

The Relative Effects of Activity and Direct Teaching Adjuncts on Primary School Pupils' Learning Outcomes in English Language

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Abstract

Early Childhood Education in Nigeria has not only witnessed population explosion today but has also gained much popularity among the elite. Children at this stage of development of reasoning and formation of concepts (0-8 years), require the use of varieties of instructional strategies to develop competence and performance skills. Instructional strategies in Early Childhood Education involve the use of different teaching approaches, tactics, methods, devices, designs, actions, efforts, skills and wisdom that can motivate the learner to learn better. Teachers' persistence in the use of traditional lecture or teacher talk in Nigerian schools, has led to learner underachievement in both oral and written work probably because teacher talk does not involve the learners sufficiently in learning situations. This paper focused on child-centered instructional strategy of active modeling. The strategy is used with the consideration of the child's age, interest and participation during the lesson. The traditional strategy of teacher talk was combined with teacher modeling as an adjunct. The control class employed the teacher talk and black board illustration, as obtains in the regular Nigerian classroom. The treatment which lasted six weeks was implemented by qualified university graduates in education. The results of the study show that the active modeling class achieved significantly higher English language mean score than both the teacher adjunct and the direct instructional approach $\{F_{(2, 71)} = 4.841; P < .05\}$. There was no significant difference in the achievement of pupils under teacher modeling adjunct and the direct teaching instructional strategies. It was recommended that the period of teacher training be extended by at least one year to enable the trainees acquire depth in their subject content areas as well as acquire greater competence in modern instructional strategies.

Keywords: Learner-centered, instructional strategy, modeling, Early Childhood, primary school, Adjunct.

1. Introduction

From the inception of formal education, classroom-based instruction has been the way teachers manage the classroom environment so that pupils can interact and learn. Classroom teaching was employed in order to promote simultaneous learning development among many individuals. Eggen and Kauchak (2006) were of the view that instructional strategies that teachers use should be those that make learning of content and procedures easier for learners. Usually, instructional strategies are used to achieve learning objectives more easily. They are used by teachers to create learning environments and to specify the nature of the activities that the teacher and the learners will be involved in during the lesson. Generally, instructional strategies are contrived by teachers to make learning, understanding, and assimilation of knowledge in schools easier. Some of the popular instructional strategies often employed by teachers include Cooperative learning, Direct instruction, Discovery learning, Whole-group discussion, Independent study, Interdisciplinary instruction, Concept mapping, Inquiry method, Questioning, Play way, Learning centers, Small-group work, Reflection and Project approach (Eggen and Kauchak, 2006).

Learner centered instruction is a teaching strategy in which the teacher organizes content, materials, and procedures to enable learners go through an interactive hands-on and minds-on procedure in order to achieve stated learning objective. This is a type of learning engagement in which open-ended problem situations are used by the learner to reconstruct what they are learning about the World and to organize their information and thinking in meaningful ways; and this is described by Eggen and Kauchak, (2006), as learner centered instruction. The strategy is interesting, useful and effective for children when materials such as clay, blocks, water colours, wood etc. are used because of their simplicity, flexibility and adaptability.

Freiberg and Driscoll, (2005) has observed that this strategy of instruction ensures that the same content and information are presented to all students, which enables the class and instructor to have a common frame of reference. In this type of learning, children move naturally into higher order reasoning and understanding through firsthand experience. Learner centered instruction requires the learners to be actively involved in the learning process (Goe and Stickler, 2008; Iroegbu, 2012). This type of instructional strategy ought to be tried in the Nigerian primary schools, to keep the children busy and reduce their restlessness. Children are happy when they handle objects, feel them, and ask questions or say what they feel about the object or task at hand.

