



Journal of Educational Sciences

Journal homepage: <https://jes.ejournal.unri.ac.id/index.php/JES>



P-ISSN
2581-1657

E-ISSN
2581-2203

Islamic Education Teachers' Strategy for Integrating Digital Technology in the Learning Process at MTsS Diponegoro Mendo

Muhammad Abid Al Khilmi*, Mutohharun Jinan

Islamic Religious Education, Muhammadiyah University of Surakarta, Surakarta, 57169, Indonesia

ARTICLE INFO

Article history:

Received: 23 Nov 2025

Revised: 19 Des 2025

Accepted: 24 Des 2025

Published online: 05 Jan 2026

Keywords:

Strategy,
Islamic Religious Education Teacher,
Digital Technology

* Corresponding author:

E-mail: abidalkhilmimuhamad@gmail.com

Article Doi:

<https://doi.org/10.31258/jes.10.1.p.1174-1185>

This is an open access article under the [CC BY-SA](#) license.



ABSTRACT

Study This focuses on the PAI Teacher Strategy to integrate Digital Technology in the Islamic Religious Education Learning Process at MTsS Diponegoro Mendo . The purpose of study is analyze the strategies used by PAI teachers to integrate digital technology in the learning process . This method chosen in a way qualitative with There are 3 types of data collection processes that is interviews , observations , and documentation towards Islamic Education Teachers and students . Findings study This prove that Islamic Education teachers use some strategies for integrate digital technology to in the PAI learning process , as as follows : 1) First , the E-Learning Platform , namely make it easier for teachers and students For Study more easy 2) Second , Interactive Digital Module is convey a number of material For interesting attention 3) Third , Google Drive and Google Form are presented For list storage a number of material . However , in implementing this strategy , Islamic Education teachers and students experience constraint in adjustment . This strategy have objective For optimize to stay relevant and positive influence to integration digital technology to Islamic Education teachers and students

1. Introduction

For 10 years lastly , progress digital technology has fundamentally change Lots aspect life man including education . Communication methods , data collection information and development knowledge public has changed as consequence from rapid digital revolution . The role of digital technology today in education can help learning more dynamic , adaptive , and responsive to demands of the modern world. Technology now become component important in teaching and learning , even in Islamic Religious Education (PAI), which was previously considered conventional and unilateral (Muzakky et al., 2023).

Generation young moment This growing up in a digital world full of with source power and information . For facilitate in-depth and meaningful Islamic learning, methods effective teaching must capable utilise interests and abilities technology student (Rahmadani, S. (2024). For push greater understanding deep about Islamic teachings, educators can use various digital media including learning videos, applications education , and online platforms. (Hakim & Yulia, 2024). In addition, technology facilitate learning distance far more efficient and easy contact between teachers and students . With merger technology to in teaching Islamic Religious Education (PAI), increasingly Lots opportunity For expand perspective and study more carry on about Islam.

Use digital devices in space class is One aspect from integration technology in religious education, aspects other is change paradigm in creation material education that connects Islamic principles with life daily students. So that students can fully understand and apply ideals Islamic teachings, contextual Islamic Religious Education (PAI) learning need presentation content that can connected with experience real them and the problem social around they. Based on needs and characteristics today 's students, tools learning interactive and engaging can made use various media and platforms provided by digital (Nugroho et al., 2024). technology

For overcome obstacle in integration technology and produce more learning effective and attractive, very important for Islamic Religious Education (PAI) teachers to follow training technology sustainable (Wahyudi et al., 2024). So that Islamic Religious Education teachers can provide material interesting and fulfilling learning hope students in the digital era, it is very important for they For accept training sustainable to improve their digital skills (Mulyadi & Susanti, 2025). It is expected training This will produce more (PAI) teachers proficient in use technology, so that the educational process become more dynamic and relevant with progress contemporary. So the author will provide problem formulation that is How do the strategies used by Islamic Education Teachers integrate digital technology in the learning process at MTsS Diponegoro Mendiro. The purpose of Study This is to analyze the strategies used by Islamic Education teachers to integrate digital technology in the learning process at MTsS Diponegoro Mendiro .

