Effects of Explicit Instruction on Reading Fluency Skills of Primary Pupils in Jos East Local Government Area of Plateau State, Nigeria

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Abstract—The ability to decode text effortlessly and to recognize words automatically is crucial to text comprehension. Most children will need intentional and systematic instruction in order to develop these reading fluency skills. The present study examined the effects of explicit instruction on reading fluency skills among 124 primary four pupils in four public primary schools. To gather data for this study, Reading Fluency Test (RFT) was used. The RFT measured the three reading fluency skills: word recognition, decoding and prosody. Analyses of data gathered using the t-test dependent sample revealed that explicit instruction improved reading fluency skills of pupils. These results confirm that improvements in reading fluency skills of pupils are related to intentional instruction as found in explicit instruction. One implication of the study is that teachers should be intentional in improving the reading fluency skills of pupils at the primary level of education.

Keywords—decoding, explicit instruction, reading fluency, word recognition, prosody.

I. INTRODUCTION

Reading is the process through which a reader gains meaning from text. The ability to read is, therefore, essential for academic learning because it is the foundation for success in all academic subjects. In today’s society, lack of reading proficiency can engender risks of facing huge economic, social and personal limitations because the world is driven by print information which can be largely accessed through reading. Consequently, the outcomes for children and sometimes adults who struggle with reading include school dropout, low self-esteem, unemployment, lack of proper social functionality and economic stagnation.

According to the National Policy on Education (FGN, 2014), English language is the medium of instruction in schools from primary four upwards in Nigeria. This means that all textbooks in the different content areas, apart from the language of the immediate environment and French, are written in English language. Hence, pupils’ ability to read proficiently in English language such that will enable them to access and comprehend academic information from print written English language is critical. Similarly, the inclusion of reading as a subject to be taught at the basic level of education by the Universal Basic Education scheme of work (UBE, 2009) underscores the importance of teaching reading as a fundamental instructional focal point in schools.

II. BACKGROUND AND STATEMENT OF THE PROBLEM

English language plays an important role at the primary level of education in Nigeria, consequently, the ability to read and comprehend text by pupils at this level is crucial. Comprehension builds on reading fluency skills and once reading fluency skills become automatic, readers’ cognitive attention can be focused on making meaning from text. Thus, reading fluency can be used to estimate the overall comprehension achievement of readers.

Research has shown that pupils struggle to read and have challenges with text comprehension due to lack of reading fluency skills (Rasinski, Homan & Biggs, 2009; Bigozzi, Tarchi, Vagnoli, Valente & Pinto, 2017). Reading fluency, the ability to read a text (orally or silently) quickly, accurately with proper expression and comprehension, is critical to successful reading. Fluent reading is an indicator that all is going well in the reading repertoire of a pupil. Thus, if a pupil reads in a laborious manner, slowing or stopping to decode words, he or she will lose understanding.
of what is being read. Reading experts (Pikulski& Chard, 2005; Alvarez-Canizo, Suarez-Coalla&Cuetos, 2015) agree that reading fluency is made up of three components, namely: word decoding, word recognition and text prosody. These components serve as essential parts of comprehension in that, if any of these components is lacking in the reading process, comprehension may not occur.

Decoding (or word identification) is the ability of a reader to accurately read words by translating written symbols into the sounds of spoken language and then making sense of the identified word. Decoding words involves taking apart the sounds in a word (segmenting skills) and putting these sounds together (blending skills) in order to be able to read such words accurately. Pupils who can accurately decode words can easily make sense of what they read.

Another reading fluency skill is word recognition. Word recognition is the ability to recognize written words effortlessly without having to sound them out. Word recognition skills are denoted by reading sight words automatically or effortlessly with minimal amount of mistakes. Some words in English cannot be decoded through segmenting and blending sounds or through syllabication. Rather, pupils learn to recognize such words automatically or effortlessly through repeated exposure to those words. These words are called “sight words” or “high frequency words”. When readers automatically recognize these words, they become more fluent readers.

