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Utilization of Artificial Intelligence in Learning the Quran and Hadith: Innovation in Islamic Education in the Digital Era

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ABSTRACT

Critical thinking skills in Islamic Religious Education at the high school level are important to help students develop in-depth analysis of various issues. The current digital era demands students to have good digital literacy and critical thinking skills. This study aims to determine the effect of digital literacy on students' critical thinking skills in Islamic Religious Education learning at SMA Negeri 1 Sigi. The study used a quantitative approach with a survey method on 35 class XC students using saturated sampling. Data collection was carried out through questionnaires, observations, interviews, and documentation. Analysis used validity, reliability, normality, linearity, and simple regression tests. The results show that digital literacy has a significant positive effect on students' critical thinking skills with a sig. 0.029 <0.05, a correlation coefficient (R) of 0.707, and a coefficient of determination (R^2) of 0.501. The findings emphasize the importance of integrating digital literacy into the curriculum to improve students' critical thinking skills.

1. Introduction

The digital era has transformed the paradigm of education globally, including in the context of Islamic Religious Education. Critical thinking skills are essential in navigating the rapidly evolving complexity of digital information. Critical thinking is a high-level cognitive process that involves analyzing, evaluating, and synthesizing information to make rational and logical decisions. This ability enables individuals to identify and evaluate arguments, detect logical fallacies, ask relevant questions, and develop arguments based on strong evidence (Lismaya, 2019).

The importance of critical thinking is also emphasized in Islamic teachings, as stated in Surah Az-Zumar, verse 9 of the Quran, which emphasizes the difference between those who have knowledge and those who do not, as well as the importance of using reason to think and understand. This aligns with the goal of developing critical thinking skills in education, including Islamic Religious Education.

However, developing students' critical thinking skills faces significant challenges. The dominance of conventional learning approaches, which do not encourage students to actively think critically, is a major obstacle. Students are often better trained to passively receive information from teachers than to ask critical questions, analyze information in depth, or develop arguments based on strong evidence (Sodik et al., 2023).

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In the digital era, digital literacy is a crucial factor in improving students' critical thinking skills. Digital literacy is the ability to use digital media to access, understand, disseminate, create, and update information in everyday life (Santoso, 2020). In the context of Islamic Religious Education, digital literacy can help students become more proficient in using digital media to search for, disseminate, and create information relevant to their learning materials.

Initial observations conducted at SMA Negeri 1 Sigi indicate that many students still lack critical thinking skills, where students tend to be passive and only receive information from teachers without asking questions or engaging in critical discussions. Based on this background, this study aims to analyze the influence of digital literacy on students' critical thinking skills in Islamic Religious Education learning at SMA Negeri 1 Sigi, which is expected to provide new contributions to the development of more effective learning strategies.

2. Literature Review

Digital literacy is the ability to understand and use information from various digital sources effectively and efficiently in various formats (Gilster, 1997). Digital literacy encompasses the critical ability to assess, interpret, and manage digital information. Its main components include technical knowledge, information access, information evaluation, information management, digital creativity, digital security, and digital communication (Nugraha, 2022).

Critical thinking skills are the ability to question, evaluate, and formulate arguments rationally and systematically (Roihana et al., 2022). Components of critical thinking include analysis, evaluation, interpretation, inference, explanation, and reflection (Rositawati, 2019). Digital literacy contributes to the development of critical thinking skills through broad access to information, the use of digital analytical tools, and the development of a critical attitude toward digital content.

Previous research has shown promising results regarding the integration of digital literacy into education. Liliasari (1996) found that students who use digital media in chemistry learning can improve their critical thinking skills. In the context of Islamic Religious Education, digital literacy enables students to access various learning resources, analyze religious content from various perspectives, and develop a deeper understanding of Islamic teachings through a critical and reflective approach.

3. Methodology

This research used a quantitative method with a survey approach to identify and analyze the influence of digital literacy on students' critical thinking skills. Quantitative methods were chosen to collect data in numerical and statistical form to objectively and measurably measure the relationships between variables.

The research population was 35 students of class XC at SMA Negeri 1 Sigi. The sampling technique used was saturated sampling, where the entire population was sampled considering that the number was less than 100, making it possible to conduct population research.

3.1 Data Collection

Data collection was conducted through four main techniques. First, a questionnaire served as the primary instrument using a Likert scale ranging from 1-5 to measure students' digital literacy and critical thinking skills. Second, observations were conducted to directly observe the application of digital literacy in the Islamic Religious Education learning process. Third, in-depth interviews were conducted with students and teachers to obtain qualitative information to support the quantitative data. Fourth, documentation consisted of recording learning activities in the form of photographs and other supporting documents.

3.2 Data analysis

Data analysis used two main stages. The first stage is instrument testing which includes validity testing using Pearson correlation with the criteria of r_calculated > r_table and reliability testing using Cronbach's Alpha with the criteria of value > 0.5. The second stage is a simple regression analysis that begins with a normality test using Kolmogorov-Smirnov to ensure the data is normally distributed, followed by a linearity test to determine the linear status of the data distribution, then a simple linear regression analysis to test the effect of digital literacy as an independent variable on critical thinking skills as a dependent variable. The entire data analysis process uses SPSS 25 software with a significance level of 5% ($\alpha = 0.05$).

