
EXPERIMENTING LEXICAL QUALITY INSTRUCTIONAL TECHNIQUE FOR TEACHING READING: A REAWAKENING OPPORTUNITY FOR UPPER-BASIC SCHOOL PUPILS IN KADUNA METROPOLIS

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ABSTRACT

The study examines the how lexical quality can enhance the teaching and learning of reading at the upper-basic school level as an instructional tool. The poor achievement of pupils in (UBSCE) English language necessitated this study. It is believed that this study would be of benefits to all the stakeholders and pupils in the education sector. Attempt was made to review the challenges of lexical quality, its nature and evolution as an instructional technique with a view to suggesting ways of improving the quality of teaching and learning of English reading comprehension, and English language in general. Quasi-experimental design with pre and post-test, non-randomised and non-equivalent was adopted for data collection. The population for this study consisted of all upper-basic school pupils in Kaduna metropolis. Two schools were purposively sampled. The sample was categorised into one experimental group and one control group of fifty respondents each. The data collected were analysed using the percentage, mean, standard deviation and analysis of Co-variance (ANCOVA) to test the two formulated hypotheses at 0.05 level of significance. Findings revealed that: the general level of pupils' achievement in reading comprehension was low before the treatment (42.79) but high after the treatment (77.76) irrespective of gender. The paper recommends that teachers of English language should wake up and move in line with modern trend in order to improve the teaching and learning of reading comprehension. Teacher trainers should re-modify the teacher training programmes to re-orientate the teachers toward the use of lexical quality instructional technique. Curriculum planners and developers should not be left out in this regard.

Keywords: *Reading, Comprehension, Technique, Lexical quality and Achievement*

Introduction

Reading is a requisite and an indispensable skill in the teaching and learning processes. Reading is a skill that is required by both teachers and students, regardless of the stage of their teaching and learning respectively. Reading is the means by which academic excellence can be attained and no student can survive in the academic world without the ability to read. Reading is required for full participation by every member in the modern society. Reading, more so, adds quality to life, provides access to culture and cultural heritage, empowers, emancipates and unites people together.

Ofofu (2009) views reading as one of the most fundamental media for acquiring and promoting knowledge at all levels of education. Reading is a language skill that is employed in facilitating the acquisition and development of literacy needed for effective communication in different contexts. More so, reading is a pleasurable venture and a source of information which provides a means of integrating and widening one's language development.

However, despite the significant importance of reading as a critical skill to success across domains of life's activities, researchers have observed that this skill is often ignored in Nigerian schools. For example, Onukaogu (2002) opines that the teaching of reading in Nigeria today is a tragedy in that nursery; primary, secondary and tertiary institutions students are not equipped with reading skills. This, perhaps, explains Fola-Adebayo's (2014) view that though reading is by far the most important of the four language skills particularly in a second or foreign language, reading is so poorly taught in many Nigerian schools and this brings about poor academic achievement of the students.

While some scholars see reading as a purely linguistic matter, others believe it is inseparable from comprehension. For instance, Moore (2014) sees comprehension as the essence of reading and the active process of constructing meaning from text. Therefore, the ability to read and comprehend text is the ultimate goal of reading instruction. Perhaps, we

can then safely pronounce that comprehension is the nucleus of reading. In line with this, Ofodu (2009) affirms that comprehension is the ultimate reason for any reading effort. This researcher thus presumes that most people would consent to the fact that any reading that is done without comprehension is not reading.

Lexical quality as a variable of importance to this study, refers to the pivotal role of word meaning on reading comprehension. Words are considered as the building blocks of a language. Words are so crucial to comprehension that having no knowledge of the meaning of a certain word is dangerous for comprehending the language and context in which that word is used. So, using words as a pilot for comprehension demands more than the knowledge of words but also the contexts in which they feature. As Nation (2014) opines, 'a word contributes to the meaning of a sentence, but at the same time, the meaning of the word is in part a product of the sentence and context in which it appears.'

