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Information Literacy Skills of EFL Students Based on The Seven Pillars Model

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Abstract

Information literacy (IL) is a cornerstone of academic and professional success, particularly in navigating the increasingly complex digital information landscape. This study explored graduate students' perceptions of information literacy (IL), emphasizing their experiences with the Seven Pillars of Information Literacy model in a Critical Literacy class at Universitas Negeri Yogyakarta. Employed a mixed-method approach, data were gathered from six students through a Likert-scale questionnaire and semi-structured interviews. The quantitative findings revealed that participants demonstrated strong competencies in identifying, gathering, and managing information but encountered challenges in evaluating and synthesizing sources. Thematic analysis of interview data further revealed difficulties with dense academic texts and time management, leading to trade-offs between efficiency and depth in their academic work. Despite these challenges, participants recognized IL as essential for research, critical thinking, and academic achievement. The study underscores the need for advanced IL instruction that moves beyond foundational skills to address critical evaluation and synthesis, preparing students for both academic and professional contexts. Recommendations for targeted interventions and curriculum enhancements are discussed, contributing to the discourse on effective IL education in higher education.

Keywords: *Information Literacy; Seven Pillars Model; Higher Education*

Introduction

Information is regarded as a crucial component of all human endeavours. In our modern world, the idea of information as a consumable good is becoming more widely acknowledged. Information is required for many activities that affect making decisions or addressing issues. It is something which makes things less unsure. That is what helps in decision-making (Huvila, 2022; Jarrahi et al., 2023). Given the growing significance of information in decision-making and problem-solving, the concept of literacy itself has also evolved over time to encompass broader skills such as reading, writing, and critical evaluation.

Historically, the term 'literate' originally referred to somebody who possessed knowledge and understanding of literature, or more broadly, someone who was well-educated and knowledgeable (Nutbrown et al., 2017). The term "literacy" has expanded its definition in the late nineteenth century to include the skills of reading and writing, while yet retaining its larger connotation of being learned or

educated in certain areas of study (Hobbs, 2018; Sailors et al., 2018). As literacy broadened its scope, the digital age has elevated information literacy to an essential skill.

Although the concept of information literacy predates the digital era, its necessity as a skill set has become increasingly evident due to the expanding availability of information (Landøy et al., 2020). Information literacy has a strong connection to the digital divide and addressing the gaps (Hadimani & Rajgoli, 2010). IL is seen as an important instrument for lifelong learning. It is appropriate for use in all academic levels, learning situations, and disciplines. It encourages students to skilfully handle information, explore their interests more deeply, and take control of their own educational growth (Chow & Wong, 2020). Moreover, the aim is to teach students the ability to find information and supports lifelong learning by ensuring they can access the resources required for any decision or activity (Xuan Huy & Huyen, 2021). With the constant generation of information in the digital age, information literacy is indispensable.

The significance of information literacy in the modern age of the 21st century cannot be disregarded. In an era dominated by digital advancements, the cultivation of information literacy skills has become a key component of success in personal, academic, and professional achievement (Machin-Mastromatteo, 2021). Researchers have worked to refine the components of IL to meet diverse societal needs, especially given the growing demand for skills to effectively obtain, evaluate, and apply knowledge in this era of continuous transformation (Olatoye et al., 2021). Information literacy encompasses the ability to seek, accurately assess, proficiently employ, and effectively transmit information. Beyond its application in academic writing, IL is crucial for achieving success in all aspects of life, from educational to professional activities.

Moreover, information literacy is an essential ability in modern day society, especially with the development of internet information resources (Zimmerman & Ni, 2021). This ability improves the capacity to make well-informed decisions, critical thinking, and effectively contribute in academic, professional, and personal undertakings. It involves accessing, evaluating, and analysing information for its accuracy, dependability, and validity (Hicks & Lloyd, 2023). In defining information literacy, scholars have highlighted core skills that enable individuals to effectively engage with and utilize diverse information sources.

