

# **Information Literacy Competency in Undergraduate Thesis Writing: A Case Study at STKIP PGRI Sidoarjo**

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## **Abstract**

This study investigates the level of information literacy (IL) competency among undergraduate students at STKIP PGRI Sidoarjo and its implication for academic writing learning outcomes, particularly in thesis writing. IL skills are fundamental in guiding students to locate, evaluate, and use information ethically and effectively, especially in composing research-based academic texts. This research employs a qualitative descriptive case study design involving questionnaire-based surveys and document analysis of plagiarism reports. The participants were 36 undergraduate students from four study programs and lecturers of academic writing courses. Results revealed varied levels of IL skills among students, with significant challenges in source evaluation and citation. Many students struggled to reduce similarity index below the institutional tolerance level, indicating a gap between IL knowledge and application. The study highlights the importance of integrating IL more robustly into academic curricula and suggests practical interventions to improve IL instruction and reduce plagiarism.

*Keyword: Information Literacy, Thesis Writing*

## **INTRODUCTION**

In the context of higher education, writing a thesis is a mandatory academic task for undergraduate students in Indonesia, as outlined in Circular Letter No. 152/E/T/2012 from the Directorate General of Higher Education. This regulation emphasizes the importance of producing scientific work as a graduation requirement, demanding that students not only be proficient in writing but also demonstrate strong information literacy (IL) competencies. In today's digital era, where students are constantly surrounded by a vast amount of information, IL has become an essential skill. It encompasses the ability to identify one's information needs, search effectively, evaluate

sources critically, manage information responsibly, and apply it ethically in academic writing. These competencies are especially crucial when composing a thesis, particularly in the introduction chapter, where students are expected to build a theoretical foundation based on credible, relevant, and properly cited academic sources.

Despite the critical role IL plays in academic success, many students in Indonesian universities still show limited mastery of these skills. A report from the World Bank (2018) highlighted that more than half of Indonesia's educated population remains functionally illiterate—able to read but lacking the capacity to comprehend, interpret, and use information meaningfully. This challenge is also evident at STKIP PGRI Sidoarjo, where students are required to complete a thesis as a graduation prerequisite. Data from the 2019/2020 academic year revealed that out of 93 students who submitted their thesis for plagiarism screening, 40 of them received similarity scores above 40% for their introduction chapters. Such high similarity levels indicate inadequate skills in citation, source integration, and paraphrasing—key components of IL.

Academic writing, a required course taken before thesis preparation, is designed to provide students with essential skills in organizing arguments, referencing appropriately, and using academic conventions. However, the knowledge gained from this course is often not reflected in students' writing practices. Many still rely heavily on copy-pasting background literature without properly synthesizing the information or contextualizing it within their research. This disconnect suggests that although IL is taught, it has not been effectively internalized or practiced consistently. Given these challenges, this study aims to explore the extent to which undergraduate students at STKIP PGRI Sidoarjo possess and apply information literacy competencies in writing their theses, and how these skills influence academic writing outcomes. The research also seeks to inform future instructional strategies and curriculum development to enhance students' ability to produce high-quality, original academic work.

## **METHODS**

This research employed a qualitative descriptive case study design to examine undergraduate students' information literacy (IL) competency in thesis writing and its implications for academic writing learning outcomes. The case study approach was chosen to allow an in-depth exploration of students' real experiences, practices, and challenges in applying IL skills within an educational setting. A multiple-case design was applied to enable comparisons between student groups with different levels of thesis similarity scores, thus providing richer and more contrasting data.

The participants included 36 final-year undergraduate students from four study programs at STKIP PGRI Sidoarjo—English Education, Mathematics Education, History

Education, and Elementary Teacher Education—who had completed their undergraduate theses in the 2020/2021 academic year. Purposive sampling was used to select students based on the initial similarity results from plagiarism checks in chapter one of their theses. Students with high similarity scores (above 40%) and those with low scores (below 25%) were intentionally selected to represent contrasting cases. Additionally, four academic writing instructors from each study program were included to provide pedagogical perspectives on the integration of IL instruction into the curriculum.

