



Effects of Home Tutoring Programme on Reading Comprehension Scores of Primary School Pupils with Dyslexia in Suleja, Niger State, Nigeria

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Abstract. This study examined the effects of home tutoring programme on reading comprehension scores of primary school children with dyslexia in Suleja Local Government Area of Niger state, Nigeria. The study adopted quasi experimental design, and particularly it employed the pretest - posttest control – experimental group design. A sample of eight (8) pupils was taken (four in the experimental and four in the control group). Two research questions and three hypotheses guided the study. The instrument for data collection was the Umolu Informal Reading Inventory (UIRI), which was validated and found to be appropriate for the study. A data analysis was done using simple percentage, mean difference and gain scores to answer research questions and t-Test to answer the hypotheses. The results obtained revealed that children taught using home tutoring programme performed better in reading comprehension than children taught with the conventional method, it was recommend that parents should procure the services of a home tutor for their children with dyslexia so as to improve their reading comprehension.

Keywords: Home Tutoring, Reading Comprehension and Pupils with dyslexia

1. Introduction

Comprehension could be simply defined as the act of making sense of what a given text/print says and it is generally regarded as the ultimate goal of reading. In other words, reading comprehension is the understanding of the written language or text. It is an active process that requires thoughtful interaction between the reader and the text. Cicerchia (2016) explained the basics of comprehension as encompassing letter and word recognition to

understanding meaning at phrase, sentence and paragraph level and that as a result of inaccurate decoding, beginning readers are likely to skip vocabulary they do not know or recognise. The more words this category of readers skips, the harder it is to make meaning and the more challenging and frustrating the reading task becomes.

Attempting to read a text that is at higher readability level, possessing limited vocabulary and struggling with decoding can result in poor comprehension. However, Cicerchia further explain that reading also requires being able to pay attention to narrative. Children need to identify gist, main ideas, and specific details and even make inferences about what they are reading. If a child has problems staying focused on reading as a result of dyslexia, it can impact on comprehension. Also, poor reading fluency affects comprehension. For instance, when a child with dyslexia is reading a variety of problems can occur and these include reading too quickly and incorrectly guessing unknown words, getting stuck on unfamiliar words known as fixation. The reader is trying to remember the unfamiliar word rather than decode it. This can lead to the reader guessing the unknown word. Other problems include reading too slowly, taking each word sound by sound.

Comprehension is a complex higher level skill that is much greater than decoding. It is important for children to develop comprehension strategies. Comprehension strategies focus on teaching children to understand what they read not on building skills on how to read/decode. While readers acquire some comprehension strategies informally, **explicit or formal instruction in the application of comprehension strategies has been shown to be highly effective in enhancing understanding**

(Addler, 2017). Comprehension strategy instruction helps children become purposeful, active readers who are in control of their own reading comprehension. Infact, Texas Education Agency (2017) viewed comprehension as a form of metacognition.

Home tutoring programme on the other hand refers to a range of organised tutoring practices in academic or skill development area that occurs outside school period. It involves formal instruction or learning facilitation to the pupil which can be provided by a parent-tutor, a paid or volunteer third party tutor, and can take place in school building or at home. Whereas the school continues to serve as primary institution for educating children, the prevalence of home tutoring suggests that learning also takes place outside school (Mori, 2015). Due to its prevalence, home tutoring that was relatively unknown in the past is now enjoying a lot of patronage. Families pay heavily for home tutoring expecting that it will boost their children's academic achievement. Parents engage some tutors at home for making up the academic deficiencies and for increasing the academic and skill abilities of their children. For this study, professional tutors are chosen for tutoring the pupils at home.

Home tutoring programme is free, from scheduling pressures of regulated curriculum, is able to provide time and go to the trouble of direct explanation, modelling, guided practice and independent application needed for adequate comprehension building (Bray,2007). A home tutor can carefully explain a strategy or word and model usage of the strategy or word several times and in several ways to the pupil. The home tutor also has more time to guide and scaffold the pupils initial stumbling steps with the new strategy or word to be learnt. He or she can also develop different ways and materials to provide the pupil drill and practice in application of the comprehension skill learnt. The cumulative effect of this is home tutoring programme will result in overlearning and multisensory exposures that all enhance learning by a struggling reader with dyslexia.

Dyslexic learning disabilities (dyslexia) is an impairment that limits an individual's ability to read and take charge of cognition. Pupils with dyslexic learning disabilities are a sub-group of learners with learning disabilities who have normal or above normal intelligence and receive adequate classroom instruction yet have difficulties with reading, skills. Dyslexic learning disabilities is a specific form of learning disability which affects the way a pupil recognises and processes symbols and letters. In other words it affects the pupil's ability to break up a

word into its component parts and to build the individual sounds into a word.

