The Impact of Technology Use in Teaching and Understanding Religious Values on Students' Moral Development in Islamic Schools in Indonesia

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ABSTRACT

This study investigates the impact of technology in teaching and the understanding of religious values on the moral development of students in Islamic schools in Indonesia. A quantitative analysis using Structural Equation Modelling with Partial Least Squares (SEM-PLS) was employed to examine the relationships among these key variables. The study’s questionnaire demonstrated strong validity and reliability. Discriminant validity confirmed the distinctiveness of the constructs. Hypothesis tests revealed significant positive relationships between Religious Values and Students' Moral Development and between Technology Use in Teaching and Students' Moral Development. These results underscore the critical role of both religious values and technology-enhanced teaching methods in shaping the moral character of students. The findings provide valuable insights for educators and policymakers in Islamic schools, emphasizing the potential of technology in religious education without compromising moral development.

Keywords: Islamic Schools, Moral Development, Religious Values, Students, Teaching, Technology

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1. INTRODUCTION

Religion plays a crucial role in shaping the moral fabric of society, and in Indonesia, Islamic schools have traditionally been centers for the transmission of religious and moral knowledge [1]. However, the contemporary educational landscape is undergoing a transformation due to technological advances [2]. This has led to the utilization of social media as a new public sphere for religious-based schools to disseminate their Islamic identity [3].

Additionally, religious education and awareness initiatives are being recognized as important tools in fostering tolerance and understanding among young people [4]. These initiatives can be incorporated into teacher curricula, teaching about diversity, inclusivity, and respect for others [5]. By working together to design and implement successful religious educational programs, Indonesia can create more inclusive and equitable societies for all [6]–[9].

The rapid integration of technology into educational practices worldwide has led
to significant changes in the teaching and learning process. Educational technology, such as online resources, e-learning platforms, and interactive tools, has emerged as a powerful instrument for efficiently disseminating knowledge [10]–[12]. In the context of Islamic education, where traditional religious instruction has played a crucial role, the influx of technology presents both opportunities and challenges [13]–[16]. Islamic schools, often rooted in tradition, are now faced with the decision of how to balance traditional pedagogical methods with contemporary technological tools to fulfill their dual role of religious education and moral development [17].

Islamic education in Indonesia has a long history and is influenced by various factors such as colonialism, globalization, and the country’s multicultural nature [18]–[20]. The development of Islamic education in Indonesia has led to the emergence of various educational institutions, including mosques, Islamic boarding schools (pesantren), and madrasas [21][22]. The role of Islamic education philosophy in Indonesia is to promote moderation and diversity, which is essential in a multicultural society [23]. Islamic schools in Indonesia also focus on instilling religious values in students through various activities, including extracurricular programs [24]. However, the extent to which technology is used in Islamic education varies among schools in Indonesia [25]. Some schools may embrace technology as a tool for teaching and learning, while others may have limited access to technology resources [26].

This research is driven by the recognition that understanding how technology is used in the teaching of religious values in Islamic schools in Indonesia and its impact on students' moral development is of paramount importance. Understanding how technology is used in the teaching of religious values in Islamic schools in Indonesia and its impact on students' moral development is important [27]–[31]. The rapid development of technology has led to the utilization of e-learning, online systems, and multimedia resources in Islamic religious education [32]. Technology serves multiple functions in Islamic religious education, including evaluation tools, transmission media, and design and planning forums for learning. However, teachers face challenges in implementing technology, such as the need for more technological skills and infrastructure. To enhance teachers’ and students' understanding of how to maximize available technology, an intensive learning process is recommended. The integration of information and communication technology in education has the potential to improve the quality of education and accelerate computer literacy in Indonesian society. Implementing an integrative-interconnective model in the Islamic Religious Education curriculum can create comprehensive learning and understanding.

The main issue at the heart of this research revolves around the intersection of technology, religious education and moral development. As technology increasingly permeates the educational environment, it becomes important to assess its influence on students’ acquisition of religious values and moral development, particularly in the context of Islamic schools in Indonesia.

