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## **Cognitive and Meta-cognitive Skills and Strategies Employed in Improving Reading Skills**

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### **Abstract**

This paper is based on the assumption that a significant number of north Indian students from rural and semi urban areas attending undergraduate and post graduate courses in an Indian university are often found struggling with the problems of reading comprehension. As a result, their academic and professional performance remains dismal. This study is based on two assumptions: first, with the help of a committed teacher, reading comprehension can be improved, second, once the reading comprehension improves, the performance of a student in his academic and professional subjects also improves. This paper also explores the role of cognitive, meta-cognitive and other skills and strategies involved in improving adequate reading comprehension. The paper also presents a case study based on the concept that improvement in reading comprehension also improves the behaviour pattern of a learner.

**Key words** : comprehension , assumption, professional, cognitive, meta cognitive

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“It was through reading that students learned of the civilization”

---Anonymous

### **Introduction**

Reading Comprehension is a complex interaction that enables the reader to create a mental representation of the text (Van den Brock & Espin : 2012). Comprehension depends not only on the quality of the reader but also on the reading processes, such as basic reading skills, decoding vocabulary, sensitivity to text structure, interference and motivation. Comprehension requires effective use of strategic processes such as meta-cognitive and comprehensive monitoring.

Reading Comprehension is the ability to process text, understand its meaning, and to integrate it with what the reader already knows. ([en.wikipedia.org/wiki/Reading\\_comprehension](http://en.wikipedia.org/wiki/Reading_comprehension)). People learn comprehension skills through education or instruction and some people learn by direct experiences. Proficient reading depends upon the ability to recognize words quickly and effortlessly (Maryanne Wolf :2016).

Reading comprehension is also determined by an individual's cognitive development. Cognitive development is 'the construction of thought process.' Reading is 'a critical academic skill', but unfortunately, the difficulty of learning to read, and teaching how to learn, has often been underestimated. Comprehension is a complex process which requires multiple cognitive skills and memory. To attain the optimum level of comprehension, there is a need to identify weaknesses in specific cognitive skills. We must also have procedures for enhancing those specific skills rather than general intervention. Internal barriers which hinder comprehension must be overcome. Later, several components of comprehension, such as prior experience and vocabulary, are acquired over time.

Reading comprehension depends upon the level of understanding of a written text or message. This understanding comes from the interaction between the words that are written, and how they trigger knowledge outside the text/message (Rayner *et al* : 2011). Comprehension is the understanding and interpretation of what is read. To be able to accurately understand written material, English language Learner (ELL) needs to be able to (1) decode what they read; (2) make connections between what they read and what they already know; and (3) think deeply about what they have read ([readingrockets.org/helping/target/comprehension](http://readingrockets.org/helping/target/comprehension)).

### **Essentials of Comprehension**

The most important component of comprehension is having adequate vocabulary, or knowing the meaning of enough words. Readers who have strong vocabulary are able to draw conclusions about what they read—what is important, what is a fact, what caused an event to happen, which characters are funny. Thus comprehension involves combining reading with thinking and reasoning ([www.readingrockets.org/helping/target/comprehension](http://www.readingrockets.org/helping/target/comprehension)). Different skills and strategies are required for a better comprehension of various levels of written text.

### **Comprehension**

### **Skills**

The following comprehension skills can be taught and applied to all reading situations:

- Summarizing
- Sequencing
- Inferencing
- Comparing and contrasting
- Drawing conclusion
- Self-questioning
- Problem-solving
- Relating background knowledge
- Distinguishing between facts and opinion
- Finding the main idea, important facts, and supporting details

These skills are particularly important for comprehending what is generally known as information reading or expository reading. ( [www.colorincolorado.org/article/reading-comprehension-skills-english-language-learners](http://www.colorincolorado.org/article/reading-comprehension-skills-english-language-learners)).

### **Comprehension Strategies**

Comprehension strategies are conscious plans--sets of steps following which good readers can make sense of text. Comprehension strategy instruction helps students become purposeful, active

readers who are in control of their own reading comprehension. The following seven strategies have research based evidence for improving text (Adler, C R.: *Seven strategies to Teach Students Text Comprehension* ) :

### **1. Monitoring Comprehension**

Students who are good at monitoring their comprehension know when they understand what they read and when they do not. Research shows that instruction, even in the early grades, can help students become better at monitoring their comprehension.

