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THE PREDICTIVE ROLE OF INFORMATION LITERACY IN ENGLISH READING COMPREHENSION AMONG MIDWIFERY STUDENTS

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ABSTRACT
In health education contexts where English is the primary medium for academic and professional communication, the ability to comprehend and critically engage with English texts is essential. For midwifery students, who frequently encounter clinical guidelines, research literature, and patient education materials in English, this competency is closely tied to their academic and professional success. This study investigates the relationship between information literacy and English reading comprehension, with the aim of determining the extent to which information literacy skills contribute to students' reading performance. A quantitative correlational design was employed, involving 120 midwifery students enrolled in an English for Specific Purposes (ESP) course. Data were analyzed using Pearson correlation and simple linear regression. The results revealed a strong, positive correlation between information literacy and reading comprehension ($r = 0.736$, $p < .001$). Furthermore, regression analysis indicated that information literacy significantly predicted reading comprehension scores, accounting for approximately 53.8% of the variance (Adjusted $R^2 = 0.538$). These findings suggest that information literacy is not merely supportive of academic reading but it is central to it. The study emphasizes the importance of integrating information literacy into ESP curricula for midwifery and health sciences, with the goal of enhancing students' reading comprehension.

Keywords: information literacy; reading comprehension; midwifery education; English for Specific Purposes

INTRODUCTION
In today's higher education landscape, particularly in health-related disciplines such as midwifery, the ability to read and comprehend academic texts in English is a foundational skill. Midwifery students are routinely expected to engage with research articles, clinical guidelines, and textbooks, the majority of which are published in English (Ghafar, 2024; Hariyanto et al., 2022). These reading skills are essential not only for academic achievement but also for supporting evidence-based care in clinical practice (Hoffmann et al., 2022). However, in non-English-speaking contexts such as Indonesia, students often struggle to understand medical texts due to their linguistic complexity, dense terminology, and unfamiliar structure (Chang et al., 2023; Sujana et al., 2019; Zhao et al., 2021).

In health education, reading comprehension involves more than decoding vocabulary or interpreting grammar. It underpins students' capacity to access, evaluate, and apply scientific evidence. English-language texts in healthcare are typically characterized by intricate sentence structures, specialized terminology, and rigorous argumentation. As Nur Hidayati et al. (2018) observe, these demands frequently exceed

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the abilities of students with limited academic English proficiency, impeding their ability to connect classroom knowledge with clinical application.

Within the field of English for Specific Purposes (ESP), there is increasing recognition that academic success in professional education also depends on a broader set of cognitive and strategic competencies. Among these, information literacy such as the ability to locate, evaluate, and use information effectively has gained particular importance. The Association of College and Research Libraries (Board ACRL, 2016) defines information literacy as a vital academic skill that supports students' independent learning and critical engagement with content. This competency is especially relevant in healthcare disciplines, where access to reliable and up-to-date information is central to clinical reasoning and evidence-based practice (Dalton, 2013; Hoffmann et al., 2022).

Prior studies have established a strong link between information literacy and academic performance. Gross and Latham (2012) noted that students with advanced information literacy tend to approach academic texts with greater confidence and strategic thinking. Similarly, Gudakovska (2013) found that embedding information literacy into academic programs enhances students' critical reading and evaluative abilities. In ESP contexts, information literacy enables learners to go beyond surface-level understanding, allowing them to engage critically with the structure, credibility, and intent of academic texts (MacVaugh, 2025; Prokop, 2017).

In the context of midwifery education, these skills are especially critical. Students must frequently evaluate clinical guidelines, scientific publications, and patient care protocols in English. Recent studies have demonstrated that information literacy training improves students' academic reading and application skills. For example, Terry et al. (2019) and Aylward et al. (2020) reported that peer-led information literacy programs enhanced students' ability to assess and apply clinical evidence. Likewise, Magoi (2019) observed improvements in students' academic writing and critical thinking following structured literacy instruction. These findings are echoed by Shamsaee et al. (2021), who noted significant gains in students' engagement with scholarly materials through virtual instruction.

