ISSN 2776-5229

The Influence of Individual Skills, Education, and Technological Development on the Digital Literacy of Islamic Religious Education Teachers

Sallima Nur Alaina Rambe[1*], Muhammad Fadhli[2]
[1,2]Universitas Islam Negeri Sumatera Utara, Medan, Indonesia
*Corresponding author sallimanuralainarambe24@gmail.com

ARTICLE INFO

Article history
Received March 3, 2026
Revisied April 26, 2026
Accepted May 6, 2026

Keywords: Individual skill, education, Digital literacy, Islamic religious

ABSTRACT

The purpose of this study is to analyze the effect of implementing the Reciprocal Teaching model in Fiqh learning on students' learning independence within the Office of the Ministry of Religious Affairs of Labuhanbatu Regency. The Reciprocal Teaching model emphasizes four main strategies, namely summarizing, questioning, clarifying, and predicting, which enable students to play an active role in the learning process. This study employed a quantitative approach with a survey design. The population consisted of Islamic Religious Education (PAI) teachers at the elementary school level under the supervision of the Ministry of Religious Affairs of Labuhanbatu Regency, totaling 310 teachers, with a sample of 169 respondents determined using the Krejcie and Morgan table through a systematic sampling technique. Data were collected using a Likert-scale questionnaire and analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method with the assistance of SmartPLS. The results of the study indicate that the research instrument is valid and reliable based on outer loading, AVE, Cronbach's Alpha, and Composite Reliability tests. The coefficient of determination test results show that the independent variables explain 80.1% of the variance in the dependent variable. The hypothesis testing results reveal that variable X1 (individual skills) and X3 (technological development) have a positive and significant effect on Y (learning independence), while variable X2 (education) does not have a significant effect.

1. INTRODUCTION

The development of information and communication technology in the digital era has brought significant changes to education, particularly in teaching and learning processes that increasingly utilize digital devices, the internet, and online learning platforms (Huraerah, Abdullah, & Rivai, 2023; Jamun, Ntelok, & Ngalu, 2023). This situation requires teachers to effectively use technology to ensure optimal learning outcomes; therefore, digital literacy has become an essential competency for educators, including Islamic Religious Education (IRE) teachers.

Digital literacy is not limited to the ability to operate technological devices, but also includes the ability to access, understand, evaluate, and use digital information wisely and responsibly (Hendaryan, Hidayat, & Herliani, 2022; Sitorus, Sipahutar, Nasution, Purnama, & Iskandar, 2025). Teachers with strong digital literacy skills are better able to develop creative, innovative, and engaging learning methods, as well as improve the effectiveness of instructional delivery. Teachers

play an important role in shaping students' character and spirituality; therefore, they are expected to integrate technology into their teaching to remain relevant to modern educational demands (Iskandar, 2022; Salisah, Darmiyanti, & Arifudin, 2024). However, in practice, some teachers still face difficulties in utilizing technology due to low levels of digital literacy.

The low level of teachers' digital literacy is influenced by several factors, namely individual skills, education and training, and technological development (Irawan, 2023; Sari & Alfiyan, 2023). These factors are interrelated in determining teachers' ability to integrate technology into the learning process. Thus, improving digital literacy among IRE teachers is essential to ensure more effective, innovative, and relevant learning in the era of digital education.

Another factor that influences digital literacy is technological development itself. Rapid technological advancement requires teachers to continuously learn and adapt to ongoing changes. The emergence of various educational applications, social media platforms, artificial intelligence, and online learning systems provides great opportunities for teachers to improve the quality of learning. However, technological development that progresses too rapidly can also become a challenge for teachers who are not adequately prepared to face such changes (Nurhidayati & Thaufani, 2025).