Lack of effective methodology of teaching reading fluency skills in primary schools may be a major reason for the high non-fluent reading rate among primary school pupils in Nigeria. Lack of appropriate teaching methodology is one major cause of reading failure among pupils in primary school (Oyetunde,2009; Abu-Ubaida, Amina, Aishatu&Abubakar, 2017). Basically, teachers’ method of teaching reading consists of round-robin reading, where students who can read well take turns to read in the classroom. Little or no systematic instructional strategy or methodology is offered to help non-fluent readers to read more fluently. This traditional approach to teaching reading merely tests students’ reading abilities rather than teach them (Urquhart & Weir, 2013) and it does not address the reading needs of struggling readers.

However, there is evidence shown by research that when teachers provide explicit instruction in reading fluency to non-fluent readers, reading fluency increases and text comprehension improves (Rupley, Blair & Nichols, 2009; Jenson, 2014). Explicit instruction is a teaching approach which allows for modeling, group and independent practices as well as explanations of goals and objectives when teaching skills to learners. Explicit instruction ensures that teachers are fully responsible for teaching important skills but they gradually relinquish this responsibility to learners as they become successful with these skills. Hence, through teacher modeling, guided and independent practices, learners become fluent with skills that have been taught.

In order to address the challenges of reading underachievement among primary school pupils, reading fluency skills need to be taught systematically and intentionally. Teaching children to read fluently in order to comprehend text should be one of the main goals of primary education because the success of formal education hinges greatly on the ability to read fluently and to comprehend text. Therefore, reading fluency skills need to be explicitly taught to children in primary schools.

**Aim and Objectives**

The purpose of this study was to investigate the effects of explicit instruction on reading fluency skills of primary four pupils in Jos East Local Government Area of Plateau State. Three primary research questions (RQ) and three null hypotheses informed the direction of this work.

**Research Questions**

RQ 1. What are the word recognition achievement mean scores of primary four pupils before and after exposure to explicit instruction?

RQ 2. What are the word decoding achievement mean scores of primary four pupils before and after exposure to explicit instruction?

RQ 3. What is the prosody achievement mean score of primary four pupils before and after exposure to treatment?

**Hypotheses**

Hn 1. There is no significant difference between the word recognition achievement mean scores of pupils who are taught using explicit instruction and those who are not.

Hn 2. There is no significant difference between the word decoding achievement mean scores of pupils who are explicitly instructed and those not taught using explicit instruction.

Hn 3. There is no significant difference between the prosody achievement mean scores of primary four pupils who are
taught using explicit instruction and those who are not taught using explicit instruction.

Delimitation and Scope of Study
This research work was restricted to the effects of explicit instruction on reading fluency skills of primary four pupils in public schools in Jos East Local Government Area of Plateau State. Explicit instruction can be used to teach different concepts in various content areas. However, this study was restricted to the effects of explicit instruction on pupils’ reading fluency skills. The study covered all reading fluency components, namely word decoding, word recognition and prosody.

Theoretical Framework
The Automaticity Theory of Reading Fluency developed by Laberge and Samuels (1974) underpinned this study. The theory, which was drawn from various cognitive research, shows that the human brain has limited attention capacity and the ability to perform two complex tasks at the same time requires one of the tasks to become automatic (Penner-Wilger, 2008). The word ‘automaticity’ means the ability to recognize and process information without really thinking about such information on a conscious level. Automaticity, therefore, is a skill that humans are not born with but develop as they continue to learn. By way of application, automaticity in reading means effortless and accurate reading of words aloud or silently with appropriate rate.

III. LITERATURE REVIEW
The concept of reading is quite broad and it has drawn much attention globally by reading researchers. Reading experts have, at different times, attempted to define reading. Indeed, these definitions of reading have provided various frameworks for teaching reading in schools as well as what should be included in reading programs or reading curricula. Some of these definitions include: “Reading is the ability to pronounce sounds” (Foersth, 1998), “Reading is the ability to identify words and get their meaning (bottom-up processing)” (Grabe, 2009) and “Reading is the ability to bring meaning into a text in order to extract meaning from it (top-down processing)” (Aina, Ogunbemi, Adigun &Ogundipe, 2011). Torgesen (2002), however, puts all these definitions of reading together by positing that reading entails the ability to identify words used to convey meaning as well as the ability to construct meaning from the identified words in print.