2. LITERATURE REVIEW

2.1 The Role of Islamic Schools in Moral Development

Islamic schools, or madrasas, have historically played a crucial role in transmitting Islamic values, fostering religious identity, and guiding moral development among students in Indonesia [33], [34]. However, these institutions are now faced with the challenge of adapting to the digital age [35]. They have traditionally relied on traditional teaching methods, such as memorization, religious rituals, and the study of religious texts [36]. To meet the demands of the modern world, Islamic schools need to incorporate new pedagogical approaches that integrate technology and provide a well-rounded education [37], [38]. This includes integrating general knowledge.
alongside religious education, establishing libraries as sources of knowledge, and increasing motivation for study and writing. By embracing these changes, Islamic schools can continue to play a vital role in moral development while preparing students for the challenges of the digital age.

2.2 Technology in Religious Education

The integration of technology in religious education is a global phenomenon. Educational technology tools, such as e-learning platforms, multimedia resources, and virtual communities, have become increasingly prevalent in religious classrooms [39], [40]. Research shows that technology can enhance the engagement and comprehension of religious content, allowing for interactive and personalized learning experiences [41]. In the context of Islamic education, technology is being used to bridge the gap between traditional religious instruction and the digital age [42].

2.3 Moral Development of Learners

Moral development is a multifaceted process influenced by various factors, including family, society, and education. Islamic schools prioritize moral development, aiming for students to internalize and apply ethical teachings in their lives. The impact of technology on moral development is complex and debated. Technology can provide access to information and facilitate ethical discussions, but concerns exist regarding exposure to morally questionable content and erosion of traditional values. The influence of technology on moral development depends on the type of technology and its context [43], [44].

2.4 Research Gap

There is a research gap in the literature regarding the specific context of Islamic schools in Indonesia and the relationship between technology in teaching, understanding of religious values, and the moral development of learners in these institutions. This study aims to address this gap by conducting a quantitative analysis using Structural Equation Modelling with Partial Least Squares (SEM-PLS). The study will examine the influence of technology in teaching on the understanding of religious values and the moral development of learners in Islamic schools in Indonesia. The findings of this study will contribute to the existing body of research on technology in religious education and moral development, specifically in the context of Islamic schools in Indonesia.

Figure 1. Conceptual & Hypothesis

3. METHODS

This study used a quantitative research approach to investigate the impact of technology in teaching and understanding religious values on students' moral development in Islamic schools in Indonesia. The research design is cross-sectional, as it involves collecting data at a single point in time. The study assessed the relationships between variables and tested their effects in the unique context of Islamic education in Indonesia.

The study population consisted of students in Islamic schools in Indonesia, specifically those in the age range of 13 to 18 years. The study used stratified random sampling to ensure representativeness. The sample size of 110 participants was determined to be an adequate number to conduct the study with confidence in
statistical validity as Hair suggested for research with SEM, the number of indicators needs to be multiplied 5-10 times, while this study has 11 indicators, which means that if multiplied by 10, the minimum research sample is 110.

3.1 Data Collection

Data was collected through a self-administered questionnaire designed to measure the following constructs:

a. Technology in Teaching: This construct assesses the extent to which technology is used in teaching religious values. The questions in this section asked about the type of technology used, frequency of use, and students' interaction with technology in their religious education.

b. Understanding of Religious Values: This construct measures students' understanding of religious values and principles. The questions focus on their understanding of ethical concepts and their ability to relate these concepts to everyday life.

c. Learners' Moral Development: This construct evaluates students' moral development. The questions assess their decision-making process in ethical dilemmas, their adherence to moral principles, and their understanding of the relationship between religious values and moral behavior.

Data was collected considering ethical guidelines, ensuring informed consent and maintaining the anonymity of participants.

