ASSESSING READING COMPREHENSION SKILLS ACROSS UNDERGRADUATE AND POSTGRADUATE LEVELS IN HIGHER EDUCATION

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Abstract. *Reading comprehension is an essential academic skill that underpins students' performance across all areas of tertiary education. Both undergraduate and postgraduate students engage in extensive academic reading, yet their needs, strategies and challenges differ considerably due to differences in cognitive development, academic experience and disciplinary familiarity. This study investigates the nature of reading comprehension at these two academic levels, focusing on how comprehension is assessed, what difficulties students encounter, and which assessment approaches most effectively capture meaningful comprehension. The research draws on theoretical models including schema theory, metacognitive theory and cognitive load theory, and is supported by empirical data collected from a quasi-experimental study with 120 undergraduates and 60 postgraduates. The study used comprehension tests, metacognitive awareness questionnaires and think-aloud protocols. Results indicate that postgraduate students demonstrate stronger metacognitive control, more efficient inferential reasoning and greater analytical depth, while undergraduates rely more heavily on surface-level processing and face greater challenges with vocabulary density and abstract reasoning. The study concludes that traditional reading comprehension tests often fail to measure higher-order comprehension skills and suggests a multi-layered assessment model that includes formative tasks, metacognitive components and discipline-specific reading activities. The findings have significant implications for curriculum designers, instructors and educational policymakers aiming to enhance academic literacy at the tertiary level.*

Keywords: *reading comprehension, undergraduate students, postgraduate students, academic literacy, metacognitive awareness, inferential understanding, cognitive processing, reading strategies.*

Introduction

Reading comprehension is widely recognized as one of the most influential predictors of academic achievement in higher education. University students must process large volumes of written material, including research articles, theoretical texts, case studies, and discipline-specific literature. Although reading demands are high across all levels, undergraduate and postgraduate students do not engage with texts in identical ways. Undergraduates are typically in the process of acquiring foundational academic literacy skills, learning how to navigate academic genres, and building the vocabulary and background knowledge required for their disciplines. Postgraduate students, by contrast, engage in deeper forms of reading that involve critical evaluation, synthesis of multiple sources and disciplinary expertise.

Assessing reading comprehension at these two levels is therefore essential for measuring learning outcomes and ensuring that educational programs meet students'

needs. However, assessment remains challenging, partly because traditional formats such as multiple-choice questions often measure only surface-level comprehension, and partly because reading is a complex, multi-layered cognitive process influenced by many personal and contextual variables. The assessment of reading comprehension must consider factors such as prior knowledge, metacognitive skills, linguistic proficiency and disciplinary backgrounds. This research seeks to investigate how reading comprehension is assessed among undergraduate and postgraduate students, how their comprehension differs in terms of strategies and processing, and what methods yield the most accurate and pedagogically valuable assessments. The study employs a mixed-methods design that combines quantitative assessment tests with qualitative think-aloud protocols, allowing for a comprehensive exploration of reading behavior. The results provide insights into the cognitive and strategic differences between learners at different academic stages and highlight shortcomings in current assessment practices. The study further proposes improvements to ensure that assessments capture deeper comprehension skills essential for academic success.

Literature Review

Reading comprehension is a multidimensional construct that includes cognitive, linguistic and metacognitive components. It is commonly defined as the ability to extract, construct and evaluate meaning from written text. Various theories attempt to explain how readers build meaning. According to the Simple View of Reading, comprehension is the product of decoding and linguistic comprehension. Schema theory emphasizes that comprehension involves the interaction of textual information with the reader's existing knowledge structures. Metacognitive theories highlight the role of planning, monitoring and evaluating one's own reading processes. These theoretical perspectives demonstrate that comprehension is not merely decoding words but an active meaning-making process.

Reading demands differ substantially between undergraduate and postgraduate studies. Undergraduates typically encounter introductory textbooks, simplified research articles and general academic readings designed to build foundational knowledge. Their comprehension often relies heavily on linguistic skills, vocabulary knowledge and structural features of the text. Postgraduate students read advanced theoretical literature, original research articles and dense disciplinary texts. They rely on higher-order skills such as inferencing, argument evaluation and synthesis across sources. Many studies suggest that postgraduate readers employ more sophisticated strategies, including selective reading, predictive reasoning and critical questioning. Their academic background also allows them to activate discipline-specific schema more efficiently.

The assessment of reading comprehension in tertiary education takes many forms, from multiple-choice tests and short-answer tasks to summaries, essays, project-based assessments, think-aloud protocols and metacognitive surveys. Despite this range, assessments often fail to capture the depth and complexity of comprehension, particularly at postgraduate level. Many instructors rely on traditional tests that assess recall rather than higher-order comprehension. Research also shows that assessments frequently lack alignment with the cognitive demands of the readings assigned.

Challenges in reading comprehension assessment arise from various factors. Text difficulty is not easily standardized, especially when accounting for students' different academic backgrounds. Linguistic and cultural diversity among students further complicates the assessment process. Higher-order comprehension is inherently difficult to measure objectively. Moreover, reading is discipline-specific, comprehension in the sciences differs from comprehension in the humanities. These challenges underscore the need for more nuanced assessment methods.