Despite growing interest in integrating information literacy into midwifery and nursing curricula, many students still lack the evaluative skills needed to critically navigate digital information. Theron et al. (2017) found that students often relied on superficial cues such as website appearance or search ranking rather than evidence quality when assessing online sources. Rapiejko and Lipiec (2024) similarly documented that even medical students struggle to distinguish credible content from misinformation. This challenge is exacerbated by the widespread use of digital tools in health education, which, while expanding access to resources, also demands greater critical engagement and discernment.

Although there is mounting evidence of the benefits of information literacy instruction, relatively few studies have directly examined its relationship with English reading comprehension, cparticularly within the field of midwifery education. While digital and academic literacy have been broadly associated with better academic outcomes, the specific contribution of information literacy to reading comprehension in English, within ESP contexts, remains underexplored. Some researchers (e.g., Nuranisa et al., 2023; Ma'rufa, 2023) have emphasized the relevance of digital-based and context-specific English learning materials in enhancing reading comprehension, yet the underlying role of information literacy remains insufficiently addressed.

This study aims to fill that gap by investigating the predictive role of information literacy in English reading comprehension among midwifery students. As these students must routinely interpret and apply English-language academic and clinical texts, their capacity to assess and utilize information is essential not only for academic progress but also for future professional competence. By empirically examining this relationship, the study contributes to an evolving understanding of how integrated literacy skills can enhance educational and clinical outcomes in health sciences.

To guide this investigation, the study is directed by the following research questions:

1. Is there a statistically significant relationship between information literacy and English reading comprehension among midwifery students?
2. To what extent does information literacy predict midwifery students' English reading performance, as indicated by linear regression analysis?

METHOD

To explore the relationship between information literacy and English reading comprehension among midwifery students, this study employed a quantitative approach grounded in correlational analysis. This section outlines the research design, participants, instruments, procedures, and statistical techniques used to generate valid and reliable findings.

Research Design

This study adopted a quantitative correlational design aimed at examining the association between two key academic competencies: information literacy and English reading comprehension. In addition to assessing the strength and direction of the relationship between these variables, the study also evaluated the predictive power of information literacy on reading comprehension through a simple linear regression model. This approach was chosen to provide empirical insights into whether higher levels of information literacy are associated with improved reading performance.

Participants

The participants included 120 undergraduate students enrolled in an English for Specific Purposes (ESP) course within a midwifery program at a higher education institution in Indonesia. Participants were recruited using a convenience sampling method based on accessibility and willingness to participate. All participants provided informed consent prior to taking part in the study, and ethical research protocols—including confidentiality, voluntary participation, and data anonymization—were rigorously observed throughout the process.

Instruments

Two standardized instruments were used to collect data:

1. **English Reading Comprehension Test:** This test assessed students' ability to comprehend academic texts written in English, focusing on both literal understanding and inferential reasoning.
2. **Information Literacy Questionnaire:** Adapted from the Association of College and Research Libraries (Board ACRL, 2016) Framework, this instrument evaluated students' competencies in identifying, locating, evaluating, and applying information from various sources.

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Both instruments underwent content validation by field experts and demonstrated strong internal consistency, with Cronbach's alpha values exceeding 0.80. These values indicate a high level of reliability for both measures.

Procedure

The data collection process was conducted in a single session during scheduled course hours. All participants completed the reading comprehension test and the information literacy questionnaire under standardized conditions, with clear instructions provided beforehand. Data collection was supervised by the researchers to ensure consistency and minimize potential bias. Upon completion, all responses were anonymized and securely stored to uphold participant confidentiality.

Data Analysis

Descriptive statistics were calculated to summarize students' performance in both information literacy and reading comprehension. To test the strength and significance of the relationship between the two variables, Pearson's product-moment correlation coefficient was computed. Following this, a simple linear regression analysis was conducted to determine whether information literacy could significantly predict reading comprehension scores. The Shapiro–Wilk test was also used to assess the normality of the data distributions, ensuring the validity of the parametric tests applied.

