

# Effectiveness of Using Creative Mental Images in Teaching Reading Comprehension in Primary Schools in Nigeria

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**Abstract** The study examined the effectiveness of using creative mental images in teaching reading comprehension in primary schools in Nigeria. A sample of sixty (60) pupils from two primary schools were used (i.e. 30 pupils from each school). A quasi experimental research design was used for the study. Kargi primary school in Kaduna South was used as the experimental group while Katsina Road primary school in Kaduna North was used as the control group. Both groups were pre-tested to establish the homogeneity of the two groups. The two groups were taught reading comprehension for eight (8) weeks. The experimental group was taught reading comprehension using creative mental images, while the control group was taught using the traditional method. Both groups were assessed using reading comprehension test. T-test was used to test the hypothesis raised in the study. The findings revealed significant differences in the performance of pupils taught reading comprehension using creative mental images. Based on the findings teachers are encouraged to use creative mental images in teaching reading comprehension. This will help to stimulate pupils to create feelings that are vital to making reading comprehension more vivid, exciting, enjoyable and fun. As pupils create mental images individually or in groups, they are able to trigger a wide range of memories and feelings, thus creating movies of the text in their minds. Workshops should be organized for teachers on how to stimulate pupils to create mental images in reading comprehension lessons. Curriculum planners and textbook writers should equally provide creative mental images exercises as part of pupil's activities in the reading component of the English Language Curriculum for Basic Education.

**Keywords:** *creative, mental images, teaching, reading comprehension*

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## 1. Introduction / Background to the Study

An alarming high percentage of primary school children have reading problems. In fact most of them cannot read. Yet one of the critical objectives of primary education is to inculcate in children permanent literacy and the ability to communicate effectively. According to [5] children are failing to learn to read because they are not being taught reading in any meaningful way. Researchers ([2,3,5,7]) have equally shown that poor methodology is one of the main causes of children's reading failure. Many primary school teachers simply do not know how to teach reading. The teacher training programme is inadequate. Most teacher-training institutions are not adequately equipped and oriented to prepare teachers meaningfully for reading instruction at the primary school level [5]. Investigations into the curriculum in teacher training colleges have shown that reading methodology is either ignored completely or is very poorly taught within the English methods course ([5,8]). Children in many schools are not usually encouraged by their teachers to create mental pictures in their minds.

They are also not encouraged to relate their five senses and life experiences creatively to the information in their reading text. ([2,5,8]). Reading comprehension could be made more vivid and meaningful if students are encouraged to make use of their creative mental images.

All of the foregoing have necessitated the need to carry out this research to find possible ways of improving the teaching of reading in primary schools. It is against this background that this study seeks to determine the effect of using creative mental images on pupils performance in reading comprehension in primary schools in Kaduna state, Nigeria.

### 1.1. Review of Related Literature

Sensory images are the cinema unfolding in one's mind that make reading three dimensional [9]. They are critically important to learners because they make reading vivid and fun. Good readers should be able to visualize the author as the writer and the reader as the illustrator.

When sensory images form in a child's mind as he/she reads, it is an ongoing creative act. According to [2] pictures, smells, tastes and feelings birth forth as the mind organizes them to help the story make sense. It is this on

going creation of sensory images that keeps readers hooked on their reading text. If learners fail to create sensory images while reading, they suffer a type of sensory deprivation. They are missing one of the great pleasures of reading [2].

Sensory images play a valuable monitoring role. Once a child understands that there should be a movie running in his/her mind, he/she realizes that something is not right when that movie stops or gets frizzy. He/she is aware that he is not understanding and can stop, re-read, look up certain words or ask for help to get back on the comprehension tract. Then the movie can start rolling again. When children's mind wonder while they read or when they stop understanding, the movie goes blank and they have to go back and re-read and retrieve the full movie [2].

Sensory images are like movies in children's heads, if they are just reading words, they won't get movie in their heads, so they have to re-read. Sensory images make reading a lot of fun [9].

Although the unique roles of mental images have been noted in research in reading comprehension [9] previous studies have not established the effect of mental images on pupils reading comprehension in primary schools. The present study will provide empirical data on the effect of creative mental images on pupils reading comprehension in Kaduna state.

## 1.2. Objectives of the Study

To determine the effect of using creative mental images on pupils' performance in reading comprehension in primary schools in Kaduna state, Nigeria.

## 1.3. Research Question

What is the effect of using creative mental images on pupils' performance in reading comprehension in primary schools in Kaduna state, Nigeria?

## 1.4. Hypothesis

There is no significant difference in the performance of pupils taught reading comprehension using creative mental images and those taught using the conventional method.

## 2. Methodology

Two randomly selected primary schools were used for the study. A sample of sixty (60) pupils i.e. 30 from each of the two primary schools were used. Kargi primary school in Kaduna South was used as the experimental group while Katsina Road primary school in Kaduna North was used as the control group. Primary five pupils were used for the study. Intact classes were used in both schools for the study.

