Artificial: Journal of Technology, Information, and Communication

https://jurnalnalar.com/index.php/artificial

Vol. 1 No. 2 (2026) 125 – 132

Submitted: 12-10-2026 | Accepted: 20-10-2026 | Published: 14-11-2026

INFORMATION LITERACY OF MADRASAH TEACHERS IN INDONESIAN RESEARCH: *SYSTEMATIC LITERATURE REVIEW* OF ARTICLES 2016–2026

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Abstract

Information literacy is an essential competency for teachers in responding to the development of information technology and changes in educational practices. This competency involves not only the ability to search for information but also the ability to identify information needs, evaluate source credibility, process information, and use it appropriately and responsibly in teaching and learning activities. In madrasahs, information literacy plays an important role in developing instructional materials, improving teachers' professional competence, and fostering a critical learning culture. This study aims to examine the development of research on information literacy among madrasah teachers in Indonesia during the 2016–2026 period, identify emerging research themes, and analyze the supporting and inhibiting factors affecting its implementation. The study is designed using the Systematic Literature Review (SLR) method, which involves searching academic databases, selecting articles based on inclusion and exclusion criteria, and conducting a thematic analysis of relevant publications. Preliminary literature indicates that discussions of information literacy in madrasahs are closely related to the use of information technology, literacy-based learning, teachers' digital competence, and the utilization of information to support teaching and learning. Manfaat et al. (2022), for example, identified a gap between teachers' understanding of information literacy and its implementation in learning activities. Therefore, strengthening information literacy should focus on source evaluation, the use of information to generate knowledge, and the continuous development of teachers' professional competence. The final findings of this review must be established based on a documented literature search and article selection process.

Keywords: *Information literacy, madrasah teachers, teacher competence, learning, Systematic Literature Review.*

INTRODUCTION

Developments in information technology have changed the way people obtain, process, and use information. Information that was once obtained mostly through printed books, documents, and conventional sources can now be accessed through various digital platforms. These changes bring convenience to education, especially in providing learning resources, developing teaching materials, and broadening teachers' knowledge. However, the ease of obtaining information also creates challenges because not all available information has the same level of accuracy, relevance, and credibility.

Under these conditions, it is not enough for teachers merely to be able to use technological devices or search for information on the internet. Teachers also need to be able to determine the information they need, assess the quality of sources, compare information from various references, and use it in line with learning objectives. These abilities are an important part of

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information literacy. Information literacy helps a person understand when information is needed, how it is obtained, and how it is used effectively and responsibly (Association of College and Research Libraries, 2016).

In the educational environment, information literacy is related to the performance of teachers' professional duties. Teachers need information to prepare learning tools, choose suitable methods, develop materials, evaluate learning outcomes, and adapt learning to learners' needs. Information used appropriately can help teachers broaden their insight and improve the quality of their decision-making. Conversely, using unverified information risks causing errors in material, mismatched learning resources, and the delivery of less accurate knowledge.

These needs also apply in the madrasah environment. As educational institutions that provide both general and religious education, madrasahs need teachers who can develop learning based on information sources that are relevant, trustworthy, and suited to learners' characteristics. Madrasah teachers need to access various sources, such as textbooks, scientific journals, curriculum documents, Islamic sources, and digital learning materials. The ability to assess these sources is important so that the information used in learning is not only easy to obtain but also has an accountable basis.

The study by Manfaat, Rosidin, and Budiningsih (2022) on the evaluation of information literacy learning in madrasahs offers a picture of this problem. The study, conducted in 14 Madrasah Aliyah in West Java, found that most teachers still understood information literacy narrowly as the skill of using information technology and searching for information on the internet. Only a few teachers understood information literacy as the ability to use information to generate new knowledge, deepen understanding of material, and develop research experience. The study also found a gap between teachers' understanding and its application in learning.

These findings show that information literacy needs to be understood more broadly than as a technical skill. Mastery of digital devices can help teachers obtain information, but that ability needs to be accompanied by skills in evaluating sources, understanding the context of information, and integrating it into learning activities. Thus, information literacy can become part of efforts to improve the quality of learning and teacher professionalism.