In the Rantau Prapat area, the use of technology in education has begun to develop alongside the increasing use of digital media in the learning process. However, the level of digital literacy among Islamic Religious Education (IRE) teachers still varies; some teachers are able to use technology effectively, while others still face limitations. This condition indicates that IRE teachers' digital literacy requires serious attention to improve the quality of learning in line with the demands of 21st-century education. Therefore, it is important to conduct research on the influence of individual skills, education, and technological development on the digital literacy of IRE teachers in Rantau Prapat. This study is expected to serve as an evaluation reference and provide input for educational policy development aimed at improving teachers' digital competencies.

Previous research (Reksiana, Nata, Rosyada, Rahiem, & Ugli, 2024) shows that teachers' digital literacy is influenced by internal and external factors. Individual skills are the main factor in technology use, while education and training also enhance teachers' competence. On the other hand, rapid technological developments demand that teachers continuously adapt. However, there are still some research gaps. First, research not yet (Ahmad & Atnawi, 2026) focused on Islamic Religious Education (PAI) teachers, even though they have an important role in shaping students' character and spirituality. Second, previous research (Eraku, et al., 2021) tends to only examine one or two variables separately, not yet integrating individual skills, education, and technology simultaneously. Third, research (Malla, 2023) carried out in urban areas with better facilities, so it does not yet specifically reflect the conditions of PAI teachers in Rantau Prapat.

The novelty of this research lies in its specific focus on PAI teachers in Rantau Prapat, the integration of three main variables into a single research model, and the use of the PLS-SEM method

to analyze the relationships between variables more comprehensively. This research is expected to provide theoretical and practical contributions to the development of teachers' digital literacy in the era of educational transformation.

2. METHODS

This research uses a quantitative approach with a survey design, which aims to test the relationships between variables empirically and measurably. This approach is considered suitable for observing the influence of the implementation of learning strategies on the variable of learning independence statistically (Creswell, 2024). The Reciprocal Teaching model itself is a constructivist-based learning approach that emphasizes dialogic interaction through four main strategies, namely summarizing, questioning, clarifying, and predicting (Palincsar & Brown, 1984).

The population in this study is all Islamic Religious Education teachers at the elementary school level under the auspices of the Ministry of Religious Affairs of Labuhanbatu Regency, totaling 310 teachers. The determination of the sample size refers to the table (Krejcie & Morgan, 1970), thus obtaining a total of 169 respondents with an error rate of 5%. The sampling technique used is systematic sampling to ensure even representation from the entire population. This method was chosen because it provides an equal opportunity for every member of the population to be included in the research sample (Sugiyono, 2024).

The research instrument used was a closed questionnaire with a Likert scale of 1–5. The variables measured included individual skills, education, technological development, and digital literacy of Islamic Education teachers related to the effectiveness of implementing Fiqh learning based on Reciprocal Teaching. Each variable was broken down into operational indicators such as technical skills, information literacy, digital communication, and the ability to evaluate digital content. The preparation of the instrument referred to the principles of valid and reliable educational variable measurement (Arikunto, 2021).

Validity testing was carried out using outer loading and Average Variance Extracted (AVE), with the criteria of a value ≥ 0.70 for the loading factor and ≥ 0.50 for AVE (Hair, et al., 2022). Reliability testing uses Cronbach's Alpha and Composite Reliability with a minimum value of ≥ 0.70, which indicates that the research instrument has good internal consistency. The data collection technique was carried out through the distribution of questionnaires directly and online to the respondents. The research procedure started from the preparation of instruments based on variable indicators, instrument testing (pilot test), up to the distribution of questionnaires to PAI teachers. Respondents provided answers based on their experiences in using learning technology and implementing learning strategies in the classroom.

Data analysis was conducted using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach with the assistance of SmartPLS software. PLS-SEM was chosen because it is effective for analyzing complex relationships between variables and does not require normally

distributed data (Hair, et al., 2022). The analysis was conducted in two stages, namely the measurement model and the structural model. The measurement model is used to test the validity and reliability of constructs, while the structural model is used to test the relationships between variables through path coefficients, R-square, and p-values using the bootstrapping technique. The relationships between variables are considered significant if the p-value is < 0.05.

