

The Use of Technology in the Islamic Boarding School Curriculum: A Phenomenological Study

Arbain Nurdin^{1*}, Hairul Fauzi², Nurul Zainab³, Maria Ulfa⁴, Khadeejah Alrawashdeh⁵

^{1,3}Universitas Islam Negeri Madura, Madura, East Java, Indonesia

²Universitas Islam An-Nadwah Kuala Tungkal, Jambi, Indonesia

⁴Universitas Bina Darma, Palembang, South Sumatra, Indonesia

⁵Istanbul University, Fatih District, Istanbul, Turkey

*Corresponding author, Surel: arbainnurdin@uinmadura.ac.id

Paper submitted: 7-March-2026; revised: 14-May-2026; accepted: 24-June-2026

Abstract

This study explores the lived experiences and perceptions of student related the use of technology in Islamic Boarding School curriculum, such as in literacy programs. In the context of the rapid development of information and communication technology, Islamic Boarding School as traditional educational institutions face the phenomenon of adaptation and integration of technology in various aspects, including literacy development. This research uses a qualitative approach with the type of transcendental phenomenology, and involves student at Padepokan Kyai Mudrikah Kembang Kuning Pamekasan who have implemented technology in their curriculum. Data collection was conducted through semi-structured in-depth interviews and participatory observation, as well as documentation. The collected data were then analyzed using the phenomenological analysis method, which focuses on identifying essential themes related to the experiences and perceptions of student related the use of technology in Islamic Boarding School curriculum especially in literacy programs, then developing textural (what student experience) and structural (how student experience) descriptions, and describing the essence of student experiences the use of technology in literacy programs and their perceptions related to the meaning of literacy. The results show that the experience of using technology in Islamic Boarding School curriculum in literacy programs is very diverse and personal. The themes that emerged included feelings of motivation and enthusiasm for wider access to learning resources, a sense of happiness when participating in literacy programs, and the challenges of adapting to new digital platforms, and reflections on the meaning of literacy itself in the digital era.

Keywords: Technology; Curriculum; Islamic Boarding Schools; Phenomenological

1. Introduction

The current concept of the Islamic Boarding School curriculum has evolved into a holistic model of Islamic education that strategically integrates religious education, Quran memorization, and formal education in order to address the challenges of the 21st century without losing its Islamic identity (Qori et al., 2026). In contemporary literature, Islamic boarding school curriculum have begun to adopt innovative elements such as the Merdeka

Curriculum and the integration of digital technology (Nurdin et al., 2025) ranging from digital marketing to website management in response to the challenges of the Society 5.0 era (Wasehudin et al., 2023). The development of this integrated curriculum is carried out through an interdisciplinary approach that strikes a balance between preserving the traditions of the Kitab Kuning and the demands of modernization, thereby optimizing the multiple intelligences of the students or student and producing graduates who are globally competitive (Ahsan, 2024; Sirojuddin et al., 2022). In addition, the shift toward modern methodologies and program diversification has become a key trend in the institutional transformation of Islamic Boarding Schools to ensure that the quality of education remains relevant to future career needs (Yolanda et al., 2025).

In today's digital age, education can no longer be separated from the role of technology. The integration of technology in learning, particularly in Islamic boarding schools, has become crucial. Especially during the COVID-19 pandemic or afterward (Fathiyatussa'adah & Suryadi, 2021). These schools, traditionally known for their emphasis on religious education and character building, now face the challenge of adapting to the times. The use of technology not only enriches teaching methods but also opens access to a wider and more diverse range of literacy resources, such as the use of the iSantri application at Islamic boarding schools (Arumsari & Christiani, 2021; Puspita & Badi'ati, 2021). This study aims to explore in depth how technology is used in the Islamic Boarding Schools curriculum, such as in literacy programs, language program, Islamic classical texts program and how this utilization impacts the learning experiences of the students.

The use of technology in education has changed the paradigm of learning from teacher centered to student centered. Technology provides various interactive learning resources such as e-books, educational videos, and online platforms that make the learning process more interesting and personalized (Stianingsih & Al Farisi, 2024). As technology advances, learning trends are also shifting. Hybrid learning models, blended learning, and the use of educational applications are now commonplace (Wu & Chen, 2025). The use of devices such as tablets, laptops, and projectors in the classroom enables students to be more actively involved and collaborate. Thus, technology not only serves as a tool but also as a facilitator that promotes the development of critical thinking skills and creativity (Olateju Temitope Akintayo et al., 2024; Wali & Popal, 2020).

