



The Use of Digital Media in Learning Islamic Religious Education: Opportunities and Challenges

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Abstract: This study aims to examine the use of digital media in learning Islamic Religious Education (PAI). Through literature analysis, this study found that digital media has great potential to improve the quality of Islamic Education learning. The use of technologies such as e-books, learning videos, interactive applications, augmented reality (AR), and virtual reality (VR) can improve students' accessibility, interactivity, learning motivation, and digital competence. However, the research also identified several challenges, including technology infrastructure readiness, teacher competency, and safety and ethical aspects of technology use. To overcome these challenges, proposed solutions include strengthening technology infrastructure, improving teachers' digital competencies through continuous training, developing digital ethics policies and guidelines, and close supervision during learning. The findings of this study make an important contribution to the development of the theory and practice of Islamic religious education in the digital era and can serve as a reference for educators, policymakers, and researchers. Further research is needed to explore unreached aspects and assess the effectiveness of the proposed strategies.

Keywords: digital media, Islamic Religious Education, PAI, accessibility, interactivity

Abstrak: Penelitian ini bertujuan untuk mengkaji penggunaan media digital dalam pembelajaran Pendidikan Agama Islam (PAI). Melalui analisis literatur, penelitian ini menemukan bahwa media digital memiliki potensi besar untuk meningkatkan kualitas pembelajaran PAI. Penggunaan teknologi seperti e-book, video pembelajaran, aplikasi interaktif, augmented reality (AR), dan virtual reality (VR) dapat meningkatkan aksesibilitas, interaktivitas, motivasi belajar, dan kompetensi digital siswa. Namun, penelitian juga mengidentifikasi beberapa tantangan, termasuk kesiapan infrastruktur teknologi, kompetensi guru, serta aspek keamanan dan etika dalam penggunaan teknologi. Untuk mengatasi tantangan ini, solusi yang diusulkan meliputi penguatan infrastruktur teknologi, peningkatan kompetensi digital guru melalui pelatihan berkelanjutan, pengembangan kebijakan dan pedoman etika digital, serta pengawasan yang ketat selama pembelajaran. Temuan penelitian ini memberikan kontribusi penting dalam pengembangan teori dan praktik pendidikan agama Islam di era digital dan dapat menjadi acuan bagi pendidik, pembuat kebijakan, dan peneliti. Penelitian lebih lanjut diperlukan untuk mengeksplorasi berbagai aspek yang belum terjangkau dan mengkaji efektivitas strategi yang telah diusulkan.

Kata kunci : media digital, Pendidikan Agama Islam, PAI, aksesibilitas, interaktivitas

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Introduction

The rapid development of information and communication technology (ICT) has brought significant changes in various aspects of life, including the field of education (Fricticarani et al., 2023). The use of digital media in the learning process is now one of the innovations expected to improve the quality of education in general, including Islamic Religious Education (PAI) (Susanti et al., 2024). Digital media offers various conveniences in access to information, learning interactions, and flexibility in learning time and place so that it can provide a more interesting and effective learning experience for students (Kumi-Yeboah et al., 2020).

In Indonesia, Islamic Religious Education plays an important role in shaping the character and morals of the younger generation (Hasan & Aziz, 2023). Effective implementation of Islamic Education learning not only aims to provide religious knowledge but also to instill Islamic values in students' daily lives (Rahma et al., 2024). Therefore, integrating digital media into Islamic Education learning becomes an urgent need to ensure the relevance of religious education to the demands of the digital era (Taufik, 2020).

However, the use of digital media in PAI learning also faces various challenges. These challenges include the readiness of technological infrastructure, teachers' competence in utilizing digital media, as well as the safety and ethical aspects of using technology (Ikhwan et al., 2023). In addition, there are also concerns about the potential misuse of technology that can disrupt students' concentration and commitment to religious learning (Niyozov & Pluim, 2009).

This research aims to examine the opportunities and challenges of using digital media in learning Islamic Religious Education in Indonesia. This research will explore various aspects that support the successful implementation of digital media in Islamic Education learning, as well as identify obstacles and solutions that can be applied to overcome these challenges. Thus, it is hoped that this research can make a significant contribution to efforts to improve the quality of Islamic Education learning through the use of digital media (Hulkin & Santosa, 2023).