The inclusion of instructional strategies and methodology in any reading definition is important because of the complex nature of the reading process for both first language readers (L1 readers) and second language readers (L2 readers). Over time, the complexity of the reading process for L1 readers reduces based on their implicit knowledge of the basic syntactic knowledge of the language, oral proficiency and instructional practices that both sustain and further develop these background reading skills. On the other hand, reading in L2 requires “much time, resources and effort” (Carrell & Grabe 2010, p. 216). This provides the basis for the inclusion of instructional practices and methodology in reading definitions, especially with regard to reading in L2.

Importance of Reading Fluency to Comprehension Achievement
The basic purpose of reading fluency instruction is to make it as easy as possible for students to comprehend text. This is especially important because word-by-word reading, poor phrasing, and lack of expression all diminish students’ ability to understand text. In view of this, Allington (2014) argues that many fluency problems are “instructionally induced and instructionally maintained”. This means that whether reading fluency difficulties will be addressed or sustained depends on the availability of instructional interventions. For instance, Don-Ezenne (2014) sought to identify and analyze problems of word recognition in reading among Basic eight (J.S 2) students in Gwalada and Kwali Area Councils of Federal Capital Territory, Abuja. The study adopted a descriptive survey research design while the population consisted of 4,535 basic 8 (J.S 2) students. The instruments used for data collection were questionnaire, interviews, observations as well as researcher-developed English language reading passages. Data gathered was analyzed using Frequency and Mean while t-test was employed to test the hypotheses for the study. Findings of the study include errors in word recognition during reading by junior secondary students and male students had more problems with word recognition during reading than female students.

Many pupils in primary schools have not developed reading fluency skills because they have not been taught intentionally. Reading fluency is considered a critical component of skilled reading (Marshall & Campbell, 2006) and should therefore receive a deliberate instructional attention especially at the primary level of education. Fluent
reading should be a major goal of reading instruction because decoding print effortlessly and accurately enables students to read for meaning.

Usually, what differentiates fluent and non-fluent readers is much more than fluency skills; it encompasses comprehension achievement as well. Fluent readers read text in meaningful units, and are able to accompany reading with appropriate expression. Since fluent readers are able to decode text and make necessary corrections or substitutions, they can devote more cognitive attention to drawing meaning from texts. On the other hand, non-fluent readers spend so much time on decoding unfamiliar words and as a result, they have trouble comprehending what they are reading. Often times, non-fluent readers need a great deal of support from teachers even when reading class-appropriate materials (Kreitz, 2015).

Shaywitz in Grabe (2009) argues that “fluency is what binds a reader to the text. If a child cannot effortlessly decode a critical mass of words on a page, he or she cannot engage the text” (p. 304).

The assertion of Shaywitz gives rise to two important facts: non-fluent readers cannot decode words; non-fluent readers are, therefore, not committed to reading. This deficiency has far-reaching implications on the child’s willingness to stay in school. Even if the non-fluent reader stays in school, he or she cannot access academic information which is found mostly in books. Hence, academic achievement will become unattainable.

Hernandez’s (2012) study corroborates the fact that reading fluency skills have far-reaching effects on academic motivation of learners. The longitudinal study, with a sample size of 3,957 students, investigated high school graduation rates for children at different skills levels and with different poverty rates. The study found that students who cannot read grade level texts by third grade are five times less likely to graduate by age nineteen than a child who is a fluent reader by that time. This outcome is supported by Oyetunde (2002), when he opines that school dropout can also be as a result of one’s inability to read.

Perhaps, one major reason why Nigeria has the highest number of school dropouts, almost a fifth of the world’s out-of-school children, (UNESCO, Education for All Global Monitoring Report, 2013) can be traced to reading fluency challenges. It is therefore most compelling for teachers to focus systematic instructional efforts on developing reading fluency skills in pupils at the primary level. Children who have significant reading challenges also have difficulties with developing reading fluency and they continue to be slow readers into adulthood, if intervention is not given (Vaughn & Bos, 2009). Grabe (2009) further elaborates the importance of teaching reading fluency skills to children especially in L2 context when he states that:

Fluency is what allows a reader to experience a much larger amount of L2 input, to expand the breadth and depth of vocabulary knowledge beyond direct instruction, to develop automatic word recognition skills, to read for additional learning, to build motivation, and in L2 university contexts, to read large amounts of materials that might be assigned every week. Moreover, fluency is one of the keys to L2 learning outside the classroom (Grabe, 2009, p. 301).

