

Instructional Strategies in Primary Schools in Ibadan North Local Government Area: An Empirical Investigation of the Effects on Children Basic Reading and Comprehension Skills

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ABSTRACT

This study investigates the relative effectiveness of preparation assistance – reflection and question – answering relationship strategies on primary pupils learning outcome and their attitude to reading comprehension. It investigates the interaction effects of verbal ability and gender. The study adopted the pre – test and post – test control quasi – experimental designs and the 3 x 3 x 2 factorial matrix. A total of 370 pupils from year five and year six, randomly drawn from public primary schools in Ibadan North Local Government Area of Oyo State for the study. The statistical level of confidence of 5% was used for the determination of analysis and decision. The results show that there are significant effects of instructional strategies on pupils' reading comprehension skills and their attitude to reading generally. It further shows that, pupils in the PAR segment had higher mean scores, followed by pupils in the QAR segment while pupils in the conventional segment had the least score. The study also reveals that, there is significant positive effect of instructional strategies on the verbal ability segment, while the low ability segment did show very low level effect of instructional strategies. There was no significant effect of gender on pupils' learning outcomes in reading comprehension and their attitude to reading comprehension. The study conclude that the teaching of reading comprehension in primary schools and can produce positive outcome if relevant and appropriate strategies are used in the teaching process.

Keywords: Learning Outcome, Instructional Strategies, Oyo State, Education, Schools

INTRODUCTION

The concept of comprehension is of major relevance to education. In the general sense of being educated, an educated person has acquired a certain body of knowledge, competence, abilities and skills (Freedle and Carroll, 1992). According to Freedle and Carroll, being educated implies possessing a capacity for acquiring new understandings and integrating them in some valid way with the knowledge already acquired.

Taken at its face value, this statement implies that one is said to be “educated” in any language he or she chooses. English language however occupies a strategic position in Nigeria education. In effect, one of the major concerns of the school

curriculum is the promotion of English comprehension skills at progressively higher levels grammatical, lexical and semantic knowledge (Cappella and Weinstein, 2001). Beyond the process of teaching the child to decode print into some analogue of spoken language, educators have discovered that there still remains the problem of teaching the child to “understand” the language thus decoded (Jeffrey, Mariglia, Bryan and Naqquin, 2001).

Reading comprehension plays a central role in the school curriculum, yet it is not given the attention it needs in our primary school classroom. Unfortunately, one of the most disconcerting problem facing teachers in the school today is not only their pupils’ inability to read; but the pupils’ general lack of interest, indifference, sheer rejection of reading, and poor comprehension (Cairny, 1999; Unoh, 1995).

Comprehension is the basis of reading. Teaching children how to read and comprehend is the number one responsibility of schools Unoh (1995 and Cairney 1990). Cairney further stressed that no child should leave school without adequate reading ability and judging from the angle of low – income families, the school is the only hope for their children to attain proficiency in reading and comprehension.

English language has attained an admirable recognition which none of the indigenous languages enjoy as yet (Adegbile, 1999). In Nigeria, English is the official language in daily use in offices, parliament and at government functions; it serves as a linkage factor between Nigerians of different ethnic and socio – economic backgrounds (Afolayan, 1986). English is also the medium of institution from primary four to the university level of education. In addition to being the language of instruction in schools, it is also compulsory subject. All schools examinations, class tests the State and National Common Entrance Examinations are conducted in English while credit in English is required for admission into the tertiary institutions. The inculcation of permanent literacy and ability to communicate effectively is one of the general objectives of the Nation’s Primary Education (National Policy on Education 1998).

Illiteracy is associated with many social problems, society as a whole suffers the consequences of poor reading among its citizenry (Cairney 1990). According to Cairney, many of the ills of our society are related to illiteracy. The preliminary report of the National Evaluation team to primary schools nationwide, conducted by the Universal Basic Education Programme Implementation Agency (2002) portrayed the prevalence of poor reader in our primary schools. Despite the influence of television, we still live in what has been called the print culture.

The World Bank Policy Report (1990) stressed that the main reason why we teach our citizens to read and write is that a certain minimum standard of literacy is needed for one to function as an obedient citizen. According to the report, Democracy thrives on a free – flow of information. The printed word in books, magazines stories and newspaper reports is still the main source of information for most people. Books remain in increasing source of pleasure for a growing reading public.