The integration of technology in learning has a significant impact on the quality of learning. Technology can increase student motivation to learn because the material is presented in a more interesting and relevant format. Additionally, technology facilitates differentiated instruction, allowing teachers to tailor content and pacing to meet the individual needs of each student. Another

positive impact is improved access to information, enabling students to access knowledge from around the world. This directly contributes to enhanced literacy skills as students are exposed to a wider range of texts, ideas, and perspectives (Prasetyo & Nurhidayah, 2021).

Research on digital literacy within the current Islamic educational ecosystem has evolved into an integral part of the Islamic Boarding School curriculum, which integrates classical scholarly traditions with advancements in global information technology (Alif et al., 2025). The implementation of this program involves the development of a comprehensive curriculum covering multimedia content, website management, and digital entrepreneurship, designed to enhance the professional competitiveness of the students without compromising their religious identity (Rochim et al., 2025). Recent research emphasizes that integrating digital literacy into the curriculum is not merely a technical matter, but rather a systematic effort guided by the strategic role of kiai in instilling digital ethics and the ability to filter information on the internet (Hasmiza & Muhtarom, 2023).

Previous studies have identified various approaches to implementing digital literacy in the context of Islamic boarding schools, focusing on the integration of e-learning and the development of technology-based learning models for classical Islamic texts (Khoiriyah & Ilmi, 2023). This study also highlights the importance of information literacy for student in anticipating the pace of information and sorting literature effectively (Nuhrodin & Dhina, 2021). Digital literacy enables student to access a wider range of information and religious literature. In addition, modernization and digital literacy have implications for the diversification of knowledge, allowing student greater freedom in accessing information online (Ja'far, 2019). Intracurricular and extracurricular activities at boarding schools for girls can also run smoothly if supported by the use of information technology (Suharso et al., 2020). Pondok Modern Darussalam Gontor, as one of the oldest Islamic educational institutions in Indonesia, continues to innovate in integrating digital technology to improve educational management and learning processes (Hakim, 2022).

Although many studies have discussed the use of technology in education, there is still a specific research gap related to the use of technology in Islamic boarding school curriculum, such as in literacy programs. Most studies focus on formal schools or universities, leaving little exploration of the unique experiences of students in environments that combine general and religious curricula. Existing research tends to discuss the impact of technology on academic outcomes in general, rather than specifically on literacy, which includes the ability to read, write, and deeply understand information. Therefore, this study aims to fill this gap by exploring the experiences and perceptions of students or student regarding the use of technology in Islamic

Boarding School curriculum at Padepokan Kyai Mudrikah Kembang Kuning Pamekasan, and providing a more holistic and in-depth understanding from their perspective.

One of the unique features of the curriculum developed by padepokan is the integration of technology into every educational program or curriculum implemented. This integration is evident in the seven pillars of education that have been established, such as one student one laptop, one activity one paragraph etc. The literacy program provided to students at padepokan has been running since the establishment of the multimedia class. This program is one of the seven pillars of the padepokan that gives identity and character to the education at the padepokan itself.

2. Method

2.1 Research Design

This study uses a qualitative approach with a transcendental phenomenology type. The transcendental phenomenological method specifically seeks to reveal the subjective experiences of participants without researcher bias, allowing phenomena to emerge authentically. A qualitative approach was chosen because it allows for a deep understanding of the phenomenon being studied holistically, focusing on narrative description rather than statistical quantification (Martirano, 2016; Moustakas, 1994).

2.2 Participants

This study aims to explore the subjective experiences of participants or student at Padepokan. Participants were selected purposively, namely students who were directly involved or had significant experience in using technology in Islamic Boarding School curriculum, such as in the literacy programs at Padepokan. There were six students. The selection of participants from among the students was based on their educational level at the boarding school, as this literacy program is open to all students.

2.3 Data Collection Instruments

Research data was collected through semi-structured in-depth interviews, participatory observation, and documentation (Creswell & Creswell, 2022). In-depth interviews enable researchers gathered information on two aspects: first, the students' experiences with technology in literacy programs within the Islamic Boarding School curriculum; and second, the students' perceptions of the literacy programs. To obtain informants' views, experiences, and perceptions directly regarding the use of technology in Islamic Boarding School curriculum such as in the literacy programs and student perceptions of the meaning of literacy, while participatory observation allows direct observation of research

subjects in the context of their experiences participating in literacy programs at Padepokan. These direct observations were conducted in the classroom during Indonesian language lessons, as well as in the evenings during literacy enrichment sessions. The observations took place over a period of one month. Documentation, as the third technique, serves to supplement the data with written and visual information relevant to the research topic.

