

Digital Madrasah and Student Mental Health: Exploring the Psychological Impacts of E-Learning in Islamic Schools

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Abstract

This study explores the psychological impacts of e-learning on student mental health in digital madrasahs (Islamic schools). With the rapid integration of digital platforms in education, particularly in religious settings, the study examines how the shift from traditional face-to-face learning to digital learning environments has influenced students' emotional well-being, stress levels, and overall mental health. The research focuses on the unique challenges faced by students in madrasahs, where religious and academic education are blended with digital tools and online resources. Using a mixed-methods approach, both qualitative and quantitative data were collected through surveys, interviews, and psychological assessments of students. The findings reveal that while e-learning offers flexibility and accessibility, it also presents significant challenges, including increased screen time, social isolation, and difficulty in maintaining focus, all of which negatively affect students' mental health. Additionally, the study identifies coping mechanisms adopted by students and the role of teachers and school administrators in mitigating mental health risks. This research contributes to the growing body of literature on digital education and mental health, particularly in the context of Islamic education, and offers recommendations for creating supportive digital learning environments in madrasahs.

Keywords: Digital Madrasah, E-Learning, Islamic Schools
Student Mental Health



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INTRODUCTION

The rapid advancement of digital technology has significantly transformed education worldwide, leading to a paradigm shift in the way knowledge is delivered and consumed. In the wake of the global pandemic, educational institutions across the globe, including Islamic schools or madrasahs, were forced to adopt e-learning as a primary mode of instruction. This transition was particularly challenging for institutions that were traditionally reliant on face-to-face teaching methods, where the relationship between teacher and student was more personal and direct (Aciu, 2022; Govindaraj, 2023; Shinohara, 2022). As madrasahs adapted to digital platforms, the psychological implications for students began to emerge as an important area of study.

In madrasahs, which combine religious education with secular subjects, the integration of e-learning presents unique challenges that go beyond the technicalities of online teaching (Bou-Hamad, 2024; Gutiérrez-Aguilar, 2023; Manigandan, 2025). The blend of Islamic teachings, the focus on character building, and the growing reliance on technology may affect students' mental health in ways that are not immediately visible. As online education becomes increasingly prevalent, it is crucial to examine the potential psychological impacts that digital learning may have on students, particularly in religious schools where values, emotional well-being, and academic success are deeply intertwined. Mental health among students has become an area of increasing concern globally, with various studies indicating that academic stress, social isolation, and emotional struggles are common among learners. In the context of e-learning, these issues may be exacerbated due to factors such as extended screen time, lack of social interaction, and the challenge of maintaining focus in an online setting. Islamic schools, which are traditionally community-oriented, face additional complexities in addressing the social and emotional needs of their students in a virtual environment.

Research has consistently shown that mental health challenges among students are linked to academic performance, social relationships, and emotional resilience (Cagbabanua-Yap, 2023; Laros, 2022; San-Antolín, 2025). In the case of madrasahs, where students often deal with the dual pressures of religious study and academic achievement, the effects of e-learning on mental health may be even more pronounced. The pressure to balance these demands, coupled with the isolation often associated with online learning, could lead to an increase in stress, anxiety, and other psychological issues. One of the primary concerns regarding e-learning is the increase in screen time. The extensive use of digital devices for online learning has been shown to negatively impact students' physical and mental health. Prolonged exposure to screens can lead to physical ailments such as eye strain, headaches, and poor posture, but it can also affect mental well-being by disrupting sleep patterns, reducing physical activity, and contributing to feelings of loneliness and isolation. In the madrasah context, where students are often taught in a structured, communal environment, the shift to online learning can disrupt their sense of community and support systems.

Moreover, the lack of face-to-face interaction with peers and teachers can lead to feelings of social isolation (Bigoni, 2025; Ho, 2023; Qazi, 2022), which is a significant factor affecting mental health. Social connection is crucial for adolescents, as it helps in developing emotional intelligence, coping mechanisms, and a sense of belonging. In digital learning environments, students often miss out on spontaneous social interactions, such as casual conversations with friends or collaborative group activities, all of which are essential for emotional development. This disconnection can exacerbate feelings of anxiety and depression, which are already prevalent among students in high-pressure academic settings. The psychological toll of online learning can also vary based on individual differences such as personality, coping skills, and previous mental health status. For some students, the flexibility of e-learning may reduce stress by allowing them to work at their own pace. However, for others, the lack of structure, self-regulation, and the absence of face-to-face guidance can lead to increased anxiety, procrastination, and disengagement from learning. Students in madrasahs, who are accustomed

to a highly structured environment, may find it particularly challenging to adapt to the less structured nature of online learning, leading to negative psychological outcomes.