In sum, a growing body of research supports the claim that reading fluency creates a bridge to comprehension (LaBerge & Samuels, 1974; Rasinski, Homan & Biggs, 2008; Hudson, Lane & Pullen, 2005; Fuchs & Fuchs, Hosp, 2001; Fuchs, Fuchs, Hosp& Jenkins, 2009; Pikulski& Chad, 2005; Linan-Thompson & Vaughn; Bigozzi, Tarchi,Vagnoli, Valente & Pinto, 2017) and that reading fluency instruction helps to develop rapid and accurate reading of words in connected texts. Reading fluency is one of the sub-skills of reading that the National English Studies Curriculum for the primary level has identified as a necessary skill for reading proficiency (Basic Education Curriculum, 2012). How then should reading fluency, an important component of the reading process, be taught?

Explicit Instruction as a Teaching Method

It has been mentioned earlier in this review that pupils with reading fluency difficulties require an intense and systematic form of instruction. Explicit instruction is a “systematic method of teaching with emphasis on proceeding in small steps, checking for students’ understanding and achieving active and successful participation by all students” (Rosenshine, 1987, p. 34; Archer & Hughes, 2011). Since most learners will not become independent readers ‘with the passage of time’, they need to be taught how to read fluently through systematic methods (Odeniyi & Folorunsho, 2017). The principle that governs explicit instruction is that teaching should be clear in order to quickly accelerate students’ learning and it should include many opportunities for practicing new skills learnt in order to attain mastery of such
skills. Explicit teaching involves a lot of modelling of the target skills by the teacher, many opportunities for practice and assessment to verify whether re-teaching is needed or not.

Explicit instruction has been supported by research as a method of teaching that can be used to improve reading skills among students of English as a second language and students who are at-risk for reading difficulties (Carlson & Francis, 2002; Reutzel, Child, Jones & Clark, 2014). Recent research suggests that explicit and systematic instruction improves students’ reading fluency skills. For instance, Nelson-Walker, Fien, Kosty, Smolkowsky, Smith and Baker (2013) investigated the relationship between the quality of reading instruction and reading achievement of at-risk and not-at-risk students in 42 first grade classrooms. One group of teacher was trained in explicit instruction protocols while the other continued with regular practice. Results showed that classes whose teachers received training on explicit instruction protocols scored higher on fluency skills.

IV. METHOD AND PROCEDURE

Design, Population and Sample

The quasi-experimental research design was used in the current study. Specifically, the study adopted the pre-test posttest non-equivalent comparison group design. The population of this study included all primary four pupils attending public schools in Jos East Local Government Area in Plateau State. The population of all primary four pupils in Jos East Local Government is one thousand nine hundred and ninety seven (1,997) out of which nine hundred and eighty five (985) are males while one thousand and twelve (1,012) are females. The sample for the study consisted of 124 pupils that were in primary four at the time of the study in the designated schools.

Instruments

The Reading Fluency Test (RFT) was used to gather data for this study. The RFT measured three reading fluency skills: word recognition, decoding and prosody. The RFT was adopted and adapted from three sources; Early Grade Reading Assessment (EGRA, 2011), Umolu and Mallam’s sight words (1985) and Rasinski’s Multidimensional Fluency scale for measuring prosody which was adapted by the researcher to include only two prosody rubrics namely, intonation and punctuation.

Procedure

The pre-test was administered for two days. Day one was for testing word decoding. A list of fifty non-words was read by pupils for one minute to test decoding skills in pupils. Day two was used for testing word recognition. A list of one hundred sight words was given to pupils to test sight word recognition skills of pupils in isolated context. Pupils read this list of sight words in two minutes.

Administration of Treatment Program

Treatment was administered by the researcher in two experimental schools. Treatment consisted of reading fluency lessons that were taught through explicit instruction. Explicit reading fluency instruction included oral fluency strategies like partner readings, modeling by teacher and independent fluency activities that were carried out by pupils in groups while the control groups did not receive any reading fluency instruction. Rather, pupils in the control group were taught normal English language lessons during their periods. Treatment lasted for twelve weeks. Each reading fluency lesson lasted for thirty five minutes.