Reading comprehension is a complex term to define because it is influenced by many factors. As one of the most researched and discussed areas in the study of reading, reading comprehension is related to so many fields of study, such as linguistics, psychology, neurology and sociology. According to Unoh (1995) the study of reading necessarily involves a study of psychology. For instance, attitude to reading, perception and reaction are heavily tilted towards human behaviour. Some other essential factors related to reading such as individual attention, thinking, recognition, retention, recall, remembering and forgetting, are all linked to psychology, neurology and sociology (Richardson and Morgan, 1990).

Reading comprehension is equally not divorced from linguistics (Unoh, 1995). First and foremost to comprehend, the reader must have acquired the basic decoding skills, which are linguistic in nature. The linguistic domain includes phonemic, lexical, syntactic and pragmatic knowledge (Colley, 1987). The rhetorical domain includes information about the form and conventions of different kinds of texts, which can range from a technical description to a literacy novel.

In spite of the complexity of reading comprehension, its definition can be classified under three domains and each influence the pedagogical process. The first group perceives reading comprehension as the end product of a reading programme aimed at getting pupils grasp the meaning of the words, which they perceive. This referred to as bottom – up approach to reading. In this instance, the reader may construct an interpretation of the text, which matches what is intended by the author. Reading appears to be a sequential letter – by – letter; word - by – word process and the focus are on perfection in oral reading and literal recall of details. To the teacher and the reader, meaning is largely in the printed word.

Among the proponents of this concept of reading comprehension are Thorndike (1973), and Williams (1991). Thorndike (1973) defines reading comprehension as ability to answer questions about a passage presented together with multiple – choice questions. Williams (1991) stated that reading is a process whereby one looks at and understands what has been written. One obvious implication of this definition is that teachers had to spend more time getting their pupils to “engage” with texts. For many children in this type of classroom environment, reading is a low – level process characterized by a constant struggle to “read word”. For this type of reader much of his or her own coherent and comprehensive textual meaning.

Critics of the bottom – up view of reading comprehension assert that reading should not be only text-based. This process, in their view isolates the reader and his prior knowledge as well as limiting the role of the teacher to helping the reader understand someone else’s meaning (Ringler and Weber, 1984; List and Lerner 1989; Richardson and Morgan 1990; Cairney 1990).

The second group defines reading comprehension as a constructive process involving the drawing of inferences based on an interaction between the readers’ prior knowledge and information from the text (Singler and Dolan 1982, Dole, Duffy, Resehler, Pearson, 1991). This view is equally referred to as the top – down approach to reading. They propose that text is language written in representation. In order to understand it the reader must, in many instances, use information, which is explicit and implicit.

Inferences may be required to integrate parts of the text and in order to make these the reader must have some background knowledge of the situation portrayed in the text. The reader may construct a satisfactory interpretation of the text, which differs from that intended by the author.

Wixon, Peters, Weber and Roeber, (1987), cited in Richeck, List and Lerner, (1989) gave what they termed a comprehensive definition of reading as the process of constructing meaning through the dynamic interaction among the reader, the text and the context of the reading situation (p. 7). Looking closely at this definition point, it is observed that reading comprehension involves the interaction of three components – reader’s existing knowledge and interest, which affects what he or she is willing and able to read (Richardson and Morgan, 1990).

The second is the text. This is the information presented to the reader. The clarity and organization of the text will affect the reader’s ability to make sense out of it (Cairney, 1990).

Finally, the third component is the context of the reading situation, which also affects the reading process. Some children find texts so frightening that they have difficulty reading them. However, these children would be able part of the reading situation. Richek, List and Lerner, (1989) postulated that people read one way when trying to understand detailed directions and another when reading a story for enjoyment.

The interaction of these three components according to Richek (1989) is dynamic and may change as the reader reads through the text. For example, when readers find information in the text that conflict with their existing knowledge, the reading act becomes less comfortable. On the other hand, when the information is the text agrees with reader's knowledge, they become more comfortable with material. Teachers in this instance, reflect a concept of reading that emphasizes the importance of the total concept, including the reader's prior knowledge, in determining meaning.

