

Beyond Instant Knowledge through Students' Reason and Science-Based Epistemic Verification Practices According to Al-Kindi

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Abstract: *This study aims to describe students' epistemic verification practices when engaging with digital information and to analyze the culture of instant knowledge through Al-Kindi's concepts of intellect and knowledge. Employing a qualitative approach, this field study used a case study design and was conducted at MISS Ar Rohman Jombang, from February to May 2026. Data were collected through in-depth interviews, observations, and documentation involving the school principal, a classroom teacher, an Islamic Religious Education teacher, and three students. The data were analyzed through data condensation, coding, thematic categorization, data display, interpretation, and conclusion drawing. The findings indicate that students were accustomed to using the internet to search for information, yet they were not consistently able to evaluate sources, distinguish facts from opinions, compare information, or formulate conclusions in their own words. The culture of instant knowledge was reflected in their tendency to rely on summaries, choose quick answers, copy information without understanding it, and readily trust popular content. Al-Kindi's concept of intellect highlights the importance of critically weighing and verifying information, while his concept of knowledge emphasizes the need for systematic, profound, and responsible understanding.*

Keywords: Instant Knowledge, Students, Epistemic Verification, Al-Kindi

Introduction

Advances in digital technology have transformed the way students seek out and understand knowledge. Information that was once obtained through books or teachers' explanations can now be found in a matter of seconds via search engines, social media, online articles, and short videos. While this convenience certainly aids the learning process, it also raises new problems ([Maghfirah dkk., 2024](#)). Students often feel satisfied after finding a brief answer without reading the source in its

entirety. As a result, learning is more task-oriented than focused on understanding. This situation indicates that students are not yet accustomed to evaluating the credibility of sources, distinguishing between facts and opinions, and using information responsibly.

Previous studies have shown that technological proficiency does not always go hand in hand with critical thinking skills ([Algooth Putranto dkk., 2025](#); [Firmansyah & Anam, 2025](#)). Students may be accustomed to using devices and searching for materials online, but they are not necessarily able to understand the context, recognize bias, or assess whether information is truly reliable. Therefore, the use of technology in learning must be accompanied by analytical thinking skills so that information is not simply accepted at face value. Digital literacy should not be understood merely as a technical skill; it also encompasses the ability to evaluate, understand, and use information responsibly.

Studies on Al-Kindi have extensively discussed the concepts of reason, science, divinity, education, and the relationship between religion and philosophy ([Umar & Santalia, 2022](#)). In these various studies, reason is understood as the human ability to comprehend, weigh, and systematically organize knowledge. This line of thought is considered relevant today because it positions reason as the foundation for acquiring knowledge correctly. However, most research remains focused on theoretical and historical discussions ([Sahidin & Abdurahim, 2023](#)). The concepts of reason and knowledge are more often discussed within Islamic philosophy; they have not yet been widely applied to analyze students' real-world experiences of seeking, receiving, and using digital information in their daily learning activities.

Field observations at MISS Ar Rohman Nglaban show that the internet has become an integral part of students' learning activities. They use it to find answers to assignments, understand terminology, and obtain additional explanations. However, this usage is still accompanied by certain habits that indicate a weak verification process. Students tend to select the top search results, cite Google as the source, read summaries, and copy answers without understanding the full content. They are also more likely to trust videos or content with high view counts, even when they do not know who created them or where they originated. When asked to rephrase their answers, some students are unable to explain the written responses in their own words.

The gap in this research lies not only in the continued separation of studies on Al-Kindi and digital literacy but also in the scarcity of research that empirically examines Al-Kindi's thought within the context of digital learning.

Most studies on digital literacy focus on the ability to access media, evaluate information, and develop critical thinking ([Ningsih dkk., 2025](#)). On the other hand, studies on Al-Kindi primarily discuss his ideas within the realms of Islamic philosophy and the history of thought ([Usman dkk., 2025](#)). As a result, there is still little research that brings these two fields together to explain how students examine sources, evaluate information, understand knowledge, and use it responsibly in learning activities. In fact, this connection is crucial to demonstrating that digital

literacy is not merely about technical skills but also about acquiring knowledge critically and reflectively.