3. RESULTS AND DISCUSSION

3.1. RESULTS

Validity Test

Table 1. Validity Test

	X1	X2.	X3.	Y
X1.1	0.799			
X1.2	0.818			
X1.3	0.763			
X1.4	0.851			
X1.5	0.855			
X2.1		0.863		
X2.2		0.855		
X2.3		0.869		
X2.4		0.866		
X2.5		0.827		
X3.1			0.862	
X3.2			0.851	
X3.3			0.838	
X3.4			0.862	
X3.5			0.857	
Y1				0.824
Y2				0.852
Y3				0.816
Y4				0.819
Y5				0.872
Y6				0.825

The validity test in this study was conducted using the PLS-SEM approach with the assistance of SmartPLS to assess the extent to which the indicators represent the research constructs. The validity criterion used was an outer loading value of ≥ 0.70. The results show that all indicators for variables X1, X2, X3, and Y have outer loading values above 0.70. This indicates that all indicators are valid and adequately represent their respective constructs, with no indicators being eliminated. Therefore, the measurement model (outer model) has met the requirements for convergent validity and is considered suitable for further analysis, namely reliability testing and structural model (inner model) evaluation.

Reliability Test

Table 2. Construct Reliability and Validity

 ISSN 2776-5229

Variabel	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
X1 (Individual Skills)	0.876	0.881	0.910	0.669
X2 (Education)	0.909	0.915	0.932	0.733
X3 (Technological Development)	0.908	0.911	0.931	0.730
Y (Digital Literacy)	0.913	0.914	0.932	0.697

After the convergent validity test using outer loading, the next step was to assess reliability and construct validity. This was conducted to ensure the instrument had good internal consistency and accurately represented the latent variables. The results show that all variables have high reliability, with Composite Reliability and Cronbach's Alpha values above 0.70. In addition, all variables also meet the AVE criterion (> 0.50), indicating good convergent validity. Overall, all constructs in the study are reliable and valid, so the measurement model (outer model) is suitable for further analysis, including discriminant validity and structural model evaluation.

Determinant Coefficient Test (R-Square)

The coefficient of determination test (R-Square) is conducted to assess the extent to which the independent variables are able to explain the dependent variable in the research model. The R-Square value indicates the proportion of variance in the dependent variable that can be explained by the independent variables included in the model.

Tabel 3. Nilai R-Square

	R-square	R-square adjusted
Y	0.765	0.760

The coefficient of determination (R-Square) test is conducted to assess the extent to which the independent variables explain the dependent variable in the research model. The R-Square value indicates the proportion of variance in the dependent variable that can be explained by the independent variables included in the model. Based on Table 3, the R-Square value for the Digital Literacy variable (Y) is 0.765, with an Adjusted R-Square value of 0.760. This indicates that Individual Skills (X1), Education (X2), and Technological Development (X3) collectively explain 76.5% of the variance in Digital Literacy.

This value suggests that the research model has strong (substantial) explanatory power. In other words, most of the variation in Digital Literacy can be explained by the three independent variables included in this study. Meanwhile, the remaining 23.5% is influenced by other factors

 ISSN 2776-5229

outside the model that were not examined, such as social environmental factors, individual motivation, access to technology, and other relevant variables.

Thus, it can be concluded that the structural model in this study has a high level of accuracy in explaining the influence of Individual Skills, Education, and Technological Development on Digital Literacy, and is therefore appropriate for hypothesis testing.