Reading comprehension skills are the strands that make up the term reading comprehension. The skills are needed to understand and apply information within written material (Oldson and Dillner 1982). The proponents of reading comprehension skills suggest that the identified sub – skills or tasks lead to an understanding of written materials. Considerable research over the years does seem to verify the existence of separable, distinguishable skills.

The most detailed study of this kind was carried out by Davis (1968, 1972), involving a statistical analysis of the results of two 96 item tests used with 988 college students. Davis suggests that he could distinguish four skills used to identify word meaning, draw inferences, identify a writer's technique by creating the passage and find answers to questions.

Since then, so many other studies have pointed to the fact that reading comprehension skills do exist and should be taught the number differs (Grillet, 1990; Williams 1991). Okwilagwe, (1992) identified eight comprehension skills while Grillet and Cairney (1990) identified as many as twenty – two reading comprehension skills. Oldson and Dillner (1982) listed twelve skills as follows: gaining word meaning, identify details, identifying main ideas, identifying sequence, identifying cause – effect relationship, making inferences, making generalizations and conclusions, identifying tone and mood, identifying theme, identifying characterization, identifying fact, fiction and opinion and identifying propaganda.

In contrast, some scholars consider reading comprehension as a “total process” with no separate skills whilst others suggest that skills exist but cannot be used in isolation. Cairney (1990) is of the opinion that to attempt to define reading comprehension, as skill – related phenomenon is to miss the major point that meaning making is at the heart of all we do as readers. She suggested a more student – centered approach that involves among other things: emphasizing the complete text, provide instructional activities and provide opportunities for readers to use alternative ways to create meaning.

Griese (1987) condensed the sub – skills to three basic skills, namely ability to identify the specific ideas, ability to understand the organization of these ideas and ability to make inferences. This study adopted the view that reading comprehension skills cannot be isolated but it can be incorporated into any instructional strategy.

Scholars have adduced several product factors as the main cause of pupils' reading comprehension problems. Unoh (1995) posited that pupils fail to comprehend text because they are not trained to read beyond the line and above the line. On the other hand, Philip, Kristy, Margaret and Ruth (2001) posited that one of the reasons pupils do not comprehend text is their non – exposure to the different levels of reading comprehension. According to the National Policy on Education, from

primaries one to three, pupils are involved in learning to read and they have crossed over from learning to read to reading to learn with English as the language of instruction.

At this level, reading comprehension is no longer for factual information alone but it becomes an active process where the reader exhibits the ability to read for details, grasps the main idea, selects and evaluates the correct meaning of text (Ogunniyi, 1994). In other words, to read and comprehend implies that the reader has to incorporate the three basic levels of reading comprehension, which are factual, inferential and evaluation (Costello, 2000).

There is a dearth of research on reading comprehension development and achievement of our children at the primary school level. The few available have identified physical and perceptual, intellectual, emotional, language and experimental factors as possible contributors to reading failure (Asiedu – Akrofi, 1982). But all those factors suggest weaknesses within the children and tend to shift the responsibility away from the teachers.

However, there is an accumulating body of evidence that the teachers have not been doing as well as they should in teaching reading comprehension as revealed by research findings (Durkin, 1979, Asiedu – Akrofi, 1982; May, 1992). They show us again that the teacher is the most important variable in how well a child learns to read. Extensive surveys and specific studies (SAPA Report, 1992; UNESCO / UNICEF / NIGERIA PROJECT 1997; UBE 2001) have pinpointed some of the factors that hinder reading comprehension as limited and fragmented instructional programmes, lack of improper use of materials (Idogo 1987) and inadequately prepared teachers.

The teacher's self – confidence (which comes partly through his or her knowledge of how to teach reading) seems to be an important factor. It is the teacher who makes the difference – her awareness of strategies, those that encourage children to look for ideas. In the conventional classroom, reading comprehension is taught as if understanding that passage in use is an end in itself.