Lexical quality tagged 'vocabulary and decoding' by Raudszus, Segers and Verhoeven (2017) has been found to predict reading comprehension achievement of learners. Borode's (2016) study on the effect of verbal ability and locus of control on Junior Secondary School students' academic achievement in French Essay writing and discover a significant difference between students' verbal ability and their academic achievement in the course in experimental and control groups before and after the treatment. For a couple of years, researchers in reading comprehension have been able to identify reading techniques that increase learners' comprehension. This, however, is evident on instructional researches in which single cognitive strategy only is taught in controlled experiment.

Statement of the Problem

Reading is an anchor for a learner's successful achievement in all school subjects because reading is at the heart of all formal learning. Without the ability to read and comprehend effectively, a child's opportunities of accomplishing his/her purpose of reading and job potentials are hampered. Poor achievement in reading is a major issue among Nigerian upper-basic pupils

The researcher observed from experience that teachers of reading in Nigerian upper-basic schools place too much emphasis on the talk-chalk teaching methods. Teachers usually dominate the teaching procedure in the reading class. Consequently, pupils are not actively engaged in the text in a meaningful way. Therefore, students have difficulty in expressing themselves orally and in comprehending verbal information. Ultimately, non-attainment of RC skill constitutes a myriad of problems for the students, parents and the nation.

Although, several researches have been carried out over the years to identify those key factors that impede students' reading comprehension, none to the knowledge of this researcher has examined the issue of lexical quality and its contribution to reading comprehension which create a research gap this study filled.

Purpose of the Study

The general purpose of this study is to investigate the effect of lexical quality on the reading comprehension achievement of upper-basic school pupils in Ekiti State, Nigeria. Specifically, the study intends to find out:

- a. the general achievement level of upper-basic school pupils in reading comprehension in Kaduna metropolis.
- b. the effect of lexical quality on upper-basic school pupils in reading comprehension in Kaduna metropolis.
- c. whether gender has influence on the effect of lexical quality on upper-basic school pupils in reading comprehension in Kaduna metropolis.
- d. whether school background has influence on the effect of lexical quality on upper-basic school pupils in reading comprehension in Kaduna metropolis.

Research Questions

The following research questions were raised to guide the study.

1. What is the general achievement of upper-basic school pupils in reading comprehension in Kaduna metropolis?
2. What is the effect of lexical quality on upper-basic school pupils in reading comprehension in Kaduna metropolis?

3. To what extent does gender influence the lexical quality of upper-basic school pupils in reading comprehension in Kaduna metropolis?
4. To what extent does school background influence the lexical quality of upper-basic school pupils in reading comprehension in Kaduna metropolis?

Research Hypotheses

1. There is no significant difference between the pre-test and post-test scores of pupils taught by lexical quality strategy and those in the control group.
2. There is no significant effect of lexical quality strategy on pupils' literal, inferential, and critical levels of comprehension.
3. There is no significant effect of a combination of working memory, verbal ability and lexical quality technique on students' creative level of comprehension.
4. There is no significant interaction effect of male and female pupils on reading comprehension in experimental and control groups.
5. There is no significant interaction effect of school background on upper-basic school pupils in reading comprehension in Kaduna metropolis.

Methodology

The study was an experimental study using pretest, post-test and non-equivalent control group. The study consisted of 100 students from two upper-basic schools within the Kaduna metropolis. The study adopted a factorial design of 2 x 2 x 3 x 3 to test the null hypotheses. The study investigated the effect of lexical quality instructional technique on upper-basic school pupils' achievement in reading comprehension. There were two groups (one experimental group and one control group). The experimental group was exposed to treatment (lexical quality instructional technique) while the control group was taught with the conventional method. Gender (male and female) and school background are used as moderating variables, and literal, inferential and critical levels of reading are considered as the dependent variables. In carrying out the study,

English Language achievement test adapted from upper-basic school certificate examination ((UBSCE)) was used. It comprises of Fifty (50) multiple-choice items. This was validated by experts in the field of English language Education. Data collected was analysed using the descriptive and inferential statistics. Demographic data of the respondents on gender was described using frequency counts and the percentage. Data gathered through pre-test and post-test was graded using a prepared marking scheme. Mean and standard deviation were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the entire hypothesis at 0.05 alpha levels.