Defining IL often focuses on a set of core skills, (Mayer & Krampen, 2016; Shashikala, 2023) states Information literacy is a set of skills that needs people to "recognize when information is required and to be able to locate, evaluate, and use the required information effectively". As defined by Olatoye et al. (2021), information literacy refers to the ability to identify information needs, find relevant sources, access the information contained they provide, evaluate its quality, and organize and apply it effectively. This focus on competencies highlights the challenges individuals face when navigating vast and varied sources of information.

Consequently, the large amount of information available in a variety of sources and formats presents impediments to its usage. To attain their educational, social, and economic goals more successfully, the student community and individuals, in particular, require special abilities to cope with this rapid growth of information (Haider & Sundin, 2022). IL is extremely important for economic progress, educational attainment, and overall social, cultural, and personal well-being (Lauri et al., 2015). The emphasis on developing information literacy has therefore prompted the establishment of various models to guide its acquisition.

In higher education, information literacy holds immense importance as it enables students to develop the critical skills needed to navigate the expansive information landscape of today (Adhikari & Joshi, 2024). With these abilities, students can effectively locate, evaluate, and use information from diverse sources (Trixa & Kaspar, 2024). In higher education, where research and academic rigor are paramount, information literacy enables students to discern credible sources, critically analyze information, and synthesize knowledge across disciplines (Le et al., 2024; Patil, 2019). Hence, information literacy serves as a cornerstone for academic success, professional development, and lifelong learning in higher education (Gerrity, 2018).

Within the field of education, the concept of information literacy plays an important part in facilitating students' comprehension of various subject matters, enabling them to explore their personal interests, and fostering the cultivation of essential research skills (Kong, 2014). Possessing strong information literacy skills enables individuals to cultivate a lifelong learning mindset, thereby preparing them to effectively navigate the complexities and possibilities presented by the digital age. Lanning & Caitlin (2022) states the acquisition of information literacy abilities exerts a substantial impact on the educational achievements of students. Students who possess enough mastery of information literacy abilities will possess the capacity to develop into autonomous learners or those committed to lifelong learning (Salim et al., 2018). To achieve this, the Seven Pillars model serves as a widely recognized framework for developing information literacy. This model outlines principles and skills that form the foundation of IL, helping individuals not only access but also assess and use information effectively. By basing oneself on these principles, a person can become more competent at managing and utilizing information appropriately and efficiently.

Serving as the basis for this research, the Seven Pillars of Information Literacy model was developed by the Society of College, National, and University Libraries (SCONUL) in England. It is a widely acknowledged model that defines seven essential skills for information literacy (SCONUL et al., 2011), which includes:

1. Identify: The ability to recognize required information.
2. Scope: The ability to find sources of the latest knowledge and differentiate ways to overcome information gaps.
3. Plan: The ability to build strategies for finding information.
4. Gather: The ability to locate and obtain information.
5. Evaluate: The ability to assess, compare, and analyze information from various sources.
6. Manage: The ability to convey, utilize, and organize information in ways appropriate to the situation.
7. Present: The ability to incorporate and expand upon existing knowledge as a basis for creating new knowledge.

In prior studies, the Seven Pillars model has been extensively employed to evaluate and develop information literacy skills across various academic and social contexts. For instance, Sulasari et al. (2020) explored how students in the History of Islamic Civilization program at Sultan Thaha Saifuddin State Islamic University, Jambi, understood and accessed information based on this model. Their findings indicated that while students demonstrated a basic understanding of information literacy, diverse interpretations led to a narrow conceptualization. Performance varied, with five students excelling and two meeting standard criteria, reflecting overall proficiency in implementing the model's components. Similarly, Shukla (2021) examined the information literacy skills of students at the University of Jammu's Department of Library and Information Science using SCONUL's core model. The findings underscored the Seven Pillars model’s effectiveness in assessing and enhancing IL competencies, though students' overall skills were deemed average.