2. Methodology

Study This use methodology studies combined cases with approach qualitative. This method used For give explanation comprehensive about phenomenon integration digital technology to in Islamic Religious Education (PAI) teaching. Researcher capable get understanding contextual about learning strategies, integration, and barriers with using this strategy . PAI teachers at MTsS Diponegoro Mendiro who has active integrate digital technology becomes subject research. Taking sample aim used in the election process informant For choose educators

who have experience substantial and direct in integrate digital technology to in class

Interview used For collect data, which allows researchers flexibility in inspect answer informant about type digital technology that they use How they using it , the obstacles they encounter face , and how much effective according to them . In addition , the tools learning , resources Power digital teaching , and visual evidence of use digital technology by instructors in class used For strengthen interview data. The main tool in study This is researchers That himself who is active participate in make guide interview , speaking with informant in a way face face , and confirm and analyze data.

Miles and Huberman's interactive model, which consists of from three steps, namely data reduction, data presentation, and drawing conclusions are used For analyzing data. Sorting and filtering relevant data , presenting data in an organized manner narrative in thematic format, and withdrawal conclusion from pattern consistent and validated findings is methods used For reduce amount of data. Procedure triangulation source, which compares interview data with document learning and observation No direct, used For guard data validity . In addition , verification member carried out, which involves verification results interpretation with informant For ensure its meaning accurate. As a result, the data collected is highly reliable and credible.

3. Results and Discussion

Before delve into findings this , Researcher do sequential interviews with the Islamic Education teacher at MTsS Diponegoro Mendiro . Interview done in a way face face in the teacher's room or via Zoom for your convenience . Interview integrate types of digital media used and the constraints faced . Questions designed open For push elaboration , while investigation advanced used For deepen understanding on response certain . All conversation recorded audio (with agreement) and then analyzed . Table 1 shows theme main interview along with example questions used during the data collection process.

Table 1. Question Guide Interview

n't any theme interview	Question
1. Readiness	How evaluation teacher and student readiness in implement digital learning ?
2. Various types of digital media	Digital media or application platform What only the most used in Islamic Education learning ?
3. Strategy	What is the strategy in integrate PAI content with digital technology so that the material still in accordance religious values and easy understood by students ?

4. Constraint	How overcome constraint technical and non-technical , such as gap access technology among student ?
5. Training or Mentoring	Whether There is training and mentoring provided to the teacher to increase ability use technology in Islamic Education learning ? How in ensure that use digital technology does not reduce spiritual aspect ?
6. Certainty	
7. Hope	Anything hope related development technology in support PAI in the future ?

Islamic Religious Education Teachers' Strategy for Integrating Digital Technology in Learning

Teacher and student readiness in digital learning is sufficient okay . The teacher has start used to use application learning , whereas the students are very enthusiastic although Still anyone in need mentoring especially in use device technology . For guard spiritual and character aspects , teachers always balance use technology with coaching direct and reflective religious values through discussions and assignments that emphasize application Islamic teachings in life daily . This matter felt important in environment education , according to studies previously about Islamic religious education . According to Al Jumaidi study (2022), can add student interest and enthusiasm at the same time help For capable describe describe and practice norms and regulations in religion. However Thus , the study This No in a way special study implementation digital literacy in the Banyumas region , but rather more focused on implementation digital literacy in general general .

However , studies Solomon (2020) study how digital media is used in Islamic religious education in Indonesia. The findings analyze that with provide material interesting and can interactive . However , the idea digital literacy and its utilization in Islamic religious education in the Banyumas region No reviewed in a way special in studies This . Effective strategies is integrate technology to in learning directly . Teachers can use various device technical , such as simulation interactive , educational films , and multimedia presentations , for illustrate idea religious in a way graphic and attractive . Approach This push greater understanding deep at a time increase interest student to material through diverse choice learning (Tang M, 2018).

There is significant improvement in learning since the use of digital media such as e-learning platforms and interactive digital modules at MTs Diponegoro Mendiro . Improvement This seen from interest Study more students high participation active in discussions , online quizzes , and understanding more PAI material in-depth . Assignment values and results The quiz also shows learning positive compared to with method learning conventional . The teacher reports that

use of this media help student more easy catch religious concepts and values because delivery more material interesting however , the increase This Still must balanced with overcomer constraint access technology so that all student can feel benefit in a way evenly . For that , the Islamic Education Teacher did some strategies for combine digital technology into Islamic Education learning , some of the media include :

E-Learning Platform

Use platform This make it easier for Islamic Education teachers and students in Study For accept a number of type material learning , so that can opened anytime and anywhere. Platform This implemented so that learning more flexible .



