

Analysis of teachers' digital technology on students' learning quality in islamic cultural history subject at ma al-falaah lekis rejo, oku regency

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ABSTRACT

This study aims to analyze the effect of teachers' mastery of digital technology on the quality of student learning in the subject of Islamic Cultural History (SKI) at MA Al-Falaah Lekis Rejo, OKU Regency. The research employed a quantitative approach with an associative design. The population consisted of 164 students, and a total of 62 respondents were selected as the sample using proportionate stratified random sampling with Slovin's formula. Data were collected through a Likert-scale questionnaire that had been tested for validity and reliability. Data analysis was conducted using descriptive statistics and chi-square (χ^2) test. The findings indicate that teachers' mastery of digital technology is at a moderate level, while student learning quality is categorized as high. The chi-square test yielded a value of 30.62, which exceeds the critical value at the 5% (9.94) and 1% (13.28) significance levels, indicating a significant influence between teachers' digital technology mastery and students' learning quality. This study highlights that digital technology mastery is a crucial factor in improving the quality of SKI learning. Therefore, continuous professional training for teachers is necessary to optimize digital literacy in the classroom and enhance student learning outcomes.

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Introduction

Teachers are central figures in the world of education whose roles extend beyond that of mere instructors to include educators, mentors, and role models for students and the community. In the context of Islamic education, teachers are often seen as figures who are trusted and emulated, meaning that their words are believed and their behavior is emulated (Uno & Mohamad, 2012). In line with the Law of the Republic of Indonesia Number 14 of 2005 concerning Teachers and Lecturers, teachers are positioned as professionals who have the primary responsibility of educating, teaching, guiding, directing, training, assessing, and evaluating students in formal education (Kemendikbud, 2005). This emphasizes that teachers are required to continuously improve their competencies in line with the times.

The changing times, marked by digital technology disruption, require teachers to have digital literacy competencies. These competencies include the ability to understand, use, and critically evaluate information sourced from digital media (Ng, 2012). Digital literacy is an important foundation for realizing active, collaborative, and contextual learning, so that students do not only

passively receive information but are actively involved in the learning process (Lankshear & Knobel, 2015; Spante et al., 2018).

The Islamic Cultural History (SKI) subject in madrasahs, as part of the Islamic Education curriculum, has a strategic objective in shaping students' identity, character, and understanding of Islamic civilization history (Huda, 2019). However, the reality on the ground shows that SKI learning often still takes place conventionally, dominated by lecture methods, so that the classroom atmosphere tends to be monotonous and uninteresting for students. This condition has an impact on low learning motivation and student involvement in understanding the material (Zaini et al., 2008).

Initial observations at MA Al-Falaah Lekis Rejo in OKU Regency revealed that teachers' use of digital technology in SKI learning is still limited. Students often only listen to the teacher's explanations without engaging in activities that encourage active participation, such as digital media-based discussions, historical video analysis, or the use of interactive presentations. As a result, students tend to easily become bored and struggle to understand the material deeply.

The use of digital technology in learning has great potential to improve the quality of student learning. Several studies confirm that the integration of digital technology can improve the quality of teacher-student interaction, expand access to learning resources, and promote more effective and meaningful learning (Redecker, 2017; Ghavifekr & Rosdy, 2015). Thus, teachers' ability to master digital technology is not merely an additional skill but an essential requirement in supporting educational quality improvement, particularly in the subject of Islamic Cultural Studies.

From a conceptual perspective, learning quality can be understood more broadly. According to (Poerwadarminta, 2007), quality is defined as a measure of the goodness or badness of something that indicates a certain level or degree. If this definition is applied to education, student learning quality can be interpreted as the level of success of students in achieving the established competency standards. Thus, teachers' mastery of digital technology is one of the factors influencing this level of quality, as the quality of learning is closely related to the methods, media, and strategies used in the teaching and learning process.

Based on this background, this study focuses on analyzing the extent to which teachers' mastery of digital technology affects the quality of student learning in Islamic Cultural History at MA Al-Falaah Lekis Rejo, OKU Regency. This study is expected to provide practical contributions to the development of teacher competencies and enrich academic studies related to the integration of digital technology in Islamic education.

Method

This study uses a quantitative approach with an associative research design, which aims to determine the relationship or influence between two variables, namely teachers' mastery of digital technology (independent variable) and student learning quality (dependent variable). The quantitative approach was chosen because it allows researchers to measure phenomena objectively through numerical data that can be statistically tested (Creswell & Creswell, 2018; Sugiyono, 2019).

