CHAPTER IV

FINDING AND DISCUSSION

In this chapter the researcher will describe process and result of the research. This report contains all activities during research in STKIP PGRI Sidoarjo.

4.1. Findings

The research was held in STKIP PGRI Sidoarjo for the undergraduate students who took thesis subject in year academic 2020/2021. There were 8 students from four department of undergraduate programs in STKIP PGRI Sidoarjo, who got the highest and the lowest percentage of plagiarism chek result and had and have carried out the thesis exam. They were participants who responded to the information literacy questionnaire through a google form which can be accessed via a link share by a WhatsApp message. The question were delivered in Bahasa Indonesia considering the respondents more from non English department than respondents from English department. The result of the responses are presented in the form of tables and diagrams and then described according to the indicators in the five information literacy standards for higher education.

Table 3. The Participants of the questionnaire

Department	**The highest Score Of Plagiarism Check**	**The Lowest Score of Plagiarism Check**
English Education	ILR	FDP
Mathematics Education	WL	RFY
History Education	AFJ	VBP
Elementary School Education	PW	SN

The first part of the questionnaire was asked in general about the identity of the participants and general information about gadgets they have and their use as well as questions about their information literacy skills. All of the participants have smartphone and laptop. They mostly used their devices to communicate, search information, play games, take pictures and creating videos. To search for informationas described in the following diagram that the most widely used search engine is Google then Yahoo and Mozilla. And when they were asked in searching references in writing a thesis, which one do you visit the most? They prefered to come directly to the library or visit the STKIP PGRI Sidoarjo Repository Site online.

Diagram 1. The Most Used Search Engine

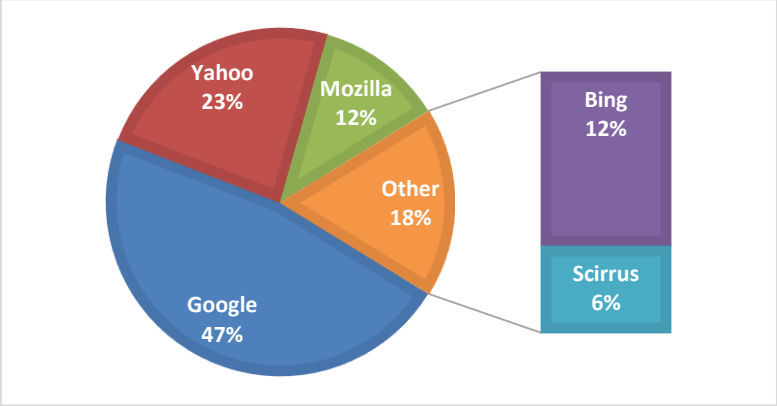
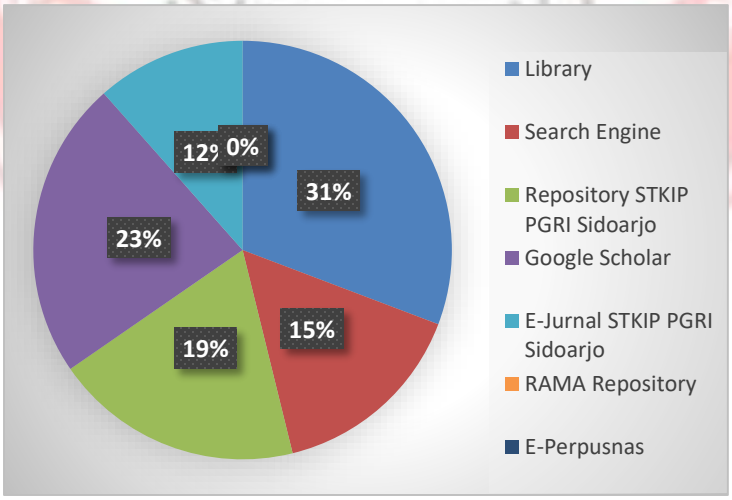
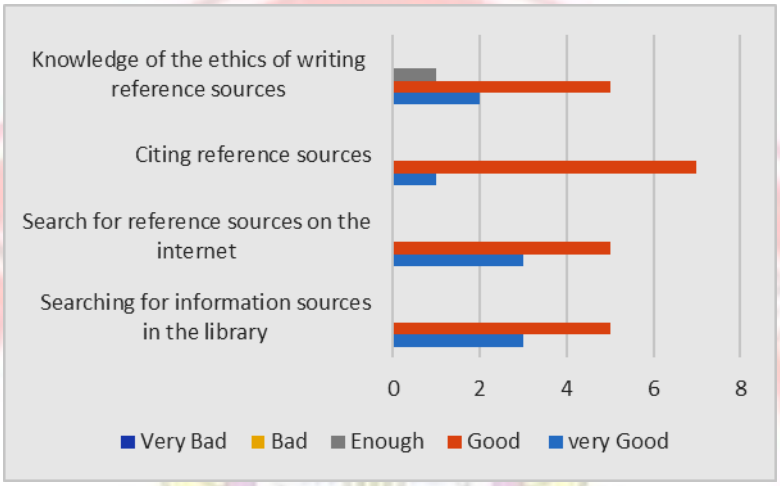