Three types of data were collected to ensure triangulation: survey responses, interviews, and document analysis. A structured questionnaire was developed based on the five core standards of the Association of College and Research Libraries (ACRL, 2000): (1) identifying information needs, (2) accessing information effectively, (3) evaluating sources critically, (4) using information ethically, and (5) applying information to create knowledge. Each standard was operationalized into specific indicators and translated into 30 Yes/No items using the Guttman scale. The instrument was validated through expert judgment involving two IL specialists and one curriculum lecturer, ensuring content validity. The internal consistency of the instrument was reviewed descriptively due to the dichotomous nature of the items.

To complement the survey data, document analysis was conducted on students' plagiarism reports from Turnitin, focusing specifically on similarity percentages and patterns of citation or paraphrasing errors in chapter one. Semi-structured interviews were conducted with academic writing lecturers to explore how IL is taught, reinforced, and assessed in the writing curriculum. Interviews were recorded and transcribed with participants' consent.

Data analysis followed Miles and Huberman's (1994) interactive model involving data condensation, data display, and conclusion drawing. Survey data were tabulated and categorized under the five ACRL IL domains. Document analysis results were coded for common citation and sourcing issues. Interview transcripts were analyzed thematically to identify recurring challenges in IL instruction and application. A matrix was constructed to map each research question to relevant data sources, ensuring coherence between findings and objectives.

This multi-method triangulation and cross-case comparison aimed to enhance the credibility of the study and provide a comprehensive view of how IL competencies manifest in students' academic writing practices, particularly in the production of an undergraduate thesis.

## RESULTS AND FINDING ANALYSIS

This section presents the findings of the study, which investigates undergraduate students' information literacy (IL) competencies and their implications for thesis writing at STKIP PGRI Sidoarjo. The data were obtained through questionnaires, document analysis of plagiarism reports, and interviews with academic writing instructors. The analysis focuses on how students recognize information needs, search and evaluate sources, cite references properly, and apply information ethically. The following findings are organized into four major themes that align with the five ACRL information literacy standards.

### Self-Assessment of Information Literacy Skills

The questionnaire results indicated mixed levels of students' confidence in their IL competencies. When asked to assess their ability to search for sources in the library, only 50.0% of students rated their skills as good. In contrast, a significantly higher percentage (94.4%) reported confidence in using internet sources, such as Google and Google Scholar, to find academic materials. Despite this, only 66.7% felt confident in quoting sources correctly, and even fewer—just 58.3%—claimed to understand citation ethics adequately.

This trend suggests that while students are digitally literate in basic searching techniques, their understanding of more complex IL dimensions such as evaluating source credibility and avoiding plagiarism remains limited. The visual representation below illustrates this self-assessment.