2.4 Data Collection Procedures

Data collection was conducted in several stages. First, permission was sought from the director of Padepokan regarding research on the use of technology in the Islamic Boarding School curriculum for literacy programs. Next, the primary data collection process was carried out online by distributing questionnaires to the students and offline by observing the implementation of literacy programs within Padepokan as well as reviewing supporting documents relevant to this study. All students participating in the literacy programs were informed of the purpose of this study and agreed to complete and answer all questions posed by the researcher.

2.5 Data Analysis

In the data analysis stage, researchers used phenomenological analysis with the following steps: Horizontalization, which is identifying every relevant statement from the interview transcripts (Moustakas, 1994). At this stage, the researcher recorded all the findings from the interviews with the students; these findings were then compiled based on their relevance to the research topic, namely experiences with the use of technology in the Islamic Boarding School curriculum for literacy programs and the meaning of literacy.

The second stage is cluster of meaning, which involves grouping similar statements into units of meaning. Next, theme development, which involves identifying the main themes that emerge from the units of meaning, namely frequently used technological tools, literacy materials, opportunities and challenges, and the meaning of literacy before and after the introduction of technology. The final stage is essential description, which involves summarizing these themes into a rich and coherent descriptive narrative, capturing the shared essence of the students' experiences in using technology in Islamic Boarding School curriculum in the literacy program (Moustakas, 1994).

Data validation was carried out using triangulation, specifically source triangulation, to ensure the validity of findings by comparing information from various informants and types of data. This approach enhances the credibility of research results by minimizing researcher bias and confirming the consistency of data from different perspectives (Creswell & Creswell, 2022). In this study, the data obtained from participants in the form of interview results were cross-checked with other participants regarding the students' experiences with the use

of technology within the Islamic Boarding School curriculum particularly in literacy programs.

3. Findings

The findings of this study are presented in the following two tables. Table 1 outlines the findings regarding students' experiences using technology tools in Islamic Boarding School curriculum for the literacy program. The themes that emerge from the students' experiences with technology at the Islamic Boarding School can be summarized in the following table 1.

Table 1. Themes of Student Experiences

No.	Theme Experience	Experience Description
1.	Motivation	Students are motivated to participate in literacy programs because they are equipped with technological tools such as laptops and smart TV.
2.	Happy	The students were excited when it was time for the literacy program, bringing their laptops to class.
3.	Enthusiastic	The students were enthusiastic and excited when participating in the literacy program because it provided an interesting experience, especially with the use of technological tools.
4.	Challenge	The students felt challenged when participating in the literacy program, as the tasks required consistency to complete, such as typing with ten fingers.

The findings of the second study regarding students' perceptions of literacy at padepokan are presented in Table 2.

Table 2. The Meaning of Literacy from the Students' Perspective

No.	Main Theme	Essential Meaning
1.	Literacy as an academic necessity	Literacy is viewed as the ability to read and write
2.	Literacy as a means of self-development	Literacy is understood as competence in all fields
3.	Literacy as a life skill	Literacy is defined as the ability to create works
4.	Literacy as a critical thinking skill	Literacy is defined as the ability to analyze and understand

4. Discussion

4.1 The Experience of Student in Using Technology in Islamic Boarding School Curriculum in the Literacy Programs

Technological tools are important in Islamic Boarding School curriculum, especially in literacy programs. The curriculum at padepokan includes intracurricular, extracurricular, and co-curricular activities that are always designed to be integrated with technology. This curriculum encompasses seven pillars of education, such as one day one student, one activity one paragraph etc.

Students who use these technological tools say that technology makes it easier for them to complete various activities. This statement was made by informant S2. In addition, informant S3 also agreed that they gained many benefits from using technological tools during the process of learning to read, write, and search for information.

Based on the researcher's observations, the most widely used technological tool by students participating in the literacy program is the laptop. These laptops have been provided by the boarding school for each student, ensuring that the literacy learning process runs smoothly and effectively. In addition to laptops, there are also other technological tools such as smart TVs and cameras with various specifications. These tools can be utilized by the students during the literacy program as well as other programs scheduled by the boarding school.