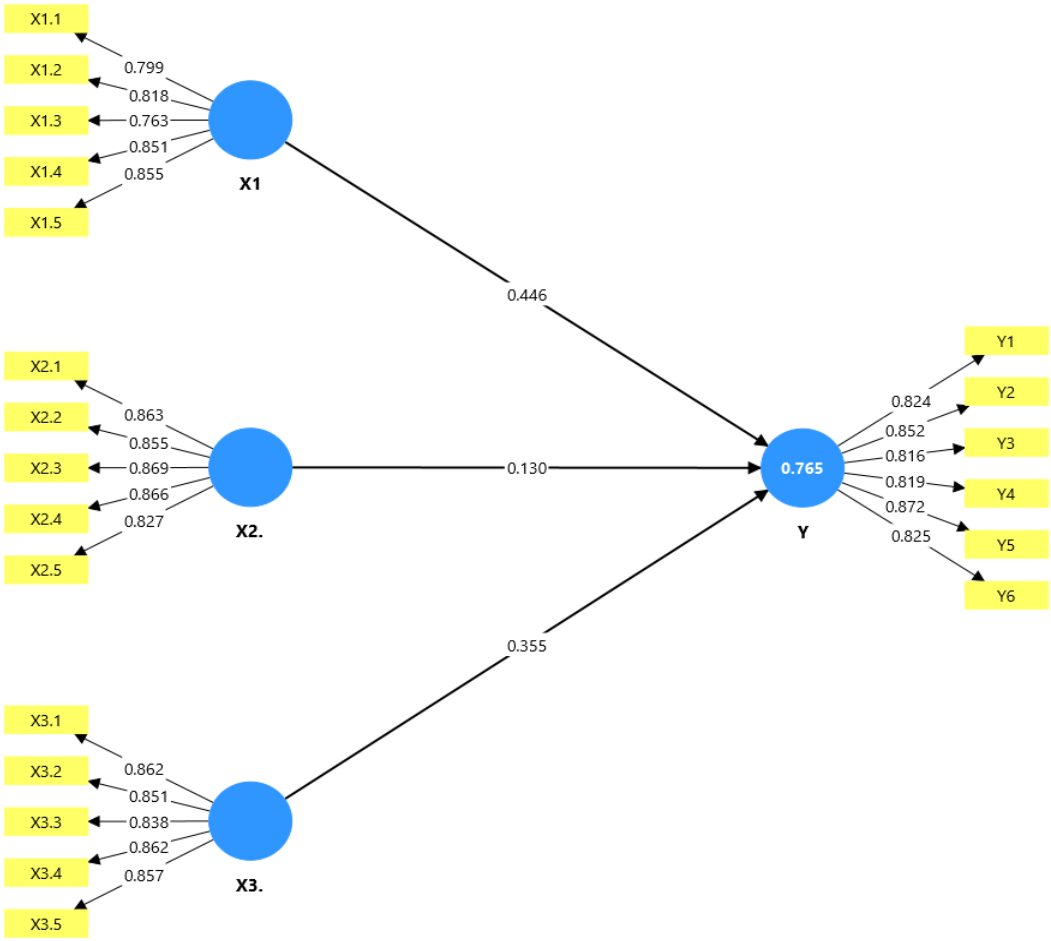

Figure 1. PLS-SEM Output

Hypothesis Testing (Bootstrapping)

Table 4. Hypothesis Test Results (Bootstrapping)

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values
X1 -> Y	0.446	0.450	0.084	5.290	0.000
X2. -> Y	0.130	0.126	0.087	1.492	0.136
X3. -> Y	0.355	0.356	0.074	4.774	0.000

Based on Table 4, the results of hypothesis testing using the bootstrapping method indicate that not all independent variables have a significant effect on the dependent variable. The path coefficient of the Individual Skills variable (X1) on Digital Literacy (Y) is 0.446, indicating a positive relationship. The T-statistic value of 5.290 is greater than 1.96, and the P-value of 0.000 is less than

0.05. Therefore, it can be concluded that Individual Skills have a positive and significant effect on Digital Literacy. This suggests that the higher an individual's skills, the higher their level of digital literacy.

Furthermore, the Education variable (X2) on Digital Literacy (Y) has a coefficient value of 0.130, indicating a positive relationship. However, the T-statistic value of 1.492 is less than 1.96, and the P-value of 0.136 is greater than 0.05. Thus, it can be concluded that Education does not have a significant effect on Digital Literacy. This finding indicates that the level of education does not directly determine digital literacy, and that other factors such as individual skills, experience in using technology, and the intensity of interaction with digital media may play a more dominant role.