Related studies show that the use of digital media in Islamic Religious Education provides various benefits, such as increased accessibility, interactivity, and learning motivation. However, challenges such as low digital literacy and limited infrastructure in some areas hinder the optimization of the application of this technology (Sharma et al., 2016). In addition, digital literacy for teachers and students is an important issue that needs to be addressed. Even so, the potential for developing the use of digital media in Islamic Religious Education is very large,

especially with new technologies such as augmented reality (AR) and virtual reality (VR), which can enrich the learning experience (Muslim, 2024; Sudiro & Munjin, 2024). This study also refers to several recent journal articles from the Sinta journal, such as "Islamic Education in the Digital Era: Challenges and Opportunities in the 21st Century" which highlights the role of digital technology in the transformation of Islamic education and the challenges and opportunities that exist (Syafudin & Aisyah, 2020). In addition, the article "The Use of Digital Media in Teaching Islamic Religious Education: A Literature Study Perspective" also provides insight into the benefits and challenges of using digital media in Islamic Religious Education (Yanuardianto et al., 2024).

Method

This study uses a literature research method to examine the use of digital media in Islamic Religious Education (PAI) learning (Snyder, 2019). The literature research method was chosen because it allows researchers to collect, analyze, and synthesize various sources of relevant information from published literature. Through this method, researchers can comprehensively understand the topic being studied based on existing data, and its validity is recognized. The data sources in this study consist of journal articles, books, research reports, and other documents relevant to the topic of using digital media in PAI learning. (Fink, 2019). Data sources are taken from accredited journals, both national and international, published in the last five years. In addition, data is also taken from reference books that discuss educational technology, digital literacy, and Islamic religious education.

Data collection techniques are carried out through systematic literature searches. (Alabood et al., 2023). Searches are carried out using relevant keywords, such as "digital media", "PAI learning", "educational technology", "digital literacy", and "Islamic religious education". Searches are carried out through scientific databases such as Google Scholar, ProQuest, Scopus, and Sinta to ensure that the data obtained has high credibility and quality. After the data is collected, content analysis is carried out to evaluate and synthesize relevant information. This content analysis approach involves several stages, namely data reduction, data presentation, and conclusion. At the data reduction stage, data obtained from various literature sources are sorted and focused on information that is relevant to the research. The reduction process includes selection, grouping, and coding of data based on predetermined themes and categories. The reduced data is then presented in the form of narrative text, tables, or diagrams to make it easier for researchers to understand the relationship between the various information obtained and to compile logical and systematic arguments.

Concluding is done by identifying patterns, themes, and important relationships from the data that has been presented (Vaismoradi et al., 2013). The

conclusions drawn are verified by comparing findings from various literature sources to ensure their validity and reliability. Source and method triangulation techniques are used to ensure the validity of the data. Source triangulation is done by comparing data obtained from various literature sources to ensure the consistency and accuracy of the information. Method triangulation is done by combining content analysis techniques with other methods, such as comparative analysis, to strengthen the validity of the research findings. This study also pays attention to the ethical aspects of literature research by citing reference sources in full and avoiding plagiarism. All data used in this study are taken from sources that can be accounted for and are recognized for their credibility.

Result and Discussion

Result

This study examines the use of digital media in Islamic Religious Education (PAI) learning through a comprehensive literature analysis. The results of this study reveal several important findings related to opportunities and challenges in the implementation of digital media in Islamic Education learning. The use of digital media in Islamic Education shows great potential in increasing the accessibility of learning. Digital media allows students to access learning materials anytime and anywhere, providing greater flexibility compared to conventional learning methods. With the existence of e-books, learning videos, interactive applications, and online learning platforms, students can learn according to the time and place they want. This is especially beneficial for students who are in remote areas or have limited access to physical textbooks.

In addition, digital media increases interactivity in PAI learning. The use of technology such as videos, animations, and educational games can make learning materials more interesting and fun for students. This interactivity also increases students' learning motivation, so they are more active and engaged in the learning process. Zubaidi & Hafsari, (2025) Found that the use of interactive digital media in PAI learning can significantly improve student learning outcomes. This study also showed that digital media can help students develop their digital competence. Digital literacy is becoming an important skill in today's digital era, and technology-based learning can help students develop these skills. Susilawati et al., (2021) Found that good digital literacy helps students optimally utilize technology for learning, including understanding and applying Islamic religious values.