Diagram 2. Most Frequently Visited Places in Looking for References in Writing Thesis



In the second part of the questionnaire, respondents were asked to self-assess their information literacy skills. The result are presented in diagram 3 below. This self-assessment uses a likert scale skoring, wuth five choice scales, namely very good, good, enough, less, and very less.

Diagram 3. Students Self-Assessment of Information Literacy Skills



From the data presented in the diagram, it can be seen that almost all respondent stated that their information literacy skills were good. In the assessment of the ability to search for information sources both directly in the library and online, 5 respondents stated that they had good skills and 3 other respondents stated that they had very good search skills. Likewise, their knowledge of ethics of writing reference sources, 5 respondents said it was good, 2 respondents said that it was very good and 1 respondent stated that their knowledge was sufficient. While in the assessment of the ability to cite reference sources, 7 respondents stated they had good abilities and 1 respondents stated their abilities were very good.

4.2. Discussion

This chapter presents a comprehensive discussion of the findings, elaborating the implications of students' information literacy competency (ILC) on thesis writing, and their alignment with academic writing outcomes. The study was conducted among undergraduate students from four different departments at STKIP PGRI Sidoarjo, with participants selected based on the highest and lowest similarity indexes in their thesis plagiarism checks. The findings not only reveal the surface-level understanding of information literacy but also expose deeper issues regarding its application, perception, and impact on academic performance. This discussion aims to critically analyze each element of information literacy in light of the literature presented in introduction and literature review then draw connections to national education policy, institutional academic practices, and broader pedagogical implications.

4.2.1 Relevance of Information Literacy in Academic Writing and Thesis Development

Before delving into the data-specific interpretations, it is imperative to contextualize the discussion within the theoretical framework laid out in the thesis proposal. The necessity for robust information literacy skills in academic writing is underlined by numerous educational regulations and standards. According to Circular No. 152/E/T/2012 from the Directorate General of Higher Education (DirJen DIKTI, Kemendikbud, 2012), every undergraduate student must produce scientific writing to fulfill graduation requirements. The development of such writing is contingent upon students' ability to identify, locate, evaluate, and ethically use information.

Budiyanto (n.d.) emphasizes that students must evaluate existing scientific work to position their research in the academic discourse effectively. Without this foundational skill, students may either unintentionally plagiarize or misinterpret scholarly work, leading to substandard academic

performance. The findings support this view: students with high plagiarism scores often exhibited weaker information literacy skills, specifically in evaluating and integrating sources—a finding that reaffirms the correlation between IL competency and originality in thesis development.

The importance of information literacy also appears prominently in academic writing curriculum design. The academic writing course, often undertaken in the fourth or fifth semester, is designed to develop students' research and writing skills, including mastery of referencing and citation techniques, paraphrasing strategies, and academic language conventions. The research clearly demonstrates a gap between what is taught in this course and how students apply this knowledge in practice, particularly during the thesis writing process.