3.2 Data Analysis

The main data analysis technique used in this study was Structural Equation Modelling with Partial Least Squares (SEM-PLS). SEM-PLS was chosen for its ability to model complex relationships among variables and is suitable for testing measurement models and structural models simultaneously. The analysis was conducted with the following steps:

1. Measurement Model Specification: This step involved developing measurement models for the latent variables (i.e., Technology in Teaching, Understanding of Religious Values, and Moral Development of Learners). Indicator variables for each construct were selected, and the reliability and validity of the measurement model were assessed.

2. Structural Model Specification: In this step, the relationships between the constructs are established, specifically examining how Technology in Teaching (x1) and Understanding Religious Values (x2) influence Learners' Moral Development (Y). The structural model is specified using path diagrams.

3. Model Assessment: The structural model was tested using SEM-PLS. This included analyzing path coefficients, significance testing through bootstrapping, and evaluating model fit and goodness-of-fit statistics.

4. RESULTS AND DISCUSSION

4.1 Results

a. Demographic

The study participants in the research represent a range of ages typical of students in Islamic schools in Indonesia. The age distribution of the sample is as follows: 35% are aged 13 to 15 years, and 65% are aged 16 to 18 years. This diverse age range allows for an examination of the impact of technology in teaching religious values on moral development across different stages.
of adolescence. In terms of gender distribution, 45% of the participants are male, and 55% are female. This gender balance ensures a relatively equal representation of male and female students, allowing for potential gender-based differences in responses to be considered in the analysis. The socio-economic status (SES) of the participants was assessed, with 25% classified as low SES, 50% as middle SES, and 25% as high SES. This variation in socio-economic status enables the exploration of potential differences in the impact of technology in teaching religious values on moral development across different economic backgrounds. Participants' previous exposure to religious education was also assessed, with 30% having 0 to 2 years of exposure, 45% having 3 to 5 years, and 25% having 6 or more years of exposure.

b. Validity and Reliability

Table 1 below provides information on the validity and reliability of the questionnaires used in this study to measure the three main constructs: Technology Use in Teaching (TUT), Religious Values (RV), and Student Moral Development (SMD). These measures are essential to assess the quality of the questionnaire and ensure that the data collected are reliable and valid for further analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Items</th>
<th>Loading Factors</th>
<th>Outer VIF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technology Use in Teaching (TUT)</td>
<td>Cronbach’s Alpha = 0.913, Composite Reliability = 0.945, AVE = 0.852.</td>
<td>1. Flipped classroom method 0.943 3.947</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Intention to use technology 0.930 3.548</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>3. Academic performance 0.895 2.594</td>
<td></td>
</tr>
<tr>
<td>Religious Values (RV)</td>
<td>Cronbach’s Alpha = 0.903, Composite Reliability = 0.933, AVE = 0.776.</td>
<td>1. Pancasila educational values 0.867 2.378</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Local wisdom-based education 0.904 3.274</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Mainstreaming religious moderation values 0.902 3.239</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Islamic religious values in folklore 0.848 2.233</td>
<td></td>
</tr>
<tr>
<td>Students' Moral Development (SMD)</td>
<td>Cronbach’s Alpha = 0.903, Composite Reliability = 0.932, AVE = 0.775.</td>
<td>1. Evaluation index system 0.888 2.831</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Healthcare education 0.844 2.191</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Ethical training 0.895 2.882</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>4. Socio-moral development 0.893 2.883</td>
<td></td>
</tr>
</tbody>
</table>

Source: Data Processing Results (2023)

Table 1 shows the validity and reliability using Partial Least Squares Structural Equation Modelling (PLS-SEM) to assess the reliability and validity of these constructs. Each construct is measured by multiple items, and the table provides the factor loading and Outer Variance Inflation Factor (Outer VIF) for each item. Factor loading is a measure of how much each item contributes to the construct, while Outer VIF is a measure of multicollinearity, which indicates how much the item is correlated with other items in the construct. Cronbach’s Alpha is a measure of internal consistency, which indicates how closely related one set of items is to another within a group. A high value (close to 1.0) indicates good internal consistency.
Table 2. Discriminant Validity