These procedures were conducted using **JASP version 0.17.1**, a statistical analysis software that supports transparent and reproducible research. The combination of robust measurement instruments and appropriate statistical methods was designed to yield results that are both meaningful and generalizable to similar educational settings.

RESULTS AND DISCUSSION

Results

This section presents the findings of the study, including descriptive statistics, correlation analysis, and regression analysis, to evaluate the relationship between information literacy and English reading comprehension among midwifery students.

Descriptive Statistics

The study involved 120 midwifery students. The mean score for information literacy was 70.37 (SD = 24.57), while the mean score for English reading comprehension was 58.06 (SD = 28.02). These descriptive figures reveal a considerable range in both competencies, indicating variability in the students' proficiency levels.

Table 1. Descriptive Statistics of Reading and Information Literacy Scores

	N	Mean	SD	SE
Reading	120	58.055	28.021	2.558
Information Literacy	120	70.367	24.567	2.243

Note. SD = standard deviation; SE = standard error.

Correlation Analysis

A Pearson correlation analysis was conducted to examine the strength and direction of the relationship between information literacy and English reading comprehension. The results indicated a strong, positive, and statistically significant correlation between the two variables ($r = 0.736$, $p < .001$). This finding suggests that

students who possess higher levels of information literacy also tend to perform better in English reading comprehension.

Table 2. Pearson Correlation Between Information Literacy and Reading Scores

Variables	r	p
Information Literacy & Reading	0.736	< .001

These findings align with earlier research by Gross and Latham (2012), who reported that students with strong information-handling skills approach reading tasks with greater confidence and deeper analytical strategies. Similarly, Gudakovska (2013) highlighted that information literacy contributes to better comprehension outcomes, especially when students are required to process technical or discipline-specific content. As Dalton (2013) observed, effective engagement with academic texts in health education settings demands more than basic literacy, it requires critical thinking and the ability to evaluate diverse types of evidence.

Regression Analysis

A simple linear regression analysis was performed to determine the extent to which information literacy predicts English reading comprehension. The model was found to be statistically significant, $F(1, 118) = 139.40$, $p < .001$, indicating that information literacy serves as a reliable predictor of reading performance.

Table 3. Regression Model Summary Predicting Reading Scores from Information Literacy

Model Summary	R	R^2	Adjusted R^2	RMSE
H_1 (Predictive Model)	0.736	0.542	0.538	19.05

Note. R^2 indicates the proportion of variance in reading scores explained by information literacy.

The adjusted R^2 value of 0.538 suggests that approximately 53.8% of the variance in English reading comprehension can be attributed to students' information literacy levels. According to Cohen's (1988) effect size benchmarks, this represents a large and meaningful relationship.

Table 4. Regression Coefficients for Predicting Reading Comprehension

Coefficients	B	SE	β	*t*	*p*
(Constant)	-1.008	5.296	–	-0.190	0.849
Information Literacy	0.839	0.071	0.736	11.807	< .001

Note. B = unstandardized coefficient; β = standardized beta; SE = standard error.

The unstandardized coefficient (B = 0.839) indicates that for each one-point increase in information literacy, there is a corresponding 0.839-point increase in reading comprehension scores. This reinforces the hypothesis that students who are better equipped to identify and evaluate information sources are more capable of interpreting academic texts in English.

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Table 5. ANOVA Summary for Regression Analysis

Source	SS	df	MS	F	p
Regression	50,602.07	1	50,602.07	139.40	< .001
Residual	42,833.24	118	362.99		
Total	93,435.31	119			

The ANOVA results confirm the overall significance of the regression model, with a high F-value and a p-value well below the .05 threshold. These results affirm that information literacy is a meaningful predictor of English reading comprehension in the academic context of midwifery education.