4.2.2 Analysis of Standard 1: Defining and Articulating Information Needs

The first standard of the ACRL framework asserts that "the information literate student defines and articulates the need for information" (Association of College and Research Libraries, 2000). This standard is foundational; without the ability to recognize what information is needed, subsequent steps in the research process may be misguided or irrelevant. The findings reveal that the majority of students demonstrated a basic awareness of their information needs. When asked about their methods for sourcing thesis material, students indicated they used devices such as smartphones and laptops to access the internet, primarily through Google, and visited online and physical repositories.

This behavior suggests that students are not entirely unaware of the importance of information seeking. However, the quality and intentionality of their information search are limited. Most students relied on a single search engine—usually Google—which raises concerns about search habits that prioritize convenience over credibility. This over-reliance potentially

limits their exposure to scholarly databases or academic search engines like Google Scholar, JSTOR, or the Directory of Open Access Journals (DOAJ), which offer peer-reviewed content. Students' information needs, while acknowledged, were not always clearly articulated or translated into systematic search behavior.

As stated by Catts and Lau (2008), the ability to articulate a research question or topic and transform it into keywords or queries is a defining marker of IL. This is particularly vital in thesis writing, where the topic's scope, relevance, and originality depend heavily on how well students frame and refine their information needs. In the findings, some students expressed difficulty identifying the right terms when search results yielded overwhelming or irrelevant content. This suggests a lack of strategic search planning, indicating that they are more reactive than proactive in their search practices.

Interestingly, students with lower plagiarism scores (e.g., ILR, AFJ, PW, and WL) were more likely to explore multiple avenues for information, including visiting libraries physically and browsing institutional repositories. This behavior aligns with the IL continuum proposed in the literature, in which students with higher IL skills move from basic digital literacy to a more integrated understanding of how to define and pursue specific information goals (Campbell in Catts & Lau, 2008). In contrast, those with high similarity scores often defaulted to web pages and blog content, which are not always suitable for academic writing.

This observation confirms Pattah's (2014) emphasis on the need for collaboration between libraries and faculty to help students become not just consumers but evaluators of information. It also highlights the urgency for embedding structured instruction on advanced search strategies and source evaluation early in the academic writing curriculum. Without these, students may continue

to demonstrate a superficial understanding of information needs, resulting in thesis topics that are poorly grounded in literature.

4.2.3 Analysis of Standard 2: Accessing Information Effectively and Efficiently

Standard 2 is focused on the ability to "access needed information effectively and efficiently." In theory, this standard builds upon Standard 1 by assuming that the student has already defined a clear information need and is now ready to locate the material that satisfies that need. However, the findings show a sharp divergence between these conceptual expectations and actual student behavior.

From the research data, it was evident that students struggled with several aspects of this standard. First, while all participants were comfortable using basic search tools, the overwhelming majority did not employ advanced search strategies. Only a few students were familiar with Boolean operators or understood how to use filters, keyword variations, or limiters to refine their searches. This lack of skill not only prolongs the search process but also leads to inefficiencies, as students spend time navigating irrelevant content or, worse, settle for substandard sources.

Moreover, while the students knew how to navigate catalog systems or digital libraries, their ability to interpret search results and determine relevance was weak. For instance, many respondents could not explain how they differentiate between peer-reviewed and non-peer-reviewed materials or how to recognize citation metrics as indicators of source credibility. These gaps align with UNESCO's finding that Indonesian learners often struggle with functional illiteracy—that is, the ability to read but not comprehend or critically analyze information (The World Bank, 2018).

A deeper problem lies in the students' overconfidence. As seen in the self-assessment diagram from Chapter IV, many students rated themselves as "good" or "very good" in information retrieval skills. However, objective performance on related tasks—such as formulating search strategies or evaluating source types—did not align with these self-perceptions. This mismatch highlights a "Dunning-Kruger effect" in IL, wherein students may not be skilled enough to recognize their own deficits. The implication here is serious: if students believe they are proficient, they are less likely to seek help or accept corrective feedback, thus reinforcing ineffective behaviors.