The analysis of the of findings

The analysis of the data collected and the results are reported as follow:

Table 1: Demographic Characteristics Based on Gender

<i>Groups</i>	Gender	Frequency (%)	Sub-Total (%)
<i>Experimental Group III</i> (Lexical Quality)	Male	19 (19%)	50 (50%)
	Female	31 (31%)	
<i>Control Group</i> (Conventional Method)	Male	23 (23%)	50 (50%)
	Female	27 (27%)	
<i>Total</i>	Male	42(42%)	100 (100.0%)
	Female	58 (58%)	

Table 1 shows the demographic information of the groups (experimental and control groups). Out of 100 (100%) pupils sampled for this study, 50 (50%) of the respondents formed the experimental group one (students taught reading comprehension with Lexical Quality) from which 19 (19%) were males, while 31 (31%) were females while 50 (50%) of the respondents constituted the control group (students taught reading using conventional method) out of which 23 (23%) were males, while 27 (27%) were females.

Table 2: Demographic Characteristics Based on School Background

<i>Groups</i>	School Background	Frequency (%)	Sub-Total (%)
<i>Experimental Group III</i> (Lexical Quality)	Public	50(50%)	50 (50%)
	private	50(50%)	

(Conventional Method)
Total

Public	50(50%)	100 (100.0%)
Private	50 (50%)	

As revealed in Table 2, out of 100 (100%) students sampled for this study, 50 (50%) formed the experimental group (Lexical Quality) were from public upper-basic school while the control group contains 50 (50%) respondents attended private upper-basic school.

General Question 1 What is the general achievement of upper-basic school pupils in reading comprehension in Kaduna metropolis?

Achievement Scores of upper-basic school pupils' exposed to both experimental and control groups before and after the treatment were computed and compared. The result is presented in Table 3.

Table 3: Mean Scores and Standard Deviation of General Achievement of Senior Secondary School Students in Reading Comprehension

<i>General Achievement</i>	N	Minimum Scores	Maximum Scores	Mean	Std. Deviation
<i>Pre-test (Lexical Quality)</i>	27	.00	22.00	8.2222	5.38040
<i>Post-test (Lexical Quality)</i>	27	5.00	32.00	17.283	6.68353
<i>Pre-test (Control Group)</i>	40	2.00	18.00	9.4250	4.13793
<i>Post-test (Control Group)</i>	40	4.00	21.00	13.3500	4.44655

Table 3 shows that the achievement of upper-basic school pupils (both the experimental and control groups). Their post-test scores were higher than pre-test scores. In the post test, the achievement of pupils exposed to reading comprehension using Lexical Quality (17.3) was relatively high while those exposed without any learning strategy (control group) was low (13.4). This mean that the achievement of upper-basic school pupils exposed to treatment was better than the control group.

Research Question 2: *To what extent does gender influence the lexical quality of upper-basic school pupils' achievement in reading comprehension?*

Mean scores of male and female upper-basic school pupils' achievement in reading comprehension exposed to lexical quality were obtained and compared to that of the control group to determine the gender influence on their achievement in reading comprehension. The result is presented in Table 4.

Table 4: Gender Influence of the Lexical Quality on upper-basic school pupils Achievement in Reading Comprehension

<i>Treatment</i>	Gender	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
<i>Lexical Quality</i>	Female	21.551 ^a	.627	20.312	22.790
	Male	16.281 ^a	1.005	14.297	18.264
	Female	17.553 ^a	.527	16.513	18.593
	Male	14.353 ^a	.529	13.309	15.397
<i>Control Group</i>	Female	13.927 ^a	.551	12.839	15.014
	Male	14.353 ^a	.529	13.309	15.397

- a. Covariates appearing in the model are evaluated at the following values: pre-test = 10.1534.

As revealed in Table 4, there is no discrepancy in the achievement (mean scores) of male and female pupils exposed to lexical quality instructional technique (17.55) and (16.28) was higher than that of male and female pupils exposed to conventional method (14.35) and (13.92) respectively.