The novelty of this study lies in the use of Al-Kindi's thought as an analytical framework for understanding students' experiences when interacting with digital information. Reason is positioned as the foundation for analyzing students' ability to verify the credibility of sources, compare information, assess evidence, and avoid hasty conclusions. Meanwhile, the concept of knowledge serves as the foundation for examining the extent to which information is understood, reinterpreted, and applied responsibly in learning. Through this approach, this study not only explains the relevance of Al-Kindi's thought to digital education but also proposes the Al-Kindi-Based Model of Critical Digital Literacy Rooted in Reason and Knowledge as a conceptual framework grounded in empirical findings from the field.

Based on this background, this study aims to 1) describe students' epistemic verification practices when encountering digital information, and 2) analyze the culture of instant knowledge evident in habits such as reading summaries, seeking quick answers, copying without understanding, and readily believing popular content. All field findings were then interpreted using Al-Kindi's concepts of reason and knowledge to identify the need for developing a more reflective, in-depth, honest, and responsible form of digital critical literacy in schools.

This study is expected to expand the scholarship on Al-Kindi by demonstrating that his thought can be applied to understanding real-world issues in digital education. It also provides an empirical picture of the gap between students' ability to access information and their ability to process it into accountable knowledge. On a practical level, the research findings can serve as a foundation for developing digital learning that places greater emphasis on the processes of scrutiny, understanding, and responsibility in the use of information.

Method

This study employs a qualitative approach using field research and a case study design ([Creswell & Poth, 2018](#)). This approach was chosen because the study aims to gain an in-depth understanding of students' epistemic verification practices and instant-knowledge culture when encountering digital information. The case study allows the researcher to examine these phenomena holistically within the school's natural context, including students' habits of seeking answers, verifying sources, comparing information, and applying knowledge in learning activities. This study does not treat Al-Kindi's thought as the primary subject of investigation, but rather as an analytical framework for interpreting students' ability to evaluate information, think critically, and use knowledge responsibly within the context of contemporary Islamic education.

The research was conducted at MISS Ar Rohman Nglaban, Diwek Subdistrict, Jombang Regency, from February to May 2026. The location was selected based on the use of digital media in learning activities and the need to understand students' habits in obtaining and using information. The research subjects consisted of the principal, classroom teachers, Islamic Education teachers, and two students. The principal was selected to provide information regarding school policies and the management of digital learning. Classroom teachers and

Islamic Education teachers provided data on learning habits, the ability to verify sources, and students' responses to information. Three students were purposively selected to obtain a diverse range of experiences.

The research data sources consisted of primary and secondary data. Primary data were obtained through in-depth interviews with the school principal, classroom teachers, Islamic Education teachers, and three students, as well as through observations of learning activities and the use of digital media. Primary data were used to describe practices of epistemic verification, habits of accepting instant answers, the ability to distinguish between facts and opinions, and students' use of information. Secondary data were obtained from school documents, learning modules, curriculum materials, student assignments, and documentation of learning activities. Literature on Al-Kindi's concepts of reason and knowledge was also used as a foundation for interpreting field findings philosophically and contextually, in line with the research focus.

Data collection techniques included in-depth interviews, observations, and documentation. Interviews were conducted using a semi-structured approach to ensure the researcher obtained focused data while allowing informants the freedom to describe their experiences openly. Observations focused on learning activities, how students sought information, their use of devices or digital resources, and their habits of copying, comparing, and checking answers. Documentation was used to supplement the data through learning modules, student assignments, instructional materials, photos of activities, and curriculum documents. These three techniques were applied in a complementary manner so that the data obtained would not rely solely on informants' statements but would also be supported by observed behavior and verifiable documentary evidence.

The data analysis technique followed the interactive model of Miles and Huberman, which includes data condensation, data presentation, and concluding ([Miles dkk., 2014](#)) Miles. After the data were collected, the researcher transcribed them, read through them, and selected information relevant to the research focus. The data were then coded and grouped into themes, such as verifying sources, distinguishing facts from opinions, comparing information, reliance on instant answers, and the responsible use of knowledge. Next, the data were presented as thematic descriptions and informant quotes. During the interpretation stage, the field findings were analyzed using Al-Kindi's concepts of reason and science, then compared with previous research before the study's conclusions were formulated in a systematic, in-depth, critical, and reflective manner.