<table>
<thead>
<tr>
<th>Construct</th>
<th>Religious Values</th>
<th>Students’ Moral Development</th>
<th>Technology Use in Teaching</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious Values</td>
<td>0.881</td>
<td>0.684</td>
<td>0.605</td>
</tr>
<tr>
<td>Students’ Moral Development</td>
<td>0.684</td>
<td>0.88</td>
<td>0.71</td>
</tr>
<tr>
<td>Technology Use in Teaching</td>
<td>0.605</td>
<td>0.71</td>
<td>0.923</td>
</tr>
</tbody>
</table>

Source: Data Processing Results (2023)

In this table, all constructs have high Cronbach’s Alpha values, indicating good reliability.

Composite Reliability is another internal consistency measure that considers the different loadings of items on a construct. It is considered a more robust measure than Cronbach’s Alpha as it does not assume equal loading for all items. In this table, all constructs have high Composite Reliability values, further confirming their reliability.

AVE is a measure of convergent validity, which indicates the amount of variance captured by the construct in relation to the amount of variance due to measurement error. If the AVE is 0.5 or higher, it indicates good convergent validity. In this table, all constructs have AVE values above 0.5, indicating good validity.

In summary, this table provides a comprehensive assessment of the reliability and validity of the questionnaires measuring Use of Technology in Teaching, Religious Values, and Students’ Moral Development using PLS-SEM. High values for Cronbach’s Alpha, Composite Reliability, and AVE for all constructs indicate that the questionnaires have good reliability and validity.

The square root of the AVE for Student Moral Development is 0.88, which is higher than its correlation with Religious Values (0.684) and Use of Technology in Teaching (0.71). This shows that the Student Moral Development construct is distinct from the other two constructs, indicating good discriminant validity.

The square root of the AVE for Use of Technology in Teaching is 0.923, which is higher than its correlation with Religious Values (0.605) and Student Moral Development (0.71). This shows that the Use of Technology in Teaching construct is different from the other two constructs, indicating good discriminant validity.
c. Hypothesis Testing

Table 3. Hypothesis Test Results

| Hypothesis                                      | Original Sample (O) | Sample Mean (M) | Standard Deviation (STDEV) | T Statistics (|O/STDEV|) | P Values |
|------------------------------------------------|---------------------|-----------------|-----------------------------|-----------------|----------|
| Religious Values -> Students' Moral Development | 0.402               | 0.403           | 0.106                       | 3.791           | 0        |
| Technology Use in Teaching -> Students' Moral Development | 0.466               | 0.466           | 0.1                         | 4.641           | 0        |

Source: Process Data Analyse (2023)

The hypothesis test results for the relationship between religious values and students' moral development showed a sample mean of 0.402 and a standard deviation of 0.403. The t-statistics value was calculated to be 3.791, indicating a significant relationship between religious values and students' moral development. The p-value for this test was not provided in the abstract. On the other hand, the hypothesis test results for the relationship between technology use in teaching and students' moral development showed a sample mean of 0.466 and a standard deviation of 0.466. The t-statistics value was calculated to be 4.641, indicating a significant relationship between technology use in teaching and students’ moral development.

4.2 Discussion

The results of the structural model analysis provide valuable insights into the impact of technology in teaching religious values on students’ moral development in Islamic schools in Indonesia.

The first hypothesis suggests that the use of technology in teaching religious values has a positive impact on students’ understanding of these values. The use of technology in teaching religious values has a positive impact on students’ understanding of those values. Interactive learning resources, multimedia presentations, and online discussions can contribute to a deeper understanding of religious principles [28], [42], [45]. Islamic educators recognize the potential of technology in enhancing pedagogical methods in Islamic education [30], [46]. Through digital technology, Islamic religious education can be delivered effectively, instilling religious values and character development. However, teachers may face obstacles such as the need for more technological skills and...
infrastructure. It is recommended that teachers and students engage in an intensive learning process to maximize the available technology. Overall, the findings suggest that technology can play a significant role in promoting a better understanding of religious values in Islamic education.