Both data are relevant to the theoretical framework developed by Richard E Mayer, which states that learners process information from multimedia presentations and how instructional design can be optimized for effective learning. This theory is rooted in the core assumption that meaningful learning occurs when learners actively process information, including organizing new material into coherent cognitive structures and linking it to relevant prior knowledge (Mayer, 2024). Mayer's approach emphasizes the importance of considering how the human mind works when designing multimedia instructional materials, referring to the principles of cognitive science (Mayer, 2014).

According to informant S1, students receive a variety of materials in the literacy program implemented by Padepokan. These materials include coding, reading, writing stories, and writing books. All of these materials require technology that can facilitate the students' learning. This information is reinforced by data obtained by the researcher showing that in the curriculum, each student receives a variety of literacy materials based on their level. These materials are delivered using technological tools such as laptops, smart TVs, and other types of technology.

Based on the documentation obtained by the researchers regarding the literacy material taught to student at the Padepokan, there are two types of material: reading and writing. These two subjects are divided according to the students' grade levels, and the themes assigned also differ between grades VII, VIII, and IX. For example, the writing subject for grades VIII and IX involves writing short stories, while grade VII focuses on specific themes such as digital technology, where student write about their first experiences using gadgets.

The basic materials taught are the initial foundation for developing the students' literacy skills. These basic materials relate to the introduction of

letters, words, and sentences for beginner students, which is a crucial foundation in early reading skills (Janawati & Sulantara, 2020; Jeni et al., 2022). Materials on fast and effective reading, such as skimming and scanning techniques for understanding information more quickly and efficiently (Fatmawan et al., 2023). Creative and scientific writing material aimed at developing writing skills in various forms, ranging from essays and stories to scientific reports that require good fact presentation and reasoning (Fitria, 2024). Technological applications used for word processing, such as Microsoft Word, Google Docs, and e-book applications to train digital reading and writing skills, in line with developments in information technology (Jismulatif et al., 2023; Li et al., 2019).

The experiences of the students described above in using technology within the literacy program at Padepokan provide psychological benefits, such as fostering their motivation to participate in every learning activity integrated with technology. This was expressed by informant S1, who stated that he is always motivated to participate in learning activities at Padepokan because everything is integrated with technological tools. This motivation arises from needs based on Maslow's hierarchy of needs, which states that a person is motivated by five needs (Alex Acquah et al., 2021), with the need for recognition being particularly relevant to the students' motivation to participate in learning activities at Padepokan all of which are integrated with technology.

Some experiences felt by students when utilizing technology in Islamic Boarding School curriculum in the literacy programs, as conveyed by informant S4, who felt many benefits, especially being able to type with 10 fingers. Another experience was shared by informant S5, who mentioned that technological tools expedite the process of searching for information on how to write a story or complete other academic assignments. Meanwhile, informant S6 expressed enthusiasm and excitement when the literacy program schedule arrives, as it provides a more enriching experience when participating in literacy activities using technological tools.

The positive experiences felt by the students above are reinforced by the researcher's observations that during the literacy programs, the students showed enthusiasm and enjoyment. Each student took a laptop to the classroom and began working on various activities, especially those related to literacy materials such as writing and reading. The use of this technology also has a positive impact on the students, especially in compiling books, which begins with writing stories based on themes determined by the teacher.

According to Barbara Fredrickson's broaden and build theory, positive emotions help broaden a person's horizons. The experiences students have while using technology at Padepokan foster positive emotions such as enthusiasm and interest, thereby helping to broaden and develop their horizons and making their thinking more creative and critical (Fredrickson, 2004, 2013).

The positive experiences felt by the students are relevant to two variables in the technology acceptance model theory, namely the perceived usefulness of using technology and the perceived ease of use. Both of these feelings were experienced by the students when participating in literacy activities using technological tools. Thus, the use of technology became a positive value and had an impact on increasing the students' motivation to learn in the literacy program (Davis, 1989; Wicaksono, 2022).

In addition, the students feel happy when participating in literacy activities at the boarding school. Based on the researcher's observations, the students appear happy and joyful when the literacy program especially in the evenings begins; with great happy, each student picks up and carries a laptop to the classroom to participate in the literacy program. This can be understood through Martin Seligman's theory of happiness, which has three pillars: positive emotions, engagement, and meaning (Liu, 2024). The students' happiness stems from the growth of positive emotions within them, leading to engagement and a sense of meaning whenever they participate in literacy program.