Data validity was ensured through source triangulation, methodological triangulation, member checking, and documentation of the research process. Source triangulation was conducted by comparing statements from the school principal, classroom teachers, Islamic Education teachers, and students. Methodological triangulation was performed by cross-checking the results of interviews, observations, and documentation. Member checking was used to ensure that the researcher's interpretations aligned with the informants' intentions. The researcher also kept field notes and a record of the analysis process so that every decision could be traced. Ethical considerations were upheld through informed

consent, anonymization of student identities, data confidentiality, and use of information solely for academic purposes. All data were presented responsibly without causing harm to the school or the informants involved in the research.

Result and Discussion

Result

1. Students' Epistemic Verification Practices When Encountering Digital Information

The research findings indicate that students are accustomed to using the internet to search for answers to assignment questions, definitions of terms, and additional explanations of course material. They tend to choose the answers that appear at the very top because they are considered faster and easier to use. Based on research documents, answers were also found to have sentence structures nearly identical to information from the internet. An Islamic Education teacher stated,

"Children are indeed accustomed to searching for various materials and information online because it is considered faster and easier. However, the problem is that they often immediately take the first answer that appears without reading the source's content in full." (W-GPAI/2026)

The habit of choosing the top search result was also evident when students were asked to find explanations regarding specific topics. Most students did not first check the website name, author, or institution that published the information. They were more interested in answers that were brief, easy to read, and directly relevant to the question. When encountering a long text, students tended to skip it and move on to a more concise source. These findings indicate that the speed of obtaining answers remains a primary consideration. One student explained,

"I usually open the answer that appears at the top because I think that result is the easiest to find and is likely to match what I'm looking for. I usually look for other sources with explanations that are shorter and get straight to the point so I can understand them faster and finish my assignments right away" (W-SIS 1/2026)

When asked about the source of their answers, some students stated that the information was obtained from the internet but were unable to name the specific website. They are not yet accustomed to checking who wrote the information, when it was published, or whether the site comes from an official institution or a personal blog. However, when teachers provide instructions on using specific sources, students can follow those guidelines. The classroom teacher stated,

"When asked about the sources of information they used, the children often simply replied that the information was obtained from Google. They are

not yet accustomed to paying attention to the website's name, the source's credibility, or who wrote the information. Some students also immediately use the information they find without checking whether the content comes from a reliable source." (W-GK/2026)

Students' ability to distinguish between facts and opinions is also inconsistent. During learning activities, some students can identify facts when the information includes clear names, places, times, or data. However, they are still easily swayed by opinions when presented in firm and convincing language. Content with a large number of views, likes, and comments is often considered more accurate than less popular content. Another student added,

"I once immediately believed the content of a video because it had a very high number of views and many people had commented on it. At the time, I assumed that if a video had a lot of views, the information it conveyed must be true." (W-SIS 2/2026)

Students consult other sources only when teachers ask them to verify their answers against their textbooks or the explanations provided in class. In such cases, they may notice differences in terminology, content, and the completeness of the information. This indicates that the ability to compare is beginning to emerge, but it remains heavily dependent on the teacher's guidance and the design of the assigned tasks. A classroom teacher noted,

"Unless they're asked to compare multiple sources, students usually feel that the single answer they've found is sufficient to use. They tend to accept that information immediately without double-checking its consistency with other sources." (W-G/2026)

When the teacher asked them to rephrase the text, some students struggled. They could read the answer, but did not necessarily understand its meaning. The teacher then asked the students to read the source first, close the web page, and rewrite it in their own words. After using this method, the answers became simpler and easier to explain. The Islamic Education teacher emphasized,

"Sometimes the students' writing uses language that is too formal and doesn't match the way they usually explain things. After I asked further about the meaning of their answers, it turned out they had copied information from the internet and hadn't truly understood the content they'd written." (W-GPAI/2026)