Population and Sample

The population of this study consists of all students at Madrasah Aliyah (MA) Al-Falaah Lekis Rejo, OKU District, totaling 164 students, comprising grades X, XI, and XII. Since the population size is relatively large, the sample was determined using the Slovin formula at a 10% error rate (Sevilla et al., 2007). Based on these calculations, the sample size was determined to be 62 students. The sampling technique used proportionate stratified random sampling, considering that the population was stratified based on grade levels. This technique was chosen to ensure that each grade stratum had a balanced representation (Etikan & Bala, 2017).

Research Instrument

The instrument used was a questionnaire with a five-point Likert scale, ranging from “strongly agree” to “strongly disagree.” The questionnaire contained 20 statements related to the research variables. This instrument had previously been tested for validity and reliability. Validity was tested using product-moment correlation, while reliability was measured using Cronbach’s Alpha coefficient, with results showing a value >0.70, indicating that the instrument was reliable (Fraenkel et al., 2019).

Data Collection Technique

Data was collected by distributing questionnaires to students selected as respondents. Data collection was conducted directly with guidance and brief explanations from the researcher to ensure respondents understood the intent of each statement. Additionally, preliminary observations and informal interviews with teachers were conducted to strengthen understanding of the research context.

Data Analysis Techniques

Data obtained from the questionnaire were analyzed descriptively and inferentially. Descriptive analysis was used to describe teachers' digital technology proficiency and student learning quality using frequency distribution, mean, and standard deviation. Meanwhile, inferential analysis was conducted using the chi-square (χ^2) test to determine whether there was a significant influence between independent and dependent variables (Field, 2018). The chi-square test is appropriate because the research data is categorical and aims to test the relationship between variables (Agresti, 2019).

With this methodological design, this study is expected to produce valid and reliable findings that provide an empirical picture of the influence of teachers' digital technology proficiency on student learning quality in the subject of Islamic Cultural History.

Result

This study focuses on the influence of teachers' mastery of digital technology on the quality of student learning in Islamic Cultural History (SKI) at MA Al-Falaah Lekis Rejo, OKU Regency. Data was obtained through a questionnaire distributed to 62 respondents who were randomly selected from grades X, XI, and XII.

Table 1.1: Cross-tabulation between Teachers' Digital Technology Proficiency and Student Learning Quality

Teachers' Mastery of Digital Technology	High	Medium	Low	Total
High	14	0	0	14
Medium	24	7	5	36
Low	8	7	5	12
Total	32	14	16	62

From the cross tabulation above, it can be seen that most students with teachers who have moderate digital technology proficiency are still able to achieve high learning quality (24 students). However, there are also students with low learning quality when teachers lack digital technology proficiency.

Based on the results of the descriptive analysis, the level of teachers' digital technology proficiency is in the moderate category. This is indicated by the distribution of respondents, where 22.58% stated high, 58.06% moderate, and 19.35% low. These findings indicate that teachers already have basic skills in utilizing digital technology, but have not yet fully optimized its integration into SKI learning.

Meanwhile, student learning quality is in the high category, with 51.61% of respondents in the high category, 22.58% in the moderate category, and 25.80% in the low category. This data indicates that most students show good motivation and achievement, although there are still some in the moderate and low categories.

Inferential analysis using the chi-square test yielded a χ^2 value of 30.62. This value is greater than the critical value at a significance level of 5% (9.94) and 1% (13.28). Thus, it can be concluded that there is a significant influence between teachers' mastery of digital technology and student learning quality in SKI subjects.

To determine the relationship between teachers' digital technology proficiency and student learning quality, TSR distribution analysis and cross-tabulation were conducted. The results are presented in the following table.

Table 1.2. TSR Analysis between Teachers' Digital Technology Proficiency and Student Learning Quality

No	Teachers' Digital Technology Proficiency Scores	Student Learning Quality Scores	TSR
1	65	92	RT
2	90	84	TS
3	91	85	TS
4	92	66	TR
5	93	77	TR
...	...	...	...
62	81	76	SS

The TSR distribution results show variations in the relationship between teachers' level of digital technology proficiency and student learning quality. Some respondents who had teachers with high digital technology proficiency tended to show better learning quality, although there were variations in the medium and low categories.

