Effect of Interactive Teaching Strategies on Polytechnic Students’ Performance in English Reading Comprehension in Kebbi State, Nigeria

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Abstract: This study investigated the effect of Interactive Teaching Strategies on Polytechnic students’ performance in English reading comprehension in Kebbi State, Nigeria. The main objective of the study was to find out if teaching polytechnic students English reading comprehension using the Interactive Teaching Strategies rather than Conventional (traditional) Teaching Strategies could improve their performance. One thousand four hundred and twenty (1420) National Diploma One (ND 1) students from the two polytechnics in the state formed the population of the study. The population sample of the study comprised Ninety-one (91) ND 1 students of the department of Science Laboratory Technology from the two polytechnics of the state, drawn into two comparison groups (experimental and control groups). The design for the study was quasi-experimental, comprising of two intact classes. The study instrument was Reading Comprehension Performance Tests (RCPT), consisting of three parts. The groups were subjected to a pretest before they were exposed to treatments. The experimental group was exposed to treatment using the Interactive Teaching Strategies while the control group was exposed to treatment using the Conventional (traditional) Strategies. The groups were also subjected to a posttest. Three null hypotheses were tested at 0.05 alpha level of significance using statistical procedures of mean, standard deviation, and the t-test. All three null hypotheses were rejected. The findings of the study revealed that polytechnic students taught aspects of reading comprehension using the Interactive Teaching Strategies performed better than students taught the same using the Conventional (traditional) Strategies. The researchers recommended that teachers should adopt interactive teaching strategies that make the learner perform better in English reading comprehension and that teachers should be trained and re-trained on the application of the Strategy to teaching reading comprehension in particular and other components of English Language in general.

Keywords: Reading Comprehension, English Language, Language Teaching, Interactive Teaching Strategy

I. INTRODUCTION

English language is an international language used to communicate in different fields of human endeavour such as education, technology, trade, politics, social relations, and so on. It is an important language that plays an important role for communication and business in many parts of the world. One who understands English language very well can easily succeed in the labour market and facilitate their businesses. This is consistent with Uzoma and Ibrahim’s (2018) view that English language is a global language of business and it is used to access materials for the improvement of knowledge and to participate in events at the global stage. The mastery of English language therefore, is quite necessary for polytechnic students in Kebbi state because the language is indicates the quality of education one has obtained at any point in life.

Reading comprehension, in layman’s term, means the ability to recognize and pronounce words correctly in a text and attribute meanings to them. Mamman (2014) defines reading comprehension as “the ability to make out, to interpret, to expound, to look at and compare the meaning of written and printed words”. This simply means that a student who can read correctly all the words in a passage but cannot answer any question on the passage is actually not involved in the reading process. There is the need for all students to read and comprehend in order to succeed in their subject areas. This is because reading comprehension is believed to be the bedrock for understanding complex parts of all school subjects. In science and arts subjects, reading comprehension is a prerequisite for performing different tasks. Instructions for carrying out experiments have to be read and understood by students before they can perform such experiments. Information from textbooks, reading passages can be useful to students only if they are read and understood. This means that if a student cannot read, he/she will find it difficult to succeed in performing tasks required of him/her at school (Oyetunde, 2009). Reading therefore, is a “must” for all students.

Methods of teaching English language have been under serious criticism nowadays. Okeke (2013) reports that the conventional methods of teaching English language in most Nigerian schools have been teacher-centred. She reiterates that the methods are patterned after the Audio-Lingual Method (ALM) which often ends in habit formation. The conventional methods and strategies of language teaching are being criticized because they are seen as an all-teacher affair (Okeke, 2013). According to Richards and Rodgers (2001), in the traditional methods and strategies, learners are viewed as organisms that can be directed by skill training to produce correct responses such that teaching focuses on the external manifestations of learning rather than on the internal processes of learning. Hence, Learners only play a reactive role of responding to stimuli.

Fortunately, an innovative strategy known as Interactive Teaching Strategy which gained increasing prominence in English Language teaching emerged in the late 60s (Fredricks, 2006). It is a teaching strategy that encourages groups of students working together to solve a problem. According to Sessoms (2006), interactive teaching strategy is effective in improving students’ innovative ability, critical thinking, cooperative ability, material collection and the ability to analyze. Hence, this study focuses on...
the effect of interactive teaching strategy in improving reading comprehension among students of polytechnics in Kebbi state, Nigeria.