On the other hand, direct instructional technique, which is in this study exemplified by the lecture, has been found in literature to be regarded as generic across both subjects and grade levels (Freiberg and Driscoll, 2005). The researchers have found that lecture teaching strategy could be used for any subject and for any level of education. These authors believe that the lecture teaching strategy is over 2000 years old and it is still found to be very relevant in present day teaching situations. The strategy has been used effectively for teaching from the

primary school level to the most advanced levels of tertiary education in the educationally advanced nations. The authors pointed out that uninspiring lecture can send some listeners to sleep. They however affirm that the situation may not arise if the lecture is organized around short key- points which the teacher may focus on and emphasize, while paying heed to how well the learners are following.

Freiberg and Driscoll, (2005) recommended that for better effect, the teacher must make learners aware of the transition from one point to the next. Freiberg and Driscoll recommendation are hardly ever heard of in teaching situations in Nigerian secondary and primary schools. The age of over 2000 years is considered too old for the strategy to be adopted without modifications in teaching academic subjects in Nigeria. Furthermore the grave disadvantage that it is capable of sending some learners to sleep makes the strategy one that should be used with caution or avoided altogether at lower levels of education. Modern teaching strategies are supposed to be those that engage young learners in active learning situations. Modification of lecture teaching strategy at the primary and secondary school levels to incorporate some amount of active learning will make the strategy more engaging and perhaps more effective in achieving learning objectives.

Rosenshine, (1995) is of the view that lecture method of instruction produces great effect if lecture materials could be organized and presented in small steps; and the presenter or teacher focuses on one point or one direction at a time, laying due emphasis on essentials, while indicating appropriately the starting point for a new point. The author indicated also that lectures could be very successfully rewarding to both the learners and the teacher if the teacher gives examples at appropriate points in the lecture and avoid digression. The author highlighted high achievement, conserving of time, coverage of large amount of work in short time intervals, as some benefits of the lecture method of teaching. Rosenshine further emphasized that achievement with lecture teaching strategy could be more effective if it is combined with modeling.

Researchers have observed that most Nigerian teachers had consistently employed the lecture method in teaching almost everything, but had very poor learner achievements (Ojerinde, 2011). Unsatisfactory achievement levels obtained with lecture strategy at the senior secondary school level is a pointer to the fact that the strategy requires modification or change, since its use in Nigeria has not produced similar effect to the ones reported by Rosenshine (1995).

Combining lecture teaching strategy with modeling as an instructional adjunct has been reported to be a profitable arrangement in teaching, especially at lower levels of education (Rosenshine, 1995). The use of modeling as an adjunct to lecture teaching strategy appears to be an interesting combination that could be tried in the Nigerian primary school classroom at this time. It will be interesting to experiment with modeling and lecture singly and in combination. Since teachers in developed nations of the world have not dumped the lecture teaching strategy. It appear fair that instead of dumping the lecture strategy for being unsatisfactory, our teachers may attempt including some amount of active learning activities in the usual lecture teaching strategy so that the resultant achievement level might be evaluated.

1.1 Statement of the problem

The Nigerian nursery and primary schools have been registering ever increasing enrollment figures for pupils annually, from 1999 to 2014 (UNESCO 2016). However the increase in enrolment has not been matched by improvement in level of learner achievement (UNICEF, 2012). It is believed that if teachers in the nursery and primary schools could be empowered by equipping them with new teaching skills, or improving the ones they already possess, then their teaching will produce greater impact; and the pupils' achievement will improve. The problem of this study therefore is to investigate the effect of learner centered teaching strategy (active modeling) on pupils' achievement in English language at the primary school.

1.2 Research questions

Research question 1: Does the strategy of instruction affect primary school children's achievement in English language?

Research question 2: Does the gender of pupils affect primary school pupil's achievement in English language?

2. Method of the study:

This study is a quasi experiment, involving three equivalent primary state schools in Ile-Ife town. The schools are distantly located from one another. One stream of primary three in each of the schools, having a mixed gender and mixed ability classification were used for the study. Each school contributed 24 children to the experiment with equal number of boys and girls. Thus there were 72 children in the study consisting of 36 boys and 36 girls. Three experimental conditions were randomized for the three schools.