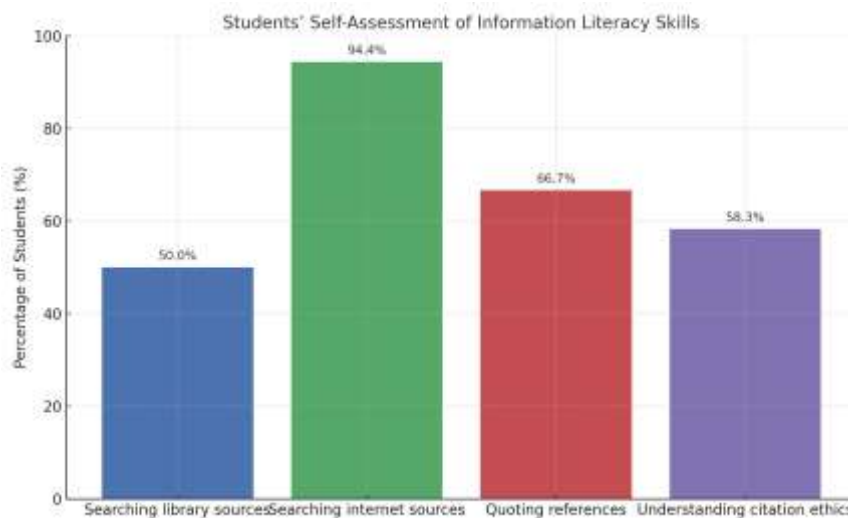


Chart 1. Students' Self-Assessment of Information Literacy Skills

The chart clearly shows a gap between students' digital searching abilities and their mastery of academic citation and ethical use of information, which are essential in scholarly writing.

### **Use of Sources and Citation Practices in Thesis Writing**

The document analysis of students' plagiarism reports further supports the findings from the self-assessment. Of the 36 participants, 40 students across the full sample had initially received similarity scores above the institution's tolerance threshold of 40% for chapter one of their thesis. These high levels of textual similarity typically resulted from poor paraphrasing, direct copying without quotation marks, and the omission of proper in-text citations.

In many cases, students pasted large portions of background theory or literature without attempting to summarize or contextualize the content. Interviews with academic writing instructors revealed that students often failed to understand the difference between citing and synthesizing, which contributed to their inability to express original arguments. Several instructors noted that students primarily used internet sources such as blogs, personal websites, or non-peer-reviewed content, rather than academic journals or institutional repositories.

A recurring pattern in the plagiarism reports was the overreliance on a small number of sources. Rather than diversifying their references, students frequently cited the same textbooks or internet materials multiple times, which indicated limited information searching strategies. This behavior not only affected the academic quality of their writing but also increased the likelihood of redundancy and self-plagiarism.

### **Students' Search Behavior and Source Selection**

Survey responses and follow-up interviews suggested that students tend to prioritize speed and accessibility when selecting sources. Google was the most frequently mentioned search tool (100%), followed by Google Scholar (80.6%), with few students using institutional repositories or library databases. While this reflects strong digital instincts, it also highlights a surface-level engagement with information searching.

When asked about the use of advanced search techniques, Boolean operators (AND, OR, NOT), and filtering by academic relevance, less than 30% of students could apply these effectively. Many admitted they simply clicked on the first few search results, assuming these were the most credible, without considering domain authority or publication bias. Furthermore, only a small proportion (22.2%) recognized the importance of using academic databases like e-Perpusnas or RAMA Repository.

This finding points to a critical gap between students' perceived and actual competence. Although they can navigate the internet with ease, their search strategies lack depth and academic rigor. The tendency to rely on keyword matching rather than conceptual exploration reduces the quality and diversity of the information gathered.

### **Ethical Use of Information and Plagiarism Awareness**

Understanding and applying the ethics of information use remains one of the weakest areas among students. Only 58.3% reported knowing when to cite, and less than half could distinguish between direct quotation, paraphrasing, and summarizing. During the interviews, lecturers expressed concern that students often failed to cite even when copying entire sentences or translating from another source.

This situation is further complicated by students' misunderstanding of what constitutes plagiarism. Several participants believed that changing a few words in a sentence was sufficient to avoid plagiarism, while others were unaware that translation from Bahasa Indonesia to English still required citation. This misunderstanding aligns with the high similarity index found in many of the initial plagiarism checks.

Interestingly, even students who had passed the academic writing course with good grades demonstrated poor citation habits in their thesis drafts. This discrepancy suggests that although the theoretical aspects of IL are introduced in class, they are not sufficiently reinforced through practical application. Some instructors admitted that due to time constraints, citation exercises and peer-review sessions were often skipped or shortened, reducing opportunities for experiential learning.

### **The Role of Academic Writing Instruction**

The study also explored how IL is incorporated into the academic writing curriculum and to what extent it supports students in developing critical academic skills. According to lecturers interviewed, academic writing courses at STKIP PGRI Sidoarjo are designed to introduce IL concepts, such as identifying credible sources, citation formatting, and constructing arguments using references. However, the course is typically offered in a single semester and is not reinforced in subsequent writing assignments.