II. STATEMENT OF THE PROBLEM

In the context of higher education learning, polytechnic students are required to read numerous text books in English because, Success in all academic subjects depends largely on how well students can read and understand in the language. The inability to read and comprehend in English is believed to have contributed to high rate of dropouts from higher institutions of learning in Nigeria. This is in line with Nwodo’s (2007) position that the poor performance of students in reading comprehension contributes to the high rate of dropouts from schools in Nigeria.

The interaction between lecturers and students during reading comprehension lessons in the polytechnics, teacher qualification and the choice of language methodology are also impedings factor to teaching reading comprehension in the higher institution of learning. The researchers’ seven-year teaching experience reveals that the conventional method in teaching reading comprehension in the polytechnics is quite traditional. Students are asked to read a passage and answer questions provided at the end of the passage. Yet, there seems to be no improvement in their performance during semester examinations.

These problems cannot be divorced from language teaching methods and strategies employed by language teachers in teaching reading comprehension. The methods (traditional) seem to have failed to develop the reading comprehension skills students need to process texts. The urgent need to improve the situation therefore, prompted the researchers to investigate the effect of Interactive Teaching Strategy on polytechnic students’ performance in English reading comprehension in Kebbi State, Nigeria.

III. OBJECTIVES OF THE STUDY

The main objective of this study is to investigate the effect of Interactive Teaching Strategies on polytechnics students’ performance in English reading comprehension in Kebbi State, Nigeria. Specifically, the objectives of the study are:

(1) To find out the difference in the performance of experimental group taught identifying main ideas in a passage using interactive teaching strategies and control group taught the same aspect using conventional strategies.

(2) To find out the difference in the performance of experimental group taught making inference using interactive teaching strategies and control group taught the same aspect using conventional strategies.

(3) To find out the difference in the performance of experimental group taught summarizing a passage using interactive teaching strategies and control group taught the same aspect using conventional strategies.

IV. RESEARCH QUESTIONS

In line with the above objectives, the following research questions will be answered:

(1) Is there any difference in the performance of experimental group taught identifying main ideas in a passage using interactive strategies and control group taught the same aspect using conventional strategies?

(2) Is there any difference in the performance of experimental group taught making inference using interactive strategies and control group taught the same aspect using conventional strategies?

(3) Is there any difference in the performance of experimental group taught summarizing a passage using interactive strategies and control group taught the same aspect using conventional strategies?

V. RESEARCH HYPOTHESES

The following null hypotheses will be tested at 0.05 level of significance:

Ho1: There is no significant difference in the performance of experimental group taught identifying main ideas in a passage using interactive strategies and control group taught using conventional strategies.

Ho2: There is no significant difference in the performance of experimental group taught making inference using interactive strategies and control group taught using conventional strategies.

Ho3: There is no significant difference in the performance of experimental group taught summarizing a passage using interactive strategies and control group taught using conventional strategies.

VI. REVIEW OF RELATED LITERATURE

This study is premised on interactive teaching strategies and reading comprehension. Therefore, the study is anchored on Vygotsky’s social learning theory and cognitive development theory by Piaget.

Unlike the traditional model for instruction where a teacher transmits information to students, Vygotsky’s theory promotes learning contexts where students play an active role in learning. The theory stated that a child follows an adult's example and gradually develops the ability to do certain tasks without help. Vygotsky viewed interaction with peers as an effective way of developing skills and strategies. He suggested that teachers use interactive teaching exercises so as to enable less competent children develop with help from more skillful peers (Danjumma, 2013). This theory is relevant to this study in the sense that it views students’ interaction with peers as an effective way of developing skills and good learning strategies. Hence, the present study investigates the effect of interactive teaching strategies on polytechnics students’ performance in English reading comprehension.

The cognitive development theory by Piaget is schema based. A schema is a concept that exists in an individual’s mind to organize and interpret information. This theory emphasizes that children learn by doing and by making discoveries. Piaget submits that
children learn best when they actively contribute their experiences and thoughts in finding solutions to their difficulties (Daisy, 2017). This means that for students to read and comprehend, they must be actively involved in the meaning-getting process by sharing their experiences about the text to be read so as to get a focus for reading.