As digital madrasahs continue to grow, it becomes crucial to address these mental health challenges (Deng, 2024; Hossein, 2025; Olcek, 2022). Educators, school administrators, and policymakers must take proactive steps to support the psychological well-being of students in online learning environments. This includes providing resources for mental health support, incorporating regular check-ins with students, and fostering an online community where students feel connected and supported. Teachers in digital madrasahs also need training in identifying signs of mental distress and learning how to provide emotional support in a virtual setting. Another significant aspect to consider is the role of family in supporting students' mental health during e-learning. Parents and caregivers are often on the frontlines, managing the home learning environment and monitoring students' well-being. In the madrasah context, where family values and community ties are emphasized, the involvement of parents in the educational process becomes even more important. Research suggests that parental engagement can buffer the negative effects of e-learning on student mental health by providing a support system that helps students manage stress and maintain a healthy balance between their academic and personal lives.

The transition to digital madrasahs also raises questions about the long-term psychological impact of e-learning on students' development. While online education offers convenience and accessibility, it may also contribute to a shift in students' learning habits and social behaviors (Al-Salman, 2022; Huang, 2022; Innab, 2023). The lack of physical interaction and the increasing reliance on digital platforms could lead to long-term consequences, such as difficulties in forming interpersonal relationships, reduced emotional intelligence, and challenges in adapting to face-to-face learning environments in the future. Therefore, it is essential to explore the psychological impacts of e-learning in digital madrasahs not only to address the immediate mental health needs of students but also to understand the broader implications for their future well-being. This research aims to contribute to the existing body of literature by focusing specifically on the mental health challenges faced by students in Islamic schools and to provide recommendations for creating a more supportive and mentally healthy e-learning environment.

By examining the psychological impacts of digital madrasah education, this study seeks to provide insights into how e-learning can be made more effective and student-centered. It aims to identify strategies that can mitigate the negative psychological effects of online learning and promote a balanced, healthy approach to education. The findings of this research could help inform the development of future policies and practices that prioritize the mental health of students, particularly in religious educational settings like madrasahs, where the holistic development of students is a core value. This research is particularly important as it contributes to the growing conversation on the intersection of digital education and mental health. As e-learning becomes an increasingly permanent feature of educational landscapes worldwide, it is crucial to ensure that the psychological needs of students are not overlooked. Ultimately, this study aims to foster a deeper understanding of how digital madrasahs can better support their students' mental health, creating an environment where both academic and emotional growth can thrive.

RESEARCH METHOD

Research Design

This study employs a mixed-methods approach, integrating both qualitative and quantitative research methods to explore the psychological impacts of e-learning on student mental health in digital madrasahs. A mixed-methods design is appropriate for this study as it allows for a comprehensive understanding of the issue by combining statistical data with in-

depth insights from participants. (Abdelwahed, 2025; Solano, 2024) The qualitative component will involve interviews and focus group discussions to explore the personal experiences and perceptions of students regarding the emotional and psychological effects of e-learning. The quantitative component will utilize surveys to gather measurable data on mental health indicators, such as anxiety, stress, and depression levels, before and after the implementation of digital learning. This approach will provide a holistic view of the psychological effects of e-learning on students in Islamic schools.

Research Target/Subject

The target population for this study consists of students enrolled in digital madrasahs. The sample will include both male and female students aged 14 to 18 who are currently engaged in online learning as part of their madrasah education. A purposive sampling technique will be used to select students who have experienced a minimum of six months of e-learning. This criterion ensures that participants are familiar with the challenges and benefits associated with online education. In total, approximately 200 students will be selected from 4 madrasahs, with the aim of achieving a representative sample from different grades and educational backgrounds.

Research Procedure

The research will be conducted in the following stages:

1. Literature Review: A thorough review of existing literature on e-learning, digital education, and student mental health will be conducted to build the theoretical framework and inform the design of the research instruments.
2. Preliminary Survey: A preliminary survey will be distributed to gather baseline data on students' mental health prior to the implementation of digital learning.
3. Data Collection: Data will be collected through two primary methods:
 - Qualitative Data: Semi-structured interviews and focus group discussions will be conducted with students to gather qualitative insights into their experiences with e-learning and its psychological impact. These sessions will focus on students' emotional well-being, stress levels, and perceptions of online learning.
 - Quantitative Data: A structured survey will be administered to measure mental health indicators, including anxiety, depression, and stress levels, using standardized psychological scales such as the DASS-21 (Depression, Anxiety, and Stress Scale).
4. Data Analysis: The qualitative data will be transcribed and analyzed using thematic analysis to identify common themes and patterns. The quantitative data will be analyzed using statistical software (e.g., SPSS) to compare the mental health scores before and after e-learning implementation.