The school does not prohibit the use of the internet because digital media can help students gain a broader range of knowledge. However, its use must still be accompanied by supervision and guidance from both teachers and parents. Based on research findings, students who receive guidance more frequently

demonstrate a cautious attitude when encountering conflicting information. They begin to ask teachers to verify the accuracy of answers and do not immediately share the information with their peers. Students generally cite sources only when it is part of an assignment. The principal stated,

"The internet can still be used as a learning resource because it provides a wealth of information that is easily accessible to children. However, when using it, they still need guidance and supervision from teachers and parents." (W-KS/2026)

The practice of epistemic verification cannot be sufficiently developed through digital device skills alone. This ability must be cultivated through the habit of reading sources in their entirety, cross-checking information with textbooks, asking teachers questions, and restating answers in their own words. Teachers also need to design assignments that not only assess outcomes but also focus on the process by which students acquire information. Through consistent guidance, students can evolve from internet users who merely seek quick answers into more careful, critical, and responsible readers of digital information.

2. Students' Culture of Instant Knowledge and the Relevance of Al-Kindi's Concepts of Reason and Science in Building Digital Critical Literacy

Research findings at MISS Ar Rohman Nglaban indicate that the ease of accessing information online is beginning to influence how students learn. They have become accustomed to searching for answers through search engines, short videos, and various easily accessible digital content. While this habit does help students complete assignments quickly, it is not always accompanied by an effort to understand the information in depth. Some students feel they already understand a topic simply because they have found a brief answer. However, when asked to explain it again, they are often unable to convey the answer effectively. An Islamic Education teacher noted,

"Children today are indeed quite quick at finding various answers online because information is easily accessible. However, they often do not truly understand the content of the answers they find. They tend to use that information immediately to complete assignments without reading it thoroughly or trying to rephrase it in their own words." (W-GPAI/2026)

The observation results also showed that students prefer information presented concisely and directly to the point. When faced with long articles, they tend to read only specific sections or look for sentences they consider most relevant to the question. In some activities, students chose summaries because they were considered more practical than reading the entire source. This habit leads them to gather many fragments of information but lack an understanding of the connections between one explanation and another. One student stated,

"If the reading is too long, I usually don't read it all from start to finish. I prefer to use sources with explanations that are brief, simple, and get straight to the point so they're easier to understand, and I can finish my assignments quickly." (W-SIS 1/2026)

This culture of instant knowledge is also evident in the habit of copying answers without reading the source in full. According to the document data, some students' answers included difficult terminology and sentence structures they are not accustomed to using. When asked to clarify the meaning of those answers, they were unable to explain them fully. This indicates that while the assignment was completed in writing, the process of understanding had not truly taken place. The classroom teacher explained,

"Some of the students' answers looked very good, complete, and used fairly advanced terminology. However, when asked about the meaning or intent behind those answers, they still struggled to explain them in their own words. Upon further investigation, it turned out that some of the answers were copied directly from the internet without being read or fully understood." (W-GK/2026)

Reliance on instant answers is also evident when students encounter questions that require reasoning. Some of them still try to find the same answer phrases online. They are not yet accustomed to connecting the information they find with material they have previously studied. If an answer isn't found immediately, students tend to ask classmates or teachers rather than form their own opinions. The internet is ultimately used more often as a place to find answers than as a tool to help understand a problem. The student said,

"If I can't find the answer right away online, I usually ask a classmate or ask the teacher for an explanation. I still feel confused when I have to formulate an answer on my own because sometimes I don't know how to select the important information and connect it into a coherent explanation." (W-SIS 2/2026)

Students are also more easily drawn to information presented through short videos, eye-catching images, and attention-grabbing headlines. Based on observations, some students were able to retell the content of videos they had watched but did not know who created them or where the information came from. Short excerpts from lectures are sometimes immediately accepted as correct explanations without considering the context of the discussion. The Islamic Education teacher added,

"Children easily remember short, engaging videos. However, they often don't know who is presenting the information or whether the explanation is complete." (W-GPAI/2026)