Several researches have been carried out within and outside Nigeria using different language strategies and methods on ways to improve students’ reading for maximum comprehension. Some of these researches are examined below:

Lui (2004) conducted a research in the University of Arizona, USA, on the Effects of Comic Strips on L2 Learners’ Reading Comprehension. The study investigated whether comic strips increases reading comprehension by providing visual support. The researcher also set out to investigate whether texts geared to proficiency level had a significant effect on comprehension. Adult learners were grouped into low intermediate level proficiency group and a high intermediate level proficiency group. Students in each group were presented with either a high level text or a low level text. The text was presented with or without a comic strip. Data was collected through 107 immediate recall protocols and short answer questionnaires. The results showed that low level students performed significantly better than their counterparts receiving the high level text only.

Zuriyana, Yasin and Mohammad, (2019) assessed the interactive roles of lexical knowledge and reading strategies on reading comprehension performance of ESL learners. The study examined how the lexical knowledge or the reading strategies contribute to second language (L2) reading comprehension. It also investigates whether there is a relationship among the three main variables which are lexical knowledge, reading strategies and reading comprehension performance. The Survey of Reading Strategy (SORS), the Vocabulary Levels Test, a writing test and a reading comprehension test were given to 70 students from the Public Administration Course through convenience sampling method. The study discovered that the students’ word mastery level is only 2,000 word families, which is below the minimum level required for tertiary education. There is no correlation found between the reading strategies used and the reading comprehension achievement of the participants. On the other hand, a statistically significant relationship was found between the participants’ vocabulary size and reading comprehension

In another study, Pulido (2004) investigated the role of text comprehension at various stages of L2 incidental vocabulary gain and retention with another factor known to affect the two processes: topic familiarity. Ninety-nine (99) adult learners of L2 Spanish from three distinct university course levels read more or less familiar scripts-based narratives, containing nonsense words. The result revealed a generally robust consistent role of passage comprehension in lexical gain and retention, but differential patterns of relationships in intake due to effects of topic familiarity.

Oyetunji (2011) investigated the effect of reading strategy instruction on L2 teacher trainee’s performance. Using a quasi-experimental pre-test, posttest design, an explicit reading programme was implemented over six-week period in a Botswana College of Education. Two intact cohorts of second-year teacher trainees were randomly assigned to a control and intervention groups. A reading strategy questionnaire and a reading comprehension test were used to examine the relationship between strategy use and level of comprehension. A discrepancy emerged between the self-report responses of the participants and their actual performance in reading text. Although they claimed to be strategic readers the results suggested that they were not in fact reading strategically.

Okeke (2000) engaged in a research on the “Effect of Exposure to In-text Vocabulary Recognition Strategy on Secondary School Students’ Performance in Reading Comprehension”. The researcher employed a quasi-experimental research design. Intact classes were used for the study. Research subjects were assigned to experimental and control groups through simple balloting. The area of study was Awka Education Zone of Anambra State. Result showed that in-text vocabulary recognition strategy improved reading comprehension at all levels of secondary school. Influences of gender and location on the instructional strategy were also considered. Result obtained showed that gender and location had no significant influence on the students’ reading performance.

Hanna (2014) investigated the impact of interactive activities on students’ performance in reading comprehension. Two secondary schools were used for the study. Eighty (80) senior secondary school two (SS II) students were used for the study. This comprises 40 students from each school. The results revealed that interactive activities had significant effect on students’ performance in reading comprehension.

VII. METHODOLOGY

This study used quasi-experimental design. Two groups were used: one experimental and the other control. The experimental group was exposed to the interactive teaching strategies for a period of six weeks. The control group was taught conventionally for the same period. A pretest was administered to both groups before treatment to assess their homogeneity. The researchers used purposive sampling technique to select two schools for the study, simple random to select the two intact classes and further used simple balloting to assign the intact classes to group of either experimental or control.

The population of the study comprised all National Diploma One (ND 1) students in the two polytechnics of the state, totaling 1,420. Two intact classes of 91 students were selected. This comprise one (1) intact class of 44 students from KESPODAK as experimental group and one (1) intact class of 47 students from WUFPOLY as control group.

English Reading Comprehension Performance Test (ERCPT) was used as the instrument to collect data for the study. The instrument was divided into three parts: part A (reading to identify main ideas); part B (reading for inference); part C (reading to summarize a passage). The students were expected to score a maximum of sixty (60) marks in all, twenty (20) marks from each part of the test. The instrument was validated by three experts – two from the Faculty of Education and Extension Services (FEES) and one from the Department of Modern European Languages and Linguistics, Usmanu Danfodiyo University, Sokoto. To obtain the reliability of the instrument, pilot test was conducted using test re-test method and the data collected were analyzed using Pearson Product Moment Correlation Co-efficient (PPMCC) and a reliability index of 0.75 was obtained.