Pearson (1989) is of the opinion that reading comprehension is not a passive, receptive, or text – based process, but an active, constructive, reader – based process. In the view of Tominson and Ellis (1990), teachers should bear in mind that when they give a comprehension lesson, they are helping to develop the pupil's basic reading skills that are used in their general reading. Pearson (1989) reiterated that the teacher's role is to make reading enjoyable and should therefore employ teaching strategies that should make pupils gain pleasure and knowledge from written texts. Undoubtedly, the fact that a large number of children in our primary schools fails to read and comprehend adequate must be of great concern to everyone. It is established that 50% to 70% of our primary school children in public schools do not read well enough to meet the requirements of school and society (Gould, 1993). Some studies such as the World Bank Report (1990); UNESCO / UNICEF / NIGERIA PROJECT (1997); UBE project (2002) tend to support this assertion

The UNESCO and UNICEF sponsored a National Assessment for Nigeria Primary School known as "Monitoring of Learning Achievement Programme (1997). The programme assessed the level of academic achievement of primary four pupils in three key areas literacy, numeracy and life skills. The literacy aspect of the study made use of reading comprehension passages. The result from this national survey of educational achievement of some primary four pupils in Nigeria confirmed the general lack of reading comprehension skills among Nigeria pupils. According to the survey, the pupils' performance in reading and comprehension was the poorest. The survey indicated that the vast majority of the primary four pupils could not read and understand instructions written in English.

Moreover, the inability to comprehend was carried over subjects. It was noted that the pupils did not attempt mathematical problems with a few words attached to it. In effect, the reading problems of pupils have a substantial effect on the pupils' performance in other subjects. In spite of the noble objectives of primary education, several studies have shown that our education system has met their objects (World Bank Policy Report, 1990; SAPA, 1993; UNICEF project, 1997; UBE project, 2003) these studies show that schools have been inefficient in teaching core skills contained in their curriculum.

THE GOAL OF READING INSTRUCTION

On a higher note, Anderson, (2000) stressed that there is relative agreement about what the target of reading instruction should be. According to Anderson society wants its citizens to be able to read at a level that will allow them to process policy information so that they can vote intelligently, to process policy information about commodities so that they can be good consumers, to process technical information so that they can be good workers and in other ways to take in written information so that they can be effective citizen (p. 387).

Since teaching is the core process through which education happens, a survey of the instructional techniques used in teaching reading comprehension in the schools reveal three major lapses:

- a) Reading comprehension skills are not taught.
- b) Teachers adhere strictly to the prescribed text book.
- c) Questions are set to test understanding of the text instead of teaching to produce understanding of any text (Cairney, 1990; Okwilagwe, 1998; Costello 2000; Udosen, 2001).

In the conventional classroom the passage is presented to the pupil together with multiple – choice questions based on that passage. The pupil reads the passage and refers back to it as often and as much as he or she needs to and then attempts to pick the choice that best answers the questions or completes the statements presented in the text exercise. The questions are usually designed to find out if the pupils understand the passage.

The study of Abe (1999) showed that only factual multiple choice question was asked in the classroom. In other words, pupils are “tested” for understanding of the passage or text rather than “teaching” with the aim of producing understanding. Consequently, pupils under conventional method are involved in the process of “struggling” to understand the text so as able to answer the questions (Cairney 1990).

In addition to the basic problem of pupils being “tested” and not ‘taught’ reading comprehension, it has also been discovered that teachers stick only to the prescribed textbook during reading comprehension lessons. As still cited in Ogunniyi (1994) conducted a study in Ibadan and discovered that 96% of teachers surveyed conducted their lessons from the textbook. Adelaken (1983) did the same study in Ogun state and the result showed that 95% of a sample of language teachers surveyed did not deviate from the content presentation of materials in their textbooks.

The studies on reading comprehension provided the impetus for changes in our thinking about comprehension instruction. From the words of Dolores and her colleagues (1978 – 79), Richardson and Morgan (1990), and Costello (2000) new instructional strategies for teaching reading comprehension have been developed. Their studies confirm that not only can teachers do a better job of ‘teaching’ comprehension by viewing these new instructional strategies, there has to be a remarkable improvement in pupil’s learning outcome in reading comprehension.

METHODS AND MATERIALS

This study determined the relative effectiveness of three instructional strategies (Preparation – Assistance – Reflection; Question – Answering Relationship and Conventional). The study further investigated the moderating effect of Verbal Ability and Gender on pupils' learning outcomes in reading comprehension.