Experimental group one, employed the modeling activity strategy in their learning of English language for the six weeks of study. The pupils followed the patterns of the model teacher, in reading, writing and in speaking. The teacher acted as a demonstrator for the children to follow. The study of English grammar was approached through the study of words, sentences and structures encountered in daily activities in and out of school. The pupils

in this group wrote short stories or summaries of their daily school events of interest. This was corrected by the teacher in class at the next English language class.

Experimental group two pupils studied English language by employing the combined strategy of teacher talk and modeling instructional strategy. Teacher centered strategy of teacher talk was the main strategy, while teacher modeling instruction was an adjunct strategy. The two strategies were used jointly in executing the teaching assignment. However, it was not mandatory for the pupils to regenerate the teachers' example. The teacher in this study condition summarized each lesson for the children every day.

Experimental group three pupils were taught English language by employing teacher talk or direct instruction teaching technique. This is the conventional approach that most primary school teachers use in teaching their contents. In this approach to teaching, teachers verbalize their teaching, employing black board illustration only when necessary. The teacher summarizes the lesson for the children at the end of the lesson.

The instrument for data collection was a thirty item multiple choice English language achievement test. Each item had one correct option and three distracters. The testing time was thirty five minutes. The reliability coefficient of the instrument when administered to an equivalent class in another part of the state was .75. A revised version of the instrument with only fifteen items was used as a pretest before the study started. The post test was administered on the last day of the study. The test papers were scored and the test data was analyzed using analysis of covariance technique (ANCOVA).

3. Results

The results for this experiment are presented following the order of research questions.

3.1 The descriptive statistics of the result of the experiment is displayed in **Table 1**.

The data in Table 1 show that the mean English language achievement scores of the three experimental groups varied as follows: Modeling class, 54.167; Teacher talk/ modeling adjunct, 49.875, and direct teaching strategy, 50.140. Also the mean English language scores for boys and girls were: boys, 50.139 and girls, 51.250. The data was therefore subjected to the analysis variance technique, using the pretest scores as covariates in order to determine the significance of the differences in mean scores.

3.2 **Research question 1:** Does the strategy of instruction affect primary school children's achievement in English language?

The answer to this research question is contained in the analysis in **Table 2**

Research question 1 sought to find out whether there was any treatment effect due to the three different instructional strategies employed in the study. The result in Table 2 shows that the treatment effect was significant $\{F_{(2, 71)} = 4.841, P < .05\}$. The results for treatment groups was analyzed further using pair-wise comparison in order to determine the treatment group that differed significantly from other treatment groups. The pair wise comparison of group mean scores is presented in **Table 3**.

The data, in Table 3 reveal that the modeling instructional group achieved significantly higher mean English language score than the teacher modeling adjunct group, (mean difference = 4.481, $P < .05$); Similarly, modeling class achieved significantly higher than the direct instruction group (mean difference = 6.413; $P < .05$). The difference in mean scores between teacher modeling adjunct and direct teaching was not significant (mean difference = 1.932; $P = .329$).

3.3 **Research question 2:** Does the gender of pupils affect primary school pupil's achievement in English language?

The effect of gender on English language achievement of the pupils in this experiment was not significant ($F_{(1, 71)} = .361; P > .05$). It was therefore taken to imply that gender of pupils had no effect on English language achievement of pupils in this study. There was no significant 2-way interactions between study grouping and gender $\{F_{(2, 71)} = 1.039; P > .05\}$.

4. Discussion

The performance of Nigerian school children in English language had been blamed on several factors, including poor teacher preparation, the use of inappropriate teaching strategies, poor language facility among teachers and pupils, overloaded syllabuses etc (UNESCO, 2016; Iroegbu, 2012). This study has shown that if well trained teachers, who are knowledgeable in the content subject matter and also competent in the various strategies of teaching, are employed in teaching English language at the early childhood classes, and primary school levels, the level of primary school pupils' achievement will improve.