Methodology

This study adopted a mixed-methods design integrating quantitative and qualitative data collection to comprehensively examine reading comprehension in undergraduate and postgraduate students. The quantitative portion of the study used reading comprehension tests and metacognitive awareness questionnaires to measure differences in comprehension performance and reading strategy use. The qualitative portion used think-aloud protocols to explore how students processed text in real time.

A total of 180 students from a large university participated, including 120 undergraduates from second and third academic years and 60 postgraduate students from master's programs. All participants were enrolled in humanities and social sciences programs and had English as a foreign or second language. Students were selected through purposive sampling to ensure balanced representation.

Three instruments were used. The reading comprehension test included questions targeting different comprehension levels, including literal, inferential and evaluative understanding as well as vocabulary-in-context tasks. The metacognitive awareness questionnaire measured students' planning, monitoring and evaluation strategies during reading. The think-aloud protocols involved asking selected students to verbalize their thoughts while reading, allowing insight into real-time comprehension processes.

Students were provided with two academic texts of comparable length and difficulty. One text presented factual information, while the other offered an argumentative perspective. After reading, they completed the comprehension tests and the metacognitive questionnaire. A subgroup of 40 students, consisting of 20 undergraduates and 20 postgraduates, participated in recorded think-aloud sessions. All data were collected under controlled conditions to ensure reliability.

Quantitative data were analyzed using descriptive statistics, t-tests and correlation analysis to compare performance and strategy use across groups. Qualitative data were analyzed through thematic coding. Transcripts from the think-aloud sessions were coded for recurring themes related to strategy use, comprehension breakdowns and interpretive approaches.

Results

The quantitative findings revealed clear differences between undergraduate and postgraduate students. Postgraduate students scored significantly higher on inferential and evaluative comprehension questions, indicating deeper processing of the texts. Their literal comprehension scores were only slightly higher, suggesting that both groups had similar basic decoding and surface understanding abilities. Vocabulary-in-context performance was stronger among postgraduates, reflecting broader academic vocabulary knowledge. The metacognitive awareness results showed that postgraduate students

reported higher levels of planning, monitoring and evaluation during reading. They were more aware of their comprehension processes and more capable of adjusting strategies when encountering difficulties. Undergraduates reported strong motivation to understand but demonstrated weaker control over strategy use. Correlation analysis showed a strong relationship between metacognitive awareness and inferential comprehension, indicating that students who were more aware of their reading strategies were better able to derive deeper meaning from the text. A moderate correlation was found between vocabulary knowledge and literal comprehension.

The qualitative findings from the think-aloud protocols provided deeper insight into these differences. Postgraduate students used advanced strategies such as prediction, hypothesis testing, selective attention and cross-checking of arguments. They moved flexibly between scanning the text for key information and reading deeply for conceptual understanding. Undergraduates tended to rely on simpler strategies such as rereading and note-taking. They often focused on unfamiliar vocabulary and struggled to infer meaning when sentences were abstract or conceptually dense.

The think-aloud data also highlighted differences in the types of difficulties encountered. Undergraduates struggled with dense academic vocabulary, identifying an author's perspective and synthesizing multiple points within a text. Postgraduates faced difficulties primarily related to time pressure and cognitive fatigue when engaging with long or technical readings.

Discussion

The results of this study show that undergraduate and postgraduate students differ significantly in the cognitive and metacognitive processes involved in reading comprehension. Undergraduates rely more heavily on bottom-up processing, focusing on linguistic features and attempting to decode meaning from smaller text units. Postgraduates, due to greater academic experience and familiarity with disciplinary conventions, demonstrate stronger top-down processing, using prior knowledge to construct meaning more efficiently.

These differences have important implications for reading comprehension assessment. Assessments given to undergraduates often require extensive scaffolding, including tasks that guide them to identify main ideas, understand vocabulary and build connections between parts of the text. Postgraduates require assessments that challenge them to evaluate arguments, synthesize information across readings and demonstrate critical engagement. A single assessment method is unlikely to be appropriate for both groups. Traditional reading comprehension tests, especially multiple-choice formats, do not adequately measure higher-order comprehension skills. They tend to reward surface-level recall rather than the deeper analytical skills required at the postgraduate level. This misalignment may result in inaccurate assessment of students' actual comprehension abilities. The results of the study support the need for more authentic assessment practices that reflect real academic reading demands. One solution is to adopt a multi-layered assessment model that combines different assessment types. Such a model would include formative assessments that provide ongoing feedback, performance-based tasks that require synthesis and interpretation, and metacognitive components that encourage students to reflect on their reading processes. These approaches are more likely to

capture the complexity of reading comprehension and support students' development as academic readers.

Conclusion

This study demonstrates that assessing reading comprehension at the tertiary level requires careful consideration of the cognitive and strategic differences between undergraduate and postgraduate students. Postgraduates display greater metacognitive awareness and more advanced inferential abilities, while undergraduates rely more heavily on foundational comprehension skills and need additional instructional support. Current assessment practices often fail to reflect these differences, particularly in their tendency to focus on surface-level comprehension.

To ensure fairness and effectiveness, reading comprehension assessments should be diversified, incorporating tasks that measure different levels of understanding and different types of strategic behavior. A multi-layered assessment model that integrates formative and summative components, disciplinary reading tasks and metacognitive reflection will provide a more accurate picture of students' comprehension abilities and support their academic development.

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