Discussion

The results of this study provide compelling evidence for a strong and significant relationship between information literacy and English reading comprehension among midwifery students. Students who demonstrated stronger information literacy skills—such as the ability to locate, evaluate, and use information effectively—consistently outperformed their peers in reading comprehension tasks.

This finding corroborates earlier studies, including those by Hoffmann et al. (2022) and Gross & Latham (2012), which emphasize the central role of information literacy in academic success. MacVaugh (2025) also argued that teaching students to apply frameworks like the ACRL model fosters deeper reading strategies, enabling learners to critically assess sources and engage with complex scholarly texts. In an academic environment where English is often the medium for research, instruction, and professional literature, the ability to process written material with critical awareness is essential.

From an instructional perspective, these results underscore the importance of embedding information literacy instruction within ESP courses. Studies by Aylward et al. (2020) and Shamsaee et al. (2021) have shown that scaffolded information literacy activities enhance students' confidence and competence in reading academic texts. Moreover, this type of instruction supports higher-order cognitive skills such as synthesis, evaluation, and application—skills crucial for clinical decision-making in health professions (McCloskey, 2021; Terry et al., 2019).

In the midwifery context, students frequently engage with clinical guidelines, patient documentation, and scientific publications—all of which demand both linguistic proficiency and evaluative literacy. Embedding the ACRL Framework (Board ACRL, 2016) into reading tasks can help students interrogate a text's purpose, examine source credibility, and assess authorial bias—skills that directly support evidence-based practice (Chang et al., 2023; Purnell et al., 2020a).

Furthermore, the rise of digital health technologies and open-access medical literature increases the urgency for students to critically navigate online information. As noted by Theron et al. (2017) and Rapiejko & Lipiec (2024), many learners rely heavily on the internet for medical knowledge but lack the evaluative capacity to distinguish trustworthy sources from misinformation. Enhancing information literacy therefore serves a dual purpose: improving reading comprehension and protecting students from engaging with inaccurate or harmful content.

In sum, this study reinforces the understanding that information literacy is more than an academic add-on; it is a key enabler of effective reading and knowledge integration. In the case of midwifery students, developing this competency is central to

fostering not only academic success but also professional readiness for evidence-based healthcare practice

CONCLUSION

This study offers compelling evidence that information literacy plays a crucial role in enhancing English reading comprehension among midwifery students. The strong and statistically significant correlation observed ($r = 0.736$, $p < .001$), alongside the predictive power demonstrated through linear regression (Adjusted $R^2 = 0.538$), underscores the centrality of information literacy in academic reading performance. These results contribute to a growing body of literature that identifies information literacy not as a supplementary skill, but as a foundational academic competency—particularly in disciplines where reading, evaluating, and applying scientific texts are integral to both learning and professional practice.

From a pedagogical perspective, the findings highlight the urgent need to intentionally integrate information literacy into English language instruction, especially within English for Specific Purposes (ESP) curricula in health sciences. Instructional strategies that incorporate information-seeking, critical evaluation, and synthesis into reading activities can support more meaningful learning. These approaches not only enhance students' linguistic proficiency but also cultivate the analytical skills required to navigate complex medical literature. Such dual-focused instruction is especially relevant in midwifery education, where students are expected to engage with clinical evidence and patient care guidelines—often written in English—to inform practice.

Additionally, in an era where digital information is abundant and often unregulated, fostering students' ability to discern credible from misleading sources is an educational priority. Equipping midwifery students with robust information literacy skills can therefore serve as both a safeguard against misinformation and a stepping stone toward lifelong learning and clinical judgment.

In conclusion, this study affirms that information literacy is not merely correlated with reading comprehension—it actively contributes to it. For midwifery students navigating an information-rich academic and professional environment, developing this skill is not optional, but essential. Educators and institutions must recognize the dual value of information literacy and language proficiency, and work to cultivate both in preparing students for the intellectual demands of healthcare education and practice.

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