Administration of Post-Test

The researcher administered post-test on the participants in both the experimental and control groups after the treatment. The post-test was the same duration of time and day as the pre-test. The text and words used during the pre-test were used to check for accuracy in word recognition, decoding and prosody.

Analyses

The research questions formulated for this study were answered using frequency counts and simple percentages derived from the pre-test and posttest administered on pupils. The mean scores were subjected to t-test for dependent samples at 0.05 significance level. By this, the significant differences between the experimental and control groups in the pre-test and posttest were determined.

Research Question One

What are the word recognition achievement mean scores of primary four pupils before and after exposure to explicit instruction? This research question was answered using the mean and standard deviation (SD) of the pupils’ word recognition achievement scores. The results are presented in Table 1.
Table 1: Word Recognition Mean Scores of Primary Four Pupils before and after Treatment for Experimental and Control Groups

<table>
<thead>
<tr>
<th>S/N</th>
<th>Group</th>
<th>No.</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Mean diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>χ</em></td>
<td>SD</td>
<td><em>χ</em></td>
</tr>
<tr>
<td>1.</td>
<td>Experimental</td>
<td>70</td>
<td>3.74</td>
<td>5.01</td>
<td>28.7</td>
</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>54</td>
<td>8.87</td>
<td>11.4</td>
<td>12.5</td>
</tr>
</tbody>
</table>

Table 1 presents pupils’ word recognition achievement mean scores of both experimental and control groups before and after explicit instruction. The experimental groups had a mean score of 3.74 and SD of 5.01 at pretest. On the other hand, the control groups had a higher mean score of 8.87 and SD of 11.4 at pretest. At posttest, the mean of the control groups was 12.5 while SD = 13.9. The mean of the experimental group at posttest was 28.6 while SD = 21.7. This shows that a significant difference exists between the pre-test and posttest mean scores and standard deviation of the control and experimental groups. After treatment, results of the posttest for the experimental groups indicate an increase in pupils’ word recognition achievement profile. The results also show that the control groups did not increase significantly in word recognition achievement profile as shown in the pretest and posttest. The results, therefore, show that explicit instruction significantly impacted pupils’ word recognition profile of the pupils exposed to treatment.

Research Question 2

What are the word decoding achievement mean scores of primary four pupils before and after exposure to explicit instruction?

In order to answer this research question, the mean and standard deviation (SD) of the pupils’ decoding achievement scores were used and the results are presented in Table 2.

Table 2: Decoding Mean Scores of Primary Four Pupils before and after Treatment for Experimental and Control Groups

<table>
<thead>
<tr>
<th>S/N</th>
<th>Group</th>
<th>No.</th>
<th>Pre-test</th>
<th>Post-test</th>
<th>Mean diff.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td><em>χ</em></td>
<td>SD</td>
<td><em>χ</em></td>
</tr>
<tr>
<td>1.</td>
<td>Experimental</td>
<td>70</td>
<td>3.92</td>
<td>5.22</td>
<td>20.7</td>
</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>54</td>
<td>4.38</td>
<td>6.80</td>
<td>5.37</td>
</tr>
</tbody>
</table>

Table 2 indicates that pupils’ word decoding profiles for both experimental and control groups at pretest were poor. While the control groups had a mean score of 4.38 and SD = 6.80, the experimental groups had a mean score of 3.92 and SD = 5.22. However, the experimental groups recorded some gains as indicated in their mean score and standard deviation at posttest (_χ_ = 20.7; SD = 11.8). The mean score of the experimental group was statistically different from the mean score of the control group at posttest (_χ_ = 5.37; SD = 7.20). This shows that explicit instruction significantly improved primary four pupils’ decoding achievement profile after treatment.

Research Question 3

What is the prosody achievement mean score of primary four pupils before and after exposure to treatment?