In addition to these findings, several other studies have utilized the Seven Pillars model in unique contexts. Lukman et al. (2024) applied the model to analyze the information literacy competencies of the community in Pattallassang Urban Village, while Stebbing et al. (2019) demonstrated its effectiveness in academic settings. However, despite the model's broad application, there is limited research on the information literacy skills of English education students, especially at Yogyakarta State University. Recognizing this gap, the present study aims to explore the understanding of information literacy, and the challenges graduate students encounter when accessing information using the Seven Pillars model. This study hypothesizes that graduate students face significant challenges in applying the Seven Pillars model due to limited familiarity with its principles. Furthermore, the findings are expected to provide valuable

contributions to the field. Examining IL skills specifically within English education, this research provides insights that can enhance curriculum development and instructional practices.

Method

This study aimed to explore graduate students' comprehension of information literacy challenges they face when accessing information through the Seven Pillars of Information Literacy model in the Critical Literacy class at Universitas Negeri Yogyakarta. Therefore, the participant group included of six students who met the eligibility criterion of having attended at least half of the course meetings, ensuring they had sufficient exposure to the content (Bridges, 2017). In accordance with ethical research standards, participants provided informed consent before taking part in the study. To achieve a holistic understanding of the students' experiences, a mixed-method approach, as outlined by Creswell & Creswell (2018), was adopted to obtain a comprehensive understanding of the students' experiences and perceptions (Hall & Liebenberg, 2024; Van Vo, 2015).

A Likert-scale questionnaire, distributes via Google Forms, served as the primary quantitative tool in this study. It was designed to assess participants' information literacy skills based on the Seven Pillars of Information Literacy model (SCONUL et al., 2011). The questionnaire contained 22 statements, each related to one of the seven components of the model. Participants were asked to rate each statement on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree). To ensure clarity and structure in data analysis, the items were organized according to the Seven Pillars model: Identify, Scope, Plan, Gather, Evaluate, Manage, and Present (SCONUL et al., 2011).

Upon completion of the questionnaire, the responses were classified based on frequency (e.g., how many responses were "Strongly Agree," "Agree," etc.), and to calculate the percentages, the following formula was used:

P=F/N x100%

where P represents the percentage, F is the frequency, and N is the total number of respondents. The results were then interpreted using established percentage ranges (Creswell & Creswell, 2018): 0%-19.99% was classified as Strongly Disagree, 20%-39.99% as Disagree, 40%-59.99% as Neutral, 60%-79.99% as Agree, and 80%-100% as Strongly Agree. To calculate the percentage index, the highest (Y) and lowest (X) possible scores were determined as follows:

Y = Highest Likert score × number of respondents (e.g., Y = 5 × 6 = 30)

X = Lowest Likert score × number of respondents (e.g., X = 1 × 6 = 6)

To interpret the scores, the final index formula was applied, following the approach outlined by (Moon, 2019):

Index Fromula % = Total score / Y × 100

In addition to the quantitative questionnaire, semi-structured interviews were conducted to gather deeper insights into students' experiences with information literacy. These interviews followed a set of questions aligned with the Seven Pillars model to ensure consistency across all interviews. Thematic analysis, based on Braun & Clarke (2006) six-step framework, was applied to analyze the interview data (Ahlin, 2019). This included familiarization, coding, searching for themes, reviewing themes, defining themes, and writing the final report. This approach allowed for the identification of patterns and themes related to students' understanding of and challenges with information literacy.

To ensure the validity of the findings, triangulation was used by comparing the results of the questionnaire with the findings from the interviews. This strategy is widely recognized as an effective method for improving data validity (Creswell & Creswell, 2018; Palinkas et al., 2015). Additionally, the

reliability of the questionnaire was tested through an expert review in the relevant field. To analyze the data, quantitative data collected from the questionnaire were examined using basic descriptive statistics, including frequency distributions and percentage calculations. In addition, qualitative data from the interviews were analyzed thematically to explore in-depth themes and patterns. The use of both quantitative and qualitative methods enabled a well-rounded analysis of the students' perceptions and experiences related to information literacy.