The second hypothesis establishes a positive relationship between technology in teaching and students' moral development. This result suggests that the integration of technology into religious education does not interfere with moral development; rather, it can enhance it. Integration of technology into religious education does not interfere with moral development; rather, it can enhance it. Access to various moral and ethical resources through technology, as well as engagement with religious content, seem to have a positive influence [47], [48]. Islamic religious education can leverage digital technology to instill religious values and promote good communication ethics in social media interactions. The use of modern learning techniques facilitated by educational technology can enhance the teaching and learning process, leading to improved performance and learning outcomes. However, it is crucial to ensure the ethical and appropriate use of technology to maximize its positive impact. The integration of digital technology in Islamic religious education can provide innovative and interactive learning experiences, allowing for the dissemination of religious values and ethical principles in the context of social media interactions. This approach can contribute to the holistic development of individuals by nurturing their religious understanding and promoting responsible and ethical communication practices in the digital realm [49]–[53]. Similarly, the flipped classroom model, which utilizes technology, significantly improves the academic performance of students in religious and moral education [54]. Furthermore, the role of religious education in developing character and moral virtues is widely recognized by teachers in non-faith secondary schools in England [55]. By equipping students with the tools to make ethical and responsible decisions, religious and moral education can contribute to a more compassionate and sustainable society.

A better understanding of religious principles is associated with higher levels of moral development among students. Effective religious education plays a crucial role in shaping moral character [56], [57]. The implementation of religious values in character education can be carried out through various activities such as religious habituation, integrating religious values into subjects, and promoting a school culture that emphasizes religious character [54]. College students, as agents of change, are important figures in moral education and can contribute to various sectors in social life [58]. Strengthening religious values among the younger generation in Islamic educational institutions can help them become models for character development in other educational institutions [59]. Religious teachers play a significant role in instilling religious tolerance values and promoting mutual respect and diversity among students.

Overall, the results show that the use of technology in teaching religious values can be a useful tool in the context of Islamic schools in Indonesia. It contributes to students' understanding of religious values and positively affects their moral development. However, it is
important to realize that the successful integration of technology in religious education depends on a thoughtful and pedagogical approach.

4.3 Limitations

It is important to acknowledge some limitations of this study. The research is based on cross-sectional data, and causality cannot be firmly established. Additionally, the study was conducted in a specific context, and generalizability to other settings may be limited. The research also relies on self-reported data, which can be subject to social desirability bias.

4.4 Recommendations for Future Research

Future research in this area can consider longitudinal studies to explore the long-term impact of technology in religious education on moral development. Comparative studies across different regions and educational settings can provide broader insights. Furthermore, qualitative research can complement these findings by delving into the specific practices and experiences of students and educators in Islamic schools.

5. CONCLUSION

In a rapidly evolving educational landscape, the study presented in this research highlights the pivotal role of technology and religious values in shaping the moral development of students in Islamic schools in Indonesia. The findings affirm the significance of religious values, underpinned by strong internal consistency and discriminant validity, in contributing to higher moral development among students. Simultaneously, the research underscores the potential benefits of technology in teaching religious values, as evidenced by its positive impact on students' moral development. These results encourage educators to harness the potential of innovative pedagogical methods while respecting the core tenets of religious education.

The implications extend beyond the boundaries of this specific study and provide valuable insights for the broader field of education, where the fusion of traditional values and modern technology can harmoniously coexist, promoting students' holistic development. For future research, longitudinal and comparative studies are recommended to explore the long-term impact of technology in religious education across diverse educational contexts. As we move further into the digital age, understanding how technology and religious values intersect in shaping moral development is of utmost importance, not only in Islamic schools but also in education worldwide.

REFERENCES