### **2. Meta cognition**

Meta-cognition can be defined as "thinking about thinking." Good readers use meta-cognitive strategies to think about and have control over their reading. Before reading, they might clarify their purpose for reading and preview the text. During reading, they might monitor their understanding, adjusting their reading speed to fit the difficulty of the text and "fixing" any comprehension problems they have. After reading, they check their understanding of what they read.

### **3. Graphic and Semantic Organizers**

Graphic organizers are known by different names, such as maps, webs, graphs, charts, frames, or clusters. Graphic organizers help readers focus on concepts, and how they are related to other concepts. Ogle's K-W-L charts are also graphic organizers that help students organize information before, during and after a unit or a lesson. The KWL charts can be used to engage students in a new topic, activate prior knowledge, share unit objectives, and monitor students' learning ([www.facinghistory.org /resource-library/teaching-strategies/k-w-l-charts](http://www.facinghistory.org/resource-library/teaching-strategies/k-w-l-charts)). Teachers use K-W-L charts during thematic units to activate students' background knowledge about a topic and to scaffold them as they ask questions and organize the information they're learning (Ogle: 1986).

### **4. Answering questions**

Question- answer technique can be effective because this technique gives students a purpose for reading and focuses students' attention on what they are to learn. The Question-Answer Relationship (QAR) strategy encourages students to learn how to answer questions better.

### **5. Generating questions**

By generating questions, students become aware of whether they can answer the questions and if they understand what they are reading. Students learn to ask questions that require them to combine information from different segments of text.

### **6. Recognizing story structure**

In story structure instruction, students learn to identify the categories of content (characters, setting, events, problem and resolution). Often, students learn to recognize story structure through the use of story maps. Instruction in story structure improves comprehension.

## 7. Summarizing

Summarizing requires students to determine what is important in what they are reading and to put it into their own words. Instruction in summarizing helps students identifying or generating main ideas and eliminating unnecessary information.

### **Effective comprehension strategy instruction is explicit**

Effective comprehension strategy instruction can be accomplished through cooperative learning, which involves students working together as partners or in small groups on clearly defined tasks. Cooperative learning instruction has been used successfully to teach comprehension strategies. Students work together to understand texts, helping each other learn and apply comprehension strategies. Teachers help students learn to work in groups. Teachers also provide modelling of the comprehension strategies.(Adapted from Adler, C.R. (Ed) : 2001 )

Meta analysis of research indicates that reading comprehension interventions are effective only when they are accurate, consistent and intensive (Sencibaugh : 2007) as well as explicit and recursive ( Mastropieri, Scruggs & Graetz: 2003). Research has proved that explicit teaching techniques are particularly effective for comprehension strategy instruction. In explicit instruction, teachers tell readers why and when they should use strategies, what strategies to use, and how to apply them. The steps of explicit instruction typically include direct explanation, guided practice and application. The teacher guides and assists students as they learn how and when to apply the strategy. For example, (Wang :2007) reported that explicit instruction in comprehension strategies enhanced the learners' comprehension.

### **Experiment- A Case Study**

A significant number of north Indian students who join college every year in most of the north Indian colleges and universities lack a proper reading comprehension skill. Barring a handful of north Indian colleges and universities, the situation is quite similar. About sixty percent students, who are mostly in their late adolescence and early youth, struggle with the inadequate reading skill. The situation is much more disappointing in the professional institutes and colleges. It is a well known fact that English language learners (ELLs) often have problems mastering science, math or social studies concepts because they cannot comprehend textbooks for these subjects ([www.colorincolorado.org /article/reading-comprehension-skills-english-language-learners](http://www.colorincolorado.org/article/reading-comprehension-skills-english-language-learners)). A typical north Indian college going student today, in most of the disciplines, is unable to comprehend what he or she reads in the text books written in English. This affects their performance in other areas of study. Every passing year, the situation is worsening. Hence, there is an urgent need to address the issues of reading comprehension among the adolescents and youth.