The study also revealed departmental differences in information access strategies. For instance, English Education students often reported accessing digital repositories and using English-language sources, while students from Mathematics or History Education departments often relied on translated or simplified content. This finding suggests that subject-matter familiarity and language proficiency may influence how students engage with information systems. Therefore, a one-size-fits-all approach to IL training may not be adequate. Instead, institutions should consider discipline-specific IL workshops that cater to the research norms of each field, as recommended by Klucevsek (2017).

Finally, institutional factors must be acknowledged. Although STKIP PGRI Sidoarjo has online and physical libraries, students indicated occasional limitations in the availability of up-to-date resources. When asked what they do if they cannot find a reference in the STKIP repository, most said they simply go to another library or purchase a book. While this behavior shows adaptability, it also underscores systemic issues: students should not be required to "hunt" for basic academic resources. Instead, the institution must expand access to scholarly databases and train students to use open-access tools effectively.

4.2.4 Analysis of Standard 3: Evaluating Information and Sources Critically

The third standard in the ACRL framework—"The information literate student evaluates information and its sources critically and incorporates selected information into his or her knowledge base and value system"—is arguably the most intellectually demanding. It requires not only technical proficiency but also academic maturity, judgment, and ethical sensitivity. The findings of this research reveal that most students at STKIP PGRI Sidoarjo exhibit only a surface-level mastery of this standard.

This is particularly troubling given the centrality of this skill in thesis writing. As noted in the thesis proposal (Chapter II), students are expected to position their research within a scholarly conversation. Budiyanto emphasized that writers must analyze and evaluate existing literature to justify the novelty of their own work. However, when students merely accept the first source that appears in a search engine or rely on blog articles, the result is weak theoretical grounding and, often, recycled ideas.

The data show that three students agreed with the idea that the first result from a search engine is always the best, and six students believed all search engines yield the same results. These perceptions indicate a lack of critical evaluation. Such assumptions are indicative of what Catts & Lau (2008) warn against—equating information access with information literacy. It is not enough to retrieve data; students must assess the source's authority, objectivity, currency, and relevance.

Compounding the problem is the students' misunderstanding of peer-reviewed literature. Although some students claimed to use journals, they often could not distinguish between scholarly and popular sources. This confusion was more prevalent among non-English majors, who expressed difficulty navigating English-language databases. Again, this points to the need for

both discipline-specific and language-sensitive IL training modules, echoing Klucevsek's (2017) call for scientific information literacy to be tailored to each field's discourse practices.

Interestingly, self-assessment data contradicts performance-based observations. Many students rated themselves as "good" or "very good" at evaluating sources and citing them correctly. Yet, interviews revealed their understanding was superficial, relying heavily on guessing or trial-and-error. This discrepancy supports Pattah's (2014) concern that students may overrate their competencies unless feedback loops—such as guided practice and iterative writing assignments—are built into the academic curriculum.

More troubling is the observation that even when students could identify credible sources, they failed to integrate them meaningfully into their own arguments. Instead of synthesizing perspectives or offering critique, they often inserted quotations with minimal interpretation. This passive engagement with literature results in fragmented and unoriginal thesis chapters and may partly explain why their plagiarism scores remain high despite formal training in citation. Quoting is not the same as integrating; true academic writing demands that writers "talk back" to their sources (Rodburg, 1999).

To address this gap, academic writing courses must go beyond mechanical citation rules and teach analytical reading, note-taking, paraphrasing, and critical synthesis. These are the true hallmarks of Standard 3 and the bedrock of independent scholarly writing.

4.2.5 Analysis of Standard 4: Using Information Effectively to Accomplish a Purpose

Standard 4 focuses on the student's ability to use information effectively to accomplish a specific academic purpose. In the context of thesis writing, this refers to the development of coherent arguments, alignment between research questions and data, and the proper sequencing of

ideas. In practice, this standard integrates all previous standards into the student's output: the written thesis.