In order to investigate the problems, the following null hypotheses were tested at 5% level of significance: (a) Null Hypothesis 1 - There is no significant main effect of treatment on pupils' achievement in and attitude to reading comprehension; and, (b) Null Hypothesis 2 - There is no significant main effect of pupil's verbal ability on pupils' achievement in and attitude to reading comprehension.

This study made use of pre – test and post-test control group quasi – experimental design. The essence of the pre – test is the idea of take off position. It provides the basis for comparison and equally absolves the entire extraneous variable. The design was used because it permits the investigator to study changes within the various groups as well as among inter – groups.

A multi – stage sampling procedure was used. At first six schools were randomly selected from the public primary schools in Ibadan North Local Government Area of Oyo state. Then, the balloting system was used to assign two schools to each treatment because of the limited number of schools involved. All the primary five pupils in the six randomly selected primary schools were involved in the study. Intact classes were also used so as not to disrupt the school programme. There hundred and seventy (370) pupils were finally involved in this study. They consisted of one hundred and seventy two (172) males and one hundred and ninety eight (198) females. All the regular teachers in the six randomly selected schools were involved in the study. They were all qualified teachers with N.C.E. certificate. In all, eleven teachers participated in the study.

DATA ANALYSIS

Four instruments were used in the study – Verbal Ability Test (VAT); Reading Comprehension Achievement Test (RCAT); Attitude towards Reading Comprehension Questionnaire (ATRCO); Operational Guide for the Instruction (OGI).

The Verbal test in English (VTE) is a 60 – item test adapted from the Australian Council of Educational Research (ACER). The objective of the test was to measure the verbal intelligence of the subjects as well as categorize subjects into high average and low ability groups. A correct answer was given 1 as its value and a wrong answer was given zero (0) as its value. It was used a pre – test only. Obemeata (1976) had validated this test for Nigerian use Jiboku (1998) also determined the usefulness of the test to reading comprehension by subjecting it to a reliability value of 0.82. However, the present researcher revalidated the instrument by administering it to 40 primary five pupils in schools not involved in the study to determine its reliability. Their responses were thereafter subjected item analyses using KR – 21 formulae which yielded a reliability estimate of 0.73 the scores between 25 – 49% were classified as low ability group, 50 – 64% were classified as average ability group while the scores between 65% and above were classified as the high ability group.

This is a three – passage comprehension achievement test adapted from primary grade literature. To establish the content validity, experienced and qualified primary school teachers of English were given the items for their necessary correction

with respect to adequacy, structure and relevance to content coverage. It was later tried on primary five classes in Ibadan North Local Government Area. The test items established a reliability value of 0.83 using KuderRichardson KR -21. The average item difficulty index range from 0.55 to 0.77

The Attitude Toward Reading Comprehension Questionnaire (ARTCQ) was deployed. This is a 20 – item instrument developed by the researcher to elicit information from the subjects on their attitudes towards reading comprehension. It was used for both pre – test and post – tests. The instrument it made up of Sections A and B. Section A deals with information about pupils' age, classes and sex. Section B was designed to measure pupil's interest towards reading comprehension. The pupils were to state either yes or no to the corresponding statements in the appropriate column. The 'yes' questions were graded with two point while the 'no' questions were graded with one point. Two – way alternative answer was used because of the level of the pupils.

The process of its validation of the test instrument was conducted extensively; the instrument was initially given to primary five teachers for assessment. The necessary corrections were made. The instrument was later given to a group 45 pupils from six randomly selected schools in another local government area in a focus group discussion. The pupils freely discussed the questions assessing its difficulty. Corrections were made and questions modified to suit their level of understanding. It was finally subjected to a reliability test using the Cronbach Alpha technique which gave a reliability coefficient of 0.74

The Operational Guide for Instruction (OGI) was used in the entire empirical process. The Operational Guide for Instruction (OGI) is the teacher's guide used in teaching all the pupils by the participating teacher in the experimental groups. There are three different teacher's guides with each reflecting the three instructional strategies – PAR, QAR and CONVENTIONAL respectively. The researcher used the OGI as a guide to train the teachers used in the study. To establish its content validity, the OGI was given to experienced lectures in higher institutions and to teachers of English in our primary schools to validate and effect changes in terms of its structure, adequacy and coverage of the treatment procedures.