While this study provides valuable insights, its limitations should be acknowledged. The small sample size (n=6) and focus on a single class at Universitas Negeri Yogyakarta may limit the generalizability of the findings. Future research could address these limitations by expanding the sample size, exploring other methods like observation or longitudinal studies, and incorporating additional data collection techniques to enhance validity and reliability.

Findings

This study examines the participants' information literacy skills, as evidenced by their responses to the questionnaire. In addition, we also delved into their perceptions of their abilities across the seven components of the information literacy model, including identifying, scoping, planning, gathering, evaluating, managing, and presenting information. The findings offer a deeper understanding of how participants perceive and apply these critical skills in their academic endeavours. The following tables provide detailed data on their responses, followed by a descriptive analysis.

Table 1. Perceived Identify Aspect

No	Statements	Likert Scale					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
1.	I can identify a lack of knowledge in my subject area.	0	0	1	3	2	25	25/30 x 100 = 83.33% (Strongly Agree)
2.	I can identify a search topic / question & define it using simple terms.	0	0	1	3	2	25	25/30 x 100 = 83.33% (Strongly Agree)

The table above showed that respondents strongly agreed with the first two statements under the *Identify* pillar. In both statements, participants overwhelmingly chose "Strongly Agree," resulting in high values of 83.33%. Furthermore, when the scores of the other options were added together, both statements received an almost perfect score of 25. The Identify aspect achieved an average score of 83.33%, which suggested that students had a very favorable view of their ability to identify necessary information. This result underscored students' strong confidence in recognizing their information needs as part of the process of effective information retrieval.

Table 2. Perceived Scope Aspect

No	Statements	Likert Scale					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
	I can identify information gaps.	0	0	0	3	3	27	27/30 x 100 = 90% (Strongly Agree)
4.	I can identify the most suitable information.	0	0	0	4	2	26	26/30 x 100 = 86,66% (Strongly Agree)
5.	I can identify the available search tools.	0	0	1	4	1	24	24/30 x 100 = 80% (Strongly Agree)
6.	I can identify various formats of information.	0	0	1	4	1	24	24/30 x 100 = 80 % (Strongly Agree)

As shown in the table above, most students chose the “Strongly Agree” option, which had the highest score, for the third statement related to the *Scope* pillar. When combined with the scores from other options, the third statement received an almost perfect score of 27, with a high interpretation value of 90%. Similarly, for the fourth statement, the majority of students selected the "Agree" option, resulting in a score of 26 and an interpretation value of 86.66%. Furthermore, with the same score as the sixth statement, the final score obtained by the fifth statement was 24 with an interpretation value of 80%. The overall average score for the scope aspect was 84%, reflecting a very positive perception of students' ability to identify information gaps, select relevant information, and effectively use various search tools. These findings support the conclusion that students were confident in their ability to identify information gaps during the information retrieval.

Table 3. Perceived Plan Aspect

No	Statements	Likert Scale					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
7.	I can define a search strategy by using appropriate keywords and setting limits.	0	0	2	4	1	27	27/30x100= 90% (Strongly Agree)
8.	I can select the most appropriate search tools.	0	0	1	2	3	26	26/30x100= 86,8 % (Strongly Agree)
9.	I can identify controlled vocabularies to aid in searching if appropriate.	0	0	1	3	2	25	25/30x100= 83,33% (Strongly Agree)

Next are statement seven to nine, which correspond to the *Plan* pillar. As shown in the table above, it showed that the participants strongly agreed in all three statements. The seventh statement received an almost perfect score of 27, with the interpretation value of 90%, reflecting strong competence in defining search strategies. This positive trend continued in the eighth statement, where a score of 26 resulted in an interpretation value of 86.8%, indicating confidence in selecting the right search tool. The ninth statement maintained this similar pattern with a score of 25 where the interpretation value was 83.33%, emphasizing agreement in identifying a controlled vocabulary for effective search.