Research Question 3: *To what extent does school background influence the lexical quality on upper-basic school pupils' achievement in reading comprehension?*

Table 5: School Background Influence of the Lexical Quality on upper-basic school pupils' Achievement in Reading Comprehension

<i>Treatment</i>	School Background	Mean	Std. Error	95% Confidence Interval	
				Lower Bound	Upper Bound
<i>Lexical Quality</i>	Public	17.082 ^a	.574	15.949	18.215
<i>Control Group</i>					
	Private	14.005 ^a	.571	12.878	15.131

a. Covariates appearing in the model are evaluated at the following values: pretest = 10.1534.

As shown in Table 5, pupils from public upper-basic school had higher achievement (17.08) than that of pupils from private upper-basic school pupils (14.00) exposed to conventional teaching method. Thus, school background had no influence on the achievement of pupils.

Hypotheses Testing

Hypothesis 1: There would be no significant effect of lexical quality on upper-basic school pupils' achievement in reading comprehension.

In order to test this hypothesis, scores relating to achievement of students who were taught reading comprehension using lexical quality instructional technique and conventional method were computed and compared using Analysis of Covariance statistical technique at 0.05 level of significance.

Table 6: Analysis of Covariance Showing the Effect of Lexical Quality and conventional method on upper-basic school pupils' Achievement in Reading Comprehension

<i>Source</i>	Type III Sum of Squares	df	Mean Square	F	Sig.
<i>Corrected Model</i>	12433.862 ^a	5	2486.772	434.200	.000
<i>Intercept</i>	1986.776	1	1986.776	346.899	.000
<i>Pretest</i>	3325.477	1	3325.477	580.641	.000
<i>Treatment</i>	5760.752	4	1440.188	251.462	.000

<i>Error</i>	973.632	170	5.727		
<i>Total</i>	89145.000	176			
<i>Corrected Total</i>	13407.494	175			

a. *R Squared = .927 (Adjusted R Squared = .925)*

p<0.05

Table 6 reveals the F-value 251.462 with a p-value 0.000 obtained when computed at 0.05 alpha levels. Since the p-value (0.000) is less than alpha level (0.05), the null hypothesis one is rejected. Thus, there are statistically significant effect of lexical quality on upper-basic school pupils achievement in reading comprehension than the conventional method ($F_{(4, 170)} = 251.462, p < 0.05$).

Sequel to the establishment of significant effect of lexical quality on upper-basic school pupils' achievement in reading comprehension, further test was carried out to find out which of the groups (treatment group) and (control group) had the most significant effect on upper-basic school pupils' achievement in reading comprehension. The test was conducted using Pairwise comparison via Bonferroni's procedure at 0.05 alpha levels. This is presented in Table 7

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig. ^b	95% Confidence Interval for Difference ^b	
					Lower Bound	Upper Bound
<i>Lexical Quality</i>	Lexical Quaity	4.232*	.693	.000	2.260	6.204
	Control	3.127*	.599	.000	1.425	4.830
						-15.094
Subset for alpha = 0.05						
<i>Treatment</i>	N	1	2	3	4	
<i>Lexical Quality</i>	27	17.283 ^a				

Table 7: Pairwise Comparisons Analysis of the Effect of Lexical Quality instructional technique on upper-basic school pupils' Achievement in Reading Comprehension

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons:
Bonferroni.

As revealed in Table 7, the treatment (i.e. Lexical Quality Instructional Methods) were significant as $p < 0.05$. However, the treatment, lexical quality with the highest mean score 30.805 had the most significant effect on upper-basic school pupils' achievement in reading comprehension while pupils taught with the conventional method with the mean scores 21.515 add the least effect on upper-basic school pupils' achievement in reading comprehension.

Hypothesis 2: There would be no significant effect of lexical quality strategy on pupils' literal, inferential, and critical levels of reading comprehension.