Furthermore, some of the problems that hinder pupils with dyslexic learning disabilities from initiating and sustaining reading include the inability of the pupil to think about and recall sounds in a word, problem translating written words to spoken language and vice versa, and reversal of letters/words. Other problems encountered by pupils with dyslexic learning disabilities include difficulty in recognising or pronouncing words (word recognition) or failing to pronounce words with appropriate speed and accuracy (fluency) and the inability to make meaning out of a written text which is comprehension. All these are demonstrated by their inability to connect ideas in a passage, confuse meaning of words and sentences. Pupils with dyslexia also have problems looking for information from the text to answer literal questions and use their background experience to answer inferential questions.

Consequently, without intervention and support the learning and execution of reading function is significantly impaired for pupils with dyslexic learning disabilities. Even with support and intervention, learning to read for a child with dyslexic learning disabilities is painfully slow and laborious. That is why Ojo (2011) suggested that the most successful way to teach reading strategies to learners with limited reading proficiency is to employ the explicit instruction. This strategy involves familiarizing the pupil with key concepts, modelling the behaviour and cognitive steps, others include providing guided practice with feedback before the pupil finally move to independent and advanced practice level among others. Taking systematic steps of this nature requires time, expertise and individual contact between the teacher and the learner. All these are usually difficult to find in our public primary schools, hence the teachers teach using one method fits all and wait to fail model typically associated with current educational intervention (Mahone, 2016). It is in this light that the home tutoring programme which has the potential and flexibility to accommodate all categories of learners is proposed to be used as a remedial programme that concentrates on imparting basic skills in which the learners with dyslexia are deficient. The programme provides less threatening and motivating learning environment where children's interest in reading is encouraged.

2. Research Questions

The following research questions were raised for the study:

- What is the reading level of primary five pupils with dyslexic learning disability before intervention?
- To what extent will home tutoring programme improve reading comprehension scores of primary five pupils with dyslexia after intervention?

3. Hypotheses

The following hypotheses were formulated to guide the study:

- There is no significant difference between pretest reading comprehension mean scores of the experimental and control group.
- There is no significant difference between posttest reading comprehension mean scores of the experimental and control group following home tutoring programme.
- There is no significant difference between pretest and posttest reading comprehension mean scores of the experimental group.

4. Methodology

This study adopted quasi experimental research design. Specifically, the non-equivalent control Group design was used. The design featured two groups, one experimental group and the other control group. A population of 57 primary five pupils with dyslexic learning disability from the selected primary school was obtained. A sample of 10 pupils was

drawn using homogenous purposive sampling strategy. The instrument used to elicit response from the respondents, was the Umolu Informal Reading Inventory (UIRI).

Validity and reliability indexes indicated that the instrument was appropriate for the study. The respondents were presented with a passage which was a class level lower to read. After reading the passage, each respondent is expected to answer the four comprehension question drawn from the passage. Each correctly answered question was scored 1 mark, but question 3 have ‘a’ and ‘b’ hence they fetch half a mark each. The first two questions were measuring literal comprehension and the last two were measuring inferential comprehension. Scores earned on comprehension were converted to percentage. All the research questions were answered using the data obtained from the pupils’ pretest and posttest reading comprehension scores. These scores were presented in tables and the mean scores, percentage gain scores’ and percentage difference were calculated. For the hypotheses, T-test statistics was used to analyze the results at 0.05 level of significance.

Both experimental and control group were administered a pretest before the commencement of treatment. Only the experimental group was exposed to treatment using the Home Tutoring Programme so as to establish the effect of the treatment on the participants reading achievement.

5. Results

Research Question One: What is the reading level of primary five pupils with dyslexic learning disability before intervention?

Reading Levels of Pupils with Dyslexic Learning Disabilities before Intervention

Reading Levels	Word Recognition		Comprehension	
	No. of Pupils	%	No. of Pupils	%
Independent Level (90 – above)	0	0	0	0
Instructional Level (70 -89)	0	0	0	0
Frustration Level(< 70)	10	100	10	100
Total	10	100	10	100

Table 1 presents the reading levels of both the experimental and control group of primary five pupils with dyslexic learning disability before intervention. From the table, no participant was reading at independent reading level, it also showed that no participant was reading at instructional reading level. All the participants (10) scored zero in word recognition and comprehension. This means they were all reading at frustration level for both word recognition and reading comprehension.

