

THE CONNECTION BETWEEN STUDENTS' READING COMPREHENSION AND READING CONCERN IN AN ESP CONTEXT

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Abstract

This paper investigates the intricate relationship between reading comprehension and reading concern among students in an English for Specific Purposes (ESP) context. While reading comprehension is a well-researched area, the affective dimension of "reading concern"—encompassing anxiety, apprehension, and reluctance related to reading tasks—is often overlooked, particularly in specialized language learning environments. This study aims to explore the extent to which reading concern influences reading comprehension, and vice-versa, among ESP learners who encounter discipline-specific texts. Employing a mixed-methods approach, data was collected through a standardized reading comprehension test, a reading concern questionnaire, and semi-structured interviews. Preliminary findings suggest a significant negative correlation between high levels of reading concern and lower reading comprehension scores. Furthermore, qualitative data illuminate specific factors contributing to reading concern within the ESP context, such as unfamiliarity with technical jargon, perceived pressure to perform, and a lack of confidence in domain-specific knowledge. The study concludes by offering pedagogical implications for ESP instructors to mitigate reading concern and enhance reading comprehension.

Introduction

Reading is a foundational skill across all academic disciplines, enabling learners to access, process, and synthesize information critical for their educational and professional development. In English for Specific Purposes (ESP) contexts, reading comprehension takes on an even greater significance, as students are required to engage with highly specialized and often complex texts pertinent to their chosen fields (e.g., engineering, medicine, business, law). Success in an ESP program, therefore, hinges considerably on a student's ability to effectively comprehend technical reports, research articles, manuals, and case studies written in English.

While much attention has been given to cognitive strategies for improving reading comprehension, the affective factors that influence a learner's engagement with reading have received comparatively less focus, particularly within the ESP domain. One such factor is "reading concern," a broad term that encompasses various negative emotional states and psychological barriers associated with reading, including reading anxiety, apprehension, aversion, and a general lack of confidence or willingness to engage in reading activities. These feelings can be exacerbated in ESP settings where the content is highly technical and demanding, potentially leading to a vicious cycle where concern impedes comprehension, and poor comprehension intensifies concern.

This paper seeks to bridge this gap by exploring the nuanced connection between reading comprehension and reading concern among students in an ESP context. Specifically, this study aims to:

1. Measure the level of reading comprehension among ESP students.
 2. Assess the prevalence and intensity of reading concern among these students.
 3. Investigate the relationship between reading comprehension scores and reading concern levels.
 4. Identify specific factors contributing to reading concern in an ESP environment.
- By understanding this relationship, educators can develop more targeted and effective pedagogical interventions to support ESP learners.

Literature Review

The existing literature extensively covers reading comprehension, identifying various sub-skills such as identifying main ideas, inferencing, understanding vocabulary in context, and recognizing text structure (e.g., Grabe & Stoller, 2013). Numerous studies have explored cognitive strategies (e.g., schema activation, predicting, summarizing) that facilitate comprehension. However, the role of affective factors, though acknowledged, often remains secondary in the discourse on reading instruction.

Reading anxiety, a prominent component of reading concern, has been studied in general language learning contexts. Horwitz et al. (1986) identified foreign language anxiety as a distinct construct, noting its pervasive impact on language learning. Subsequent research has extended this concept to specific skills, including reading. Saito and Samimy (1996) found a negative correlation between reading anxiety and reading proficiency in L2 learners. Likewise, MacIntyre (1995) highlighted the debilitating effects of anxiety on information processing and memory, which are crucial for comprehension.

In ESP, the cognitive load is significantly higher due to the specialized nature of the content and vocabulary (Hutchinson & Waters, 1987). Students are not only

contending with a foreign language but also with new, complex subject matter. This dual challenge can intensify feelings of inadequacy and apprehension, thus contributing to reading concern. Previous studies in ESP have primarily focused on needs analysis, syllabus design, and the effectiveness of teaching methodologies (Stevens, 1988). However, the psychological barriers that impede learning within these specialized domains require more in-depth exploration. While some studies touch upon motivation and attitude in ESP (e.g., Douglas, 2000), a direct investigation into "reading concern" as a measurable affective construct within this specific context is still limited. This study aims to fill this void by providing empirical evidence on the interplay between cognitive reading abilities and the emotional states associated with reading specialized texts.