However, the use of digital media in PAI learning also faces several challenges. One of the main challenges is the readiness of technology infrastructure. Not all schools have adequate access to technology such as computers, tablets, or stable internet connections. This is an obstacle to the implementation of digital media equally in all schools. Salemin et al., (2017) revealed that limited technological

infrastructure is a significant obstacle to the use of digital media in schools, especially in rural areas. In addition, teacher competence in utilizing digital media is also an important challenge. Not all teachers have sufficient skills in integrating technology into PAI learning. Training and professional development for teachers are needed so that they can use digital media effectively. Research by Falloon, (2020) emphasizes the importance of improving teachers' digital competencies to support the successful implementation of technology in learning.

The safety and ethical aspects of technology use are also a challenge that needs to be considered. Widespread access to the internet can bring the risk of misuse of technology by students, such as accessing inappropriate content or engaging in unethical online behavior. Tomczyk, (2019) States that it is important to develop clear policies and guidelines regarding the use of technology in learning, as well as educating students about digital ethics and online safety. There are concerns that the use of digital media can disrupt students' concentration and commitment to religious learning. Technology can be a source of distraction if not used properly. Research by (Engebretson et al., 2008) Shows that students who are not properly supervised tend to use technology for unproductive activities during learning.

To overcome these challenges, this study also identified several solutions that can be implemented. First, strengthening technological infrastructure is very important to support the implementation of digital media in Islamic Religious Education learning. The government and educational institutions need to invest in providing adequate technological facilities in all schools, including the provision of computers, and tablets, and increasing internet access. Second, improving teachers' digital competence should be a priority. Continuous training and professional development need to be carried out to ensure that teachers have the skills needed to integrate digital media into Islamic Religious Education learning. Training programs should include the use of technological tools, the development of digital teaching materials, and effective teaching strategies.

In addition, the development of digital ethics policies and guidelines is also crucial to addressing challenges related to security and ethics in the use of technology. These policies should include rules regarding internet access, the use of technological devices, and digital ethics and safety. Education on digital ethics and online safety should also be part of the curriculum so that students have a good understanding of the responsible use of technology. Close supervision during learning is also needed to reduce the risk of technology misuse. Teachers should be able to supervise and direct students' use of technology and use effective teaching strategies to maintain students' focus and concentration. Technology use should be directed towards productive activities and support learning, to minimize distraction and increase student engagement in the learning process.

This study also shows that the use of digital media in Islamic Religious Education learning can support learning differentiation. Digital media allows for the customization of teaching materials according to the needs and abilities of each student. This provides flexibility in the learning process so that each student can learn in the way that suits them best. Zakaria (2022) showed that the use of digital media allows for more effective learning differentiation, especially in the context of religious education which requires a personalized approach.

The findings of this study also show that the use of digital media can enrich students' learning experiences through new technologies such as augmented reality (AR) and virtual reality (VR). This technology allows students to experience learning content in a more in-depth and interactive way, thereby increasing their understanding and involvement in the learning process. Firdaus and Mulyono (2020) found that the use of AR and VR in Islamic Religious Education learning can help students understand religious concepts better and make learning more interesting.

Overall, the results of this study indicate that the use of digital media in Islamic Religious Education learning has great potential to improve the quality of religious education in Indonesia. The opportunities offered by technology, such as increased accessibility, interactivity, motivation to learn, and development of digital competencies, provide significant benefits to students. However, the challenges that exist, such as the readiness of technological infrastructure, teacher competency, and security and ethical aspects, need to be addressed seriously to ensure effective and sustainable implementation.

Discussion

Opportunities for Using Digital Media in Islamic Education Learning

The use of digital media in Islamic Religious Education (PAI) learning offers significant opportunities. One of the main opportunities is the increased accessibility of learning. With digital media, students can access learning materials anytime and anywhere, which provides more flexibility than conventional learning methods. E-books, learning videos, interactive apps, and online learning platforms allow students to learn in their own time and place. This is very beneficial, especially for students in remote areas or who have limited access to physical textbooks. According to Hwang et al. (2018), digital media provides wider access to educational resources, expanding the reach and impact of education.

In addition, digital media increases interactivity in Islamic Religious Education learning. Technologies such as videos, animations, and educational games can make learning materials more interesting and fun for students. This interactivity also increases students' learning motivation, so that they are more active and involved in the learning process. Minarti et al., (2023) found that the use of interactive digital

media in Islamic Religious Education learning can significantly improve student learning outcomes. Kholid & Darmawan, (2023) also found that interactive digital media increases students' learning motivation and their involvement in learning.