In this study, the teachers that implemented the strategies of instruction were graduate teachers of English education that possessed competence in both content knowledge and strategic skills. They were made to follow laid down rubrics for the various treatment groups. The results give credence to the observation that most primary school teachers are not measuring up to expectations in the execution of their primary assignment of teaching their

subject matter (Ezeokoli and Onyekwere, 2012). It is therefore important to begin laying more emphasis on the depth of coverage and understanding of the subject matter content of all teacher training programs, as well as the use of modern instructional strategies for attaining learning goals at the teacher training institutions. In this modern age, content knowledge and strategic skills play important and significant roles in any teachers' level of teaching task accomplishment.

5. Recommendations

The results of this study has revealed that the achievement level of primary school pupils depend in part on what teachers do with the pupils in the name of teaching. If teachers could provide for learners sufficient amount of content knowledge in their subject matter and also unambiguous procedural skills in handling content matter related problems, the level of learner achievement will improve. These researchers therefore recommend the elongation of teacher training programmes by at least one year. This elongation is to enable the teachers acquire more exposure to subject matter content in the discipline that they are going to teach.

The period will also avail trainee teachers the opportunity of learning in greater depths the various teaching subjects that they offer and their procedural plans for more impactful practice. The Universities that run programs in teacher education should contribute seasoned lecturers to join hands with the Nigerian Teachers' Registration Council for the purpose of teacher training and certification. The teachers Council do not appear to have adequate numbers of well trained staff to successfully implement their training programs at their various out-stations that are scattered all over the federation. In addition to investigating engaged learning strategies, future researches should focus on the impact of the school curriculum and time allocation on learner achievement at the lower levels of Nigerian education.

6. Conclusion

This study has shed some light on the possible outcomes of classroom practice when planned and implemented by adequately trained and competent teachers. The Nigerian classrooms are full of children who are eager and willing to learn. If they are provided with well trained and motivated teachers, improved achievement levels will result. These researchers therefore call for more planned researches in the various content areas as well as the curriculums of instruction in order to lift the achievement levels of the Nigerian primary schools. The extension of teacher training periods by about one year should be adopted in order to make teacher training graduates competent in both content subject matter and also content teaching implementation skills.

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Table 1: Descriptive Statistics of post test achievement in English language

Dependent Variable: post test

experimental group	gender of pupils	Mean	Std. Deviation	N
modeling class	Male	53.4167	8.95908	12
	Female	54.9167	6.76163	12
	Total	54.1667	7.80004	24
teacher modeling adjunct	Male	49.2500	6.82409	12
	Female	50.5000	5.93143	12
	Total	49.8750	6.28533	24
direct instruction	Male	47.7500	4.13686	12
	Female	48.3333	6.58281	12
	Total	48.0417	5.38500	24
Total	Male	50.1389	7.15203	36
	Female	51.2500	6.83844	36
	Total	50.6944	6.97003	72

Table of group means scores for treatment groups by gender

Table 2: Analysis of variance of the English language achievement score, using the pretest as covariate

Tests of Between-Subjects Effects

Dependent Variable: post test

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	504.845 ^a	6	84.141	1.857	.102
Intercept	9761.628	1	9761.628	215.493	.000
Pretest	5.567	1	5.567	.123	.727
Group	438.611	2	219.306	4.841*	.011
Gender	16.346	1	16.346	.361	.550
Group * gender	2.079	2	1.039	.023	.977
Error	2944.433	65	45.299		
Total	188484.000	72			
Corrected Total	3449.278	71			

a. R Squared = .146 (Adjusted R Squared = .068) * = sig, P < .05

Table 3: Pair-wise comparison of mean English achievement scores for treatment groups

(I) experimental group	(J) experimental group	Mean Difference (I-J)	Std. Error	Sig. ^b
modeling class	teacher modeling adjunct	4.481*	2.017	.030
	direct instruction	6.413*	2.110	.003
teacher modeling adjunct	modeling class	-4.481*	2.017	.030
	direct instruction	1.932	1.963	.329
direct instruction	modeling class	-6.413*	2.110	.003
	teacher modeling adjunct	-1.932	1.963	.329

• = significant at p < .05