Research Question Two: To what extent will home tutoring programme improve reading comprehension scores of primary five pupils with dyslexia after intervention?

Reading comprehension scores of primary five pupils with dyslexic learning disability.

Reading Level	Experimental group		Control group	
	Pretest	Posttest	Pretest	Posttest
Independent (80% >)	0(0%)	2(40%)	0(0%)	0(0%)
Instructional (62.5 – 75%)	1(20%)	3(60%)	1(20%)	3(60%)
Frustration (< 50)	4(80%)	0(0%)	4(100%)	2(40%)

Table 2 presents the pretest and posttest reading comprehension scores of primary five pupils with dyslexia. From the table, the experimental group had 1 (20%) of the participants reading at instructional comprehension level (62.5) and the other 4 (80%) of the participants reading at frustration level (37.5, 37.5.50 and 50) of comprehension before treatment. However, after treatment, 2 (40%) of the participants were at the independent comprehension level (87.5 and 87.5) and 3(60%) rose to instructional comprehension level (75, 75 and 75) from frustration comprehension level, none of the participants 0(0%) was at the frustration comprehension level after treatment. For the control group however, only 1(20%) participant was at the instructional reading level (62.5) before treatment and all others 4(80%) were at frustration comprehension level. However, at posttest, there were 3(60%) participants at the instructional comprehension level (62.5, 75 and 75) and two participants at frustration comprehension level (50 and 50). The difference between the posttest reading comprehension scores of experimental group and control group was in favour of the experimental group.

Hypothesis One: There is no significant difference in pretest reading comprehension mean scores of the experimental and control group.

Table 3: t-test Comparison of the Pretest Reading Comprehension Mean Scores of the experimental and Control Group.

Group	∑n	\bar{X}	Sd	Df	t-value	P-value
Experimental	5	47.50	10.46	8	0.00	1.00
Control	5	47.50	10.46			

P>.05

Table 3 presents the independent t-Test statistics result on the pretest reading comprehension skills mean scores of primary five pupils with dyslexia in experimental and control group. From the table, the mean score of the experimental group (mean = 47.50, sd= 10.46) and the mean score of the control group (mean = 47.50, sd =10.46) at (t (8) = 0.00, P = 1.00). This indicated that there was no statistically significant difference between the mean scores of the experimental group (47.50) and that of the control group (47.50) on reading comprehension skills at pretest. Therefore hypothesis 3 that say there is no significant difference in pretest reading comprehension mean scores of primary five pupils with dyslexia in experimental and control group is upheld.

Hypothesis Two: There is no significant difference in posttest reading comprehension mean scores of the experimental and control group following home tutoring programme.

Table 4: t-test Comparison of Posttest Reading Comprehension Mean Scores of the Experimental and Control Group.

Group	∑n	\bar{X}	Sd	Df	t-value	P-value	r^2
Experimental	5	80.00	6.85	8	2.75	0.02	0.48
Control	5	62.50	12.50				

P<.05

Table 4 presents the independent t-test statistics result on posttest reading comprehension skills mean scores of primary five pupils with dyslexia in experimental and control groups. From the table, the mean scores of the experimental group (mean = 80.00, sd = 6.85) is greater than the mean scores of the participants in the control group (mean = 62.50, sd = 12.50). The mean difference of 17.5 is statistically significant (t (8) = 2.75, P = 0.02). This means that there is statistically significant difference in posttest reading comprehension scores between the experimental and control group. The size or the magnitude of the effect of the treatment ($r^2 = 0.48$) on the difference is around 48%, thus, the finding has a large effect. Therefore, the null hypothesis six of no significant difference between the experimental and control groups posttest reading comprehension mean scores is not supported by the data collected, thus the alternative hypothesis of difference is accepted and confirmed.

Hypothesis Three: There is no significant difference in pretest and posttest reading comprehension mean scores of the experimental group.

Table 5: t-test Comparison of the Pretest and Posttest Reading Comprehension Mean Scores of the Experimental Group.