### 2.1. Research Design

A pre-test, post-test quasi experimental design was used for the study. The pre-test was administered before pupils were taught. The pre-test was conducted in order to establish the homogeneity of the two groups. The post test was administered after eight (8) weeks of teaching to

determine the effect of the treatment on the experimental group.

### 2.2. Instrumentation

The instruments used for the study were reading comprehension passages from which test items were drawn to encourage and stimulate pupils to form creative mental images in their minds as they relate their life experiences to the information in their reading texts. Six passages selected from Lantern Comprehensive English Textbook Pupils Book 5 were used. The passages were selected because they were educative and interesting to both gender (i.e. male and female pupils).

### 2.3. Administration of Instruments

A pre-test was administered to both control and experimental groups to establish the homogeneity of the pupils. The experimental group was taught reading comprehension using creative mental images for eight (8) weeks, while the control group had their normal reading comprehension lessons taught by their teacher. A post-test was administered on the two groups after eight (8) weeks of teaching to determine the effectiveness of using creative mental images on the performance of pupils in reading comprehension. T-test was used to test for significant difference in the performance of pupils from both groups.  $P < 0.05$  level of significance was used to reject or retain the hypothesis stated for the research.

### 2.4. Treatment

Teacher encourages pupils to:

- picture the words they read in their minds, by putting themselves right in the actions.
- visualize the words / sentence by making themselves part of the story. Visualizing such words makes pupils to be part of the story.
- read and create their own images of the reading tasks.
- read, create and talk about each paragraph of the reading tasks.
- read, write and draw special characters or themes about the reading tasks.
- read, create and act out their own creative mental images.
- pause over the story or reading task, form a picture in their minds; imagine certain smells, tastes, sights and feelings depending on what is being read.
- relate what is being read to their life experiences in a discussion session.

### 2.5. Sample Lesson Plan

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|---------|--|
| Step 1. | Teacher introduces the lesson by telling pupils that she is going to read a passage to them. She tells them to close their eyes as they listen to the introductory lines of the passage. |
| Step 2. | She reads a few lines, stops and tells them to describe in great details all that they can see in their minds.   |
| Step 3. | Teacher encourages them to feel free to go beyond the information on the passage. They should elaborate and be   |

- creative about every sound heard, every smell, smelled, and every scene seen. This should be repeated over and over again with other paragraphs of the passage. As pupils do this repeatedly, their sensory images will burst open.
- Step 4. Teacher encourages pupils to pair up as if they are in a game and do the same exercise while she moves round to render assistance where necessary. Pupils can switch roles with their partners. As pupils do this repeatedly, they begin to realize that texts are much more than bunch of printed words. They are keys that unlock the imagination.
- Step 5. Teacher encourages pupils to draw pictures of what they have read in the passage. Drawing pictures is a great way to nurture their creation of sensory images.
- Step 6. Teacher encourages them to draw as they read. They should draw pictures of what they see as they read. Let them know much value is placed on what they see, smell, taste, hear and feel.
- Step 7. Teacher encourages pupils to act out what they have read. This does not have to be elaborate. They can stand up, pretend to be throwing a rope, fly their arms in panic, grab a banana and so on.
- Step 8. Teacher reads together with pupils. As he/she reads, she makes exclamations such as wow! Did you get the same picture in your head as I got? Describe what you saw. Teacher can sketch his/her own picture on the board and ask pupils "what did that scene look like to you? Draw or sketch your own pictures. Teacher should use the following questions to activate pupils' creative mental images.
- What did you see when you read those words? Does having this picture in your head make reading more fun? How?
  - Where is that picture in your head coming from? What words in the text helped you make that picture? How did your background knowledge add to the details of this mental image?
  - Now that you've pictured what's going on in this chapter, what predictions do you have for what will happen next?
  - Have your sensory images changed as you read this story? What words added detail to your mind picture? Yes, one image does lead to another. How do these sensory images help you understand what you read?
- Step 9.

### 3. Data Presentation and Analysis

**Table 1. Table showing pupils' mean scores in the pretest**

| Group                               | N  | Df | Pretest Mean Scores | SD   |
|-------------------------------------|----|----|---------------------|------|
| Experimental Creating Mental Images | 30 | 29 | 41.50               | 7.92 |
| Control Group                       | 30 | 29 | 41.55               | 7.95 |

Table 1 shows the mean scores of pupils in the pretest of the two groups. The experimental group had a mean score of 41.50 while the control group had a mean score of 41.55. This shows the homogeneity of the two groups.

**Table 2. Table showing the presentation of mean scores of pupils in the post test.**

| Group        | N  | Df | Post-test Mean Scores | SD    |
|--------------|----|----|-----------------------|-------|
| Experimental | 30 | 29 | 68.50                 | 15.59 |
| Control      | 30 | 29 | 52.50                 | 10.43 |

Table 2 shows the mean scores of pupils from the experimental and control groups in the post test. From the table the experimental group had a mean score of 68.50 while the control group had a mean score of 52.50.