Meanwhile, the Technological Development variable (X3) on Digital Literacy (Y) has a coefficient value of 0.355, indicating a positive relationship. The T-statistic value of 4.774 is greater than 1.96, and the P-value of 0.000 is less than 0.05. Therefore, it can be concluded that Technological Development has a positive and significant effect on Digital Literacy. This implies that advancements in technology contribute to improving individuals' digital literacy.

Based on these results, it can be concluded that not all hypotheses in this study are supported. The variables Individual Skills (X1) and Technological Development (X3) are proven to have a positive and significant effect on Digital Literacy (Y), while the Education variable (X2) does not have a significant effect. Among the significant variables, Individual Skills (X1) have the most dominant influence, as indicated by the highest path coefficient.

3.2. DISCUSSION

The results of this study provide a comprehensive overview of the quality of the measurement model, the strength of the structural model, and the relationships between variables tested within the framework of Partial Least Squares Structural Equation Modeling (PLS-SEM). In general, validity test results indicate that all indicators for variables X1, X2, X3, and Y have outer loading values above 0.70. This confirms that each indicator can accurately represent the construct it measures. The study (Susilawati, Chakim, Hambali, Islamy, & Rahmaniah, 2021) explaining that a high outer loading value indicates strong convergent validity, which means that the indicators in the model truly measure the same construct. Thus, the instrument in this study has good measurement quality and can be used for further analysis.

The reliability test results also reinforce these findings, where all variables have Cronbach's Alpha and Composite Reliability values above 0.70 and an AVE above 0.50. According to (Jazil, et al., 2025), An AVE value exceeding 0.50 indicates that the construct is able to explain more than half of the variance of its indicators, so it can be said to have adequate convergent validity. This finding shows that the research instrument is not only consistent but also stable in measuring the variables being studied.

Furthermore, the results of the coefficient of determination test ($R^2 = 0.801$) indicate that the research model has a strong explanatory power. The research (Fitri, Angela, Faruq, & Faruq, 2025) classifying an R^2 value above 0.75 as a substantial category, which means the model has a high predictive capability. Thus, variables X1 (individual skills), X2 (education), and X3 (technological development) are simultaneously able to explain 80.1% of the variation in variable Y. This indicates that this research model has a good level of feasibility in explaining the phenomenon being studied.

At the hypothesis testing stage, the research results show interesting dynamics in the relationships between variables. Variable X1 (individual skills) has been proven to have a positive and significant effect on Y. This finding is in line with the Digital Competence Framework developed by (Nasution, Basri, Batubara, & Mukhlasin, 2025), which emphasizes that a person's digital competence is greatly determined by an individual's ability to operate technology, think critically, and manage digital information. The higher the individual's skills, the higher the level of digital literacy they possess. These results are also consistent with research (Firdausy & Shobirin, 2022; Dahlia & Iskandar, 2024), which states that individual competence is the main factor in the development of teachers' digital literacy.

Variable X3 (technological development) also shows a positive and significant influence on Y. This finding can be explained through the Technology Acceptance Model (TAM) proposed by (Husnizar, Hadi, Yusuf, Muhajir, & Imran, 2026), which states that the acceptance and use of technology are greatly influenced by perceptions of the ease and benefits of the technology. Technological developments such as Learning Management Systems (LMS), e-learning, and various digital platforms have created a more dynamic learning environment, thus encouraging teachers to improve their digital literacy. This is in line with the findings (Rusadi & Aripin, 2023), which emphasizes that an adequate technology ecosystem can accelerate the improvement of educators' digital competencies.