Other experiences felt by the students were also challenging, as stated by informant S4, who said that writing stories with 10 fingers requires a long time to develop the habit and consistency. Additionally, informant S5 mentioned difficulties in completing the writing and reading stages of several pages, even with the assistance of technological tools like laptops. Similarly, informant S6 noted that writing with a laptop takes considerable time, as students at the elementary school level are not yet accustomed to using such technological tools.

According to Arnold Toynbee's theory of the cycle of civilizations, one of the key points of this theory is the interplay between challenges and responses. This aligns with the psychological experiences of the students at the boarding school, who feel challenged by the presence of technology in every aspect of their learning particularly through the one student one laptop initiative. The challenges presented to the students in using technology have been met with a positive response, thereby creating an opportunity for the emergence of a future civilization (Hall, 2003; Kovalenko, 2023).

The Discussion section should be a reasoned and justifiable commentary on the importance of your findings. This section states why the problem is important; what larger issues and what propositions are confirmed or disconfirmed by the extrapolation of these findings to such overarching issues.

4.2 The Meaning of Literacy from the Students' Perspective

In this subsection, the researcher identified various meanings of literacy from the perspective of students at Padepokan after participating in the literacy program, the students interpret it in various ways. As stated by informant S1, literacy is understood as an individual's ability in various fields, such as reading

and writing skills. Meanwhile, informant S2 defines literacy as the students' knowledge in understanding something.

The interpretation of literacy by these two informants is relevant to the general meaning of literacy, which is the ability to read and write. However, according to Kern, literacy is not merely a technical ability to read and write, but rather a complex social practice. He emphasizes that literacy is an ongoing process that is integrated with social, cultural, and technological contexts. This means an individual's ability to process and understand information conveyed through various media, including printed and digital texts, and to function effectively in contemporary society (Kern, 2004). This definition is reinforced by the view that literacy is not only about acquiring knowledge, but also utilizing that knowledge and experience as a reference for the future. Literacy is also defined as the cumulative ability to develop skills for the future. Literacy is not a static skill, but a dynamic process connected to an individual's social identity (Barton et al., 2005; Karlsen, 2021). In a broader context, literacy is defined as the ability to interpret and articulate information effectively in a variety of contexts, including language skills such as speaking, listening, and writing (Farkhatun, 2020).

The meaning of literacy was also conveyed by informant S3, who stated that literacy is the competence of student in analyzing and understanding what they learn, so that literacy is urgent for student to learn. This statement is reinforced by informant S4, who said that student must learn literacy in order to compete with students from other schools. Moreover, literacy programs can provide opportunities for student to create works, whether in writing or storytelling, that are documented.

Based on the documentation obtained by the researcher, the students have documented their work in the form of essays on the Padepokan website and in published books. From 2022 to 2025, the students produced 147 books, and in 2025, 15 books by students were also published. This document provides concrete evidence that the literacy program has a positive impact on the development of the students' writing skills.

The meaning of literacy conveyed by the student has also changed with the advent of technology. As stated by informant S5, literacy was previously limited to the student's ability to write letters correctly, but with the development of technology, the meaning of literacy has expanded to include the student's ability to write, read, and understand something. This view is reinforced by the opinion of informant S6, who noted that the rapid advancement of technology today has impacted the development of the meaning of literacy, making it more comprehensive and broad in scope that is, the students' abilities and knowledge across all fields.

The two terms above, literacy and technology, have a significant relationship, as they complement each other and support each other in facilitating access to information and dissemination of knowledge in the digital age, especially in Indonesia (Irwanto & Irwansyah, 2020). Technology is a tool that can help achieve literacy or the ability to receive, process, and understand knowledge or information. Technological literacy, especially digital literacy, enables individuals to interact effectively with digital devices and platforms, which are essential for utilizing the various knowledge resources now available online (Nuraini et al., 2022). Therefore, the student's understanding of literacy changed once they became familiar with technology.

5. Conclusion

Based on the results of data analysis and discussion above, the researcher concludes that: first, the experience of student using technology in Islamic Boarding School curriculum, especially in the literacy programs is quite diverse. These experiences determine the themes present, such as motivation, happy, enthusiastic, challenge. Second, the meaning of literacy among student quite diverse and is also influenced by the presence of technology, so that the understanding of literacy is not limited to the ability to read and write but has evolved beyond that.