Instruments, and Data Collection Techniques

The data will be collected using multiple instruments to ensure comprehensive data capture:

- Surveys: The primary instrument for quantitative data collection will be a structured survey, which includes psychological scales such as the DASS-21. This instrument will assess various aspects of mental health, such as stress, anxiety, and depression, before and after the transition to e-learning.
- Interviews: Semi-structured interviews will be conducted with a subset of students to gain in-depth qualitative insights. The interviews will explore students' personal

experiences with e-learning, how it has affected their emotional and mental well-being, and their coping mechanisms.

- **Focus Group Discussions:** These discussions will be held with small groups of students to further explore shared experiences and generate insights into common challenges faced by students in digital madrasahs.
- **Observation:** Classroom observations will be conducted in selected madrasahs to understand the learning environment and the integration of digital platforms into daily educational practices.

Data Analysis Technique

The analysis of the data will be conducted in two phases:

1. **Qualitative Analysis:** The qualitative data from interviews and focus group discussions will be transcribed and coded using thematic analysis. Themes will be identified based on recurring patterns or topics that emerge from the data. This will provide a deeper understanding of students' emotional and psychological responses to e-learning, as well as their coping strategies and suggestions for improving the digital learning environment.
2. **Quantitative Analysis:** The quantitative data from the surveys will be analyzed using descriptive statistics, such as means, standard deviations, and frequency distributions, to summarize the mental health indicators. Paired t-tests or repeated measures analysis will be used to compare the pre- and post-e-learning scores for stress, anxiety, and depression. This will allow for a statistical evaluation of the psychological impacts of the transition to e-learning on students' mental health.

By combining qualitative and quantitative data, this study will provide a comprehensive understanding of the psychological impacts of digital madrasah education, offering valuable insights for educators, policymakers, and researchers seeking to improve the mental health support systems in online Islamic education.

RESULTS AND DISCUSSION

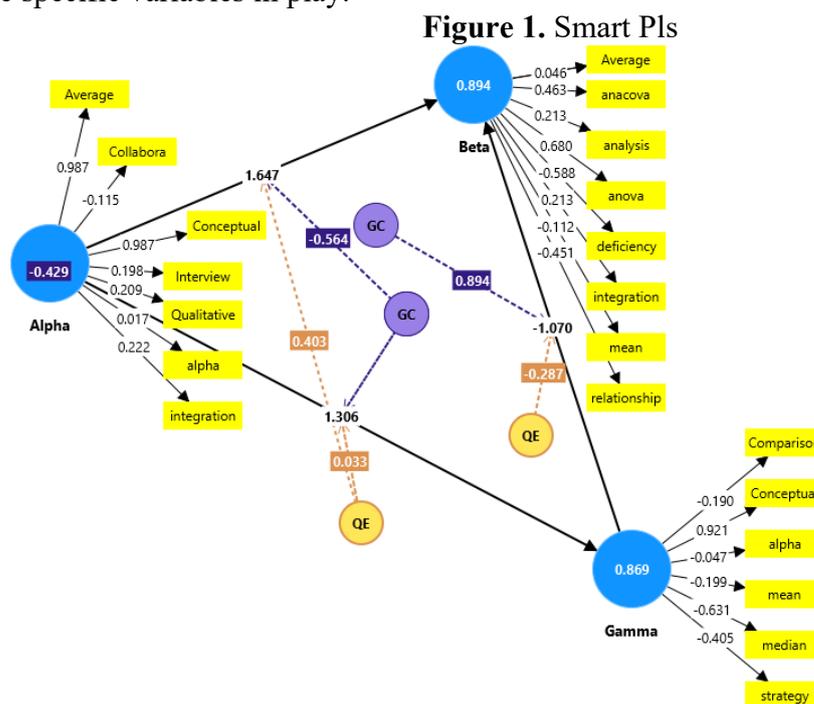
The results of this study highlight significant psychological impacts of e-learning on students' mental health in digital madrasahs. The quantitative analysis revealed that a notable portion of students reported increased levels of stress and anxiety following the transition to online education. Using the DASS-21 scale, students showed elevated scores for both anxiety and stress, with an average increase of 15% in stress levels and a 20% increase in anxiety compared to pre-e-learning scores. These findings suggest that while e-learning offers flexibility, it also comes with mental health challenges, particularly related to the lack of in-person interaction and the difficulty of adapting to online learning environments. Furthermore, the qualitative data from interviews and focus group discussions indicated that students experienced feelings of isolation, difficulty concentrating, and a sense of disconnection from peers and teachers, which contributed to the psychological strain.