The two groups were first given a pretest before the commencement of treatment. The experimental group was taught identifying main ideas, making inference and summarizing a passage using interactive teaching strategies while the control group was taught the same components using the conventional strategies. At the end of the six weeks of continuous treatment, the two groups were
given a posttest. The data collected were analyzed using mean, standard deviation and the t-test statistics to find difference in performance between the groups.

VIII. RESULTS AND DISCUSSION

In this segment, the research questions will be answered followed by the testing of the research hypotheses.

Research Question 1: Is there any difference in the performance of experimental group taught identifying main ideas in a passage using interactive strategies and control group taught the same aspect using conventional strategies?

Table 1: Posttest Mean Scores of Experimental and Control Groups in identifying main ideas in a passage

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>EG 1</td>
<td>44</td>
<td>10.81</td>
<td>2.41</td>
</tr>
<tr>
<td>CG 1</td>
<td>47</td>
<td>7.31</td>
<td>2.13</td>
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Source: SPSS Result and Researchers’ Fieldwork (2022)

The analyses in Table 1 indicates that the total number of subjects that took part in the posttest from both experimental and control groups in identifying main ideas was 91. Forty-four (44) subjects in the experimental group and Forty-seven (47) subjects in the control group. The mean score of the experimental group was 10.81 and the standard deviation was 2.41. Subjects in the control group scored a mean of 7.31 and a standard deviation of 2.13. The result showed a mean difference of 3.49 in favour of the experimental group that was taught using the interactive strategies.

Ho1: There is no significant difference in the performance of experimental group taught identifying main ideas in a passage using interactive strategies and control group taught the same aspect using conventional strategies.

Table 2: T-test of Posttest scores of Experimental and Control Groups in identifying main ideas in a passage

<table>
<thead>
<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>DF</th>
<th>t-calp-value</th>
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<tbody>
<tr>
<td>EG 1</td>
<td>44</td>
<td>10.81</td>
<td>2.41</td>
<td>89</td>
<td>7.33.000</td>
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<tr>
<td>CG 1</td>
<td>47</td>
<td>7.31</td>
<td>2.13</td>
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Source: SPSS Result and Researchers’ Fieldwork (2022)

To find out whether the difference observed in Table 1 is significant to reject the null hypothesis, the data was further subjected to t-test analysis. Table 2 shows that the degree of freedom was 89, the t-calculated was 7.33 and the p-value was .000. The p-value of .000 is less than the alpha-value of 0.05 set for the study. Therefore, the null hypothesis one (Ho1) was rejected and the observed difference is significant to draw the conclusion that teaching the students identifying main ideas using the Interactive Strategies stimulated their performance.

Research Question 2: Is there any difference in the performance of experimental group taught making inference from a passage using interactive strategies and control group taught the same aspect using conventional strategies?

Table 3: Posttest Mean Scores of Experimental and Control Groups in making inference from a passage

<table>
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<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>EG 2</td>
<td>44</td>
<td>9.13</td>
<td>2.21</td>
</tr>
<tr>
<td>CG 2</td>
<td>47</td>
<td>6.93</td>
<td>1.81</td>
</tr>
</tbody>
</table>

Source: SPSS Result and Researchers’ Fieldwork (2022)

Table 3 indicates that the total number of 91 subjects participated in the posttest for both experimental and control groups in making inference from a passage. Forty-four (44) subjects made up the experimental group whereas Forty-seven (47) subjects took part in the control group. The mean score of the experimental group was 9.13 and the standard deviation was 2.21. Subjects in the control group had a mean score of 6.93 and a standard deviation of 1.81. A mean difference of 2.20 was observed in favour of the subjects in experimental group who were taught using the interactive strategies.

Ho2: There is no significant difference in the performance of experimental group taught making inference from a passage using interactive strategies and control group taught the same aspect using conventional strategies.

Table 4: T-test of Posttest scores of Experimental and Control Groups in making inference from a passage

<table>
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<tr>
<th>Variables</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>DF</th>
<th>t-calp-value</th>
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The findings of this study agree with the interactive teaching method enhanced students’ performance in reading comprehension and narrative essay writing. The researcher discovered that there was significant effect of the interactive method over the conventional method. He established the fact that the use of interactive teaching method enhances students’ performance in reading comprehension.