This research contributes to the understanding that the experiences of students in using technology in Islamic boarding school curriculum, especially in the literacy programs are quite diverse and also impact the attitudes they demonstrate, such as motivation, happy, enthusiastic, challenge. Additionally, it reinforces the idea that technology can influence students' understanding of the concept of literacy as they have come to know it. The limitation of the results of this study lies in the number of informants studied, so further research is needed with a larger number of informants and various research locations or Islamic Boarding Schools.

References

- Ahsan, M. N. (2024). Kontroversi kurikulum pesantren dan tantangan dalam membangun standar mutu pendidikan: Menemukan keseimbangan antara tradisi dan modernisasi. *Jawda: Journal of Islamic Education Management*, 5(1), 49–71. <https://doi.org/10.21580/jawda.v5i1.2024.22691>
- Alex Acquah, Takyi Kwabena Nsiah, Elizabeth Naa Akushia Antie, & Benjamin Otoo. (2021). Literature review on theories motivation. *EPRA International Journal of Economic and Business Review*, 9(5), 25–29. <https://doi.org/10.36713/epra6848>
- Alif, K. P., Matin, M., & Santosa, H. (2025). Integrating tradition and technology: A prisma-based synthesis of pesantren curriculum transformation. *Proceedings of the 3rd Annual Conference of Islamic Education, ACIE 2024, 14-15 October 2024, Jember, East Java, Indonesia*. <https://doi.org/10.4108/eai.14-10-2024.2356524>
- Arumsari, D., & Christiani, L. (2021). Santri for kyai galang sewu islamic boarding school. *Khizanah Al-Hikmah : Jurnal Ilmu Perpustakaan, Informasi, Dan Kearsipan*, 9(2), 81.