In order to test this hypothesis, scores relating to achievement of pupils who were taught reading comprehension on the literal, inferential, and critical levels using lexical quality was computed and compared using Analysis of Covariance statistical technique at 0.05 level of significance.

Table 8: Analysis of Covariance Showing the Interaction Effect of the Treatment (Lexical Quality) on upper-basic school pupils' Achievement at the Literal, inferential and critical Levels of Reading Comprehension

<i>Source</i>	Type III Sum of Squares	df	Mean Square	F	Sig.
<i>Corrected Model</i>	1620.725 ^a	5	324.145	214.190	.000
<i>Intercept</i>	234.147	1	234.147	154.721	.000
<i>Pretest (Literal)</i>	413.245	1	413.245	273.066	.000
<i>Treatment</i>	825.807	4	206.452	136.420	.000
<i>Error</i>	257.270	170	1.513		
<i>Total</i>	14611.000	176			
<i>Corrected Total</i>	1877.994	175			

a. R Squared = .863 (Adjusted R Squared = .859)
p<0.05

Table 8 shows that the F-value of 136.420 is obtained with a p-value of 0.000 computed at 0.05 alpha level. Since p-value (0.00) is less than alpha level (0.05), the null hypothesis is rejected. Thus, there are statistically significant effect of lexical quality strategy on upper-basic school pupils' literal, inferential and critical levels of reading comprehension ($F_{(4, 170)} = 136.420, p < 0.05$).

Hypothesis 3: There would be no significant interaction effect of the treatment (lexical quality) on male and female upper-basic school pupils' achievement in reading comprehension.

In order to test this hypothesis, scores relating to achievement of male and female pupils who were taught reading comprehension using lexical quality and conventional method was computed and compared using Analysis of Covariance statistical technique at 0.05 level of significance.

Table 9: Analysis of Covariance Showing the interaction Effect of the Treatment (Lexical Quality) on Male and Female upper-basic school pupils' Achievement in Reading Comprehension

<i>Source</i>	Type III Sum of Squares	df	Mean Square	F	Sig.
<i>Corrected Model</i>	12456.367 ^a	10	1245.637	216.091	.000
<i>Intercept</i>	1917.516	1	1917.516	332.648	.000
<i>Pretest</i>	3110.471	1	3110.471	539.599	.000
<i>Treatment</i>	5705.143	4	1426.286	247.430	.000
<i>Gender</i>	6.567	1	6.567	1.139	.287
<i>Treatment * Gender</i>	18.064	4	4.516	.783	.537
<i>Error</i>	951.127	165	5.764		
<i>Total</i>	89145.000	176			
<i>Corrected Total</i>	13407.494	175			

a. R Squared = .929 (Adjusted R Squared = .925)

Table 9 reveals the F-value 0.783 with a p-value 0.537 obtained when computed at 0.05 alpha level. Since the p-value (0.537) is greater than alpha level (0.05), the null hypothesis one is rejected. Thus, there is no statistically significant effect of treatment (lexical quality) on male and female upper-basic school pupils' achievement in reading comprehension ($F_{(4, 165)} = 0.783, p > 0.05$).

Hypothesis 4: There would be no significant interaction effect of the treatment (lexical quality) and school background on upper-basic school pupils' achievement in reading comprehension.

Table 10: Analysis of Covariance Showing the interaction Effect of the Treatment (Lexical Quality) and School Background on upper-basic school pupils' Achievement in Reading Comprehension

<i>Source</i>	Type III Sum of Squares	df	Mean Square	F	Sig.
<i>Corrected Model</i>	12454.943 ^a	10	1245.494	215.743	.000
<i>Intercept</i>	1307.254	1	1307.254	226.441	.000
<i>Pretest</i>	2069.211	1	2069.211	358.427	.000
<i>Treatment</i>	5735.829	4	1433.957	248.389	.000
<i>School Background</i>	5.097	1	5.097	.883	.349
<i>Treatment * School Background</i>	15.622	4	3.905	.676	.609
<i>Error</i>	952.551	165	5.773		
<i>Total</i>	89145.000	176			
<i>Corrected Total</i>	13407.494	175			

a. R Squared = .929 (Adjusted R Squared = .925)

Table 9 reveals the F-value 0.676 with a p-value 0.609 obtained when computed at 0.05 alpha level. Since the p-value (0.609) is greater than alpha level (0.05), the null hypothesis one is rejected. Thus, there is no statistically significant effect of the treatment (lexical quality) and school background on upper-basic school pupils' achievement in reading comprehension ($F_{(4, 165)} = 0.676, p > 0.05$).