Critical thinking serves not only to find information but also to examine reasoning, compare sources, and assess the credibility of information. Observation results show that students are actually capable of thinking more critically when teachers pose guiding questions. They begin to consider where the information comes from, whether the answer is appropriate, and why a particular opinion can be trusted. A classroom teacher stated,

"When children are asked to explain why they chose a particular answer, they start thinking more deeply. They're actually capable, but they still need frequent guidance." (W-GK/2026)

Al-Kindi's concept of knowledge is also relevant to understanding students' tendency to settle for brief answers. Knowledge does not merely mean knowing many things, but understanding something correctly and being able to explain it systematically. In the learning process, changes become apparent when teachers ask students to read several sources, note down key points, and rephrase the information in their own words. Students find it easier to connect the information to the material they are studying. An Islamic Education teacher noted,

"A simple answer that a student truly understands is actually far better than a long answer that appears complete but was merely copied without understanding its content. When students understand their answers, they will find it easier to rephrase them in their own words and connect them to the material being studied." (W-GPAI/2026)

Assignments that only require short answers tend to lead students to take the quick route and copy information. Conversely, assignments that require reasons, comparisons, and explanations in their own words encourage students to think more deeply. Assessing the use of technology remains important, but it must be accompanied by efforts to foster the habits of reading, discussing, and taking responsibility for their answers. Students also need guidance to use information honestly, carefully, and in accordance with their learning needs. The principal stated,

"Technology still needs to be used in the learning process because it can help children obtain information more quickly and expand their learning resources. However, assigned tasks must also be designed to encourage students to read, compare, analyze, and express their opinions in their own words." (W-KS/2026)

The culture of instant knowledge arises not merely because students use the internet, but because the learning process is more often focused on results rather than understanding. The convenience of technology should not replace the processes of thinking, reading, and evaluating information. Al-Kindi's concepts of

reason and science demonstrate that sound knowledge arises from an orderly, critical, and responsible process. Teachers need to continually encourage students to read sources in their entirety, compare information, write answers in their own words, and not readily accept popular content.

Discussion

Students' Epistemic Verification Practices When Encountering Digital Information

Students are accustomed to using the internet to find answers, but this habit is not always accompanied by adequate verification. They tend to choose the top result, read a summary, and then immediately use it to complete their assignments. From Al-Kindi's perspective, this situation does not mean that students are incapable of thinking; rather, their reasoning skills have not yet been trained to systematically weigh and organize information ([Sholeh dkk., 2025](#)). Therefore, the concepts of reason and knowledge are used to examine the gap between the ability to access information and the ability to understand, evaluate, and take responsibility for that information. It is this gap that poses the primary challenge in the development of students' digital critical literacy.

The ability to distinguish between facts and opinions has also not developed uniformly. Students find it easier to identify facts when information includes names, places, dates, or clear data. Conversely, they are still prone to accepting opinions when they are presented in strong, engaging, and persuasive language. Content that receives many views, likes, or comments is often considered more credible than less popular information. Within Al-Kindi's framework of reason, this approach to evaluation indicates that decisions are still heavily influenced by superficial appearances and are not yet fully grounded in reason and evidence ([Setyariza dkk., 2024](#)).

Students' limitations are also evident when verifying the credibility of sources. They often cite Google as an information source without paying attention to the website's name, the author, the publishing institution, or the publication date. These elements are typically only considered after the teacher provides guidance. In Al-Kindi's view, knowledge cannot be built solely on easily accessible information; it must have verifiable foundations, origins, and justifications ([Saruhan, 2023](#)). These findings support other research indicating that the effective use of digital information requires not only the ability to locate materials but also the ability to assess whether a source is trustworthy and relevant to learning needs ([Goldman dkk., 2012](#)).

The ability to compare information began to emerge when students were asked to match answers found online with those in textbooks and the teacher's explanations. They were able to identify differences in content and the completeness of information, but such activities were rarely undertaken on their own initiative. The habit of settling for the first answer they find means students are poorly trained in concluding from multiple sources ([Sahidin & Abdurahim, 2023](#)). Within Al-Kindi's framework of reason, comparing information is a crucial step in transforming initial impressions into more thoughtful considerations.