- <https://doi.org/10.24252/kah.v9i2a1>
- Barton, D., Hamilton, M., & Ivanic, R. (2005). *Situated literacies: Reading and writing in context*. Taylor & Francis Group.
- Creswell, J. W., & Creswell, J. D. (2022). *Research design: Qualitative, quantitative, and mixed methods approaches* (sixth ed.). Sage Publications.
- Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly: Management Information Systems*, 13(3), 319–339. <https://doi.org/10.2307/249008>
- Farkhatun, U. (2020). Literacy strengthening: A case study of writing class program for elementary school grade. *MUDARRISA: Jurnal Kajian Pendidikan Islam*, 12(1), 69–86. <https://doi.org/10.18326/mdr.v12i1.69-86>
- Fathiyatussa'adah, U., & Suryadi. (2021). Islamic boarding school learning management in new normal era. *Proceedings of the 4th International Conference on Research of Educational Administration and Management (ICREAM 2020)*, 526(Icream 2020), 440–443. <https://doi.org/10.2991/assehr.k.210212.091>
- Fatmawan, A. R., Dewi, N. P. A., & Hita, I. P. A. D. (2023). Skimming and scanning technique: Is it effective for improving indonesian student's reading comprehension? *EDUSAINTEK: Jurnal Pendidikan, Sains Dan Teknologi*, 10(3), 1181–1198. <https://doi.org/10.47668/edusaintek.v10i3.897>
- Fitria, T. N. (2024). Creative Writing skills in english: Developing student's potential and creativity. *EBONY: Journal of English Language Teaching, Linguistics, and Literature*, 4(1), 1–17. <https://doi.org/10.37304/ebony.v4i1.10908>
- Fredrickson, B. L. (2004). The broaden and build theory of positive emotions. *Philosophical Transactions of the Royal Society of London. Series B: Biological Sciences*, 359(1449), 1367–1377. <https://doi.org/10.1098/rstb.2004.1512>
- Fredrickson, B. L. (2013). *Positive emotions broaden and build* (pp. 1–53). Elsevier Inc. <https://doi.org/10.1016/B978-0-12-407236-7.00001-2>
- Hakim, M. A. (2022). Increasing the excellence of pesantren in digital era: the study of management information system development at pondok modern darussalam gontor. *Tsaqafah*, 18(2), 335. <https://doi.org/10.21111/tsaqafah.v18i2.7073>
- Hall, I. (2003). Challenge and response: The lasting engagement of arnold j. toynbee and martin wight. *International Relations*, 17(3), 389–404. <https://doi.org/10.1177/00471178030173008>
- Hasmiza, H., & Muhtarom, A. (2023). Kiai dan pengembangan kurikulum pesantren di era digitalisasi. *Arfannur*, 3(3), 137–150. <https://doi.org/10.24260/arfannur.v3i3.1049>
- Irwanto, I., & Irwansyah, I. (2020). Pendekatan social construction of technology untuk teknologi pendidikan di indonesia. *Media Komunikasi FPIPS*, 19(1), 28. <https://doi.org/10.23887/mkfis.v19i1.24184>
- Ja'far, A. (2019). Literasi digital pesantren: Perubahan dan kontestasi (studi atas pesantren al-anwar 3, sarang-rembang). *Islamic Review: Jurnal Riset Dan Kajian Keislaman*, 8(1), 17–35. <https://doi.org/10.35878/islamicreview.v8i1.156>
- Janawati, D. P. A., & Sulantara, I. M. E. (2020). An analysis of early reading ability of class 1 in elementary school. *Pedagogia : Jurnal Pendidikan*, 10(1), 43–49. <https://doi.org/10.21070/pedagogia.v10i1.630>
- Jeni, N. F., Kuntarto, E., & Noviyanti, S. (2022). Analysis of early reading ability in grade ii elementary school students. *Indonesian Journal of Primary Education*, 6(1), 43–49. <https://doi.org/10.17509/ijpe.v6i1.46429>
- Jismulatif, J., Niken Trisna, A., Delfi, S., Dita, D., Dahnilsyah, D., & Suhardi, S. (2023). Empowering state high school 3 mandau duri teachers: Training on e-book creation with flipbook application. *Dinamisia : Jurnal Pengabdian Kepada Masyarakat*, 7(3), 694–702. <https://doi.org/10.31849/dinamisia.v7i3.14415>
- Karlsen, J. E. (2021). Futures literacy in the loop. *European Journal of Futures Research*, 9(1), 17. <https://doi.org/10.1186/s40309-021-00187-y>
- Kern, R. G. (2004). Literacy and advanced foreign language learning: Rethinking the curriculum. In *Advanced Foreign Language Learning: A Challenge to College Programs* (pp. 131–150). Heinle, a part of the Thomson Corporation.
- Khoiriyah, K., & Ilmi, A. F. (2023). Multimodal digital extensive reading program: A reflection on literacy movement in madrasah and pesantren. *Journal on English as a Foreign Language*, 13(1), 265–288. <https://doi.org/10.23971/jefl.v13i1.6059>