Discussion of information literacy also overlaps with digital literacy. The two support each other but are not entirely the same. Digital literacy covers the ability to use technology and participate effectively in digital environments, whereas information literacy places more emphasis on recognizing information needs, finding appropriate sources, evaluating their quality, and using information for particular purposes. A teacher who is skilled at using applications does not necessarily have adequate ability to judge the truth of the information found through those applications.

The study by Habibah, Izzah, and Nadlir (2025) on the challenges of digital literacy for Madrasah Ibtidaiyah teachers in implementing the Merdeka Curriculum also shows the importance of teachers' ability to adapt to technological developments and learning demands. Meanwhile, Asiah et al. (2026) identified that teachers' digital literacy in the Indonesian education context needs to be understood not only technically but also pedagogically, infrastructurally, and in terms of organizational support. Both studies are relevant as supporting context for understanding the environment that influences the development of madrasah teachers' information literacy, even though their focus is not entirely the same as information literacy.

Therefore, this article aims to analyze the development of research on madrasah teachers' information literacy in Indonesia during 2016–2026. Specifically, the study is directed at answering three questions: (1) how the research on madrasah teachers' information literacy in Indonesia developed, and what its characteristics were, during 2016–2026; (2) what the focus and main findings are regarding madrasah teachers' information literacy abilities; and (3) what factors support or hinder the application of information literacy in learning activities. The results are expected to serve as considerations in developing teacher competence improvement programs, learning resource management, and future Islamic education research.

METHODS

This study uses a qualitative approach with the *Systematic Literature Review* (SLR) method. The method is used to identify, select, evaluate, and synthesize previous research based

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on research questions and predetermined source selection criteria. Unlike a general library study, an SLR requires transparent search and selection procedures so that the sources analyzed can be traced back.

Literature Sources and Search Strategy

The literature search was designed to cover scholarly articles published from 1 January 2016 to 28 October 2026. The search was carried out through Google Scholar, GARUDA, and Indonesian scholarly journal portals. These sources were chosen to reach research in the fields of Islamic education, educational management, library science, information literacy, and teacher competence.

The keywords used included “literasi informasi guru madrasah”, “literasi informasi guru”, “literasi informasi di madrasah”, “kompetensi informasi guru”, “information literacy teachers Indonesia”, and “literasi digital guru madrasah”. These keywords were combined as needed to find articles relevant to the research focus.

The digital literacy keywords were intended to find supporting studies that might discuss the ability to access and evaluate digital information. However, articles that only discuss technology skills without a clear link to searching, evaluating, or using information are not automatically included as primary evidence on information literacy.

Inclusion and Exclusion Criteria

Literature was selected based on the following criteria.

Table 1: Inclusion and Exclusion Criteria

No.	Inclusion Criteria	Exclusion Criteria
1.	Scholarly journal articles published in 2016–2026.	Articles outside the research period.
2.	Research conducted in Indonesia or discussing the Indonesian education context.	Research not related to the Indonesian context.
3.	Discusses madrasah teachers’ information literacy directly or has a clear conceptual link.	Articles that discuss only technology use without relevance to information literacy.
4.	Full text is accessible for checking content and methods.	Articles whose full text cannot be checked or whose bibliographic information is inadequate.
5.	Research articles or scholarly reviews relevant to the research questions.	Duplicate articles, non-scholarly opinion, news, or popular writing that does not meet scholarly source criteria.

Article Selection Procedure

The selection process was designed in four stages: identification, removal of duplicates, screening, and determination of eligible articles. At the identification stage, all search results were recorded by title, author, year of publication, journal name, and article link. Next, duplicate articles were removed before titles and abstracts were examined to assess their fit with the research focus.

Articles that passed the initial screening were then examined through the full text. The examination was carried out to ensure that the articles discuss information literacy, madrasah teachers, or related aspects that can be used to answer the research questions. Reporting of the selection process can follow the PRISMA 2020 guideline so that the number of articles at each stage can be known and checked (Page et al., 2021).

Note on filling in the selection results: the number of articles found, the number of duplicates, the number of articles excluded, and the final number of articles must be filled in based on actual search records. These figures are not set in this draft because a comprehensive search across all databases and an examination of each article have not yet been documented.