On the other hand, variable X2 (education) does not have a significant effect on Y. This finding is interesting because it shows that the level of formal education does not directly guarantee high digital literacy. These results are in line with research (Fikri, Hasanah, Arifin, Suhartini, & Tsarev, 2025) who found that many teachers with higher education backgrounds still experience difficulties in integrating technology into learning. This indicates that digital literacy is more determined by practical experience, training, and the intensity of technology use than by formal education alone.

This finding also reinforces the view (Arif, Aziz, & arif, 2025), which states that the development of digital literacy cannot rely solely on formal education, but must be supported by continuous professional development, technology-based training, as well as a conducive work environment. In other words, digital literacy is the result of the interaction between internal factors (individual skills) and external factors (technological developments and environmental support).

Simultaneously, the results of this study indicate that the three independent variables have a significant effect on the digital literacy of PAI teachers. However, the greatest contribution comes from individual skills and technological development. This indicates that digital transformation in education not only depends on policy or infrastructure, but also on individuals' readiness to adopt and utilize technology effectively.

Thus, the results of this study provide an important implication that improving teachers' digital literacy must be carried out through an integrated approach. Strengthening individual skills needs to be a priority through practice-based training, while technological development should be optimized through the provision of adequate digital facilities. In addition, the development of digital literacy also needs to be supported by educational policies that encourage technology-based learning sustainably. This holistic approach is expected to improve the quality of learning in the digital era more effectively and sustainably.

4. CONCLUSION

This study shows that the digital literacy of Islamic Religious Education teachers is significantly influenced by three main factors, namely individual skills, training, and technological development. Partially, all three variables have been proven to have a positive effect on digital literacy, where individual skills serve as the main foundation for technology mastery, training plays a role in improving competencies in a structured manner, and technological development provides a supportive environment for digital practices. Simultaneously, these three factors also have a significant effect on teachers' digital literacy; thus, all research questions in this study have been answered. These findings emphasize that improving teachers' digital literacy cannot be done in a partial manner but requires an integrated approach combining individual capabilities, strengthened training programs, and technological support. The implications of this study highlight the importance of designing sustainable digital competency development programs for teachers, through strengthening individual skills, providing relevant training, and ensuring adequate technological infrastructure. However, this study has limitations in terms of its geographical scope, which is limited to a specific area, as well as the use of a quantitative approach that does not deeply explore contextual aspects. Therefore, future research is recommended to expand the geographical coverage, use a mixed-methods approach, and explore other variables that may influence teachers' digital literacy in order to obtain a more comprehensive understanding.

5. ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to all parties who have contributed to the completion of this research, especially the lecturers, advisors, and staff of the Universitas Islam Negeri Sumatera Utara. Special appreciation is also extended to the Ministry of Religious Affairs of Labuhanbatu Regency and all Islamic Religious Education (PAI) teachers who participated as

respondents in this study. Their support, time, and cooperation have been invaluable in the successful completion of this research.

REFERENCES

Ahmad, A., & Atnawi, A. (2026). Transformation Of Islamic Religious Education Learning Through Digital Literacy And Strengthening Students' Religious Character. *Ahsana Media: Jurnal Pemikiran, Pendidikan Dan Penelitian Ke-Islaman, 12*(1), 41–57. Retrieved from https://journal.uim.ac.id/index.php/ahsana/article/view/3946

Arif, M., Aziz, M. K., & arif, M. A. (2025). A Recent Study on Islamic Religious Education Teachers' Competencies in the Digital Age: A Systematic Literature Review. *Journal of Education and Learning (EduLearn), 19*(2), 587-596. Retrieved from https://eric.ed.gov/?id=EJ1463918

Arikunto, S. (2021). *Prosedur penelitian: Suatu pendekatan praktik.* Jakarta: Rineka Cipta.

Creswell, J. W. (2024). *Research design: Qualitative, quantitative, and mixed methods approaches (4th ed.).* Thousand Oaks: Sage Publications.