The last session of the analysis was for the administration of the ATRCQ and RCAT as post – tests. The subjects were not informed that the post – test would be administered.

The overall data collected were analyzed using inferential statistical model of covariance (ANCOVA) with the pre – test scores as covariates. This was to determine the significant main effects and interaction effects of the group differences while the multiple classification analysis (MCA) aspect of the ANVOVA was used to detect the magnitude and direction of differences. Scheffe multiple range analysis and graph was also employed as post – hoe measures in the case of significant main and interaction effect respectively. All hypotheses were tested at .05 alpha levels.

RESULTS AND DISCUSSIONS

As earlier mentioned, two hypotheses were tested. The results are presented in the order in which the hypotheses were generated. Null Hypothesis 1: *There is no significant effect of treatment on pupils' academic achievement in reading comprehension.* The results of the ANCOVA of the post – test achievement score of subjects in Reading Comprehension According to Treatment, Verbal Ability and Gender are presented in Table 1.

Table 1: Summary of 3 x 3 x 2 Ancova of the post – test achievement score of subjects in Reading Comprehension According to Treatment, Verbal Ability and Gender.

Source of Variation	Sum of Square	DF	Mean Square	F	Sign. of F
Covariates pre – test score	110211.9	1	110211.9	4472.926	.000
Main effects (combined)	34070.20	5	6814.039	276.546	.000
Treatment	33676.62	2	1683.31	683.379	.000
Verbal Ability	338.175	2	169.087	6.862	.001
Gender	55.399	1	55.309	55.309	.135
2 – way interactions (combined)	204.525	8	25.566	1.038	.407
Treatment x Gender	33.503	2	16.752	.680	.507
Treatment x Ability	122.194	4	30.549	1.240	.240
Gender x Ability	30.462	2	15.231	.618	.540
3 – way interactions – Treatment x Ability x Gender	143.0.78	4	35.769	1.452	.217
Explained	144629.7	18	8034.984	326.098	.000
Residual	8599.284	349	24.640		
Total	153229.0	367	417.518		

Note: The test statistic is significant at the 5% level of confidence

To determine the actual source of the significant main effect of treatment on pupil’s attitude to reading comprehension, Scheffe Multiple Range Test was employed as a post – hoe measure. The result is shown in Table 2.

Table 2: Summary of Scheffe Post – Hoe Analysis on Post – Attitude Mean Score of Pupils to Reading Comprehension According to Treatment Group

Treatment	Mean	PAR Group	QAR Group	Conventional Group 3
PAR	37,000		*	*
QAR	33.0070	*		*
CONTROL	32.3311	*	*	

*Denotes groups significantly different at 0.05 level

Table 2 shows that there is a significant difference between the Control group and the experimental groups (PAR and QAR). Moreover, there exists a significant difference between PAR and QAR. This implies that the significant difference observed was as a result of the differences between experimental groups 1 and 2, and 3 and 2 and 3.

Null Hypothesis 2: There is no significant main effect of pupils’ verbal ability on academic achievement in reading comprehension.

Table 4 shows that there is a significant main effect of pupils verbal ability on academic achievement $F_{(2,367)} = 6.862$ $p < 0.05$ the hypothesis is therefore rejected. Table 5 shows that the high verbal ability group performed better ($X = 47.33$) than the average verbal ability group with the adjusted post – test mean scores of 42.44, followed by low verbal ability group ($X = 32.85$). To determine the extent of the significance, Scheffe Multiple Range Analysis was employed as a post – hoe measure. The result is presented in table 3.

Table 3: Summary of Scheffe Post – Hoe Scores Analysis of Post – Test Mean Scores of subject according to Verbal Ability

Verbal Ability	Mean	Group 1 PAR	Group 2 QAR	Conventional
High	54.53		*	*
Average	42.4	*		*
Low	37.85	*	*	

*Denotes group significantly different at 0.05 level

Table 3 shows that there is a significant difference in the mean scores of the high and average ability pupils. The high ability group performed better than the average and low ability pupils. Based on the results, the null hypothesis that “*there is no significant main effect of pupils’ verbal ability on attitude to reading comprehension is not significant*” is not rejected.