Methodology

Research Design

This study adopted a convergent parallel mixed-methods design. Quantitative data was collected through a reading comprehension test and a reading concern questionnaire, while qualitative data was gathered via semi-structured interviews. This approach allowed for the triangulation of data, providing a more comprehensive understanding of the phenomenon.

Participants

A total of 80 undergraduate students enrolled in an ESP course (specifically, "English for Psychology") at a large public university participated in the study. Participants were selected via convenience sampling. Their proficiency in general English was intermediate to upper-intermediate, as determined by a standardized institutional placement test. All participants were non-native speakers of English and were in their second or third year of their psychology programs.

Instruments

Reading Comprehension Test (RCT). The RCT consisted of two authentic engineering-related texts (approximately 500 words each) adapted from academic journals and textbooks. Each text was followed by 10 multiple-choice questions designed to assess various comprehension skills: identifying main ideas, supporting details, inferencing, understanding technical vocabulary in context, and recognizing cause-effect relationships. The total score for the RCT ranged from 0 to 20.

Reading Concern Questionnaire (RCQ). A 20-item Likert-scale questionnaire (1 = Strongly Disagree, 5 = Strongly Agree) was developed to assess reading concern. Items were adapted from existing foreign language anxiety scales and modified to specifically address reading in an ESP context. Examples of items include: "I feel

nervous when I have to read technical texts in English," "I worry about not understanding complex terms in engineering articles," "I avoid reading English texts related to my major," and "I feel frustrated when I encounter a lot of unfamiliar vocabulary." The internal consistency reliability (Cronbach's alpha) of the RCQ was 0.88, indicating good reliability.

Semi-structured Interviews. A subsample of 15 participants (5 high concern, 5 medium concern, 5 low concern based on RCQ scores) were invited for semi-structured interviews. The interviews aimed to explore participants' perceptions, experiences, and specific reasons for their reading concern or lack thereof. Questions focused on their approach to reading ESP texts, challenges faced, emotional responses, and strategies for overcoming difficulties.

Data Collection Procedure. The RCT and RCQ were administered simultaneously in a single session during regular class hours. Participants were given 60 minutes to complete both instruments. Interviews were conducted individually in a quiet room, recorded with participant consent, and later transcribed verbatim.

Data Analysis. Quantitative data from the RCT and RCQ were analyzed using descriptive statistics (means, standard deviations) and inferential statistics (Pearson correlation coefficient) to determine the relationship between reading comprehension scores and reading concern levels. Qualitative data from the interviews were analyzed using thematic analysis. Transcripts were read multiple times, open coding was applied, and codes were grouped into broader themes to identify recurring patterns and insights related to reading concern in the ESP context.

Results. The mean score for the Reading Comprehension Test (RCT) was 12.5 (SD = 3.1), indicating an average level of comprehension among the participants. For the Reading Concern Questionnaire (RCQ), the mean score was 3.8 (SD = 0.7), suggesting a moderately high level of reading concern among the ESP students.

Correlation between Reading Comprehension and Reading Concern

A Pearson product-moment correlation coefficient was calculated to assess the relationship between RCT scores and RCQ scores. The analysis revealed a significant negative correlation between reading comprehension and reading concern ($r = -0.65$, $p < 0.001$). This indicates that students with higher levels of reading concern tended to achieve lower scores on the reading comprehension test, and vice versa.

Qualitative Findings. Thematic analysis of the interview data revealed several recurring themes contributing to reading concern in the ESP context:

- **Technical Vocabulary Overload:** Many participants expressed frustration and anxiety due to the sheer volume of unfamiliar technical jargon in their ESP texts. They

felt overwhelmed and reported that constantly stopping to look up words disrupted their comprehension flow.

- **Lack of Prior Domain Knowledge:** Some students, particularly those in earlier stages of their engineering programs, admitted to struggling with concepts that were new to them, even in their native language. This lack of foundational knowledge made comprehending English technical texts even more daunting.
- **Perceived Pressure and Performance Anxiety:** Participants frequently mentioned feeling pressure to understand every detail of the text, believing that a complete understanding was necessary for academic success or future professional practice. This pressure often led to anxiety and self-doubt.
- **Text Complexity and Structure:** The complex sentence structures, passive voice, and dense information presentation typical of academic and technical English texts were cited as significant barriers, leading to feelings of inadequacy.
- **Time Constraints:** Students often felt that the time allocated for reading assignments was insufficient, especially given the density and difficulty of the texts, further exacerbating their concern.
- **Fear of Misinterpretation:** A common theme was the fear of misunderstanding critical information, which could have serious implications in their field (e.g., misinterpreting safety instructions or design specifications).