Figure 1. E-Learning Platform

It is method education traditional created and packaged use technology in digital format. In e-learning, students must more involved , independent , and responsible answer on education they , meanwhile in learning traditional . This is show that form innovation in education and progress technology education , instead replacement paradigm classroom learning traditional . Along with the more popularity online learning , e-learning has appear as a learning medium . This is due to more fast , easy , and personal. Need personal ensure students and teachers involved in communication active and teachers feel guided , so that they No bored with use prolonged computer use . Instead of cause confusion inside e - learning system , simple requirements allows time Study utilized in a way efficient for the learning process with make available technology and menus easy used (Setiyowati et al., 2020).

According to Haughey (1998) e-learning services respond to complaint with fast Because its fast requirements . Web courses, web - centric courses , and enhanced courses with the web is three potential e-learning development as system learning internet based . Online collaboration is effective method For teaching of Islamic Religious Education (PAI) (Putri et al., 2023). Students collaborate to make it happen improvement understanding they about Islamic teachings using online learning platforms or network social education . Thanks Work The same this , students can create community useful learning outside class conventional .

Teachers can do evaluation more learning efficient blessing utilization technology . Teachers can use test or online quiz for measure understanding student use tool online assessment . Teachers can accept bait come back about progress Study student with fast and accurate using this strategy (Umami, 2018). Teaching methods can modified to be more fulfil needs and levels understanding student with using data from evaluation this . Integration technology to in PAI no only increase learning but also makes learning more relevant and adaptive to demands of the digital world.

Interactive Digital Module

This media found it very helpful student in delivery PAI material displayed with method interesting and easy understood . This module can combine audio – visual elements that make student more understand and capture material taught about religious values .



Figure 2. Learning Module

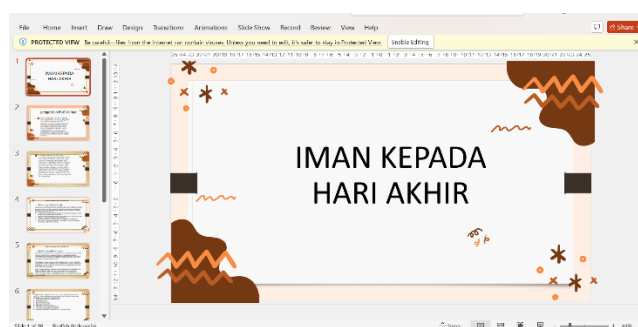


Figure 3. Interactive Digital Module Power Point

It is the Significance of E- module in Education A innovation in education that combines technology and learning . According to Yamin, M et al. (2025) e-module is source learning that is made For support a better learning process adaptive . According to theory learning constructivist , asserts learning that is not boring (Sutrisno, M., & Susanti, S, 2019).

Based on draft this , students in a way active create information they Alone through involvement and experience , instead of only absorb it in a way passive . This is consistent with the hypothesis discussed by (Kemp, J., dan Smellie, 2019) the initiator that level improvement efficacy learning by learning media as well as convenience access and interaction can used For measure its practicality . According to study previously , students involved with e- module Because No only flexible in accessibility . Consistency with study Previously , the response rate was extraordinary normal 85.7 % reported in research by (Salfia, 2021) which also evaluated e- modules interactive . This is show that e- module interactive succeed make learning fun and improve understanding material lesson .

The role of e- modules in education , It is hoped that e- module interactive that combines prayer and dhikr to in life daily will add knowledge about importance implant Islamic principles in life everyday . According to approach education character attitude positive student to diversity can strengthened with use material education that includes moral values such as tolerance . In addition , the e- module grow identity more national accommodating .