To answer this research question, the mean scores and standard deviation of pupils’ prosodic achievement scores were computed. The results are presented in Table 3.
Table 3: Prosody Mean Scores of Primary Four Pupils Before and After Treatment for Experimental and Control Groups

<table>
<thead>
<tr>
<th>S/N</th>
<th>Group</th>
<th>Pre-test</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>No.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>χ</td>
<td>SD</td>
</tr>
<tr>
<td>1.</td>
<td>Experimental</td>
<td>70</td>
<td>1.94</td>
</tr>
<tr>
<td>2.</td>
<td>Control</td>
<td>54</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Table 3 shows that before explicit instruction, both the experimental and control groups had low scores in the prosody achievement ratings. However, after explicit instruction, both experimental group and control group did not make significant improvements in their prosody achievement profiles as indicated by the mean scores and standard deviation of both groups. The experimental groups had a mean score of 1.94 with SD of 3.37 at pre-test. The control groups had a mean score of 2.00 and SD of 3.59 at pre-test. Similarly, the posttest mean scores and SD of the experimental group (χ = 7.45; SD = 6.93) as well as the posttest mean scores and SD of the control groups (χ = 4.31; SD = 8.29) show that the prosody profile of pupils in both experimental and control groups before and after treatment remained poor.

Hypotheses

Hypothesis One

1. There is no significant difference between the word recognition achievement mean scores of pupils who are explicitly instructed and those not taught using explicit instruction.

This hypothesis was tested using the t-test for independent samples and the result is presented in Table 4.

Table 4: Result of t-Test Analysis for Difference between the Posttest Word Recognition Mean Scores of the Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Skill</th>
<th>Test</th>
<th>No.</th>
<th>χ</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Word Recognition</td>
<td>Post-test</td>
<td>70</td>
<td>28.71</td>
<td>21.64</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Word Recognition</td>
<td>Post-test</td>
<td>54</td>
<td>12.5</td>
<td>13.95</td>
<td>122</td>
<td>-4.78</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4 reveals that, for word recognition skills, the posttest mean score of the experimental group was significantly different than that of the control group. Where the control groups had X = 12.5, the experimental groups had a mean score of 28.71 with df 122, t-calculated of -4.78 and the p value of .008. The p value of .000 is less than the level of significance, that is, 0.05. Therefore, the null hypothesis was rejected, and the decision that there is a significant difference between the posttest word recognition achievement mean scores of pupils who were taught using explicit instruction and those who were not explicitly instructed was upheld.

Hypothesis 2

There is no significant difference between the word decoding achievement mean scores of pupils who are taught using explicit instruction and those who are not. This hypothesis was tested using t-test for independent samples and Table 4 shows the result.
Table 5: Result of t-Test Analysis for Difference between the Posttest Decoding Mean Scores of Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Skill</th>
<th>Test</th>
<th>No.</th>
<th>$\chi$</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Decoding</td>
<td>Post-test</td>
<td>70</td>
<td>20.7</td>
<td>11.8</td>
<td></td>
<td>-8.37</td>
<td>.000</td>
</tr>
<tr>
<td>Control</td>
<td>Decoding</td>
<td>Post-test</td>
<td>54</td>
<td>5.37</td>
<td>7.20</td>
<td>122</td>
<td>-8.37</td>
<td>.000</td>
</tr>
</tbody>
</table>

Research hypothesis two reveals that a significant difference exists between the posttest word decoding achievement mean score of both the control and experimental groups since the control group had $X = 5.37$ while mean for experimental group = 20.7 with df = 122, $t_{cal} = -8.37$ and $p = .000$. Hence, the null hypothesis is rejected since the data gathered does not provide sufficient evidence to uphold it. The experimental group recorded a mean score of 16.78 while the control group had 0.99. Therefore, we conclude that a significant difference exists between the word decoding achievement mean scores of pupils who were taught using explicit instruction and those not taught using explicit instruction.

**Hypothesis 3**

There is no significant difference between the prosody achievement mean scores of primary four pupils who are taught using explicit instruction and those who are not taught using explicit instruction. A $t$-test for independent samples was used to test this hypothesis. The result is presented in Table 6.