Responsibility in using information is also still in its developmental stage. Students begin to ask teachers when they encounter differing answers, but they do not yet consistently cite sources or paraphrase information in their own words. For some students, citing sources is still seen merely as a requirement for assignments, not as part of academic integrity. Al-Kindi's concepts of reason and knowledge emphasize that knowledge is not merely about the truth or falsity of content, but also about how one acquires and uses it ([Rahmatullah & Miftah, 2022](#)). Digital critical literacy must integrate the ability to evaluate information with moral responsibility.

A culture of superficial information is evident in several concrete habits, such as reading only summaries, relying on instant answers, copying information without understanding it, readily believing popular content, and rarely reading sources in their entirety. While these habits do allow assignments to be completed more quickly, students' understanding becomes fragile and easily forgotten. This is evident when they struggle to rephrase the answers they have written. This finding supports various studies on digital literacy that emphasize that access to information must be accompanied by the ability to understand context, evaluate arguments, and process information more deeply so that learning does not stop at superficial knowledge ([Sari dkk., 2024](#)).

The key factors supporting the development of critical digital literacy stem from the teacher's role, task design, and a learning environment that allows for questioning. Teachers who ask students to cite sources, compare answers, and rephrase their responses can foster a more careful thought process. Conversely, assignments that only require short answers tend to reinforce the habit of copying. Digital media is not inherently a hindrance, but it becomes problematic when used without guidance and good reading habits. Other obstacles include low reading persistence, a desire to complete tasks quickly, and a reliance on top search results.

A common thread is evident in the relationship between digital literacy, critical thinking skills, and the ability to evaluate information. Various studies also confirm that proficiency with devices does not automatically make someone capable of determining accurate information ([Rani dkk., 2025](#)). This study expands on these findings by demonstrating more concrete examples among elementary madrasah students, such as citing Google as a source, selecting the top result, and trusting popular videos without checking their context. The distinction lies in the use of Al-Kindi's concepts of reason and knowledge to explain that the examination, understanding, and use of information must be viewed as both a cognitive and ethical process, not merely a technical skill.

Students' Culture of Instant Knowledge and the Relevance of Al-Kindi's Concepts of Reason and Science in Building Digital Critical Literacy

Students' experiences show that the internet has become the fastest way to find answers. When given an assignment, they tend to open the top search result, read the parts they consider important, and then use that information immediately. Viewed through Al-Kindi's philosophy, the problem lies in the use of reason that has not yet reached the stage of weighing and understanding. Reason is used only

to find information, not yet fully to examine, connect, and process it into understood knowledge.

The ability to distinguish between facts and opinions has also not developed evenly. Students easily recognize facts when information includes names, places, times, or clear data. However, they still readily accept opinions presented in firm, engaging, and persuasive language. A large number of viewers, "likes," or comments is often taken as a sign that a piece of information is true. Within Al-Kindi's framework of reason, this approach to evaluation indicates that decisions are still influenced by outward appearances rather than sufficient reasoning and evidence ([F. N. Islam, 2023](#); [N. Islam, 2023](#)). Therefore, students need to be encouraged to question the basis, source, and purpose of any information.

The ability to verify the credibility of sources has not yet become a habit. Students often cite Google as a source without paying attention to the website's name, the author, the publishing institution, or the publication date. These elements are usually only considered after the teacher provides guidance. In Al-Kindi's view, knowledge cannot be built solely on easily accessible information; it must be grounded in verifiable foundations ([Khaeruddin, 2025](#)). The ability to compare information actually begins to emerge when teachers ask students to cross-check answers found online with those in textbooks or classroom explanations. Students can identify differences in terminology, content, and the completeness of information, but they rarely do so on their own initiative.

The habit of settling for the first answer they find also leaves them ill-equipped to conclude from multiple sources. Viewed through the lens of Al-Kindi's concept of reason, comparing information is a crucial step in preventing hasty decision-making ([Buyung, 2024](#); [Buyung Putra dkk., 2026](#)). Digital literacy requires critical thinking skills, not merely the ability to use devices. Therefore, assignments should encourage students to explain the differences between sources and the reasons for choosing a particular conclusion ([Intansari dkk., 2026](#)).