Table 1.3. Chi-Square Analysis Results of the Influence of Teachers' Digital Technology Proficiency on Student Learning Quality

Sel	Fo	Ft	Fo – Ft	(Fo – Ft) ²	(Fo – Ft) ² / Ft
1	7	7,22	-0,22	0,05	0,01
2	24	18,58	5,42	29,38	1,58
3	9	6,19	2,81	7,89	1,28
...	...	...	...	...	...
9	0	3,09	-3,09	9,55	3,09
Total					30,62

The chi-square test result of 30.62 is greater than the critical value at a significance level of 5% (9.94) and 1% (13.28). This means that there is a significant influence between teachers' mastery of digital technology and the quality of student learning in SKI subjects.

Discussion

The results of this study reinforce previous findings that emphasize the importance of teachers' role in mastering and integrating digital technology to improve the quality of learning (Ghavifekr & Rosdy, 2015). Mastery of digital technology enables teachers to create a more interactive, varied, and appropriate learning environment for the learning styles of the digital generation (Redecker, 2017).

In the context of SKI learning, the integration of digital technology can be realized through the use of presentation media, historical videos, online learning applications, and digital platform-based discussions. This approach is in line with the view that active and technology-based learning encourages students to be more involved in the process of knowledge construction (Zaini et al., 2008; Spante et al., 2018).

Research findings also indicate a gap between teachers' competencies in using digital technology and students' learning needs. Teachers are still in the moderate category in terms of technology mastery, while student learning quality is in the high category. This indicates that students have good learning motivation potential, but it is not yet fully supported by optimal digital learning strategies. In other words, improving teachers' digital literacy competencies is an important prerequisite for maximizing student learning quality (Ng, 2012; Instefjord & Munthe, 2017).

In the context of learning strategies, research shows that the use of active approaches can improve student learning outcomes, especially at the primary and secondary education levels. This is relevant to the views of Nurdiyansyah & Fitriyani, (2018), who emphasize that active learning strategies encourage students to be more involved in the learning process, so that they do not just passively receive information, but also construct knowledge independently. Thus, the integration of digital technology by teachers can be seen as an extension of active learning strategies, as both place students at the center of learning activities.

Additionally, the integration of digital technology in learning not only impacts academic outcomes but also the development of 21st-century skills such as collaboration, critical thinking, and information literacy (Voogt & Roblin, 2012). Therefore, the role of teachers is not merely as conveyors of material, but also as facilitators who can guide students in accessing, understanding, and managing information from various digital sources critically.

Several studies emphasize that teachers' low mastery of digital technology is often caused by a lack of training, limited infrastructure, and resistance to change (Tondeur et al., 2017). Thus, the implication of this research is the need for ongoing training for teachers in utilizing digital technology, particularly in madrasahs. This training is expected to not only emphasize technical skills but also pedagogical aspects in integrating technology into learning strategies.

Overall, the results of this study provide empirical evidence that teachers' mastery of digital technology has a significant impact on the quality of student learning. Improving teachers' competencies in this area is a strategic step that madrasahs must take to realize SKI learning that is more innovative, contextual, and adaptive to the needs of the times.

Conclusion

Based on the results of data analysis and discussion, this study concludes several important points. First, the level of digital technology mastery by teachers at MA Al-Falaah Lekis Rejo in the subject of Islamic Cultural History is in the moderate category. This indicates that teachers have basic skills in utilizing digital technology, but there are still limitations in its broader and deeper

application. Second, the quality of student learning in the Islamic Cultural History subject is generally high, with most respondents showing good motivation and learning outcomes. However, there are still groups of students in the moderate and low categories, indicating the need for further learning innovations. Third, the results of the chi-square statistical test ($\chi^2 = 30.62$) prove that there is a significant influence between teachers' mastery of digital technology and student learning quality. This value exceeds the critical limit at both the 5% (9.94) and 1% (13.28) significance levels. This means that the higher the teachers' competence in mastering and integrating digital technology, the greater their contribution to improving student learning quality. Thus, this study confirms that digital technology mastery is no longer just an additional skill but an essential requirement for teachers, especially in SKI subjects. The practical implications of this study are the importance of continuous training programs for teachers to develop digital literacy and integrate it into teaching strategies. Madrasahs also need to provide adequate infrastructure and policy support to ensure that digital-based learning processes can be conducted optimally, thereby continuously improving student learning quality.

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