Google Forms and Google Drive

In the Islamic Religious Education learning process , teachers utilize it as a storage and distribution medium material . The teacher creates a special folder For every chapters containing modules , summaries , PPTs, explanatory videos , and worksheets Work so that student can access it When just without Afraid lost files. Response student to Google Drive usage is sufficient Good Because they feel material easy accessed and structured neat , and can studied repeat in accordance need . Apart from Google Drive, teachers also use Google Forms as tool evaluation , good For quizzes , tests daily , as well as evaluation attitude . Google Form is considered very helpful Because capable correcting question choice double in a way automatic and provide analysis results Study so that teachers can know the most wrong questions . In a way overall , the use of Google Drive and Google Forms was assessed give Lots benefit Because increase flexibility , efficiency , and understanding concept . The teacher also sees existence improvement results learning and planning Keep going use both platforms as supporters learning although learning face advance has back to normal.



Figure 3. Google Form

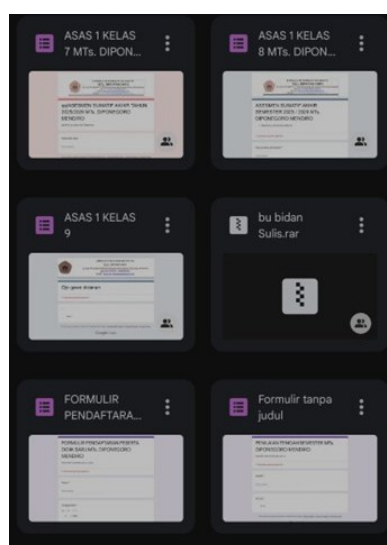


Figure 4. Google Drive

Environment modern learning also highlights importance integrate (ICT) into in education . Utilization technology For improve the learning process teach The same importance for effectiveness learning like case in point interaction between teachers and students in class . In the curriculum Independent , teachers are encouraged For integrating ICT into in class so that students can get information from various source . Therefore that , Google Forms selection as tool evaluation in line with condition integration technology to in education For increase standard teaching (Pratama et al., 2024) Technology , like Google Forms, is necessary used in evaluation learning as tool online evaluation . In addition to providing experience interesting learning for students , Google Forms can help teachers collect , edit , and manage results evaluation (Nugroho, 2018).

Google account required For make form using Google Forms, a tool multipurpose For Google account . Anyone can using Google Forms to make forms that can be accessed by people all over the world. Form This nature public Because users can fill it without Google Forms account . However , Google Forms' reliance on the internet for manufacturing and filling form is loss . Laptop, computer , or cell phone clever can used For create a formula(Andyansyah et al., 2018).

Meanwhile , Google Drive source Power education that can used For advance level learning with utilise internet technology to be more innovative , dynamic , and creative . Google Drive has a number of feature increase efficiency time and space learning . This tool can used For learning individual and group Because its usefulness . In Islamic Religious Education (PAI), Google Drive can used For improve and repair quality as well as condition activity Study teaching , so that more innovative and creative . This can also help instructor become more professional in class (Salsabila et al., 2023).

The demands of the times are demanding man For Keep going changed along time become another reason because demand understanding or skills in internet

technology, learning using Google Drive is the right step. With Thus, the use of this media can help users get skills that will help them adapt. In addition, the use of Google Drive is expected can help student get diverse knowledge. Improvement knowledge and skills is one of the from two goals learning that you want achieved by Google Drive(Ismawan et al., 2018)

A. Barriers to Integration Digital Technology in Islamic Education Learning

Obstacles experienced by teachers in execute this strategy usually internet access and devices technology that has not been maximum For students. Some student need mentoring specifically to be able to optimize the use of digital media. Limitations teachers' digital competence also becomes challenges, so that regular training from schools and services education is very necessary so that we can increase ability teach based technology. Although So, the strategy used This can enrich method learning and helping student more active as well as understand material in a way more in depth. In addition, Islamic Religious Education teachers get challenge the biggest is adapt PAI material that is spiritual in nature so that it remains relevant and irrelevant solely based technology. With Thus, the problem that must be completed that is with integrate digital method with learning face face and approach character.

The integration of digital technology is hampered by the lack of digital skills of Islamic Religious Education teachers. This become challenge significant in ensure utilization technology. According to Norjanah (2022) optimization utilization technology in education depends on the teacher's ability creating Islamic Religious Education (PAI) based on technology information and communication. Although However, many Islamic Religious Education teachers still difficulty understand digital devices and implement technique teaching based effective technology.