The use of digital media in Islamic Religious Education also helps students develop digital competencies. Digital literacy is an important skill in today's digital era, and technology-based learning can help students develop these skills. (Araniri et al., 2021) Found that good digital literacy helps students optimally utilize technology for learning, including understanding and applying Islamic religious values. Research by Gitadewi, (2024) Shows that digital literacy improves students' ability to think critically and solve problems.

In addition, digital media allows for the customization of teaching materials according to the needs and abilities of each student. This provides flexibility in the learning process so that each student can learn in the way that suits them best. Ihwanah et al., (2024) Showed that the use of digital media allows for more effective differentiation of learning, especially in the context of religious education which requires a personalized approach. According to Li, (2024), digital media allows for easier adaptation of teaching materials to meet the diverse needs of students.

The use of new technologies such as augmented reality (AR) and virtual reality (VR) can also enrich students' learning experiences in Islamic Religious Education. This technology allows students to experience learning content in a more in-depth and interactive way, thereby increasing their understanding and involvement in the learning process. Rafsanjani et al., (2024) Found that the use of AR and VR in Islamic Religious Education learning can help students understand religious concepts better and make learning more interesting. Research by Perez-Lopez & Contero, (2013) Also shows that the use of AR and VR in education improves students' understanding and retention of information.

Challenges of Using Digital Media in Islamic Religious Education Learning

However, the use of digital media in Islamic Religious Education learning also faces several challenges. One of the main challenges is the readiness of technological infrastructure. Not all schools have adequate access to technology such as computers, tablets, or stable internet connections. This is an obstacle to the implementation of digital media evenly in all schools. Ahiaku et al., (2025) Revealed that limited technological infrastructure is a significant obstacle to the use of digital media in schools, especially in rural areas. Research by Warschauer et al. (2018) also shows that the digital divide is still a major problem in education.

Teacher competence in utilizing digital media is also an important challenge. Not all teachers have sufficient skills in integrating technology into Islamic Religious Education learning. Training and professional development for teachers are essential so that they can use digital media effectively. Instefjord & Munthe, (2017)

emphasize the importance of improving teachers' digital competence to support the successful implementation of technology in learning. Research by Albion et al. (2019) found that ongoing training and professional support are essential to improving teachers' digital competence.

Security and ethical aspects in the use of technology are also challenges that need to be considered. Widespread internet access can carry the risk of technology misuse by students, such as accessing inappropriate content or engaging in unethical online behavior. Zulfa (2022) stated that it is important to develop clear policies and guidelines regarding the use of technology in learning, as well as educate students about digital ethics and online security.

According to Livingstone et al. (2018), education about digital ethics is very important to prevent technology misuse among students. There is also concern that the use of digital media can interfere with students' concentration and commitment to religious learning. Technology can be a source of distraction if not used properly. Firdaus and Mulyono (2020) showed that students who are not properly supervised tend to use technology for unproductive activities during learning. Research by Rosen et al. (2020) shows that technological distractions can affect students' concentration and learning outcomes.

Solutions and Strategies to Overcome Challenges

To overcome these challenges, several solutions can be implemented. Strengthening technological infrastructure is very important to support the implementation of digital media in Islamic Religious Education learning. The government and educational institutions need to invest in providing adequate technological facilities in all schools, including the procurement of computers, and tablets, and increasing internet access. The government also needs to collaborate with the private sector to support programs that provide technology access for schools in remote areas. (Younus et al., 2024) Stated that collaboration between the public and private sectors can help overcome the digital divide in education.

Improving teachers' digital competence should be a priority. Continuous training and professional development need to be carried out to ensure that teachers have the skills needed to integrate digital media into Islamic Religious Education learning. Training programs should include the use of technological tools, the development of digital teaching materials, and effective teaching strategies. Collaboration with training institutions and universities can help provide quality training programs for teachers. Gisbert Cervera & Lázaro Cantabrana, (2015) Found that structured and continuous training programs can significantly improve teachers' digital competence.