These results collectively demonstrate strong agreement and proficiency among the students in the assessed aspects of the *Plan* pillar. The average score for the *Plan* aspect was 87%, suggesting that students held a highly positive view of their ability to develop strategies for information retrieval. These findings indicate that students were very confident in their ability to create effective information-finding strategies, including defining search keywords, selecting appropriate tools, and utilizing controlled vocabularies.

Table 4. Perceived Gather Aspect

No	Statements	Likert Scale					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
10.	I can access full text information (both print and digital.)	0	0	1	3	2	25	25/30x100= 83,33% (Strongly Agree)
11.	I can read and download online material & data.	0	0	0	2	4	28	28/30x100= 93,33% (Strongly Agree)
12.	I can keep up to date with new information.	0	0	1	4	1	24	24/30x100= 80% (Strongly Agree)
13.	I can engage with the community to share information.	0	0	1	3	2	25	25/30x100= 83,33% (Strongly Agree)

Next, the statement items number ten to thirteen related to the *Gather* aspect. The table above showed that respondents strongly agreed with all four statements under this pillar. For each statement, participants overwhelmingly selected "Strongly Agree," resulting in high values of 80 %. However, with a final score of 28, with an interpretation value of 93.99%, the eleventh statement remained as the highest score. The average score for the *Gather* aspect was 85%, suggesting that students had a very positive perception of their ability to locate and access information. These findings indicated that students were confident and proficient in gathering information from various sources, including both print and digital formats, and were actively engaged in staying updated and sharing information within their community.

Table 5. Perceived Evaluate Aspect

No	Statements	Likert Scale					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
14.	I can distinguish between different information resources.	0	0	1	2	3	26	26/30x100= 86,66% (Strongly Agree)
15.	I can assess the quality, accuracy, and relevance of the information resources.	0	0	2	3	1	23	23/30x100= 76,66% (Agree)
16.	I can identify key points and arguments.	0	0	1	1	4	27	27/30x100= 90% (Strongly Agree)

Next, the statement items from fourteenth to sixteenth related to the *Evaluate* pillar. As shown in the table above, the fourteenth statement stood out as all students selected the "Strongly Agree" option, resulting in a perfect score of 26 and an interpretation value of 86,66%. This statement had the highest interpretation value among all. The sixteenth statement followed a similar pattern, with the majority of students selecting the "Strongly Agree" option, obtaining the second-highest score of 27 and an interpretation of 90%. In contrast, the fifteenth statement received the lowest score among the two, totaling score 23, and its interpretation value of 76.66%. The average score for the *Evaluate* aspect was 84%, suggesting that students had a positive perception of their ability to evaluate information. These findings indicated that while students were generally confident in assessing information from various sources, they felt somewhat less assured when evaluating the quality and relevance of certain resources.

Table 6. Perceived Manage Aspect

No	Statements	LIKERT SCALE					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
17.	I can use bibliographic software (Zotero, Mendeley, etc.) to manage information.	0	0	1	2	3	26	26/30x100= 86,66% (Strongly Agree)
18.	I can cite sources using referencing styles like APA, MLA, Chicago, etc.	0	0	0	2	4	28	28/30x100= 93,33% (Strongly Agree)
19.	I can use appropriate statistical software to manage data (like SPSS, Excel, PSPP, SOFA Stat etc.	0	0	2	4	0	22	22/30x100= 73,33% (Agree)

Next, the statement items for number seventeenth to nineteenth related to the *Manage* pillar. As shown in the Table 6, evidently that all of the students chose the “Strongly Agree” option for both statements in the seventeenth and eighteenth statements under the *Manage* pillar. Thus, the score and interpretation value were different. The seventeenth statement had the second-highest score of 26, with an

interpretation value of 86.66%. The eighteenth statement stood out with the highest score of 28 and almost perfect interpretation value of 93.33%. In contrast, the nineteenth statement received a slightly lower score of 22, resulting in an interpretation value of 73.33%. In conclusion, the average score for the *Manage* aspect was 84.44%, indicating that students had a very positive perception of their ability to organize, manage, and communicate information. These findings suggested that students were proficient in managing information in various forms, including referencing sources and utilizing software, but may have felt less confident with more specialized software, such as statistical tools.