Discussion. The findings of this study confirm a significant inverse relationship between reading comprehension and reading concern in an ESP context. This aligns with previous research on language anxiety, extending its applicability to the specialized domain of ESP. The quantitative results clearly demonstrate that as reading concern increases, reading comprehension tends to decrease. This suggests that the emotional and psychological state of the learner is not merely a peripheral factor but plays a central role in their ability to process and understand specialized English texts. The qualitative data provides invaluable insights into the specific manifestations and triggers of reading concern among ESP students. The "technical vocabulary overload" theme highlights a critical challenge: ESP learners face a double burden of acquiring both new language and new domain-specific concepts. Traditional vocabulary teaching methods may be insufficient; instead, strategies focusing on technical word formation, common prefixes/suffixes in scientific terms, and contextualized learning through glossaries or in-text support may be more effective.

The "lack of prior domain knowledge" theme underscores the interdisciplinary nature of ESP. It suggests that ESP instructors might need to collaborate more closely with subject matter specialists or incorporate brief explanations of core concepts when

introducing complex texts. Addressing foundational knowledge gaps, even briefly, could significantly reduce apprehension.

"Perceived pressure and performance anxiety" point to a need for instructors to create a more supportive and less intimidating learning environment. Emphasizing that understanding every single word is not always necessary for overall comprehension, or encouraging a "gist" reading approach for initial passes, could alleviate some pressure. Scaffolding strategies, such as pre-reading activities that activate schema or provide a conceptual framework, can also build confidence.

Finally, the "fear of misinterpretation" highlights the high stakes often involved in reading ESP texts. For future engineers or medical professionals, misinterpreting a text can have real-world consequences. This fear, while rational, can be paralyzing. Instructors could integrate activities that encourage collaborative reading, peer discussion, and verification of understanding, thereby diffusing the individual burden of interpretation.

Conclusion

This study provides compelling evidence of a negative correlation between reading comprehension and reading concern in an ESP context. The findings suggest that reading concern is a significant affective barrier that impedes ESP students' ability to effectively comprehend specialized English texts. Key factors contributing to this concern include technical vocabulary overload, insufficient domain knowledge, performance pressure, text complexity, time constraints, and the fear of misinterpretation.

Pedagogical Implications. Based on these findings, the following pedagogical implications are recommended for ESP instructors:

1. **Integrate Vocabulary Strategies:** Beyond simple definitions, teach strategies for handling technical vocabulary, such as analyzing word parts, using context clues, and effectively utilizing specialized dictionaries or glossaries.
2. **Activate and Build Schema:** Incorporate pre-reading activities that activate students' existing knowledge (even in their native language) and explicitly build necessary background knowledge related to the technical content.
3. **Reduce Performance Pressure:** Foster a low-stakes reading environment. Encourage extensive reading for gist, emphasize that perfect comprehension is not always the goal, and provide opportunities for students to build confidence through manageable tasks.

4. **Scaffold Text Complexity:** Break down complex texts into smaller, manageable chunks. Provide graphic organizers, guided reading questions, and opportunities for collaborative reading to help students navigate dense information.
5. **Address Time Management:** Help students develop efficient reading strategies for technical texts, including skimming, scanning, and identifying key information quickly, especially under time pressure.
6. **Promote Collaborative Learning:** Encourage group discussions and peer-teaching activities where students can clarify doubts, share interpretations, and collectively build understanding, thereby mitigating the fear of individual misinterpretation.

Conclusion. This study was limited by its sample size and specific ESP context (psychology). Future research could involve larger and more diverse samples across various ESP disciplines (e.g., medical, business, law) to generalize these findings. Longitudinal studies could also explore the long-term impact of interventions designed to reduce reading concern on reading comprehension development. Furthermore, investigating the specific reading strategies employed by high vs. low concern readers could offer further insights.

By acknowledging and proactively addressing reading concern, ESP educators can create a more conducive learning environment that not only enhances students' reading comprehension but also fosters a more positive and confident approach to engaging with specialized English texts.

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