The findings show that although students understand the general structure of a thesis and the importance of supporting their arguments with evidence, their actual ability to use sources to build a case is uneven. Most students cited sources to fulfill formal requirements rather than to substantiate claims or engage in academic dialogue. For example, instead of linking quotations to the argument being made, many simply dropped in citations at the end of a sentence. This "citation dumping" approach dilutes the argumentative coherence and weakens the intellectual contribution of the paper.

Rodburg (1999) notes that a strong thesis consists of two parts: a clear claim and an outline of how the claim will be supported. Unfortunately, many students at STKIP PGRI Sidoarjo seem to struggle with both. While they may state a topic, they often fail to frame it as a problem or position it within an academic debate. This suggests a lack of experience with rhetorical structures common in academic genres, such as problem-solution, cause-effect, or compare-contrast patterns.

One recurring issue is the lack of synthesis. Students often present multiple sources in succession without connecting them to each other or to their own stance. This reflects a linear, list-based approach to writing rather than an analytical or integrative one. As Kastens (n.d.) explains, the introduction of a thesis must not only present background information but also articulate a research gap and justify the investigation. This level of reasoning was often missing in student work, resulting in weak theoretical frameworks and underdeveloped research rationales.

Furthermore, data from the self-assessment and questionnaire indicate that many students find it difficult to write Chapter I (Introduction). This is consistent with the findings of Pattah (2014), who argues that even when students are aware of what is expected, they often lack the procedural and cognitive strategies to execute these expectations. The implication is clear: more scaffolding is needed. Instructors should provide models, outline templates, and guided revision sessions to help students develop argumentative clarity and structural coherence.

Interestingly, students with lower plagiarism scores demonstrated stronger alignment between source use and argument development. They often reported using outlines or graphic organizers during the planning phase, which may have contributed to more cohesive papers. This highlights the potential value of integrating metacognitive strategies into academic writing instruction, a practice supported by ACRL's performance indicators.

4.2.6 Analysis of Standard 5: Understanding Ethical, Legal, and Social Issues in Information Use

Standard 5 pertains to students' understanding of the economic, legal, and social aspects of information use—most notably, avoiding plagiarism, respecting intellectual property, and understanding citation norms. At first glance, this standard appears to be the best understood among participants. Most students stated that they were aware of plagiarism policies and considered them important. Many could articulate the basic principles of citation and demonstrated familiarity with referencing styles like APA.

However, despite this awareness, plagiarism remained high. This contradiction suggests that knowledge of ethical standards does not automatically translate into ethical behavior. Several factors could explain this gap. First, some students may not fully understand what constitutes

plagiarism. For instance, they may believe that changing a few words or rearranging sentence order is sufficient paraphrasing. Second, they may be under pressure to complete their theses quickly and therefore copy material out of expedience rather than ignorance. Third, they may lack confidence in their own voice and use sources excessively to "pad" their arguments.

This finding resonates with Klucevsek's (2017) argument that ethical information use is a learned behavior, not an innate moral instinct. Students must be taught not just the "what" but the "how" of ethical practice. This includes training in paraphrasing, summarizing, quoting, and using citation management tools. The importance of this training is reinforced by the fact that citation ethics was one of the few areas where students gave themselves high scores but still performed poorly on plagiarism metrics.

Furthermore, ethical information use must be situated in a broader socio-academic context. As Catts & Lau (2008) argue, the ethical use of information is tied to students' identity as members of a scholarly community. If students feel disconnected from this community, they are less likely to internalize its values. Therefore, institutions must foster a culture of academic integrity that goes beyond punitive measures. This includes mentorship programs, writing centers, honor codes, and supportive peer review processes.

Finally, the institutional policy at STKIP PGRI Sidoarjo—capping plagiarism at 40%—may unintentionally send the wrong message. While it sets a threshold, it also implies that some level of plagiarism is acceptable. Such messaging can lead to complacency rather than a deep understanding of originality. A more effective strategy would be to shift the emphasis from "plagiarism reduction" to "authentic authorship," thereby encouraging students to value their own intellectual contributions.

