

## INDIVIDUAL DIFFERENCES IN COMPREHENSION ABILITY OF ADULT READERS IN SECOND LANGUAGE ACQUISITION

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*Abstract:*

This article discusses five characteristics of adult readers in comprehending the text in Second Language Acquisition. Skilled readers integrate sentence representations with prior knowledge to construct coherent discourse models. However, poor readers struggle with integration, often representing text ideas in isolation or loosely organized clusters. This paper explores five reader traits—word-level proficiency, working memory capacity, suppression ability, print exposure, and background knowledge—linked to comprehension proficiency.

*Key words:* SLA, comprehending the text, word-level proficiency, working memory capacity, suppression ability, print exposure, background knowledge.

*doi:* <https://doi.org/10.2024/ynbpgfo5>

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Reading in second language acquisition (SLA) refers to the process of acquiring and developing the ability to understand written texts in a language that is not one's native or first language. It involves the cognitive and linguistic processes of decoding words, understanding vocabulary and grammar, making meaning from text, and comprehending the overall message conveyed by written materials.

Reading in second language acquisition is a complex and multifaceted process that evolves over time with exposure, practice, and instruction. Effective instruction in SLA reading involves providing learners with opportunities for extensive reading practice, explicit teaching of language skills and comprehension strategies, exposure to authentic reading materials, and creating a supportive and engaging learning environment. Additionally, fostering motivation and a positive attitude towards reading can further support the development of reading proficiency in the second language.

Readers effortlessly create detailed mental pictures of what they read, masking the complexity of the reading process. Reading requires orchestrating various processes: decoding words, accessing their sounds and meanings, and forming structures at the sentence level to understand relationships. These processes enable comprehension of who is doing what to whom in a sentence. This leads to constructing units of meaning, called propositional representations, capturing the explicit ideas conveyed. At the discourse level, these ideas merge across sentences, integrating with contextual knowledge to form a mental representation known as a discourse or situation model. This model mirrors the world described in the text, whether real or imagined. Constructing this model demands active inference, where readers interpret and rearrange text information based on their existing

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understanding of the subject matter. (Debra L. Long, Clinton L. Johns, and Phillip E. Morris, 2006)

In the subsequent lines, we examine five reader traits linked to comprehension proficiency in mature readers. The chosen characteristics are: word-level proficiency, working memory (WM) capacity, suppression ability, print exposure, and background knowledge.

A. Word-level proficiency. The simplest reason behind the inability of poor comprehenders to form cohesive discourse models is attributed to deficiencies in fundamental language skills, specifically in the realm of word identification. (Bell, L. C., & Perfetti, C. A., 1994) The word proficiency level of mature readers in comprehending texts in Second Language Acquisition (SLA) refers to the ability of adult learners to effectively understand and use words while reading in a second language. This proficiency encompasses various aspects such as vocabulary knowledge, lexical comprehension, word recognition, and semantic understanding. Differences in word-level proficiency among adult readers in text comprehension denotes the variations in adult learners' abilities to comprehend written texts at the level of individual words as they acquire a second language. These differences may arise due to factors such as vocabulary knowledge, familiarity with language structures, phonological awareness, and decoding skills. Understanding these differences is essential for educators and researchers in developing instructional approaches that support adult learners in improving their word-level proficiency and overall reading comprehension in a second language. In early readers, the ability to identify words is closely linked to their level of phonological awareness, which refers to their explicit understanding of the sound structure of the language. (Perfetti, C. A., Beck, I., Bell, L. C., & Hughes, C. 1987) However, mature readers exhibit minimal diversity in tasks related to phonological awareness. Nevertheless, they demonstrate considerable variation in their ability to quickly and accurately connect a sequence of letters with a sound-based representation. (Bell, L. C., & Perfetti, C. A., 1994) The primary methods employed to evaluate the word-level skills of adult readers typically involve three tasks: naming (rapid pronunciation of both real words and pseudowords), phonological decision (determining which of two pseudowords would be a real word if pronounced), and orthographic decision (deciding which of two letter strings is spelled correctly).

B. Working memory (WM) capacity. Working memory (WM) is the theoretical concept used to describe the system responsible for retaining such information. (Baddeley, A.D., & Hitch, G.J., 1974) The working memory (WM) capacity of mature readers in comprehending text in Second Language Acquisition (SLA) refers to the cognitive ability of adult learners to temporarily hold and manipulate information while engaging in reading activities in a second language. This capacity plays a crucial role in various aspects of reading comprehension, such as processing and integrating information from the text, making inferences, and understanding complex sentences. Mature readers may differ in their WM capacity, which can impact their ability to effectively comprehend texts in a second language. Working memory (WM) is the theoretical concept used to describe the system responsible for retaining such information.