Experimental Group	Σn	\bar{X}	Sd	df	t-value	P-value	r^2
Pre-test	5	47.50	10.46	4	5.10	.01	0.72
Post-test	5	80.00	6.85				

P<.05

Table 5 presents the paired t-test statistics result on the pretest and posttest reading comprehension skills mean scores of primary five pupils with dyslexia in experimental group. From the table, the pretest mean score was (mean = 47.50, sd = 10.46) and posttest mean score was (mean = 80.00, sd = 6.85). This indicates that there is statistically significant difference between the mean scores of the pretest experimental group (47.50) and that of the posttest (80.00) on reading comprehension at posttest. Moreover the calculated value of $t = 5.10$ and the value of $P = 0.01$. Since the P value is less than 0.05, it means the difference between pretest and posttest did not occur by chance. Hence, the null hypothesis is rejected in favour of the alternate hypothesis. The magnitude or size of the effect ($r^2 = 0.87$) on the difference is 87%, which means the magnitude of the effect is very high. Therefore hypothesis 9 that say there is no significant difference in pretest and posttest reading comprehensions mean scores of primary five pupils with dyslexia in the experimental group is rejected. Hence, there was significant difference in pretest and posttest reading comprehension skills mean scores of primary five pupils with dyslexia in the experimental group.

6. Discussion of Results

This study was on effects of home tutoring programme on reading achievement of primary school pupils with dyslexic learning disabilities in Suleja, Niger state Nigeria. A primary five pupil whose word recognition and reading fluency is at the frustration level will probably have difficulty keeping up with the quantity of reading required for academic success beyond primary school. And, as large amount of effort is expended in decoding words, comprehension is affected such that deriving meaning from what is read becomes difficult. Reinforcing instruction cannot solve these problems unless those areas that hinder learning are intentionally tackled. The discussions of all the variables covered in the study were presented as follow:

The Reading Level of Pupils with Dyslexia: The study revealed the reading levels of pupils with dyslexia. Table 1 showed that pretest word recognition of all the pupils' in the experimental group was at the frustration level. As pupils move

from one grade level to the other, they are expected to recognise at least 95 percent of the words in the passage they are reading else they are considered to be reading at frustration level. Also, their reading fluency was at frustration level since all the pupils earned scores less than 90%. Similarly, the pupil's comprehension was at the frustration level except for two pupils whose scores were at the instructional level (62.5%). A reading comprehension score of less than 75% for a passage that is one year below the class level of the pupils showed that the pupils' comprehension skills were at the frustration level. The researcher deduced from this finding that all the pupils were at the frustration level in word recognition and reading comprehension skills as result of dyslexia. This finding was in concurrence with the works of Osisanya, Lazarus and Adewunmi (2013) and Oyetunde (2015), who found a large percentage of primary school pupils with reading disabilities. Oyetunde, Korb and Babudoh (2016) suggested that additional instruction is needed in the areas of reading fluency and comprehension among other skills in the classroom.

Comprehension Skill of primary five Pupils with Dyslexia:

The result in tables 2, 4 and 5 showed the extent to which home tutoring programme improved comprehension skill of the participants in the experimental group. The result showed that the experimental group achieved better than the control group in comprehension skill (see table 2). Also, the result of the null hypothesis of no significant difference between the experimental and control group on comprehension presented in table 4 was rejected. The result revealed that the pupils with dyslexia in the experimental group did significantly better in their comprehension scores than the control group. Also, the result of the null hypothesis of no significant difference in the comprehension pretest and posttest scores of the experimental group revealed that the difference was significant in favour of posttest.

This result is consistent with the finding of Rasinski, Samuels, Hiebert, Petscher and Feller (2011) on effects of a computer-based silent reading fluency instructional system called Reading plus (RP) on the reading comprehension and overall reading achievement of a large corpus of students in an urban school setting. The finding of the researchers

indicated that the programme resulted in positive, substantial, and significant improvements in reading comprehension and overall reading achievement on a criterion referenced reading test for grades 5, 6, 7, 8, and 9 and on a norm-referenced test of reading achievement for grades 4, 5, 6, 7, 8 and 10. Moreover, mean gains made by students in the Reading Plus intervention were greater than mean gains for all students at the state and district level.

7. Conclusions

From the foregoing, it can be concluded that home tutoring programme is consistent in improving reading achievement of primary five pupils with dyslexic learning disability. This fact suggests that home tutoring programme can be used as supplementary strategy for mitigating the effect of dyslexia on primary pupil's ability to initiate and sustain the reading act. It can also be concluded that primary school teachers are implicated in the failure of pupils with dyslexia to acquire the basic skills needed to be successful readers. This may be due to their work schedule size of their class and methodological issues. It can also be deduced that parents are failing to pay attention and procure additional home support for their pupils.

8. Recommendations

For successful inclusion of children with special needs into our regular classrooms, this study recommends that the regular classroom teacher must be assisted by specialist teachers who will work with pupils with special needs.

It is also recommended that home tutoring programme be utilized for remediating reading problems among pupils with dyslexia.

Furthermore, home tutoring can be made free by government so as to assist the parents of children with dyslexia benefit maximally from reading programme.

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