4.2.7 Cross-Standard Insights: Patterns, Gaps, and Interdependencies

A comparative analysis across the five standards reveals several critical insights. First, while students generally demonstrate baseline familiarity with the concept of information literacy—particularly in defining information needs (Standard 1) and recognizing the importance of ethical use (Standard 5)—their performance across the more cognitively demanding standards (Standards 2, 3, and 4) is markedly weaker. This discrepancy suggests that information literacy among STKIP PGRI Sidoarjo students is compartmentalized, with procedural understanding (how to search, cite, or paraphrase) often decoupled from conceptual mastery (why and when to evaluate, synthesize, and argue).

This fragmentation is consistent with the findings of Catts & Lau (2008), who noted that many students across developing countries exhibit "functional literacy" rather than true IL competency. Students can perform isolated tasks but struggle to integrate them into coherent academic practices. In this study, for example, students could define research problems (Standard 1) but often failed to locate the most relevant academic sources (Standard 2), critically evaluate them (Standard 3), and incorporate them effectively into their own work (Standard 4). This breakdown across the IL continuum (Campbell in Catts & Lau, 2008) is likely a major contributing factor to the high plagiarism rates and low-quality thesis outputs identified in the initial institutional observations.

Another notable trend is the students' overestimation of their competencies. Across all standards, self-assessment scores consistently outpace observed behaviors. This trend may be attributed to limited metacognitive awareness—a condition where learners lack the ability to accurately reflect on their knowledge and skills. Without accurate self-assessment, students may

feel no need to seek improvement or additional support. As such, part of any IL intervention must involve not only skill development but also tools for self-monitoring and reflection.

Additionally, there is a discernible difference in performance based on plagiarism scores. Students with lower similarity indexes demonstrated more proactive research behaviors, such as visiting physical libraries, using multiple search platforms, and organizing their writing with outlines. These behaviors suggest a higher level of IL maturity, reinforcing the argument that better IL skills correlate with better academic writing outcomes. Conversely, students with higher similarity scores showed a tendency toward "quick fix" strategies—relying on blogs, copying and pasting, or citing without comprehension.

This insight supports the multi-case design of the research. By comparing high- and low-performing students, the study is able to provide evidence that the variance in IL competency is not merely due to individual preference or effort but reflects structural, pedagogical, and curricular gaps that must be addressed institutionally.

4.2.8 Implications for Academic Writing Learning Outcomes

The implications of these findings for academic writing instruction are significant. Academic writing is not merely about grammar, structure, or citation; it is about constructing a scholarly argument informed by credible, well-analyzed, and ethically integrated sources. Each standard of information literacy feeds directly into this process:

Standard 1 supports students in narrowing research topics, crafting thesis statements, and identifying the scope of their work.

Standard 2 enables students to locate supporting evidence and data, ensuring their arguments are grounded in authoritative scholarship.

Standard 3 guides the evaluation of these sources for bias, reliability, and relevance.

Standard 4 equips students to synthesize information, draw conclusions, and express original insights.

Standard 5 instills a sense of academic ethics and integrity throughout the writing process.

When any of these standards are weak or absent, the academic writing product suffers. Students may rely on poor-quality sources, make vague or unsupported claims, misrepresent information, or unintentionally plagiarize. The result is a paper that lacks credibility, originality, and intellectual depth. This outcome directly contradicts the objectives of the academic writing curriculum, which seeks to produce graduates capable of producing logical, objective, systematic, and reliable scientific work (Tim Pusat Pendidikan dan Pelatihan Pegawai Kemendikbud, 2018).

The current curriculum, while including academic writing as a required subject, may not allocate sufficient time, scaffolding, or resources to IL. This underemphasis is problematic given the central role of IL in academic writing outcomes. As highlighted in the proposal, academic writing is typically introduced in the fourth or fifth semester. However, a single-semester course, often crowded with technical rules and citation formats, is unlikely to instill the full range of IL skills needed for thesis writing. Students need sustained exposure, iterative practice, and interdisciplinary application to internalize these skills.