As one instructor stated, "Students often memorize citation formats without truly understanding the purpose of referencing or how to paraphrase ideas effectively." This pedagogical approach may explain why many students display mechanical application of citation rules without critical engagement with the content. The absence of sustained IL practice across semesters weakens students' ability to transfer these skills to long-term projects like thesis writing.

Furthermore, academic writing instruction is often delivered as a generic module without adapting to the specific needs of each discipline. For example, education majors may need more exposure to action research frameworks and educational databases, while history students may require training in archival research and source evaluation.

The study found that instructors who collaborated with librarians or integrated citation management tools like Mendeley or Zotero into their classes reported better outcomes. Students in these classes showed a stronger understanding of referencing conventions and were more likely to achieve lower similarity scores in their final theses.

## **DISCUSSION**

The findings of this study reveal significant gaps between students' perceived and actual competencies in information literacy (IL), particularly in academic writing and thesis composition. While most students expressed confidence in their ability to search for information—especially through the internet—the data show that their understanding of ethical information use, source evaluation, and citation practices remains limited. These findings are consistent with the growing body of literature emphasizing the disconnect between digital literacy and academic information literacy in higher education (Head, 2013; Andretta, 2012).

Students' overconfidence in their searching abilities is one of the most prominent themes. The high percentage (94.4%) of students who claimed to be skilled at using internet sources supports the argument that today's learners are digitally immersed. However, this digital fluency does not automatically translate to academic information literacy, which requires critical thinking, source credibility evaluation, and integration of information into one's own writing. As emphasized by Limberg and Sundin (2006), information literacy is not only about access but also about meaningful engagement with information within a specific context. This study's findings reflect that such engagement is still underdeveloped among students.

The self-assessed competency data also suggest an overreliance on Google-based tools, with minimal use of library resources and academic databases. This behavior reflects the "convenience bias" documented in prior studies, where students prioritize speed and familiarity over reliability (Gross & Latham, 2007). Although tools like Google Scholar offer access to peer-reviewed literature, the inability to differentiate between scholarly and non-scholarly sources remains a critical issue. The frequent use of blogs, non-academic websites, and textbooks as primary references suggests students are still guided more by accessibility than academic rigor.

The analysis of plagiarism reports strengthens this argument. High similarity scores, particularly in chapter one of students' theses, indicate a lack of understanding in

synthesizing sources. Many students copied large segments of text without integration or proper attribution—practices that may be linked to insufficient instruction in paraphrasing and referencing. This issue confirms the observation by Pecorari (2003), who argued that plagiarism often stems from poor source management rather than deliberate misconduct. In the context of STKIP PGRI Sidoarjo, where students are expected to write theses in English, the additional linguistic challenge may further hinder their ability to paraphrase or summarize information properly.

Furthermore, students' misunderstanding of plagiarism—including translating texts from Bahasa Indonesia without citing the source—highlights a need for deeper conceptual instruction on academic ethics. Many students in this study believed that superficial changes (e.g., rewording or translating) were enough to avoid plagiarism. This misconception has also been reported in previous research, where students were found to possess only a procedural, not ethical, understanding of citation (Howard, 1999).

Academic writing instruction, while present in the curriculum, appears to lack continuity and depth. A one-semester course may introduce citation styles and basic referencing mechanics, but it is insufficient to develop sustained IL competencies. The absence of reinforcement throughout the curriculum results in shallow learning that does not transfer effectively to more complex writing tasks like thesis development. This finding resonates with reports by Walton and Cleland (2017), who argued that IL should be scaffolded across programs and disciplines, rather than confined to a single module.

An important insight from this study is the pedagogical implication of how IL is taught. Lecturers interviewed in this study admitted to time constraints and a lack of follow-up activities related to citation, synthesis, and the use of reference tools like Mendeley. Where instructors did integrate such tools and collaborated with librarians, students demonstrated better performance and lower plagiarism rates. This suggests that effective IL instruction benefits from a collaborative, interdisciplinary approach involving writing instructors, subject experts, and information professionals.