- Kovalenko, Y. (2023). Civilizational paradigm of the study of management culture phenomenon: theoretical and methodological aspect. *Socio-Cultural Management Journal*, 6(1), 27–54. <https://doi.org/10.31866/2709-846X.1.2023.278647>
- Li, K. L., Razali, A. B., & Baki, R. (2019). Writing narrative essays using e-book writing software: analyses of students' digital written works. *Journal of Asia TEFL*, 16(4), 1289–1304. <https://doi.org/10.18823/asiatefl.2019.16.4.14.1289>
- Liu, S. (2024). Martin seligman's theory in the perspective of positive psychology. *International Journal of Social Sciences and Public Administration*, 3(3), 290–293. <https://doi.org/10.62051/ijsspa.v3n3.35>
- Martirano, M. M. (2016). Transcendental phenomenology: Overlooked methodology for marketing research. *International Journal of Marketing Studies*, 8(3), 58. <https://doi.org/10.5539/ijms.v8n3p58>
- Mayer, R. E. (2014). Cognitive theory of multimedia learning richard. In *The Cambridge handbook of multimedia learning*. Cambridge University Press. <https://doi.org/10.1017/CBO9781139547369.005>
- Mayer, R. E. (2024). The past, present, and future of the cognitive theory of multimedia learning. *Educational Psychology Review*, 36(1), 1–25. <https://doi.org/10.1007/s10648-023-09842-1>
- Moustakas, C. (1994). *Phenomenological research methods*. Sage Publications.
- Nuhrodin, N., & Dhina, M. A. (2021). Information literacy for santri in islamic boarding school (pesantren). *Al-Hayat: Journal of Islamic Education*, 5(2), 216. <https://doi.org/10.35723/ajie.v5i2.191>
- Nuraini, R., Pattiasina, P. J., & Ulfah, A. (2022). Peran literasi teknologi dalam dunia pendidikan. *Al-Madrasah: Jurnal Pendidikan Madrasah Ibtidaiyah*, 6(3), 659. <https://doi.org/10.35931/am.v6i3.1045>
- Nurdin, A., Anwar, S., In'am, A., Faridi, F., & Nurhakim, M. (2025). Integration of technology in islamic boarding schools curriculum in indonesia: A systematic literature review on integrative curriculum models and innovations in learning. *International Journal Of Social Science & Interdisciplinary Research*, 14(09), 29–40.
- Olateju Temitope Akintayo, Chima Abimbola Eden, Oyebola Olusola Ayeni, & Nneamaka Chisom Onyebuchi. (2024). Evaluating the impact of educational technology on learning outcomes in the higher education sector: A systematic review. *Open Access Research Journal of Multidisciplinary Studies*, 7(2), 052–072. <https://doi.org/10.53022/oarjms.2024.7.2.0026>
- Prasetyo, M. M., & Nurhidayah, N. (2021). The effect of internet use on improving student learning outcomes. *Journal of Education Technology*, 5(4), 511–519. <https://doi.org/10.23887/jet.v5i4.40748>
- Puspita, R. E., & Badi'ati, A. Q. (2021). The Adoption of technology in islamic information literacy among young moslem. *Islamic Communication Journal*, 6(1), 91–104. <https://doi.org/10.21580/icj.2021.6.1.6742>
- Qori, M., In'am, A., Romelah, R., & Zaimuddin, Z. (2026). The integrative curriculum of al-ittifaqiah islamic boarding school, indralaya: A conceptual-analytical study from the perspective of curriculum and learning. *UKR Journal of Education and Literature*, 2(1), 9–21. <https://doi.org/10.5281/zenodo.18291195>
- Rochim, E. Z., Ikhwan, A., Arifin, S., & Rahajeng, C. T. (2025). Integration of islamic boarding school curriculum based on islamic values and technology in indonesia. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, 10(3), 602–616. <https://doi.org/10.31538/ndhq.v10i3.216>
- Sirojuddin, A., Ashlahuddin, A., & Aprilianto, A. (2022). Manajemen kurikulum terpadu berbasis multiple intellegences di pondok pesantren. *Munaddhomah: Jurnal Manajemen Pendidikan Islam*, 3(1), 35–42. <https://doi.org/10.31538/munaddhomah.v3i1.143>
- Stianingsih, L., & Al Farisi, T. (2024). Penggunaan komputer dalam pendidikan: mengubah paradigma pembelajaran. *Journal of Education Research*, 5(3), 3122–3127. <https://doi.org/10.37985/jer.v5i3.1245>
- Suharso, W., Imron, M., Rakhmah, E., Hanif, L., & Chandranegara, D. R. (2020). Pemanfaatan media teknologi informasi pada sekolah menengah atas perempuan berasrama untuk mendukung kegiatan belajar. *Jurnal Perempuan Dan Anak*, 3(1), 35–44. <https://doi.org/10.22219/jpa.v3i1.14506>
- Wali, A. Z., & Popal, A. W. (2020). The emerging issues and impacts of technology in classroom learning. *International Journal of Emerging Technologies in Learning*, 15(15), 237–245. <https://doi.org/10.3991/ijet.v15i15.14175>
- Wasehudin, W., Rohman, A., Nizarudin Wajdi, M. B., & Marwan, M. (2023). Transforming islamic

- education through merdeka curriculum in pesantren. *Jurnal Pendidikan Islam*, 9(2), 255–266.
<https://doi.org/10.15575/jpi.v9i2.28918>
- Wicaksono, S. R. (2022). *Teori dasar technology acceptance model* (Issue March). CV. Seribu Bintang.
<https://doi.org/10.5281/zenodo.7754254>
- Wu, X.-Y., & Chen, J.-B. (2025). Trends, themes, and innovations in technology-enhanced learning: A comprehensive bibliometric study. *Sage Open*, 15(4).
<https://doi.org/10.1177/21582440251385845>
- Yolanda, M., Gunarhadi, G., & Efendi, A. (2025). Curriculum transformation at islamic boarding high school: Moving ahead modernism. *AL-ISHLAH: Jurnal Pendidikan*, 17(1).
<https://doi.org/10.35445/alishlah.v17i1.6267>