Table 7. Perceived Present Aspect

No	Statements	LIKERT SCALE					Score	Interpretation
		SD (1)	D (2)	N (3)	A (4)	SA (5)		
20.	I can summarize information.	0	0	0	3	3	27	27//30x100= 90% (Strongly Agree)
21.	I can add new information in a present knowledge environment.	0	0	0	3	3	27	27/30x100= 90% (Strongly Agree)
22.	I can communicate orally.	0	0	2	2	2	24	24/30x100= 80% (Strongly Agree)

Lastly, the statement items from number twentieth to twenty-second related to the the *Present* pillar. As shown in the table above, for all the three statements, the participants overwhelmingly chose "Strongly Agree" option. The twentieth statement received a score of 27, reflecting an interpretation value of 90%. The twenty-first statement also received a score of 27, with the same interpretation value of 90%. The twenty-second statement, while still receiving strong agreement, had a slightly lower score of 24, corresponding to an interpretation value of 80%. The average score for the Present aspect was 87%, indicating that students had a very positive perception of their ability to synthesize and present information. These findings suggested that students were confident in their ability to integrate and communicate knowledge, although they felt slightly less confident about oral communication compared to summarizing or adding new information.

The interviews with three participants were analyzed to gain a deeper understanding of how they apply information literacy in their academic work. Through thematic analysis, this process identified key themes that align with the Seven Pillars of Information Literacy Model, shedding light on the challenges they faced and emphasizing the importance of information literacy in higher education. The findings from the interviews are summarized below:

The Seven Pillars of Information Literacy Model

The interviewees demonstrated a solid understanding of the seven pillars of information literacy. They expressed confidence in their ability to engage with various aspects of information literacy, such as identifying, gathering, evaluating, managing, and presenting information. For example, Participant 1 (P1) shared that he is able to identify his personal information needs and understands how to look for relevant data in texts, likening it to following a thread through the material. This indicates a clear grasp of identifying informational needs. Similarly, Participant 2 (P2) emphasized her ability to recognize areas in her studies that require further exploration, explaining that she knows what she needs to learn more about based on her current knowledge. This shows her awareness of the scope of information literacy and her ability to assess knowledge gaps effectively.

As for their research planning strategies, Participant 3 (P3), she described her approach to planning research by breaking down tasks into smaller parts, which helps her avoid feeling overwhelmed when conducting searches. This strategy indicates a well-developed plan for locating information. In terms of gathering and evaluating information, Participant 2 mentioned the importance of cross-referencing sources and verifying the credibility of the material before using it for assignments, showcasing strong evaluation skills. Similarly, Participant 3 highlighted her process of creating summaries and outlines to organize information clearly before presenting it to others, demonstrating her competence in both managing and presenting information. The overall responses revealed a high level of proficiency in engaging with all aspects of information literacy, with participants expressing confidence and demonstrating practical strategies for applying these skills in their academic work.

Challenges That May Arise

Despite their strong competencies in information literacy, participants faced challenges when applying information literacy skills, particularly when dealing with complex or dense academic material. Many found the advanced texts used in their critical literacy courses difficult to absorb on the first read. Participant 1 noted that the materials were dense, requiring him to read the same chapter two or three times before it made sense. This recurring difficulty highlighted the depth and complexity of the content, which posed a significant challenge for the students. Additionally, time constraints were another major issue, as participants struggled to balance their academic responsibilities. In response, they adopted strategies such as skimming or scanning the texts to quickly identify key points. Participant 2 explained that when time was tight, she would skim for a general understanding and then go back for deeper reading if needed. Similarly, Participant 3 shared that she used the same approach when under time pressure, choosing to skim through the material first to get an overview before delving deeper into specific sections. Although these strategies helped participants save time, they also revealed a trade-off between efficiency and gaining a deeper understanding of the material. The need for balancing depth and speed was a consistent challenge across all participants.