The discipline-specific needs of students also deserve attention. For instance, students in English Education may require instruction in accessing international journals and databases for language teaching research, while History Education students may need more training in source triangulation and archival material analysis. The uniform design of the academic writing course, regardless of department, does not cater to these diverse needs. As Bruce (2004) noted, IL should be contextualized to support subject-based inquiry and knowledge creation.



Moreover, the prevalence of high similarity scores despite students having passed academic writing courses indicates a gap between theoretical knowledge and practical application. It supports the hypothesis that IL competencies are not merely skills to be learned but habits of mind that must be cultivated through ongoing engagement. This echoes the constructivist view of IL as a process embedded in authentic learning contexts (Kuhlthau, 2004). Students must be given opportunities to engage in IL practices across various writing tasks, not just during thesis preparation.

The study's findings also suggest that current assessment methods in academic writing courses may not fully capture students' IL development. Grades may reflect knowledge of citation formats but not the ability to apply them meaningfully in extended writing. Alternative assessment approaches—such as writing portfolios, annotated bibliographies, and plagiarism prevention workshops—could provide more accurate measures of IL competency.

It is also worth noting the socio-cultural dimension of the findings. Many students in this study appeared to view writing as a task of compiling information rather than constructing an argument. This aligns with research in Asian academic contexts where students often perceive knowledge as fixed and transferred, rather than constructed (Ballard & Clanchy, 1997). To foster critical engagement with information, educators need to encourage epistemological awareness—helping students see themselves as knowledge producers, not just consumers.

Lastly, the study highlights the urgency of institutional commitment to IL development. STKIP PGRI Sidoarjo, as a teacher education institution, holds a strategic role in shaping future educators' academic integrity and information practices. Integrating IL into the academic culture requires not only curriculum redesign but also faculty development, librarian involvement, and administrative support. Implementing IL as a graduate attribute, embedding it in assessment rubrics, and ensuring continuous student-librarian engagement are critical steps toward long-term change.

## **CONCLUSION**

This study examined undergraduate students' information literacy (IL) competencies and their implications for thesis writing at STKIP PGRI Sidoarjo. The findings reveal a significant discrepancy between students' self-perception and actual application of IL skills. While most students reported confidence in searching for online academic sources, their ability to critically evaluate, ethically use, and effectively integrate those sources into academic texts remained limited. This was evident from high similarity scores in thesis plagiarism checks and a tendency to rely heavily on copy-pasted material without proper citation or synthesis.

The analysis also indicated that students often misunderstand plagiarism and ethical source use, particularly in cases involving translation or paraphrasing. Despite completing academic writing courses, many students were unable to demonstrate adequate IL competencies in their thesis work. This suggests that a single-semester writing course is insufficient to instill deep and sustained IL habits. Instead, a more comprehensive, scaffolded instructional approach is needed—one that integrates IL instruction across various courses and assignments throughout students' academic journey.

Moreover, the study highlights the need for pedagogical reform in academic writing instruction. Collaborative teaching involving both content instructors and librarians can provide more holistic IL education. Tailoring writing instruction to specific disciplinary needs and embedding citation tools such as Mendeley or Zotero into classroom practice may improve student performance and reduce academic dishonesty.

The findings also carry institutional implications. STKIP PGRI Sidoarjo, as a teacher education institution, should consider adopting a more integrated IL policy across its curriculum. This includes reinforcing academic integrity, promoting student-librarian engagement, and incorporating IL as a core graduate attribute. In doing so, the institution can not only enhance the quality of thesis writing but also better prepare future educators with the critical literacies needed for lifelong learning in the digital age.

Future research is encouraged to explore longitudinal impacts of integrated IL instruction, particularly in relation to students' development of critical thinking, academic voice, and disciplinary engagement across different stages of higher education.

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