Table 6: Result of $t$-Test Analysis for Difference between the Posttest Prosody Mean Scores of Experimental and Control Groups

<table>
<thead>
<tr>
<th>Group</th>
<th>Skill</th>
<th>Test</th>
<th>No.</th>
<th>$\chi$</th>
<th>SD</th>
<th>df</th>
<th>t-cal</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>Prosody</td>
<td>Post-test</td>
<td>70</td>
<td>7.45</td>
<td>6.93</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>Prosody</td>
<td>Post-test</td>
<td>54</td>
<td>4.31</td>
<td>8.29</td>
<td>122</td>
<td>-229</td>
<td>.971</td>
</tr>
</tbody>
</table>

Analysis of research hypothesis three shows the mean scores of prosody achievement of the control and experimental groups. The control group had a mean score of 4.31 and the experimental group had a mean score of 7.45 while df = 122, $t_{cal} = 2.29$ and $p$ value = .971. The analysis reveals that no significant difference exists between the prosody achievement mean score of the control group and the experimental group on their posttest. Hence, we fail to reject the hypothesis because our data did not provide sufficient evidence to reject it. We, therefore, conclude that the difference between the prosody achievement mean scores of the control and experimental groups on the posttest was not significant.

V. DISCUSSION

The results from research question one reveal that word recognition profile of both control and experimental groups was mostly in the poor category. After treatment, however, the word recognition profile of the experimental groups showed an increase in word recognition achievement of pupils while word recognition achievement profile of pupils in the control group did not change. This finding is in consonance with the studies of Young (2011), Nelson-Walker, Fien, Kosty, Smolkowsky, Smith and Baker (2013) and Akamatsu (2008) who found that explicit training on reading fluency can significantly improve reading skills of pupils.

Results obtained from research question two showed that both control and experimental groups recorded a low word decoding achievement profile at pre-test as both groups had a high percentage of pupils in the poor category. At posttest, the experimental groups increased in word decoding skills while the control groups did not improve significantly. This finding supports the research of Foorman, Francis, Fletcher, Mehta and Schatschneider (1997) who found that explicit instruction improved decoding skills. It means that explicit instruction will improve decoding skills in pupils and this
will have an impact on pupils' overall reading fluency abilities.

The results from research question three showed that pupils' prosody scores before exposure to treatment were poor as indicated by the pre-test scores for both control and experimental groups. This result supports the views of Schwanenflugel, Hamilton and Stahl (2004) who found through their study that prosody provides insights into readers' overall reading achievement because prosody serves as a predictor of comprehension skills. In this instance, pupils’ poor prosody achievement pointed to the fact that they were deficient in comprehension skills. After exposure to treatment, the prosody profile of the experimental group did not differ significantly from that of the control group. This result implies that, although prosodic expression can improve with explicit instruction, more instructional time may be needed to build prosodic skills in pupils than what was given during the research.

Results obtained from hypotheses one and two as presented on Tables 4 and 5 showed that word recognition and decoding skills of pupils in the experimental groups improved after treatment. This result is in line with the findings of Stockard (2010); Oyetunde, Ojo, Korb and Babudoh (2016) and Don-Ezenne (2014) who found that instruction improves reading fluency and that explicit instruction can promote higher reading achievement levels overtime among pupils who are from literacy deficient homes. The implication of the results is that, if explicit instruction is used in teaching reading fluency, it will help to improve pupils’ word recognition and decoding skills.

VI. CONCLUSION

Explicit instruction was found effective for teaching reading fluency skills because it has significant effects on the three components of reading fluency of primary four pupils. Pupils’ ability to read fluently improved greatly after treatment. Explicit instruction is, therefore, an effective method of teaching reading fluency because of the gains it yielded in the reading fluency skills of pupils in the experimental group.

This study has established the fact that explicit instruction can have significant effects on reading fluency of pupils at the primary level of education. The ability to read fluently is one of the links to comprehension achievement. When appropriate methodology that is systematic and which gives multiple opportunities to practice the skills that are taught is employed in teaching reading fluency, reading comprehension underachievement among pupils is greatly reduced.

Based on the significant gains recorded by the experimental group at posttest as compared to the control group whose posttest scores did not significantly improve, it is clear from the findings that explicit instruction can have impact on reading fluency skills of pupils. Findings from the study also established that the mean gain scores which reflected on the experimental group was as a result of intentional, instructional engagement in reading skills through explicit method of teaching. One implication of these findings is that teaching reading fluency should be done intentionally at the basic level of education.

REFERENCES