Importance of Information Literacy in Higher Education

Moving forward, all participants acknowledged the critical role of information literacy in higher education, emphasizing its importance in research, problem-solving, and academic success. They discussed how information literacy enables them to evaluate sources, efficiently conduct research, and apply knowledge to real-world scenarios. Participant 3 highlighted that being able to determine whether a source was trustworthy was a key skill, and she appreciated how information literacy helped her make those decisions. Furthermore, participants saw these skills as crucial for solving academic problems. Participant 2 shared that when tasked with solving problems or writing research papers, she relied on her ability to find good sources and evaluate them critically, which made her research process much smoother. Ultimately, all participants agreed that information literacy was foundational for success in higher education. As Participant 1 pointed out, without strong information literacy, it would be hard to succeed in higher education because it serves as the base for everything they do. These reflections emphasize the crucial role that information literacy plays in academic achievement, supporting students' ability to think critically, conduct research effectively, and present well-informed arguments.

Discussion

This study explored graduate students' perceptions of information literacy (IL) and the challenges they face in applying it, specifically through the Seven Pillars of Information Literacy model. The findings provide valuable insights into how students engage with IL skills in academic settings and the difficulties they encounter when navigating the vast amounts of information available. These results align with the broader discussion in the literature on the increasing importance of information literacy in the digital age, where skills like identifying, evaluating, and using information effectively are necessary for both academic success and lifelong learning.

The participants in this study demonstrated a solid understanding of the initial stages of information literacy, particularly in identifying their information needs and gathering relevant resources. This is consistent with the framework proposed by Mayer & Krampen (2016) and Olatoye et al. (2021), where IL is defined as the ability to recognize, seek, and use information effectively. However, while students were proficient in identifying and locating information, they encountered challenges when dealing with the more complex aspects of the Seven Pillars model, particularly in evaluating the credibility of sources and presenting synthesized knowledge. This difficulty with more advanced IL skills is commonly found in the literature, where it is argued that while basic IL tasks like searching are often well-developed, critical evaluation and synthesis remain problematic for many students (Reynders et al., 2020). These challenges can lead to gaps in students' ability to engage deeply with information, which in turn affects their academic performance and their ability to participate in more sophisticated discussions or research.

These difficulties are in line with findings from Haider & Sundin (2022), who pointed out the struggles students face in managing large volumes of information and assessing its quality. The results of this study underscore the tension between the abundance of information available today and students' ability to effectively evaluate and use it, as also highlighted by Lauri et al. (2015). The challenges faced by students in applying information literacy go beyond simply gathering resources; they extend to the critical evaluation and management of information, which are vital components of academic work. Participants noted that evaluating the relevance and credibility of information sources, as well as organizing and synthesizing this information, were significant hurdles. These struggles reflect the findings of Sulasari et al. (2020), who found that while students were familiar with basic IL concepts, more advanced skills like evaluating sources and presenting new knowledge were less clearly understood. The current study reinforces these challenges, emphasizing the need for greater attention to these critical areas in IL instruction. Such struggles are not unique to the participants in this study but rather are reflective of broader trends in IL education. As noted in previous research, students often report feeling more confident in basic tasks like finding information but less so in applying critical thinking to evaluate the information they find (Maab et al., 2024). This gap between knowledge retrieval and evaluation often leads to inefficiencies in students' research processes.

Despite these challenges, participants acknowledged the importance of information literacy in their academic and professional development. The widespread recognition of IL as a crucial skill for success in higher education and beyond is consistent with the perspectives of Machin-Mastromatteo (2021) and Adhikari & Joshi (2024), who emphasized that mastering IL enables students to think critically, make informed decisions, and engage deeply with academic content. The study participants expressed that without strong IL skills, academic success would be difficult to achieve, underscoring the vital role of IL in fostering autonomous learning and informed decision-making.