There are many contributing reasons to low level this digital competency. First, Islamic Religious Education (PAI) instructors have not trained in a way adequate in utilization technology in the classroom. Although Yahya emphasized importance digital literacy in education, many educator Not yet own required skills For integrate it to in the learning process teach (Yahya, 2023)Second, teachers hesitate to trying out teaching strategies new digital based Because lack of self - confidence Alone with instead outlook they in use technology. This is in line with study Muflihin and Makhshun (2020), which discusses teachers still making minimal efforts help student become more digital literacy.

Resistance This exacerbated by limitations infrastructure. Learning digital -based often considered No worthy in places with access limited to technology or the internet. Without adequate access, students will feel isolated, which in the end will make they not enough interested For participate in activity learning based technology. This implies that rejection to change is reflection unauthorized access equivalent to technology like case in point choice personal or culture (Nisa et al et al., 2024).

4. Conclusion

Writer will give conclusions of the research This among them : Islamic Religious Education teachers provide some strategies for integrate digital technology to in the PAI learning process , then activities implemented , as as follows : 1) First , the E-Learning Platform , namely make it easier for teachers and students For Study more easy reachable Accessible anytime and anywhere . 2) Interactive Digital Module is a medium that is carried out For convey a number of material For interesting attention students . This media like audio-visual integration for describe teachings about Islam . 3) Google drive and google form are implemented For keep material so that student can repeat material with Study independent which has taught . However , in implementing this strategy , Islamic Education teachers and students experience internet access and devices technology that has not been maximum so that need mentoring in a way specifically to be able to optimize merger digital technology with Islamic Education learning and adjustment PAI material that is spiritual in nature so that it remains relevant .

References

- Al Jumadi, NZ (2022). Implementation Islamic religious studies multiliteracy in curriculum based Madrasah Aliyah research . *Al- Thariqah Journal of Islamic Religious Education* , 7 (1), 107-126. [https://doi.org/10.25299/al-thariqah.2022.vol7\(1\).9409](https://doi.org/10.25299/al-thariqah.2022.vol7(1).9409)
- Andyansyah , I. (2018). Development instrument evaluation affective Google Form based for measure discipline student in Islamic Religious Education learning for class VII of Nahdlatul 'Ulama Pakis Middle School (*Doctoral dissertation, Maulana Malik Ibrahim State Islamic University*).
- Hakim, AN, & Yulia, L. (2024). Impact digital technology towards education moment This . *Journal of Social Education and Humanities* , 3 (1), 145-163.
- Ismawan , F., Irfansyah , P., & Apriyani , DD (2018). Optimizing Cloud Storage–Google Drive as a Learning Medium for Junior High and High School Teachers. *Journal PkM (Community Service) to Society* , 1 (01), 61-70. <https://doi.org/10.30998/jurnalpkm.v1i01.2362>
- Kemp, J., & Smellie, D. (2019). Designing Effective E-Learning Experiences. Pearson. <https://doi.org/10.46743/2160-3715/2019.3870>
- Muflihin , A., & Makhshun , T. (2020). The role of Islamic Religious Education Teachers in Increase Student Digital Literacy as 21st Century Skills . *Ta'dibuna : Journal of Islamic Religious Education* , 3 (1), 91-103. <https://doi.org/10.30659/jpai.3.1.91-103>
- Mulyadi, D., & Susanti, L. (2025). Training improvement digital competence of teachers in the region Ratu Harbor Regency Sukabumi For optimization use of the Merdeka Mengajar platform . *Journal Devotion Technology and Education*, 8 (1), 37–51.
- Muzakky , RMR, Mahmuudy , R., & Faristiana , AR (2023). Transformation Islamic boarding school Facing the Era of the Digital Revolution 4.0.
-