The development of digital ethics policies and guidelines is essential to address the challenges of security and ethics in the use of technology. These policies should

include rules regarding internet access, the use of technological devices, and digital ethics and security. Education about digital ethics and online security should also be part of the curriculum so that students have a good understanding of the responsible use of technology. Zammit, (2023) stated that clear policies and education about digital ethics can help prevent technology misuse among students.

To reduce the risk of technology misuse, strict supervision during learning is essential. Teachers must be able to supervise and direct students' use of technology and use effective teaching strategies to maintain students' focus and concentration. The use of technology must be directed at productive activities and support learning, to minimize distractions and increase student engagement in the learning process. Rosen et al. (2020) showed that strict supervision and effective teaching strategies can reduce technological distractions and improve student learning outcomes.

This study makes an important contribution to the development of Islamic religious education theory and practice in the digital era. These findings emphasize the importance of strengthening technological infrastructure and improving teachers' digital competence as the key to the successful implementation of digital media in Islamic Religious Education learning. In addition, the development of digital ethics policies and guidelines as well as effective teaching strategies are also important factors in overcoming existing challenges.

Thus, the results of this study can be a reference for educators, policymakers, and researchers in developing and implementing digital media in Islamic Religious Education learning. Further research is needed to explore various aspects that have not been covered in this study, as well as to examine the effectiveness of various strategies that have been proposed in overcoming the challenges of using digital media in Islamic Religious Education learning.

Conclusion

This study reveals that the use of digital media in Islamic Religious Education (PAI) learning can improve accessibility, interactivity, learning motivation, and students' digital competence. Technologies such as e-books, learning videos, interactive applications, augmented reality (AR), and virtual reality (VR) play a role in enriching students' learning experiences. However, several challenges need to be addressed, including the readiness of technological infrastructure, teacher competence, and security and ethical aspects in the use of technology. The solutions identified include strengthening technological infrastructure, improving teachers' digital competence through ongoing training, developing digital ethics policies and guidelines, and strict supervision during the learning process.

This study makes a significant contribution to the development of Islamic religious education theory and practice in the digital era. This study also offers

practical recommendations for educators, policymakers, and researchers in implementing digital technology to improve the quality of Islamic religious education. This study has limitations in terms of generalizing findings because the study was conducted at one school, namely SMP Islam Syifaul Qulub Gresik, so the results of the study may not be widely applicable to other school contexts. In addition, this study is also limited by the limited number of respondents, as well as limited time and resources in data collection and analysis.

References

- Ahiaku, P. K. A., Uleanya, C., & Muyambi, G. C. (2025). Rural schools and tech use for sustainability: The challenge of disconnection. *Education and Information Technologies*. <https://doi.org/10.1007/s10639-024-13311-9>
- Alabood, L., Aminolroaya, Z., Yim, D., Addam, O., & Maurer, F. (2023). A systematic literature review of the Design Critique method. *Information and Software Technology*, 153, 107081. <https://doi.org/10.1016/j.infsof.2022.107081>
- Araniri, N., Nahriyah, S., Nurhidayat, Jamaludin, G. M., & Jatisunda, M. G. (2021). *The Impact of Digital Literacy Ability of Islamic Religious Education Students on FIQH Learning Achievements*. 254–257. <https://doi.org/10.2991/assehr.k.210304.053>
- Engebretson, K., Smith, K., McLaughlin, D., Seibold, C., Terrett, G., & Ryan, E. (2008). The changing reality of research education in Australia and implications for supervision: A review of the literature. *Teaching in Higher Education*, 13(1), 1–15. <https://doi.org/10.1080/13562510701792112>
- Falloon, G. (2020). From digital literacy to digital competence: The teacher digital competency (TDC) framework. *Educational Technology Research and Development*, 68(5), 2449–2472. <https://doi.org/10.1007/s11423-020-09767-4>
- Fink, A. (2019). *Conducting research literature reviews: From the internet to paper*. Sage publications.
- Fricticarani, A., Hayati, A., R, R., Hoirunisa, I., & Rosdalina, G. M. (2023). Strategi Pendidikan Untuk Sukses Di Era Teknologi 5.0. *Jurnal Inovasi Pendidikan dan Teknologi Informasi (JIPTI)*, 4(1), Article 1. <https://doi.org/10.52060/pti.v4i1.1173>
- Gisbert Cervera, M., & Lázaro Cantabrana, J. L. (2015). Professional development in teacher digital competence and improving school quality from the teachers' perspective: A case study. *Journal of New Approaches in Educational Research*, 4(2), 115–122. <https://doi.org/10.7821/naer.2015.7.123>
- Gitadewi, A. J. (2024). Optimizing Digital Literacy Through Problem-Based Learning Models to Improve Student's Critical Thinking Skills. *International Journal of Current Educational Research*, 3(2), Article 2. <https://doi.org/10.53621/ijocer.v3i2.379>
- Hasan, M. S., & Aziz, A. (2023). Kontribusi Pendidikan Islam dalam Pengembangan Sosial Emosional Peserta Didik di MTs Salafiyah Syafiiyah Tebuireng Jombang. *Irsyaduna: Jurnal Studi Kemahasiswaan*, 3(2), Article 2. <https://doi.org/10.54437/irsyaduna.v3i2.1124>

