between 2015 and 2024; (2) articles containing topics related to educational technology and teacher or student welfare; (3) articles available in full text; and (4) articles relevant to the context of primary education or Madrasah Ibtidaiyah. Meanwhile, the exclusion criteria included: (1) opinion or editorial articles; (2) thematically irrelevant articles; and (3) articles that did not fulfil methodological criteria, such as not stating clear research methods.

C. RESULTS AND DISCUSSION

1. The Impact of Educational Technology Implementation on Teacher Welfare in Madrasah Ibtidaiyah

The implementation of educational technology has had a significant impact on the well-being of teachers in Madrasah Ibtidaiyah. Educational technology, including in the context of online learning, has introduced new methods that can affect teachers' work experience and overall well-being. Firstly, adapting to educational technology provides opportunities for teachers to improve their professional capabilities. In the context of COVID-19, the implementation of online learning is an urgent need, which forces teachers to learn and master information and communication technology (ICT) (Dewi, 2020; Aulia et al., 2023). This process can improve teachers' digital literacy, which in turn contributes to their teaching performance (Aulia et al., 2023). Teachers who are proficient in ICT have a higher potential to create an interactive and supportive learning environment that increases student motivation (Aulia et al., 2023; Yusuf et al., 2023).

In addition, the integration of technology also encourages the development of a supportive community of teachers. In the Madrasah Ibtidaiyah environment, teachers can collaborate online to share best practices and educational resources, thus strengthening the social network between educators (Salsabila et al., 2022; Maritsa et al., 2021). Support in the form of training and guidance on the ongoing use of technology also plays an important role in helping teachers adapt and reduce their work-related stress levels (Hidayah et al., 2022).

However, the implementation of technology is not without challenges. Some teachers face difficulties in adapting new methods, which can lead to frustration and degrade their psychological well-being (Mesra, 2023; Eleanora & Adawiah, 2021). Research shows that inadequate training or lack of technical support can be an obstacle to technology adoption (Mokalu et al., 2022). Therefore, it is important to provide ongoing support to teachers in this transition, including access to relevant training and professional development resources.

In addition, the implementation of technology also contributes to increasing teachers' work commitment. With more innovative teaching tools and methods, teachers can feel higher job satisfaction due to success in delivering material and improving student learning outcomes (Kurdi et al., 2023; Hidayah et al., 2022). This directly impacts their well-being, creating a more positive learning environment not only for students but also for the teachers themselves (Aulia et al., 2023; Rofdillah et al., 2024).

2. The Influence of Educational Technology on the Welfare of Students at Madrasah Ibtidaiyah

The implementation of educational technology in Madrasah Ibtidaiyah has a significant impact on the welfare of teachers, especially in the context of professional development and performance improvement. With the advancement of information and communication technology (ICT), teachers have better access to educational resources and opportunities to improve their skills. The provision of training in the use of technology has been proven to increase work motivation and teacher performance (Pratiwi, 2021). As revealed by Aulia et al., the use of technology not only helps in teaching but also supports the development of relevant skills for teachers in the digital era (Amalia, 2020). This contributes to increasing teachers' job satisfaction, which has direct implications for their well-being (Husna, 2022).

In addition, the presence of technology in learning allows teachers to create a more interactive and engaging learning environment for students. The use of digital tools, such as social media and online learning tools, can expand teaching methods and increase student engagement, which in turn improves learning outcomes and student satisfaction (Maritsa et al., 2021; Windiarti et al., 2023). When students experience an increase in learning achievement, teachers also feel more valued, which has a positive effect on their psychological well-being (Haeranah et al., 2023). This creates a positive cycle that can strengthen teachers' commitment to their profession.

However, it is important to recognize that the implementation of technology also faces challenges that can affect the well-being of teachers. The main problems consist of a lack of adequate training as well as technical support, which can lead to uncertainty and stress among teachers (Ramadhani & Ritonga, 2019; Atikoh, 2023). Research by Ramadhani and Ritonga shows that a lack of understanding of new technologies results in dissatisfaction among teachers, which can impact their performance (Pratiwi, 2021). Therefore, to maximize the benefits of educational technology, there is a need for investment in continuous training and support for teachers to build their confidence in using these new tools (VOLTA & NAHDIYAH, 2024).

3. Strategies to Improve Welfare through Adaptive and Inclusive Technology Approaches

The strategy to increase the impact of the implementation of educational technology on the welfare of teachers in Madrasah Ibtidaiyah through an adaptive and inclusive approach requires a number of comprehensive steps. The emphasis on technology-friendliness and inclusivity in education policy will facilitate better conditions for teachers and students, as well as create a supportive learning environment. One of the key strategies that can improve teacher welfare is the provision of systematic and continuous training on the use of educational technology. This training should not only be limited to theory, but should also include real practice in the field that suits the specific needs of the teachers at Madrasah Ibtidaiyah. As informed by Wahyudi et al., the integration of effective teacher training and infrastructure development is an important factor in maximizing the potential of technology-based education (Wahyudi et al., 2024). In this context, collaboration with educational training institutions and technology institutions can be a strategic solution. In addition, training related

to digital literacy must be an integral part of the development program to support teachers in adapting to new technological tools (Suharyati et al., 2019).

Furthermore, the implementation of inclusive education policies can help in creating an environment that supports the work of teachers. The Independent Learning Policy, for example, has had a positive impact on reducing the administrative burden on teachers, according to research by Lembong et al. (Lembong et al., 2023). Effective implementation of this policy includes reducing the rules that hinder them, so that teachers can focus on their teaching and professional development. By reducing the administrative burden, teachers can have a more fulfilling and productive work experience, which contributes to their well-being (Irfan et al., 2023).

The involvement of all stakeholders is also very important in this strategy. The development of learning communities that involve teachers, parents, and the community will create a better and collaborative learning ecosystem. It can also help in the development of subject matter that is relevant and appropriate to the existing learning context. An inclusive approach will facilitate feedback from various parties, which in turn can improve teaching practices (Arifah et al., 2023).

D. CONCLUSIONS AND SUGGESTIONS

The application of educational technology in Madrasah Ibtidaiyah has a complex and diverse impact on the welfare of teachers and students. On the one hand, technology opens up opportunities for teacher professional development, increased learning effectiveness, and a more interactive learning experience for students. But on the other hand, various challenges such as lack of training, limited infrastructure, and additional workload can hinder the optimization of the use of these technologies. Therefore, an adaptive and inclusive approach is crucial. Strategies such as the provision of continuous training, supportive policies, cross-stakeholder collaboration, and increased access to technology, are important foundations in maximizing the positive impact of educational technology on the welfare of teachers at Madrasah Ibtidaiyah. With the right policy support and resources, educational technology can be a transformative instrument to improve the quality and a healthier and more empowered education ecosystem.

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