Data Collection and Analysis Techniques

Data were collected using an extraction sheet containing article identity, year of publication, research location, madrasah level, research objectives, methods, the information literacy concept used, main results, and the supporting and inhibiting factors reported by the researchers. Using an extraction sheet helps keep recording consistent and makes it easier to compare across publications.

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The collected data were analyzed descriptively and thematically. Descriptive analysis was used to map publication years, source characteristics, and research methods used. Meanwhile, thematic analysis was used to group findings into several themes, such as understanding of the information literacy concept, the ability to search for and evaluate sources, the use of information in learning, technological and organizational support, and teachers' professional development.

The synthesis results are presented in narrative form and a summary table. Final interpretation is limited to findings supported by the selected articles. Research discussing digital literacy in general is used as contextual supporting material, not directly regarded as evidence of madrasah teachers' information literacy ability.

DISCUSSION

Development of Research on Madrasah Teachers' Information Literacy in Indonesia

Research on madrasah teachers' information literacy can be understood through the growing attention to teachers' ability to obtain, evaluate, and use information to support learning. In the educational context, this ability is increasingly important because teachers face diverse sources of knowledge, both printed and digital. The development of research in this field should be viewed not only from the number of publications but also from changes in the focus of study and the depth of understanding of information literacy.

One relevant study is Manfaat et al. (2022) on the evaluation of information literacy learning in madrasahs. The study used the CIPP (Context, Input, Process, Product) evaluation model and was carried out in 14 Madrasah Aliyah in West Java. The results show that most teachers' understanding was still limited to the skill of using information technology and searching for information on the internet. An understanding of using information to generate new knowledge and develop research experience was found in only a small portion of teachers.

These findings give the picture that the discussion of information literacy in the madrasah environment needs to be directed at deeper abilities. Teachers need to know not only how to obtain information but also how to check the accuracy of sources, compare various opinions, and connect information with learning needs.

More recent studies on teachers' digital literacy also show that the development of teacher competence is influenced by technological change and pedagogical needs. Habibah et al. (2025), for example, discuss the challenges of digital literacy for Madrasah Ibtidaiyah teachers in implementing the Merdeka Curriculum. The study emphasizes that teachers need to adapt to technological developments and improve competencies that support the learning process. However, because digital literacy has a wider scope than information literacy, these findings need to be interpreted as supporting context, not as a substitute for direct evidence on information literacy.

The Concept of Information Literacy in Madrasah Teacher Competence

Information literacy is the ability to recognize information needs, find relevant information, evaluate the quality and credibility of sources, and use information appropriately. The Association of College and Research Libraries (2016) describes information literacy as a set of abilities involving reflection on information needs, an understanding of how information is produced and valued, and the use of information in creating knowledge and participating responsibly in learning communities.

In the context of madrasah teachers, this concept is closely related to the performance of professional duties. Teachers need to use information when designing learning, preparing teaching materials, explaining concepts, and determining learning strategies. Therefore, information literacy cannot be measured merely by the ability to operate devices or find information through search engines.

Manfaat et al. (2022) found that some teachers still understand information literacy narrowly as technology skills and internet searching. This finding shows a difference between the ability to obtain information and the ability to use information to deepen knowledge. A teacher who can find many references cannot necessarily judge whether those references are suitable, trustworthy, and relevant to the material being taught.

Applying Information Literacy in Madrasah Learning Processes

Applying information literacy does not end with teachers' ability to obtain learning resources. That ability needs to be visible in planning, carrying out, and evaluating learning.

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Teachers with information literacy can use various references to extend explanations, update materials, and adapt learning to learners' needs.

In the planning stage, teachers can look for sources in textbooks, scientific articles, curriculum documents, and relevant digital sources. The information obtained is then compared to ensure the material fits the learning objectives. In the implementation stage, teachers use that information to prepare explanations and give examples that help students understand the material. Meanwhile, in the evaluation stage, teachers can use information on learning outcomes to assess the need for learning follow-up.

The study by Manfaat et al. (2022) shows that some teachers see information technology as a means that can support information literacy learning, but this view is not always put into practice. Device support, access, knowledge, skills, and commitment are factors related to this gap.

These findings show that the availability of technology does not guarantee good application of information literacy. Schools or madrasahs need to give teachers opportunities to practice searching for, checking, and using information in real learning situations. Training that focuses only on operating applications needs to be complemented by exercises in evaluating sources and developing materials based on accountable references.