The importance of IL in higher education, as discussed in the literature, is also reflected in the participants' experiences. As noted by Gerrity (2018) and Trixa & Kaspar (2024), information literacy is integral not only for academic success but also for students' ability to engage with and critically analyze information in various disciplines. This aligns with the aim of this study to investigate how graduate students in English education at Yogyakarta State University understand and apply IL. While the study addressed a gap in the literature on IL in specific academic fields, it also revealed that students, even within the field of English education, face considerable challenges in applying IL skills across the Seven Pillars framework. These findings indicate that although students are often aware of the value of IL, they may not always have the tools or guidance needed to address the more intricate aspects of the model, such as critically evaluating or synthesizing information from multiple sources. It is critical, therefore, for IL instruction to move beyond basic information retrieval techniques to incorporate advanced critical thinking and synthesis strategies (Kong, 2014).

These findings suggest that, while students demonstrate an understanding of the core principles of IL, there is a need for more comprehensive instruction on the deeper aspects of the model. By focusing on areas such as the critical evaluation of sources and the presentation of synthesized information, educators can help students navigate the increasingly complex information landscape more effectively.

The study highlights the need for targeted interventions and instructional strategies that address the challenges identified, particularly those related to evaluating and presenting information.

In conclusion, this study contributes to the growing body of research on information literacy in higher education by highlighting the specific challenges faced by graduate students, especially within the context of English education. The findings indicate that while students possess some foundational IL skills, they struggle with more advanced components, which aligns with the broader literature on IL and its evolving role in academic achievement and lifelong learning. This research also emphasizes the importance of developing more effective instructional methods to address these gaps and enhance students' ability to apply information literacy skills in both academic and professional settings. Further research should explore interventions aimed at improving students' ability to evaluate and present information, as well as the effectiveness of IL instruction across different disciplines.

Conclusion

This study explored graduate students' perceptions of their information literacy (IL) skills based on the Seven Pillars of Information Literacy model. The findings from the Likert-scale questionnaire indicate that students feel confident in basic IL tasks, such as identifying information needs and gathering relevant sources. The results also highlight students' strong ability to manage and present information effectively, as evidenced by their high ratings in these areas. However, the research also identified key challenges, especially in the more advanced aspects of IL. Students reported difficulty in critically evaluating the credibility of sources and synthesizing information across various materials. While they excel at gathering and organizing information, they struggled with integrating and presenting it cohesively.

The interview data reinforced these findings, showing that students face obstacles such as dealing with complex academic texts, time management issues, and the balance between efficiency and thoroughness. Despite these challenges, participants acknowledged the vital role IL plays in their academic and professional success, particularly in enhancing their ability to evaluate sources and solve academic problems. These findings highlight the pressing need for comprehensive IL instruction that moves beyond basic competencies to address these advanced skills, which are essential for academic success and lifelong learning.

Although the study is limited by its sample size, the results suggest that while students demonstrate a solid grasp of basic IL skills, they need further instruction in higher-order skills such as critical evaluation and synthesis. This aligns with existing research, which shows that advanced IL competencies are often underemphasized in current curricula. Therefore, it is recommended that educators integrate more focused training on these advanced skills into the curriculum. To gain a more comprehensive understanding of the challenges and perceptions related to information literacy, future research should include a larger and more diverse group of students from different academic fields. This approach could offer deeper insights into the changing needs of students in the digital age. Ultimately, the study calls for greater emphasis on IL in academic curricula, not merely as a technical skill but as a cornerstone of intellectual engagement in the digital age. Addressing the identified gaps is important for individual academic achievement and for preparing students to thrive in professional contexts that demand advanced information processing and critical analysis. This research invites continued exploration of effective IL teaching strategies to better support students in higher education and beyond.

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