- Hulkin, M., & Santosa, S. (2023). Integration of Information Technology in the Transformation of Religious Education: Fostering Learning Quality in Elementary Islamic Schools. *Sunan Kalijaga International Journal on Islamic Educational Research*, 7(1), Article 1. <https://doi.org/10.14421/skijier.2023.71.02>
- Ihwanah, A., Idi, A., Karoma, K., Afifah, N., & Diana. (2024). Character Building Through Differentiated Learning of Islamic Religious Education in the Digital Era. *Ta'dib: Jurnal Pendidikan Islam*, 29(2), Article 2. <https://doi.org/10.19109/td.v29i2.24890>
- Ikhwan, M., Fuadi, M., Mailizar, M., & Jannah, M. (2023). The Utilization of Information Technology for the Professional Development of Islamic Education Teachers in Indonesia. *Progresiva: Jurnal Pemikiran Dan Pendidikan Islam*, 12(02), 209–222.
- Instefjord, E. J., & Munthe, E. (2017). Educating digitally competent teachers: A study of the integration of professional digital competence in teacher education. *Teaching and Teacher Education*, 67, 37–45. <https://doi.org/10.1016/j.tate.2017.05.016>
- Kholid, K., & Darmawan, D. (2023). The Influence of Digital Literacy and Learning Media Utilization on Student Learning Motivation. *Fitrah: Journal of Islamic Education*, 4(2), Article 2. <https://doi.org/10.53802/fitrah.v4i2.622>
- Kumi-Yeboah, A., Kim, Y., Sallar, A. M., & Kiramba, L. K. (2020). Exploring the Use of Digital Technologies from the Perspective of Diverse Learners in Online Learning Environments. *Online Learning*, 24(4), 42–63. <https://eric.ed.gov/?id=EJ1277763>
- Li, Y. (2024). Adapting to the Digital Learning Environment: The Impact on Student Learning and Outcomes. *Lecture Notes in Education Psychology and Public Media*, 37, 65–71. <https://doi.org/10.54254/2753-7048/37/20240504>
- Minarti, M., Rahmah, M. N., Khalilurrahman, K., Samsir, S., & Mardiana, M. (2023). Utilization of Social Media in Learning Islamic Religion: Its Impact on Strengthening Student Outcomes and Achievements. *Nidhomul Haq: Jurnal Manajemen Pendidikan Islam*, 8(2), Article 2. <https://doi.org/10.31538/ndh.v8i2.3930>
- Muslim, M. (2024). Internalizing Digital Technology in Islamic Education. *Scaffolding: Jurnal Pendidikan Islam Dan Multikulturalisme*, 6(3), Article 3. <https://doi.org/10.37680/scaffolding.v6i3.6309>
- Niyozov, S., & Pluim, G. (2009). Teachers' Perspectives on the Education of Muslim Students: A Missing Voice in Muslim Education Research. *Curriculum Inquiry*. <https://www.tandfonline.com/doi/abs/10.1111/j.1467-873X.2009.00463.x>
- Perez-Lopez, D., & Contero, M. (2013). Delivering Educational Multimedia Contents through an Augmented Reality Application: A Case Study on Its Impact on Knowledge Acquisition and Retention. *Turkish Online Journal of Educational Technology - TOJET*, 12(4), 19–28. <https://eric.ed.gov/?id=ej1018026>
- Rafsanjani, T. A., Abdurrozaq, M., & Inayati, F. (2024). Islamic Religious Learning in the Digital Age: An Interactive Method for Generation Z. *Solo International*