The analysis of the effect of treatment on pupil’s achievement and their attitude to reading comprehension shows that the pupils’ in Preparation – Assistance and Reflection group (PAR) performed better than pupils in the Question – Answering Relationship (QAR) and the Conventional groups respectively. The study also showed that the mode of instruction played significant role in the differences observed in pupil’s achievement (see Tables 4 and 5).

Table 4: Summary of 3 x 3 x 2 Ancova of the Post-Test Achievement Scores of Subjects in Reading Comprehension According To Treatment, Verbal Ability And Gender.

Source of Variation	Sum of Squares	df	Mean Square	F	Sign. of F
Covariates –Pre-test scores	110211.9	1	110211.9	4472.926	.000
MAIN Effects (combined)	34070.20	5	6814.039	276.546	.000
Treatment	33676.62	2	16838.31	683.379	.000
Verbal Ability	338.175	2	169.087	6.862	.001
Ability	55.399	1	55.309	2.248	.135
2-way interactions (combined)	204.525	8	25.566	1.038	.407
Treatment x Gender	33.503	2	16.752	.680	.507
Treatment x Ability	122.194	4	30.549	1.240	.294
Gender x Ability	30.462	2	15.231	.618	.540
3-way interactions –					
Treatment x Ability x Ability	143.078	4	35.769	1.452	.217
Explained	144629.7	18	8034.984	326.098	.000
Residual	8599.284	349	24.640		
Total	153229.0	367	417.518		

Note: Test statistic is Significant at $p < 0.05$

Table 4 shows that there is a significant main effect of treatment on pupil’s achievement in reading comprehension ($F_{(2,349)} = 683.379$; $p < 0.05$). Based on this, the hypothesis is rejected.

For the MCA on Achievement, Table 5 shows that Preparation, Assistance and Reflection (PAR) group has the highest adjusted post-test mean score of 61.75 (46.13 + 15.62) followed by Question – Answering Relationship (QAR) group 50.3 (46.132 +4.17); and the Control group has the lowest score of 34.51 (46.13 – 11.62).

The MCA table also shows that the three independent variables correlate positively with the dependent variables ($R = .970$). Similarly, the table shows that 94.2% of the variation in pupils’ achievements is as a result of the three variables investigated in this study. The remaining 5.8% are accounted for by some other factors not included in this study. To determine the actual source of the significant

main effect of the treatment as indicated in Table 5, Scheffe Multiple Range Analysis was employed as a post-hoc measure.

Table 5: Multiple Classification Analysis (MCA) of the Post-Test Achievement Scores of Subjects According to Treatment, Ability and Gender.

Variable + Category	N	Unadjusted Deviation	Eta	Adjusted for Independent + Covariate Deviation	Beta
TREATMENT					
1. PAR	74	17.91		15.62	
2. QAR	143	11.1		4.17	
3. Conventional	252	-2.9	.798	-11.62	.517
GENDER					
1. Male	172	0.39		-0.39	
2. Female	192	0.33	.016	0.38	.019
VERBAL ABILITY					
1. Low	147	-8.28		-1.03	
2. Average	174	-3.73		-0.7	
3. High	49	8.4	.360	1.2	.050
R2					.970
Multiple R					.942

Note: Grand Mean = 46.13; PAR – Preparation Assistance Reflection; QAR – Question Answering Relationship

The MCA results presented in Table 5 explains how each of the treatment groups performed. The superiority of PAR group over the rest may be due to the inherent principles of PAR which includes:

- a) Activating the pupil’s background knowledge
- b) Building upon their background knowledge and language skills
- c) Increasing pupil’s verbal ability through the use of pictures and objects
- d) Stimulating pupil’s higher – level thinking processes through the use of evaluation and inferential question.