**Table 3. Table showing the pre-test and post-test mean scores of pupils**

| Group        | N  | Df | Pre-test Mean Scores | Post-test Mean Scores | SD    | T- Cal | T-Crit | Decision  |
|--------------|----|----|----------------------|-----------------------|-------|--------|--------|-----------|
| Experimental | 30 | 29 | 41.50                | 68.50                 | 15.59 | 2.350  | 1.963  | Reject Ho |
| Control      | 30 | 29 | 41.55                | 55.50                 | 10.43 |        |        |           |

Table 3 shows that the t-calculated value is 2.350 and the t-critical value is 1.963. This means that the t-critical is less than the t-calculated. Therefore the null hypothesis which states that there is no significant difference in the performance of pupils taught reading comprehension using creative mental images is rejected. This means the experimental group performed significantly better than the control group.

### 4. Discussion of Findings

The findings in Table 1-Table 3 have confirmed the studies of (Zimmermann and Hutchins (2003) Miller

(2002) Jensen (1998) and Havey & Goudris 2000) which all point to the fact that the use of creative mental images play significant and critical role in enhancing comprehension. There was a general increase in the level of involvement and participation of pupils in the experimental group. Pupils were eager to share the mental pictures and images they were able to create in their minds. Some of the pupils confessed that they always pretend to put on a movie in their heads as soon as they were engaged in the reading tasks. Some of them said they pretend to turn on the television in their heads. By so doing, they were able to make reading comprehension become more vivid and fun. Pupils were also able to

express their emotions at appropriate places. They were able to make predictions about the story. They were able to describe the main characters in the text and they were able to discuss issues beyond the information that was provided in all of the reading comprehension passages they were exposed to reading. This researcher therefore joins other researchers like ([1,9]) in saying that sensory images play valuable role in reading comprehension.

## 5. Implications of the Study

The findings of the present study have practical implications in terms of classroom practices. The result suggest that reading comprehension at the primary school level should focus not only on children's pronunciation, vocabulary skills and being able to answer comprehension questions but it should focus on children being able to make use of their creative mental images.

The present empirical data suggest that pupils need to understand words and have mental images to connect different ideas to make meaning from their reading texts. The study has established the fact that mental images play an important role in the construction of meaning. They are critically important because they make reading vivid and fun. Like some of the pupils confessed, when I start reading, I pretend to put on a movie in my head. It is like turning on the television.

## 6. Conclusion

Based on the empirical evidence presented, the experimental group (i.e the group that was exposed to the use of creative sensory images) performed better than the control or conventional group. The comprehension of the pupils in the experimental group was greatly enhanced and improved. Pupils were able to form sensory images in their minds as they read. They were able to create pictures, smells, taste and feelings. They were also able to organize all the creative acts in their minds to make sense out of the stories read. It is this on going creation of sensory images that kept them hooked to their reading task and made reading comprehension vivid and fun. In view of this, teachers should teach pupils to know that the words they read have the power to create movies in their minds. Without sensory images, reading can be a blank slate. If pupils fail to create sensory images while reading (just like pupils in the control group), they suffer a type of sensory deprivation, thereby, missing one of the great pleasures of reading. To this group, it was like taking them to a theatre, each of them sitting on a seat and having the lights go down and nothing comes up on the screen. This can be very devastating. Teachers should therefore be encouraged to help pupils activate the use of their sensory images in creative ways.

## 7. Recommendations

The following recommendations were made based on the findings of the study.

- Teachers should be encouraged to adopt the use of creative mental images in teaching reading comprehension

in primary schools. This will help pupils to tap into the fascinating world of thinking & adventure. It will also help pupils to see the interesting facts and poignant stories in the words that they read in their texts.

- Pupils should be encouraged to see reading beyond mere words. They should decode the rich, engaging, thinking part of any reading text. This can be achieved by encouraging them to imagine playing a movie of the reading text in their minds.
- Pupils should be encouraged to create a wide range of visual, auditory and other sensory images as they read and they should also be encouraged to be emotionally and creatively involved in their reading tasks. Pupils should try to become creators by imagining the setting of the story, seeing the facial expressions, hearing the reflections of the voices etc.
- Teachers should encourage pupils to create mental images before, during and after every reading task.
- Textbook writers should include activities in reading comprehension that will require pupils to activate their creative mental images.
- Curriculum planners should provide creative mental activities to guide and encourage pupils in creating movies on all the reading tasks to be carried out in the reading component of the English Language curriculum for basic education.
- Pupils should be encouraged to create series of images to reflect the story line of the text they are reading. Teachers can discuss with pupils about why or how the pupils choose to re-present their ideas the way they do or what images work best with which storyline.

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