-
- Aladalah : Journal Politics , Social , Law and Humanities*, 1 (3), 241-255. <https://doi.org/10.59246/aladalah.v1i3.371>
- Nisa, NZ, & Nainggolan, TCB (2024). The Role of Technology in Improving Capacity Coastal Human Resources . *Science and Technology Research Marine* , 64-69. <https://doi.org/10.62012/sensistek.v7i1.31653>
- Norjanah , N., Nasir, M., & Mauizdati , N. (2022). Teacher competence in develop Islamic education based technology information and communication in schools basic . *Journal Basicedu* , 6 (3), 5130-5137. <https://doi.org/10.31004/basicedu.v6i3.3051>
- Nugroho, W., Yusuf, MH, Malintang , J., Dzikrillah , JA, & Iffah, I. (2024). Approach Change Social and Development of Islamic Religious Education Curriculum in Indonesia. *Al Ghazali* , 7 (2), 106-125.
- Pratama, AR, Irsyad , W., Hassan, RH, & Rawati , M. (2024). Utilization of Google Forms as a tool evaluation of learning Islamic religious education . *Tunas Bangsa Education Journal* , 2 (1), 19-30. <https://doi.org/10.51806/an-nahdlah.v4i2.377>
- Rahmadani, S. (2024). Learning strategies Islamic religious education in the digital era: An overview literature Qualitative . *Journal of Academic Media (JMA)* , 2 (6). <https://doi.org/10.62281/v2i6.515>
- Salfia , E. (2021). Development e- module based teaching materials interactive using a learning model based Problems in the Integral Material for Senior High School Grade XII. *Journal of Educational Science Research* , 1 (1), 12-18 . <https://doi.org/10.56495/jrip.v1i1.62>
- Salsabila, UH, Nabil, SM, Arrashid, MR, & Sari, R. (2023). Optimizing Google Drive as a Learning Medium for Islamic Religious Education. *Wahana Pendidikan Journal* , 10 (1), 105-116. <http://dx.doi.org/10.25157/jwp.v10i1.9311>
- Setiyowati , A., Salsabila, UH, Zulaika, R., Arista, VA, & Santoso, YW (2020). The role of technology education in The use of e-learning as a learning platform during the COVID-19 pandemic . *Edureligia : Journal of Islamic Religious Education* , 4 (2), 196-206. <https://doi.org/10.33650/edureligia.v4i2.1497>
- Sulaeman , A., Darodjat , D., & Makhrus , M. (2020). Information and communication technology in learning Islamic religious education . *Islamadina : Journal Islamic Thought* , 81-95 . <https://doi.org/10.30595/islamadina.v0i0.7258>
- Putri, ARI, & Shohib , MW (2024). Competence Professional Islamic Education Teachers in Improving the Quality of Islamic Religious Education Learning . *Attadrib : Journal of Elementary Madrasah Teacher Education* , 7 (2), 244-255. <https://doi.org/10.54069/attadrib.v7i2.872>
- Tang, M. (2018). Development of learning strategies Islamic religious education (pai) in Responding to the digital era. *Fikrotuna : Journal of Islamic Education and Management* , 7 (1), 717-740. <https://doi.org/10.32806/jf.v7i1.3173>
- Umami, M. (2018). Assessment Authentic Learning Islamic Religious Education and Character Education in the 2013 Curriculum. *Journal Education* , 6 (2), 222–232. <https://doi.org/10.24090/jk.v6i2.2259>
-

- Wahyudi, M., & Gunawan, D. (2024). Exploring impact technology learning active in institutions education vocational secondary education . *Journal of Modern Vocational Education* , 2(2), 142–153.
- Yahya, MS (2023). Transformation of Islamic Religious Education in the Digital Era: Implementation Digital Literacy in Learning in the Banyumas Region . *Edukasia Journal of Education and Learning* , 4 (1), 609-616 . <https://doi.org/10.62775/edukasia.v4i1.317>
- Yamin, M., Ismail, I., & Rodiyah , S. (2025). Development of Interactive E-Modules for Islamic Religious Education Subjects for Grade VII at SMPN 3 Palopo . *Islamika* , 7 (2), 309-324. <https://doi.org/10.36088/islamika.v7i2.5619>

How to cite this article:

Al Khilmi, M. A., & Jinan, M. (2026). Islamic Education Teachers' Strategy for Integrating Digital Technology in the Learning Process at MTsS Diponegoro Mendirol. *Journal of Educational Sciences*, 10(1), 1174-1185.