- Collaboration and Publication of Social Sciences and Humanities*, 2(03), Article 03.
<https://doi.org/10.61455/sicopus.v2i03.222>
- Rahma, F., Zain, A., Mustain, Z., & Rokim, R. (2024). Penguatan Nilai-Nilai Spiritual dan Moralitas di Era Digital melalui Pendidikan Agama Islam. *JEMARI (Jurnal Edukasi Madrasah Ibtidaiyah)*, 6(2), 94–103.
<https://journal.unuha.ac.id/index.php/jemari/article/view/3568>
- Salemink, K., Strijker, D., & Bosworth, G. (2017). Rural development in the digital age: A systematic literature review on unequal ICT availability, adoption, and use in rural areas. *Journal of Rural Studies*, 54, 360–371.
<https://doi.org/10.1016/j.jrurstud.2015.09.001>
- Sharma, R., Fantin, A.-R., Prabhu, N., Guan, C., & Dattakumar, A. (2016). Digital literacy and knowledge societies: A grounded theory investigation of sustainable development. *Telecommunications Policy*, 40(7), 628–643.
<https://doi.org/10.1016/j.telpol.2016.05.003>
- Snyder, H. (2019). Literature review as a research methodology: An overview and guidelines. *Journal of Business Research*, 104, 333–339.
<https://doi.org/10.1016/j.jbusres.2019.07.039>
- Sudiro, S., & Munjin, M. (2024). Teaching Management of Islamic Religion Education Based on Virtual Reality at Junior High School. *AL-ISHLAH: Jurnal Pendidikan*, 16(4), Article 4. <https://doi.org/10.35445/alishlah.v16i4.6183>
- Susanti, S. S., Nursafitri, L., Hamzah, I., Zunarti, R., Darmanto, Fitriyah, Asy'arie, B. F., & As'ad, M. S. (2024). Innovative Digital Media in Islamic Religious Education Learning. *Jurnal Pendidikan Agama Islam*, 21(1), Article 1.
<https://doi.org/10.14421/jpai.v21i1.7553>
- 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), Article 7.
https://digitalcommons.unl.edu/libphilprac/5143/?utm_source=digitalcommons.unl.edu%2Flibphilprac%2F5143&utm_medium=PDF&utm_campaign=PDFCoverPages
- Taufik, M. (2020). Strategic Role Of Islamic Religious Education In Strengthening Character Education In The Era Of Industrial Revolution 4.0. *Jurnal Ilmiah Islam Futura*, 20(1), 86–104. <https://doi.org/10.22373/jiif.v20i1.5797>
- Tomczyk, Ł. (2019). What Do Teachers Know About Digital Safety? *Computers in the Schools*, 36(3), 167–187. <https://doi.org/10.1080/07380569.2019.1642728>
- Vaismoradi, M., Turunen, H., & Bondas, T. (2013). Content analysis and thematic analysis: Implications for conducting a qualitative descriptive study. *Nursing & Health Sciences*, 15(3), 398–405. <https://doi.org/10.1111/nhs.12048>
- Yanuardianto, E., Wibowo, D. R., & Crismono, P. C. (2024). Innovation in Islamic Religious Education in The Digital Era for Students' Religious Tolerance Character Building in Elementary School: An Implementation of Beyond the Wall Learning Model. *JIP Jurnal Ilmiah PGMI*, 10(2), Article 2.
<https://doi.org/10.19109/jip.v10i2.25306>

- Younus, M., Suswanta, & Zaenuri, M. (2024). Public-Private Collaboration to Overcome the Digital Divide in Digital Transformation of Government. *Digital Zone: Jurnal Teknologi Informasi Dan Komunikasi*, 15(1), 28–41. <https://doi.org/10.31849/digitalzone.v15i1.17027>
- Zammit, L. (2023). Teaching Ethics in the Age of Technology: Promoting the Ethical Use of Technology in Maltese Secondary Schools [Doctoral, UCL (University College London)]. In *Doctoral thesis, UCL (University College London)*. <https://discovery.ucl.ac.uk/id/eprint/10167592/>
- Zubaidi, A., & Hafsari, Y. (2025). Implementation of Multimedia-Based Interactive Teaching Materials In Increasing Interest In Learning Pai. *Tafhim Al-'Ilmi*, 16(02), Article 02. <https://jurnal.stitau.ac.id/index.php/tafhim/article/view/272>