The application of PAR instruction strategies requires the teacher to use different kinds of reading materials, pictures and objects in addition to the prescribed text. This process stimulates recall of an experience as well as enriching their experimental background. The reflection aspect of the strategy provides pupils the opportunity to improve on their use of high level thinking strategies. In addition, with the display of different objects and pictures during the lesson, the children found learning to be fun and actively participated in it. The finding thus corroborated those of Ringler and Weber (1984); Richardson and Mogan (1990), Cairney (1990), Costello (2000) that appropriate instructional strategies does enhance pupil’s learning comprehension.

The QAR group also had an edge over the Conventional group. The findings supported the result of the studies carried out by Pearson and Johnson (1978); Richek, List and Lerner (1989), special features of QAR that may have contributed to its advantage over the conventional method are:

- a) The interaction between the reader, the text and the author
- b) The realization of the fact that not all answers to questions are found in the text
- c) The role of background knowledge in answering questions that involves the reader making decisions and analyzing values.

These salient features of QAR are incorporated into the reading comprehension skills. Several studies have proved that Reading Comprehension is an active process

in which the reader's background knowledge interacts with the text and the author in construction meaning out of any text in view (Cairney, 1990); Okwilagwe, (1992); Asiodu – Akorfi, (1997); Costello, (2000). Some other studies confirmed that understanding the nature of questions as well as being aware of the type of answers expected, improves considerably the reading comprehension ability of primary school pupil's realize that they have something to contribute to any text and that the author does not necessary have the last say.

Findings from the study showed that verbal had a significant influence on pupil's achievement in reading comprehension (see table 4). The result showed that high verbal ability pupils achieved better than the average and low ability pupils across the three treatment groups, it therefore points to the fact that pupil's achievement in reading comprehension is dependent on their verbal ability. The result confirms the assertion that pupil's verbal ability in reading is a display of the pupil's experience and exposure to the usage of the language. This result is consistent with some research findings on the positive effect of verbal ability on pupils achievement in reading comprehension (Brown, 1984; Bell and Perfett 1994; Adelabu 1998; Akinbote 1999).

However the study conducted by Jiboku, (1990) had a contrary result. His study though on senior secondary students – showed that there was no significant effect of verbal ability on student's achievement in reading comprehension. It should be noted that Jiboku (1998) made use of two levels of verbal ability – high and low, while this study made use of three levels – high, average and low levels.

There is an advantage in using three levels. According to Kirk and Gallagher (1979) one of the concepts of individual differences is inter – individual differences, which is the variability between and among members of a group. Whenever a group is measured children like biological organisms group themselves along what is known as the Gaussian curve, or normal distribution for most characteristics. They further explained that when a large sample of the population is examined on almost any common characteristic, most members of the group cluster near the average with fewer members spreading out to the extremes. To make use of two levels of verbal ability as Jiboku (1998) did, may mean taking samples from the two extremes neglecting the middle point.

As regards attitude, it is interesting to note that verbal ability did not influence pupil's attitude to reading comprehension significantly. This confirms the importance pupil's attach to the knowledge of reading comprehension skills in addition to their willingness to learn through the application of interesting instructional strategies.

RECOMMENDATION AND CONCLUSION

This study has provided some practical ways and means of improving reading comprehension ability of pupil's in our primary schools. However are still aspects of reading comprehension that need further researcher work such as the area of verbal ability and background knowledge in enhancing pupil's reading comprehension ability.

Based on the limitation of the study, more schools and more local government areas should be included in future research. On the other hand, there may be need to have a comparative study between the public and private primary schools.

From the findings of the study, both the PAR and QAR are good instructional strategies for improving the reading comprehension ability of primary school pupil's. Reading comprehension could therefore be effectively taught at the primary school level using PAR and QAR as instructional strategies. PAR stimulates the pupil's

background knowledge; build on it increasing their verbal ability. The study also showed that there was significant effect of verbal ability on pupils' achievement in and attitude to reading comprehension. The study showed that verbal ability is central to reading comprehension, and this ability is influenced by the pupils' background knowledge. More importantly, the high verbal ability pupils in the treatment groups performed better than their counterparts with average and low verbal ability.

PAR instructional strategy is the next best option in a situation where there are not enough resources to implement PAR. QAR simply involves the teacher explaining the nature of questions, where to find the answers and the realization that not all the answers required are found in the textbook. This also stresses the need for adequate background knowledge and the ability to increase it where it is lacking.

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