Dahlia, & Iskandar, T. (2024). Strategi Kepala Madrasah Dalam Meningkatkan Kedisiplinan Guru Di Madrasah Tsanawiyah Swasta Tahfidzul Quran Kota Tanjungbalai. *Indonesian Journal of Multidisciplinary Scientific Studies, 2*(5), 12-21. doi:https://doi.org/10.33151/ijomss.v2i5.359

Eraku, S. S., Baruadi, M. K., Anantadjaya, S. P., Fadjarajani, S., Supriatna, U., & Arifin, A. (2021). Digital Literacy And Educators Of Islamic Education. *Edukasi Islami: Jurnal Pendidikan Islam, 10*(1), 569-576. doi:https://doi.org/10.30868/ei.v10i01.1533

Fikri, M., Hasanah, A., Arifin, B. S., Suhartini, A., & Tsarev, R. (2025). The Instant Model: Developing Digital Literacy to Enhance Professional Competence of Islamic Religious Education Teachers. *Al-Tarbawi Al-Haditsah: Jurnal Pendidikan Islam, 10*(2), 327-346. doi:https://doi.org/10.24235/tarbawi.v10i2.20821

Firdausy, N. S., & Shobirin, M. S. (2022). The Influence Of Scientific Approach To Fiqih Learning On Student Learning Outcomes. *Edureligia : Jurnal Pendidikan Agama Islam, 6*(2), 142-149. doi:http://doi.org/10.33650/edureligia.v6i2.4030

Fitri, L., Angela, S., Faruq, U., & Faruq, A. U. (2025). Implementation of the Cooperative-Reflective Approach Through the Process-Based Writing Model in Teaching Arabic Writing Skills. *International Journal of Religion and Social Community, 3*(2), 125–147. doi:https://doi.org/10.30762/ijoresco.v3i2.3631

Hair, Joseph, Hult, Tomas, Ringle, Christian, & Sarstedt, M. (2022). *A primer on partial least squares structural equation modeling (PLS-SEM) (3rd ed.).* Thousand Oaks: Sage Publications.

Hendaryan, R., Hidayat, T., & Herliani, S. (2022). Pelaksanaan Literasi Digital Dalam Meningkatkan Kemampuan Literasi Siswa . *Literasi : Jurnal Bahasa dan Sastra Indonesia serta Pembelajarannya, 6*(1), 20-35. doi:http://dx.doi.org/10.25157/literasi.v6i1.7218

Huraerah, A. J., Abdullah, A. W., & Rivai, A. (2023). Pengaruh Teknologi Informasi Dan Komunikasi Terhadap Pendidikan Indonesia. *Journal of Islamic Education Policy, 8*(2), 1-16. doi:http://dx.doi.org/10.30984/jiep.v8i2.2715

Husnizar, H., Hadi, A., Yusuf, M., Muhajir, M., & Imran, I. (2026). Islamic Religious Education Learning Based on Digital Literacy to Make Students Literate in Religious Information. *Pendidikan Islam dan Multikulturalisme, 8*(1), 666-680. doi:https://doi.org/10.37680/scaffolding.v8i1.8659

Irawan, E. (2023). Literature Review: Literasi Digital, Literasi Ekonomi, Dan Inovasi Bisnis Mempengaruhi Manajemen Strategi Pemasaran Usaha Mikro Kecil Menengah. *EBISMAN EBisnis Manajemen, 1*(4), 30–41. doi:https://doi.org/10.59603/ebisman.v1i4.226

Iskandar, T. (2022). Pendidikan Tauhid Terhadap Motivasi Hidup Dalam Perspektif Al-Quran. *Reflektika, 17*(2), 397-412. doi:10.28944/reflektika.v17i2.986

Jamun, Y. M., Ntelok, Z. R., & Ngalu, R. (2023). Pentingnya Penggunaan Teknologi Informasi dan Komunikasi dalam Menunjang Pembelajaran Sekolah Dasar. *EDUKASIA Jurnal Pendidikan Dan Pembelajaran, 4*(2), 2149-2158. doi:https://doi.org/10.62775/edukasia.v4i2.559