For example, a Fiqh teacher who will explain the topic of zakat can use a textbook, credible Islamic references, and relevant official sources. The teacher then checks that the content of the sources fits before preparing the learning material. In general subjects, a science teacher can compare information from textbooks and scientific articles to explain a phenomenon. Both examples show that information literacy can be applied across subjects while paying attention to the characteristics of the sources used.

Its application also needs to consider learners' ability to access information. Teachers use information not only for their own purposes but can also guide students to find suitable sources, distinguish trustworthy information from doubtful information, and cite sources when completing assignments. In this way, teachers' information literacy can support a learning environment that encourages critical attitudes and academic responsibility.

Supporting and Inhibiting Factors in Madrasah Teachers' Information Literacy

Teachers' information literacy does not develop separately from the environment in which they work. Facility support, access to knowledge sources, opportunities to attend training, and institutional policy can influence teachers' ability to obtain and use information. Manfaat et al. (2022) identified that device support, access, knowledge, skills, and commitment are related to the implementation of information literacy learning in madrasahs. This finding shows that developing information literacy requires attention to individual ability as well as institutional conditions.

Based on this initial literature, there is a tendency for discussion of madrasah teachers' information literacy to relate to three main issues: understanding of the concept, the use of technology as a means of obtaining information, and the application of information in learning. These three show that information literacy needs to be positioned as an ability that connects access to information with teachers' thinking processes and decision-making. Nevertheless, this tendency cannot yet be used to conclude an increase or decrease in the number of studies during 2016–2026. Conclusions about publication trends require complete search results, removal of duplicates, and grouping of articles by year of publication.

Analytically, these factors can be grouped as follows.

Table 2: Supporting and Inhibiting Factors in Madrasah Teachers' Information Literacy

No	Factor	Form of Support or Barrier	Implications for Madrasahs
1.	Teacher competence	Differences in the ability to search for, evaluate, and use information sources.	Training needs to cover source evaluation and information use, not only application use.
2.	Infrastructure	Availability of devices and stability of internet access.	Madrasahs need to provide access to learning resources suited to the institution's conditions and capacity.
3.	Availability of sources	Ease of obtaining books, journals, and relevant teaching materials.	Libraries and digital learning resources need to be managed so teachers can access them easily.

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No	Factor	Form of Support or Barrier	Implications for Madrasahs
4.	Organizational support	Policy, time, mentoring, and professional development opportunities.	Madrasah heads need to support collaborative learning and the sharing of reference sources.
5.	Commitment and work culture	Teachers' consistency in updating knowledge and applying information.	Information literacy activities need to be integrated into learning planning and evaluation.

This table is an initial synthesis framework based on problems found in the literature, not the result of counting the frequency of all SLR articles.

Competence is an important factor because teachers may already be able to search for information but are not yet used to comparing sources or assessing the evidence behind a claim. Therefore, competence development needs to provide direct experience, such as comparing two articles, checking publisher identity, identifying primary sources, and preparing teaching materials with references cited.

Infrastructure also needs attention. Access to scientific journals, digital books, and internet networks can help teachers obtain more diverse references. However, limited facilities do not always mean that information literacy activities cannot be carried out. Madrasahs can optimize library collections, available teaching materials, open sources, and reference-sharing activities among teachers.

Strategies for Strengthening Madrasah Teachers' Information Literacy

Strengthening information literacy needs to be done in a planned and sustained way. The strategies applied should consider teachers' initial abilities, available facilities, and learning needs. Based on a conceptual synthesis of the literature identified, several strategies can be considered.

First, training in searching for and evaluating information. Training needs to guide teachers in using suitable keywords, comparing various sources, checking publisher credibility, and assessing the relevance of information. This activity can be carried out through practice using scientific articles and learning sources directly related to the subject.

Second, strengthening a culture of reading and sharing references. Madrasahs can build the habit of reading articles, discussing research results, and sharing learning resources in teacher working groups. These activities give teachers the opportunity to broaden their insight and check the quality of the references they use.

Third, integrating information literacy into learning planning. Teachers can be asked to cite the sources used when preparing teaching modules, presentation materials, and evaluation materials. This step helps make searching for and evaluating information part of everyday professional work.