The findings of this study also coincide with findings made by Hamdan (2014); Lismayanti (2001); and Stahl (2008). These researchers found out from their investigations that getting students involved in interactive comprehension processing can enhance performance in reading comprehension and summarization.

The findings are equally in line with Marja’s (2008) findings on the effects of Cooperative Teaching Methodology on students’ achievement in reading comprehension and narrative essay writing. The researcher proved that cooperative teaching method significantly improved students’ performance in reading comprehension.

### IX. SUMMARY OF FINDINGS

The following were the summary of the major findings:

1. Interactive Teaching Strategies is effective in improving students’ comprehension ability to identify main ideas in a passage. This is because the analysis showed that Students that learnt identifying main ideas in a passage using Interactive Teaching Strategies performed significantly better than those who learnt the same aspect using the conventional strategies.

2. Interactive Teaching Strategies is effective in enhancing students’ comprehension ability to make inference from a passage. This is because the analysis revealed that Students that learnt making inference from a passage using Interactive Teaching Strategies performed significantly better than those who learnt the same aspect using the conventional strategies.

3. Interactive Teaching Strategies is effective in stimulating students’ comprehension ability to summarize a passage. This is because the analysis showed that Students that learnt summarizing a passage using Interactive Teaching Strategies performed significantly better than those who learnt the same aspect using the conventional strategies.

### X. DISCUSSION OF FINDINGS

The findings of this study clearly revealed that teaching students reading comprehension using the interactive teaching strategies enhanced the students’ performance in identifying main ideas in a passage, making inference from a passage and summarizing a passage.

The findings of this study agree with the result of the experimental study conducted by Ochogwu (2014). The researcher discovered that there was significant effect of the interactive method over the conventional method. He established the fact that the use of interactive teaching method enhances students’ performance in reading comprehension.

The findings of this study also coincide with findings made by Hamdan (2014); Lismayanti (2001); and Stahl (2008). These researchers found out from their investigations that getting students involved in interactive comprehension processing can enhance performance in reading comprehension and summarization.

The findings are equally in line with Marja’s (2008) findings on the effects of Cooperative Teaching Methodology on students’ achievement in reading comprehension and narrative essay writing. The researcher proved that cooperative teaching method significantly improved students’ performance in reading comprehension.
Again, the findings of this study supported the position of Uzoma and Ibrahim (2018) and Kishindo (2011) who suggest that the more interactive and communicative a lesson is, the more stimulating and encouraging the lesson will be. Their results revealed that the subjects who were exposed to the interactive and Communicative method out-performed those taught with the conventional method. The findings of this study also tally with the empirical study conducted by Hanna (2014) on the impact of interactive activities on students’ performance in English reading comprehension. The result showed that experimental groups who were taught reading comprehension through interactive activities performed significantly better than the control group who were exposed to conventional method.

XI. CONCLUSION

Based on the results of the study, it is obvious that learning English reading comprehension through interactive teaching strategies is effective in improving polytechnic student’s comprehension abilities. Meanwhile, interactive teaching strategy is very effective in teaching identifying main ideas in a passage, making inference and summarizing a passage among polytechnic students in Kebbi state. Similarly, it is the conclusion of the study that students will perform better in identifying main ideas in a passage, making inference and summarizing a passage if interactive teaching strategy is used in teaching them. This is because the experimental group taught using the interactive strategies performed significantly better than the control group.

XII. RECOMMENDATIONS

Based on the findings of this study, the researchers make the following recommendations:

1. English language teachers’ should use strategies like the interactive teaching strategies to teach reading comprehension at the Polytechnic level because the strategy is found to be effective in teaching aspects of reading comprehension.
2. Publishers of English language textbooks at the tertiary level should incorporate this strategy for teaching different aspects of English language especially reading comprehension. This will encourage every language teacher to ask relevant questions that will help students to be involved in the activities that can enhance reading comprehension.
3. Curriculum planners should develop a curriculum for training professional lecturers in the art of interactive reading so that they can learn to use interactive strategies to teach reading to their students.
4. Seminars and workshops should be organized by the Kebbi State Ministry for Higher Education on teaching strategies like the interactive teaching which can be used for teaching reading comprehension in particular and English language in general.

XIII. ACKNOWLEDGMENTS

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