Two common measures for evaluating WM capacity are the reading-span task and the operation-span task. In the reading-span task, individuals read a series of unrelated sentences one by one and then recall the final word of each sentence after the entire set is presented. Similarly, in the operation-span task, participants solve simple arithmetic problems instead of reading aloud. In both tasks, "span" refers to the maximum number of words or items that an individual can recall accurately.

C. Suppression ability. Suppression ability in comprehending text refers to the cognitive capacity to inhibit or suppress irrelevant information or distractions while focusing on relevant information during the process of reading and comprehension. This ability allows individuals to filter out irrelevant details, thoughts, or distractions that may interfere with understanding the main content of the text. Essentially, suppression ability enables readers to maintain focus and allocate cognitive resources efficiently to comprehend the material effectively. Suppression is a central element in Gernsbacher's (1990) structure building framework. In her model, readers aim to construct a cohesive mental representation or "structure." They start by laying a foundation using initial information and then expand this structure by incorporating new information that aligns with or complements it. When encountering information that doesn't relate to the existing structure, readers pivot to create a new substructure. As a result, mental representations often comprise multiple interconnected structures.

D. Print exposure. Print exposure in comprehending text refers to the extent of an individual's prior experience with reading printed materials, such as books, newspapers, magazines, or other written texts. It encompasses both the frequency and diversity of reading materials that a person has been exposed to over time. Print exposure can influence various aspects of reading comprehension, including vocabulary knowledge, reading fluency, and overall reading comprehension skills. Individuals with higher levels of print exposure typically demonstrate better comprehension abilities, as their familiarity with written language facilitates faster and more efficient processing of textual information. Print exposure can be assessed by means of questionnaires and interviews. (Walberg & Tsai, 1984)

Print exposure is likely to impact comprehension skill in several ways. Firstly, individuals who engage in frequent reading are more inclined to encounter rare words compared to those who read infrequently. This is because rare words are more prevalent in print than in spoken language. For instance, Hayes and Ahrens (1988) discovered that rare words, defined as those ranking lower than 10,000 in a frequency-ordered list, appeared 50% more frequently in children's books than in adult conversations or prime-time television programs. Consequently, individuals who read regularly are expected to experience accelerated vocabulary growth. Secondly, readers are more apt to come across complex syntactic structures in written text than in spoken language. This phenomenon is particularly evident in genres like newspapers, where optional function words are often omitted due to space constraints. Lastly, individuals who engage in frequent reading are likely to acquire a broader range of world knowledge compared to those who read infrequently. Text comprehension serves as the primary avenue for acquiring knowledge across various domains.

E. Background knowledge. Background knowledge in comprehending text refers to the information, experiences, and understanding that readers bring to a text from their prior learning and life experiences. This knowledge encompasses a wide range of domains, including cultural, historical, social, and personal experiences, as well as factual knowledge and understanding of concepts relevant to the topic at hand. Background knowledge plays a critical role in reading comprehension by providing a framework for understanding and interpreting the information presented in the text. It allows readers to make connections between new information and what they already know, infer meanings, identify main ideas, and construct a coherent understanding of the text. One of the initial discoveries in the study of text comprehension revealed that readers possessing relevant knowledge about a text's topic tend to comprehend and recall it more effectively than those lacking such knowledge. (Bransford & Johnson, 1972) The advantage in comprehension linked to

background knowledge has been extensively documented through two distinct approaches. In one paradigm, participants read texts containing numerous ambiguous references. Recollection of the text enhances when readers receive pertinent contextual information, such as a title indicating the passage's topic. In a second approach, participants engage with cohesive texts containing domain-specific information. Individuals familiar with the domain demonstrate better recall of information from the text compared to those less knowledgeable about the subject.

Skilled comprehenders effectively construct coherent discourse models by creating high-quality representations of individual sentences and then integrating these representations with relevant prior knowledge. In contrast, poor comprehenders understand individual sentences reasonably well but struggle to integrate them into a cohesive whole. They tend to represent text ideas separately or in loosely organized clusters based on themes.

The exact reasons why poor comprehenders fail to execute the high-level interpretive processes necessary for constructing coherent discourse models remain unclear despite decades of research. While it's evident that good and poor comprehenders exhibit differences strongly associated with comprehension performance, the precise nature of these differences is still not fully understood. Questions persist regarding the correlation between complex span tasks and comprehension performance. Is this relation influenced by deficits in word-level ability? Do good and poor comprehenders primarily differ in their capacity to construct effective retrieval structures and store them in Long-Term Working Memory? One challenge in addressing these questions lies in methodology. Typically, individual differences in reading are investigated using quasi-experimental designs.

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