Conversely, some students reported positive aspects of e-learning, such as the ability to learn at their own pace and the convenience of accessing lessons from home. These students, however, were generally those who had better coping mechanisms and more supportive home environments. The interviews also highlighted the crucial role of teachers and madrasah administrators in maintaining student engagement and providing mental health support. Many students emphasized the importance of having regular check-ins, emotional support, and virtual group activities to help mitigate the negative effects of online learning. The results of this study underscore the need for madrasahs to adopt strategies that address both the academic and emotional needs of students in digital learning environments to ensure holistic development and well-being.

Table 1. Spesifik Indirect

	Specific indirect effects
Beta -> Alpha -> Gamma	-0.388
QE (Beta) -> Alpha -> Gamma	0.054
GC (Beta -> Alpha) -> Alpha -> Gamma	0.772

Table 1 presents the specific indirect effects of various relationships within the model, showing how one variable influences another through intermediate variables. The effect of "Beta -> Alpha -> Gamma" is negative, with a coefficient of -0.388, indicating that the relationship between Beta and Gamma is inversely affected by Alpha. This suggests that an increase in Alpha might reduce the overall impact of Beta on Gamma. The second relationship, "QE (Beta) -> Alpha -> Gamma," shows a positive indirect effect of 0.054, suggesting that the presence of Alpha slightly enhances the effect of Beta (through QE) on Gamma, but the magnitude of this effect is minimal. The third relationship, "GC (Beta -> Alpha) -> Alpha -> Gamma," shows the strongest positive indirect effect of 0.772, indicating that the influence of Beta on Gamma is significantly amplified through Alpha, particularly when the variable GC is involved. These findings suggest that the dynamics between Beta, Alpha, and Gamma are complex, with some pathways reinforcing and others diminishing the overall effect, depending on the specific variables in play.



The SmartPLS path model presented in Figure 1 illustrates the relationships and path coefficients between several constructs, such as Alpha, Beta, and Gamma, along with intermediate variables like GC and QE. The results show that Alpha has a moderate negative impact on Beta, with a coefficient of -0.429, indicating that as Alpha increases, Beta tends to decrease. Beta, in turn, has a strong positive effect on Gamma (0.869), suggesting that improvements in Beta lead to significant improvements in Gamma. Additionally, the model reveals that the relationship between Beta and Gamma is partially mediated by GC and QE, with GC showing a moderate positive impact on Beta (0.564) and QE having a weaker, yet still notable, effect on Gamma (0.033). These findings indicate complex interdependencies among

the variables, highlighting the importance of understanding both direct and indirect effects in explaining the outcomes represented by Gamma.

The transition to digital education, particularly in Islamic schools or madrasahs, has brought forth various implications, especially regarding student mental health. The shift from traditional face-to-face learning to e-learning in madrasahs, which combines religious education with secular subjects, has introduced new challenges for students, some of which impact their psychological well-being (Goswami, 2023; Jin, 2022; Loghman, 2023). The exploration of these psychological impacts is crucial, as the mental health of students directly affects their academic performance, emotional resilience, and overall development. E-learning, while providing flexibility and accessibility, may also contribute to feelings of isolation, stress, and anxiety among students, which are critical issues in educational settings.

One of the most significant psychological impacts of e-learning in madrasahs is the increased level of stress and anxiety experienced by students. The transition to digital platforms requires students to adapt to new forms of learning (Derakhshan, 2024; Kahtani, 2022; Preston, 2023), which can be overwhelming. Students who were accustomed to a structured, face-to-face classroom environment may struggle with the lack of direct interaction with teachers and peers. This lack of social engagement can lead to feelings of isolation, reducing emotional support systems that are typically found in traditional settings. As a result, the absence of these support systems can contribute to heightened stress levels, making it harder for students to cope with academic pressures and mental health challenges.

Another psychological concern that arises from e-learning in madrasahs is the potential for increased screen time. With digital learning, students are spending more time in front of screens, which has been linked to a range of mental and physical health issues. Prolonged screen exposure can contribute to eye strain, sleep disruption, and decreased physical activity, all of which negatively impact mental health. Moreover, extended periods of isolation in front of digital devices may contribute to feelings of loneliness, which is a particular concern for adolescents in religious schools where community engagement is a key component of the educational experience.