Students begin to ask questions when they encounter differing answers, but they are not yet consistent in citing sources or rephrasing information in their own words. For them, citing sources is still often seen as a teacher's directive rather than part of academic integrity. Through Al-Kindi's concepts of reason and knowledge, this responsibility can be understood as the relationship between truth, the means of acquiring knowledge, and the impact of its application ([Putri, 2023](#)). This finding expands the discussion on digital literacy by demonstrating that critical thinking should go hand in hand with ethical conduct when writing, speaking, and disseminating information.

A culture of superficial information is evident in habits such as reading summaries, seeking instant answers, copying without understanding, and avoiding lengthy sources. However, when asked to rephrase the information, some of them were unable to explain the content of their answers. Al-Kindi's concept of knowledge helps explain that new information is valuable as knowledge only if it is understood systematically and can be justified ([Kamaluddin, 2021](#)). The use of short videos may lead to a more superficial approach to learning if not accompanied by guidance.

The key supporting factor comes from teachers who not only evaluate the final answer but also inquire about the sources, reasoning, and the process by which students obtained the information. Class discussions, cross-referencing with textbooks, and assignments requiring students to rewrite content in their own words have proven to help students think more deeply. Assignments that only require short answers tend to encourage the habit of copying, whereas assignments that require comparisons and justifications encourage analysis. These findings align with research emphasizing the importance of instructional innovation and institutional support in developing digital literacy ([Devia Awaliah Zahrani dkk., 2026](#)) ([Hamid dkk., 2025](#)). This means that technology is more beneficial when used in purposeful, challenging activities that allow for reflection.

Barriers stem not only from digital media but also from weak reading habits, the desire to complete tasks quickly, and reliance on top search results. A learning environment that places too much emphasis on “correct” answers can also make students less confident in forming their own opinions. This situation indicates that strengthening digital literacy depends not only on technological proficiency but also on curiosity, independent learning, and a supportive environment ([Kharisma dkk., 2024](#); [Rustamova & Absamadova, 2022](#)). Schools need to foster a culture of reading, discussing, asking questions, and verifying sources so that students can develop resilience in the face of the fast-paced flow of information.

These findings support the view that technical proficiency in using the internet does not automatically lead to critical literacy. A common thread is the importance of source evaluation, critical thinking, and the ability to recognize misleading information. However, this study broadens the discussion by highlighting forms of an “instant knowledge” culture among elementary madrasah students, such as selecting the top-ranked answer, reading summaries, and copying without understanding. Al-Kindi’s thought is not treated as a topic in the history of philosophy, but rather as a framework that links the ability to evaluate information with depth of understanding, integrity, and moral responsibility in daily learning activities.

Conclusion

The practice of epistemic verification among students at MISS Ar Rohman Nglaban is still in its early stages. Students are already accustomed to using the internet to search for information and complete assignments, but they do not always carefully verify their sources. They still often choose the answer that appears at the top of the search results, cite Google as a source, and are not yet consistent in distinguishing facts from opinions or comparing different pieces of information. The verification process usually only takes place after a teacher provides guidance. Nevertheless, guidance through leading questions, cross-checking with textbooks, class discussions, and rewriting answers in their own words is beginning to help students become more careful and responsible when using digital information.

A culture of instant knowledge is evident in students’ habits of choosing summaries, seeking quick answers, copying without understanding, and readily trusting content that is appealing or popular. This situation indicates that the ability to obtain information has not yet been fully matched by the ability to process

it into truly understood knowledge. In this regard, Al-Kindi's concept of reason helps explain the importance of weighing, comparing, and verifying information before accepting it. Meanwhile, the concept of science emphasizes that knowledge must be understood systematically and deeply and used responsibly. Based on these findings, digital critical literacy can be developed through five steps: finding information, verifying sources, comparing content, drawing conclusions, and using information responsibly.

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