4. Results and Discussion

4.1 Validity and Reliability Test Results

The validity test was conducted using the rtable formula with a significance level of 0.05 and a sample size of 35 respondents (n-2=33), resulting in rtable = 0.344. The results of the validity test showed that all statement items for the digital literacy variable (21 items) and critical thinking skills (18 items) had a calculated rvalue > rtable (0.344), so all items were declared valid.

4.2 Results of Normality and Regression Tests

The normality test using the One-Sample Kolmogorov-Smirnov Test showed a significance value of 0.144 > 0.05, thus concluding that the residual values were normally distributed. The data used in the study met the assumption of normality.

Table 1. One-Sample Kolmogorov-Smirnov Test

Parameter	Unstandardized Residual
N	35
Normal Parameters Mean	0.0000000
Standard Deviation	6.50181060
Test Statistics	0.130
Asymp. Sig. (2-tailed)	0.144

The results of the normality test indicate that the data are normally distributed, which is a prerequisite for conducting linear regression analysis. A significance value of 0.144, which is greater than α = 0.05, indicates that the assumption of data normality has been met, allowing parametric statistical analysis to proceed.

Table 2. Model Summary

Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	0.707	0.501	0.485	6,456

Table 7. ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1378,689	1	1378,649	33,072	0.000
Residual	1375,637	33	41,686		
Total	2754.286	34			

Table 3. Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	18,662	8,156		2,288	0.029
Digital Literacy	0.606	0.105	0.707	5,751	0.000

The analysis results show a correlation coefficient (R) of 0.707, indicating a strong relationship between digital literacy and students' critical thinking skills. The coefficient of determination (R^2) of 0.501 indicates that 50.1% of the variation in students' critical thinking skills can be explained by digital literacy, while the remaining 49.9% is influenced by other factors not examined in this study.

The calculated F value of 33.072 with a significance of 0.000 < 0.05 indicates that the regression model is suitable for predicting critical thinking skills based on digital literacy. The regression equation obtained is Y = 18.662 + 0.606X, which means that every increase of one unit of digital literacy will increase critical thinking skills by 0.606 units. The constant of 18.662 indicates that if digital literacy is zero, then critical thinking skills still have a base value of 18.662.

These findings align with research by Vinna Aulia Nur Hidayah, which demonstrated a significant influence of digital literacy on students' critical thinking skills. These findings also support Andini's (2024) findings in her study, "Digital Literacy Skills as a Predictor of Students' Critical Thinking," which concluded that digital literacy plays a strong role in developing critical thinking skills. Furthermore, these findings align with research published in the Tambusai Education Journal (2023), which emphasized the importance of digital literacy in improving students' critical thinking and problem-solving skills.

The results of this study also support the findings of research conducted at Ahmad Dahlan University published in the Indonesian Physics Periodical (2023) on "Digital Literacy in Improving Critical Thinking Skills in the IPBA Course" which shows that digital literacy has a strategic role in developing students' critical thinking skills. A similar study was also conducted by researchers at SMAN 1 Tukdana published in the journal Perspektif Pendidikan dan Keguruan (2022) with the title "Determinants of Digital Literature and Learning Style on Critical Thinking Ability of Students" which confirmed a positive relationship between digital literacy and students' critical thinking skills.

In the context of Islamic Religious Education learning, digital literacy allows students to access various learning resources, analyze religious content from various perspectives, and develop a deeper understanding of Islamic teachings through a critical and reflective approach. Research conducted by Dhewi at the Sultan Agung IV National Education Seminar also supports these findings by focusing on "Digital Literacy Strategies as a Means of Strengthening Critical Thinking in Journalism Students," which confirms that digital literacy facilitates students' critical thinking, especially in analyzing and evaluating information.

Digital literacy in Islamic Religious Education (PAI) learning encompasses not only technical skills in using digital devices but also higher cognitive abilities such as analyzing, evaluating, and synthesizing religious information. Students with good digital literacy are able to use various digital applications and platforms to search for references to the Quran and Hadith, compare interpretations from various scholars, and analyze developments in contemporary Islamic thought.

These findings are highly relevant to the demands of 21st-century competencies, particularly in the context of religious education. The digital era demands that students not only master content knowledge but also develop critical, creative, communicative, and collaborative thinking skills. In Islamic Religious Education (PAI) learning, this means students must be able to deeply understand Islamic teachings and apply them to the context of modern life, filled with the complexity and dynamics of digital information.

5. Conclusion

Based on the results of research on the influence of digital literacy on students' critical thinking skills in Islamic Religious Education learning at SMA Negeri 1 Sigi, it can be concluded that there is a significant influence between digital literacy and students' critical thinking skills. This is evidenced by a significance value of 0.000 < 0.05.

The strength of the relationship between the two variables shows a high correlation with a correlation coefficient (R) of 0.707. The coefficient of determination (R^2) of 0.501 indicates that digital literacy is able to explain 50.1% of the variation in students' critical thinking abilities. The linear regression model Y = 18.662 + 0.606X shows that every one unit increase in digital literacy will increase critical thinking abilities by 0.606 units.

The research recommends that teachers integrate digital literacy into Islamic Religious Education (IS) learning through the use of technology and learning strategies that encourage students to critically analyze information. Students are expected to actively use digital technology as a productive learning tool and develop habits of critically analyzing information from various digital sources. Schools need to provide adequate technological infrastructure and develop policies that support the integration of digital literacy into the curriculum.

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