It has been noticed that the strategies related to increasing reading comprehension are not properly observed, and even less implicitly taught. However, learners require more explicit instruction on specific comprehension strategies to obtain both surface level information and critical thinking information from the text.

This study explores the issues related to research on teaching reading comprehension. In the process, the following research questions have been answered:

- Can reading comprehension be taught?
- Does teaching improve reading comprehension? If it does, then how, and what are the variants involved?
- How can we improve reading skill?
- Can reading comprehension be improved within a given period of time?

The assumption is that like all other skills, reading comprehension is a skill which can be acquired through practice. Once it is acquired it brings drastic changes in the behaviour pattern of the learners.

An experiment was made with a core group of 20 learners with the sole objective of improving their reading comprehension of the text written in English language. The learners were from the mixed background, and also from the different streams of study. They were not homogenous. The learners were randomly selected from mechanical and civil engineering, from law, mass communication and social sciences. Most of them, who attended the programme, were from the rural and semi-urban areas. These learners were in the age group of 18-21. All these students had attended the schools funded by the respective state governments. They were not able to decipher the written text in English Language.

A three weeks class schedule was structured, in which every day one hour class was conducted. The only constraint was that the students were not forced to join. They had to join willingly; no pressure was exerted on them. Direct attendance and marks were not allowed. A pre and post evaluation test was conducted to measure the efficacy of the experiment. Scores and grades were not given to categorize who was good and who was not good. The following activities were observed:

- Some of the students started losing their excitement after a few classes.
- The instructor had to work hard to maintain the level of motivation.
- Three students left the programme in the middle. The reasons cited were personal.
- The students who dropped were those who could not cope up the rigor.

It was observed that the role of the instructor was quite significant. He had to spend a lot of quality time with the students to maintain their interest in the programme. He had to conduct a lot of motivation sessions, sometimes in the group, and sometimes with an individual student. The motivation sessions were formal as well as informal.

The homework carried out by the instructor was also very significant. He had to work really very hard to prepare the graded reading material which was of great significance.

- The structured reading material was meticulously designed, prepared and delivered in the classroom.

- The materials were graded.
- Newspaper, dictionary, stationary etc were also provided.
- Direct teaching method was discouraged.
- An environment was created in which the learners were given ample opportunity to spend time with the reading materials.
- A set of questionnaires was also attached everyday to evaluate the understanding level of the students.

The following reading materials were used in the classroom:

- Newspaper articles
- Fairy tales
- Business cases and reports
- Excerpts from the memoirs and biographies
- Scientific inventions
- Sports
- Parables

Extreme care was taken to include only those materials which could be interesting for the learners. It was a tough time for the instructor. During the course of the programme, it was observed that students were found struggling with the following two problems:

1. Difficulty in understanding sentence structure, and
2. Problems in vocabulary

A few remedial classes were also organized. These classes were meant to explain the basics of grammar, and also there was vocabulary building exercise. Once the learners understood and internalized a few basics, the interest level of students increased.

### **Behavioural Changes**

As the days progressed, the results were found beyond expectations. Some of the learners started taking extra interests. They collected additional reading materials, and also began talking about them after the classes. As a result

- their fluency level improved
- they developed a kind of affinity with the materials.
- their vocabulary improved.
- their pronunciation also improved.
- a serious approach towards study was observed.
- many of them started reading and deciphering their core text books.

However, at the end, a few of them dropped and did not continue. Out of twenty students enrolled in the beginning, fifteen developed a serious interest in their academic and professional subjects. The main take away of the programme was that it instilled among them a sense of confidence that things are possible, and they can even read further. The programme also developed interest in further reading. These were the behavioural changes noticed among the learners who graduated from the programme. (This case study has been prepared on the basis of the experiment carried out in the winter of 2014-2015 at a place where the author had worked previously).

## Conclusion

Reading comprehension improvement is a program that holds immense potentiality, especially in the field of higher education, where the text books and reference materials are available only in the English language. Improvement in reading comprehension is not optional, it is mandatory. If there is an expectation of better performance, the significance of reading comprehension cannot be undermined. Reading comprehension program has to be given top priority to address the issues faced by the adolescent students.

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