Fourth, using libraries and digital learning resources. The management of learning resources needs to be directed so that teachers can find references more easily. Cooperation between teachers and library managers can help determine collection needs, provide search guides, and develop information literacy services.

Fifth, developing periodic evaluation. Madrasahs need to assess whether programs to strengthen information literacy truly improve teachers' abilities. Evaluation can be done by examining the quality of references in learning tools, teachers' ability to explain the reasons for choosing sources, and the application of information in learning activities. Evaluation should measure real ability, not merely the number of trainings attended.

These strategies are in line with the need to address the gap between understanding and practice reported by Manfaat et al. (2022). Meanwhile, the study by Habibah et al. (2025) on the challenges of digital literacy among Madrasah Ibtidaiyah teachers can serve as a supporting source in designing training that matches teachers' abilities to learning demands. However, these strategies remain conceptual recommendations. The effectiveness of each strategy needs to be assessed through research that directly measures changes in madrasah teachers' information literacy ability.

Research Gaps and Directions for Developing Studies

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One matter that needs attention in research on madrasah teachers' information literacy is the difference between studies that discuss information literacy directly and research that focuses on digital literacy. The two are related, but using the two terms interchangeably can make the scope of research less clear.

The study by Manfaat et al. (2022) directly discusses information literacy learning in madrasahs. In contrast, the study by Habibah et al. (2025) focuses on the digital literacy of Madrasah Ibtidaiyah teachers in the context of the Merdeka Curriculum. Meanwhile, Asiah et al. (2026) examined teachers' digital literacy and readiness to implement the 21st-century curriculum in Indonesia. These three studies can complement one another in understanding the context of teacher competence, but they cannot be treated as research with an identical object and focus.

These differences provide a basis for developing a clearer classification of articles. Articles can be grouped into research that directly discusses madrasah teachers' information literacy, research on teachers' information literacy at other education levels, and supporting research on digital literacy or information competence. This grouping allows researchers to use supporting literature without blurring the main focus of the study.

Another gap that needs to be examined through the SLR process is the distribution of research by madrasah level, research region, methods used, and the aspects of information literacy measured. This information can help answer whether research discusses Madrasah Ibtidaiyah, Madrasah Tsanawiyah, or Madrasah Aliyah more, and whether studies more often use qualitative, quantitative, evaluative, or program development approaches.

In addition, future research can be directed at developing instruments to assess teachers' information literacy more comprehensively. Such instruments need to distinguish the ability to find information, evaluate source credibility, integrate information into learning, and use it ethically. Developing instruments can help madrasahs know which aspects of teachers' ability have developed and which still need strengthening.

Thus, the main contribution of this SLR is expected to be not only a summary of previous research but also a mapping of issues that can be used to determine priorities for further research. However, conclusions about the most dominant gaps and research tendencies during 2016–2026 must be determined after all articles meeting the inclusion criteria have been analyzed.

CONCLUSION

Information literacy is an important ability for madrasah teachers in supporting the performance of professional duties and improving the quality of learning. This ability relates not only to the skill of searching for information on the internet but also covers the ability to identify information needs, evaluate source credibility, process information, and use it appropriately and responsibly.

The literature identified shows that there are still problems in understanding and applying information literacy in the madrasah environment. Manfaat et al. (2022) found that most of the teachers studied still understood information literacy narrowly as technology and information-search skills. The study also showed a gap between teachers' understanding and its application in learning. This finding shows the importance of strengthening teacher competence through training, facility support, access to learning resources, and institutional commitment.

Strengthening information literacy can be done through training in searching for and evaluating sources, developing a reading culture, integrating the use of references into learning planning, and periodic evaluation of teachers' abilities. These efforts need to be adapted to the conditions and needs of each madrasah so that they can be applied sustainably.

Nevertheless, the results presented in this article are still an initial synthesis of the literature that has been identified. Conclusions about publication trends, theme dominance, and research gaps during 2016–2026 cannot yet be determined definitively before the search, selection, and analysis of all articles is completed. Therefore, further research needs to complete the SLR process systematically to produce a more comprehensive and accountable mapping of the development of madrasah teachers' information literacy in Indonesia.

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