Mental Imagery and Reading Comprehension Proficiency in English Second Language Learners: An Exploratory Study

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Abstract

Reading comprehension proficiency is vital for learners to be successful in their academic career, however, South African studies have revealed that reading comprehension skills are severely underdeveloped in secondary school learners. Local research has investigated many contributing factors such as multilingualism and deficits with the national curriculum standards. Far fewer studies have examined the cognitive underpinnings that differentiate between English second language (ESL) learners who are proficient in reading comprehension and those who are not. Certain multi-coding theories assert that the integration of visual mental imagery and verbal information is essential for the formation of a comprehensive mental model, which forms the basis of reading comprehension. This study explored the relationship between visual reasoning ability and the reading comprehension proficiency in a group of 83 ESL learners from two urban Gauteng schools. One school represented learners who are proficient readers whilst the second group represented learners who are developing readers. The Non-Verbal Reasoning and the 3D Spatial Manipulation subtests from the Differential Aptitude Test (DAT) battery were used to explore the learners' ability to reason using visual-object and visual-spatial mental imagery. The Verbal Reasoning test was used to establish a baseline for the learners' language skills. The items of the Reading Comprehension subtest of the Stanford Diagnostic Reading Test battery (SDRT-RC) were evaluated for textual factors that contribute toward word concreteness effects. The relationships between the DAT subtests and the SDRT-RC Mixed, Abstract and Concrete Items subtests were discussed in light of multi-coding models of reading comprehension.

Keywords: Mental Imagery, Reading Comprehension, ESL (English Second Language), Mental Models, Visual-Object, Visual-Spatial, Word Concreteness Effects