

# Metacognitive Scaffolding in Reading Comprehension: Classroom Observations Reveal Strategies to Overcome Reading Obstacles of Engineering Students at QUEST, Nawabshah, Sindh, Pakistan

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Received: December 3, 2017 Accepted: December 28, 2017 Online Published: February 4, 2018

doi:10.5539/ijel.v8n3p131

URL: <http://doi.org/10.5539/ijel.v8n3p131>

## Abstract

This study aimed at investigating the development of reading comprehension of engineering students through metacognitive strategies and scaffolding. This study used 12 classroom observations in four engineering departments of one public university in Pakistan. The researcher observed 3 classes in each department at the time of read-aloud sessions. The class in each department was comprised on minimum 55 students and maximum 75 students. The researcher himself conducted all the 12 observations to maintain reliability without interfere of the complete teaching method. Teacher in each class was introduced by the observer and his aim to come in the first observation session. The observer sat at the back of every classroom and noted all instructional practices carefully on the field-notes based on teachers using metacognitive strategies to support students in terms of reading comprehension instructions. This study revealed the promising results based on metacognitive scaffolding and strategies as the most important tools for engineering students and language teachers to use for the development of reading and comprehension.

**Keywords:** reading comprehension, metacognition, reading strategies, scaffolding

## 1. Introduction

In Pakistan, the metacognition and cognition fields were ignored from undertaking research for developing the ability of students in language learning. This study would pave the way for researchers to develop their interest in language leaning through metacognitive strategies and would develop a trend of investigation to develop certain policies and planning for reading comprehension of engineering students. This research would be beneficial to propose propositions for designing teaching and learning materials of reading comprehension interconnecting metacognition and cognition in Pakistan. Some researchers including Flavell (1999), Bogdan (2000), and Metcalfe (2000) explained metacognition as the knowledge about the philosophy of thinking practices concerning the cognizance to reproduce the thought processes; thinking process is also used to create implications-related to the exercises on prior understanding. Further, Metcalfe, (2000) specified that metacognition can be considered as the regulatory system of thinking by using one's intellects; which can imperatively be used to control the thoughts, knowledge, and actions of a person (Weinert, 1987). This proves that metacognition can be related towards the awareness of one's individual thoughts and the control of one's personal thinking or dogmas.

Moreover, Flavell's (1976, 1979, 1999) studies reported that metacognitive awareness denotes as the acquired knowledge which can support to control the cognitive processes and can be used to assess the understanding of thinking processes. Similarly, Brown (1987) asserted that meta-comprehension is considered as the most important aspect of metacognitive knowledge that enables student to understand a question clearly; however, regulation enables students to utilize that piece of knowledge to develop rational performance for comprehension purposes. In the same way, metacognitive awareness develops regulation effectively to utilize for enhancing the capability of performance (Brown, 1987). However, Veenman et al. (2006) stated that it is very difficult to distinguish between metacognitive and cognitive; both are considered as the two faces of one coin depending on each other to work