Discussion

Findings from this study revealed that the general achievement of upper-basic school pupils in reading comprehension in the experimental and control groups was low before the treatment but better after the treatment. However, in the post-test, the achievement of upper-basic school pupils exposed to lexical quality in reading comprehension was higher than the conventional method which was low. This finding supports that of Ofodu (2009) and Lawal (2019) whose found that the achievement of learners was better when they were exposed to treatment. The finding of this study has proved that the treatment better influenced pupils' comprehension achievement than the conventional method of teaching reading comprehension.

The finding from this study also revealed that upper-basic school pupils exposed to reading comprehension using lexical quality performed better than those exposed to conventional methods. This finding supports the outcome of Alptekin and Ercetin (2011) whose study measured the effect of working memory capacity and content familiarity on literal and inferential comprehension in second language learning (L2) and found independent and additive effect of working memory capacity and content familiarity on inferential comprehension, This finding, however, is in consonance with Perfetti (2007) who reported that lexical quality is the scope to which a reader's knowledge of a given word represents the four constituents of word's identity of orthography, phonology, semantics and morpho-syntactic.

Also, the finding of this study revealed that there was statistically significant effect of lexical quality strategy on upper-basic school pupils' literal, inferential, and critical levels of reading comprehension.

Another finding of this study revealed that gender did not have any influence on lexical quality instructional method in reading comprehension. This finding is in line with Fasae (2017) who revealed that gender did not significantly influence the achievement of students in comprehension and sentence construction in both the experimental and control groups. However, this finding contradicts the findings of Borode (2016) who commented that the achievement of both boys and girls in different school subjects is determined by their socio-environment.

The finding from this study revealed that school background had no influence on the achievement of students exposed lexical quality

instructional method in reading comprehension. Thus, this implies that the type of school students attended have no influence on their achievement in reading comprehension, it is the technique teachers adopted or adapted that matter,

Summary of the findings

The findings of the study revealed that:

- The general achievement of students (both the experimental and control groups) was low before the treatment, however, after the treatment, the achievement of students in reading comprehension exposed to LQ was higher than those exposed to conventional strategy (control group).
- There were statistically significant effects of lexical quality strategy at pupils' literal, inferential and critical levels of reading comprehension.
- There was no discrepancy in the achievement of male and female pupils exposed to lexical quality instructional method than those exposed to conventional instructional method.
- There was a difference in the achievement of pupils from public upper-basic school pupils exposed to lexical quality and private upper-basic school pupils exposed to conventional method.

Conclusion

Based on the findings of this study, it was concluded that reading comprehension occupies a position in the life of every learner. Therefore, it is very important for the teachers to use learning technique such as lexical quality in teaching and learning reading comprehension. Consequently, the outcome of this study proved that lexical quality instructional technique enhanced pupils' reading comprehension more than the conventional strategy.

Recommendations

Based on the findings of this study, the following recommendations were made:

- Teachers should be encouraged and supported to attend seminars, work-shops, and in-service training that could improve their professional skills and update their experiences on new technique to teaching.
- Teachers should adopt technique that are student-centred as these technique would be capable of helping and guiding students to discover meaning in any written text.

- The teaching and learning of reading comprehension entail many activities before, during and after reading. Therefore, parents, teachers, government at all levels, society, publishers, curriculum planners and other agents of education should endeavour to incorporate this activity in their role since comprehension is at the heart of scholarship.

Suggestions for Further Studies

Further study could be carried out in other parts of the country especially in the rural areas. Also, this study examined the effects of lexical quality on reading comprehension, other studies could examine new technique that could enhance reading comprehension.

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