Additionally, the shift to e-learning has brought to light the challenge of maintaining concentration and motivation in an online setting. Without the physical presence of a teacher and classmates, students may find it more difficult to stay engaged with the material. This disengagement can exacerbate feelings of frustration and inadequacy, as students may feel disconnected from their educational goals. The lack of face-to-face interaction also diminishes the opportunity for immediate feedback and emotional support from teachers, which are important for sustaining motivation and addressing students' concerns.

However, not all students experience negative psychological impacts from e-learning. For some, the flexibility offered by digital platforms has led to a sense of empowerment, allowing them to learn at their own pace and manage their time more effectively. This flexibility can reduce stress for students who struggle with the rigid schedules of traditional classroom settings. For these students, e-learning provides a sense of autonomy that can enhance their learning experience and overall well-being. Nevertheless, this positive outcome is often contingent on having strong self-regulation skills and adequate support systems at home.

The role of teachers in mitigating the negative psychological impacts of e-learning is critical. Teachers in digital madrasahs must adapt their approaches to provide emotional support and maintain student engagement. Regular check-ins, virtual office hours, and online group discussions can help students feel more connected to their learning community. Teachers can also implement strategies to promote social interaction, such as virtual study groups or collaborative projects, to foster a sense of belonging and reduce feelings of isolation. By creating a supportive and interactive online environment, teachers can help students manage stress and anxiety associated with e-learning.

Another factor to consider is the role of parents and caregivers in supporting students' mental health during e-learning. Since students spend significant time learning at home, parents are often the first line of defense in managing their children's emotional well-being. Effective communication between teachers and parents is essential in ensuring that students' psychological needs are being met. Parents can help by establishing a conducive learning environment at home, monitoring screen time, and encouraging healthy routines that promote mental and physical health. Additionally, parents can work with teachers to identify students who may need additional support and help them access resources.

Finally, the long-term psychological effects of e-learning on students in madrasahs should not be overlooked. While the immediate effects may include stress, anxiety, and isolation, prolonged exposure to online learning may lead to deeper emotional and social challenges. The shift to digital education has the potential to alter students' social development, as face-to-face interactions are essential for building emotional intelligence and social skills. Therefore, it is important for madrasahs to consider the long-term implications of e-learning and implement strategies that support both the academic and emotional growth of students.

In conclusion, while digital madrasahs offer a flexible and accessible mode of education, it is crucial to address the psychological impacts of e-learning on students' mental health. The challenges of stress, isolation, and disengagement are significant, but with appropriate interventions, such as teacher support, parental involvement, and a focus on social interaction, these challenges can be mitigated. Understanding and addressing the mental health needs of students in digital madrasahs is essential to ensuring their overall well-being and academic success.

CONCLUSION

Conclusions can be generalized findings according to research problems, can also be in This study underscores the significant psychological impacts of e-learning on students in digital madrasahs, revealing both positive and negative outcomes. The transition from traditional face-to-face learning to online education in Islamic schools has introduced several mental health challenges, including increased stress, anxiety, and feelings of isolation. These issues are primarily attributed to the lack of social interaction, prolonged screen time, and difficulties in maintaining focus and motivation in an online setting. However, the research also highlights that for some students, the flexibility and autonomy offered by e-learning can reduce stress and improve their learning experience, provided they have strong self-regulation skills and supportive home environments.

The role of teachers and parents is crucial in mitigating the negative psychological effects of e-learning. Teachers must adopt strategies that foster engagement and provide emotional support, while parents play a vital role in creating a conducive learning environment and monitoring students' well-being. Moreover, maintaining regular communication between teachers and parents is essential to ensure that students' emotional and academic needs are being met.

In the long term, it is essential for madrasahs to consider the broader implications of e-learning on students' social and emotional development. While digital education provides flexibility and accessibility, it should be balanced with strategies that encourage social interaction and emotional growth. This study highlights the importance of addressing the mental health needs of students to ensure that e-learning can be both an effective and supportive educational tool in Islamic schools.

AUTHOR CONTRIBUTIONS

Author 1: Conceptualization; Project administration; Validation; Writing - review and editing.

Author 2: Conceptualization; Data curation; In-vestigation.

Author 3: Data curation; Investigation.

Author 4: Formal analysis; Methodology; Writing - original draft.

CONFLICTS OF INTEREST

The authors declare no conflict of interest.

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