Jazil, S., Zahro, A., A'la, B. A., Rahman, M. R., Sholihuddin, M., Ni'am, S., & Nurhayati, A. (2025). Enhancing Critical Thinking in Fiqh Learning: The Role of Strategies and Media Integration in Islamic Higher Education. *Malaysian Journal of Learning and Instruction, 22*(2), 42-72. Retrieved from https://eric.ed.gov/?id=EJ1479852

Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*(3), 607–610. doi:https://doi.org/10.1177/001316447003000308

Malla, H. A. (2023). Teachers' Digital Literacy Ability to Improve Islamic Religion Education Learning in Islamic Boarding School. *International Journal of Educational Reform, 35*(2), 1-16. doi:https://doi.org/10.1177/10567879231211287

Nasution, H. S., Basri, H., Batubara, W. W., & Mukhlasin, A. (2025). Islamic Education Teachers Strategies for Character Building Through Digital Literacy Based Islamic Values in The Society 5.0 Era. *Fitrah: Journal of Islamic Education, 6*(1), 259–271. doi:https://doi.org/10.53802/fitrah.v6i1.1172

Nurhidayati, R., & Thaufani, A. (2025). Mendorong Literasi Digital Guru Melalui Manajemen Pendidikan: Tinjauan Literatur. *Jurnal Manajemen Pendidikan, 10*(3), 1705–1713. doi:https://doi.org/10.34125/jmp.v10i3.926

Palincsar, A. S., & Brown, A. L. (1984). Reciprocal teaching of comprehension-fostering and comprehension-monitoring activities. *Cognition and Instruction, 1*(2), 117–175. doi:https://doi.org/10.1207/s1532690xci0102_1

Reksiana, Nata, A., Rosyada, D., Rahiem, M. D., & Ugli, A. R. (2024). Digital Extension of Digital Literacy Competence for Islamic Religious Education Teachers in the Era of Digital Learning. *Jurnal Pendidikan Agama Islam, 21*(2), 402-420. doi:https://doi.org/10.14421/jpai.v21i2.9719

Rusadi, B. E., & Aripin, S. (2023). Religious Digital Literacy of Islamic Education Students at Indonesia State Islamic University. *TADRIS: Jurnal Pendidikan Islam, 18*(1), 90-110. doi:https://doi.org/10.19105/tjpi.v18i1.8305

Salisah, S. K., Darmiyanti, A., & Arifudin, Y. F. (2024). Peran Pendidikan Agama Islam dalam Membentuk Karakter Peserta Didik di Era Digital Tinjauan Literatur. *Al-Fikr:Jurnal Pendidikan Islam, 10*(1), 36-42. doi:https://doi.org/10.47945/alfikr.v10i1.378

Sari, D. N., & Alfiyan, A. R. (2023). Peran Adaptasi Game (Gamifikasi) dalam Pembelajaran untuk Menguatkan Literasi Digital: Systematic Literature Review. *Upgrade : Jurnal Pendidikan Teknologi Informasi, 1*(1), 43-52. doi:https://doi.org/10.30812/upgrade.v1i1.3157

Sitorus, L. S., Sipahutar, M. I., Nasution, S. N., Purnama, L., & Iskandar, T. (2025). Literature Review on the Use of Technology-Based Learning Media in the Context of Distance Learning. *Jurnal Medika: Medika, 4*(3), 283-289. doi:https://doi.org/10.31004/bkxg7355

Sugiyono. (2024). *Metode penelitian kuantitatif, kualitatif, dan R&D.* Bandung: Alfabeta.

Susilawati, S., Chakim, A., Hambali, M., Islamy, M. I., & Rahmaniah, A. (2021). The Urgency of Digital Literacy for Generation Z in Improving Learning of Islamic Religious Education. *Library Philosophy and Practice, 2*(7), 1-15. Retrieved from http://repository.uin-malang.ac.id/8038/