The Effect of Creative Instructional Strategy and School Type on Primary School Pupils’ Performance in Literacy in English

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Authors’ contributions

This work was carried out in collaboration between the two authors. Author VI designed the study, collated part of the data and literature of the study, performed the statistical analysis and wrote the first draft of the manuscript. Author CLO did part of data collection and part of literature search. The two authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JESBS/2018/43982

Editors:
(1) Dr. Shao-I Chiu, Associate Professor, Taipei College of Maritime Technology of Center for General Education, Taiwan.

Reviewers:
(1) Jasjit kaur Delow, Panjab University Chandigarh, India.
(2) Niu Ruiying, Guangdong University of Foreign Studies, China.
(3) Luqman Rababah, Jadara University, Jordan.

Complete Peer review History: http://www.sciencedomain.org/review-history/26803

Original Research Article

Received 06 July 2018
Accepted 17 September 2018
Published 24 October 2018

ABSTRACT

The absence of quality and creativity in the performance of primary school leavers was one of the problems that gave rise to the preparation of the current primary school curriculum in Nigeria. The achievement level of Nigerian primary school children had been poor and unacceptable. It is believed that implementing teaching strategies that have the potential of improving achievement levels and creative literacy among the school children is what the schools require. This study, therefore, focused on the effect of engaged learning strategy, school type (Public or Private), and gender on the achievement of primary school pupils in literacy in English. The study was a quasi-experiment with pretest, posttest control group design. One public and one private school having equivalent status were randomised into each of the two study conditions. Data for the study was collected using highly reliable, researcher designed reading, writing and spelling tests. The results showed that teaching strategy was significant $[F=(1,39)=10.266, p < 0.05]$; School type was
significant $[F (1, 39) = 16.355, p < 0.05]$; Gender was significant $[F (1, 39) = 8.143, p < 0.05]$; and three-way interaction was significant $[F (1, 39) = 4.195, p < .05]$. The results reveal that: Engaged learning facilitated literacy achievement above teacher verbalisation; Private school system facilitated literacy achievement more than public schools; males achieved much higher than females. These results and disentangled interactions were discussed and explained. Engaged learning strategy was recommended for use in the primary schools in preference to teacher verbalisation.

**Keywords:** Creativity; teaching strategy; engaged learning; primary school; literacy.

**1. INTRODUCTION**

The Nigerian Basic Education Curriculum desires from beneficiaries some measure of creativity in performance in all areas of learning and life activities, arising from their exposure to various contents and processes of the curriculum. The expectation of creativity in performance from benefitting pupils arises from the curriculum demands on implementing teachers to employ innovative approaches in teaching task accomplishment. Such teachers are required to engage as often as they consider necessary, objects, materials, events and experiences that are relevant and related to the children’s background in ensuring deep understanding and superlative performance (National Education Research and Development Council {NERDC}, [1]). The teachers are expected to encourage their pupils to explore experiment, ask questions, discuss findings and verify answers; as these processes are believed to be capable of engendering significant improvement on the level of persisting poor achievement status of Nigerian school children [2]. The curriculum designers showed awareness that creativity is not limited to any single area of study/learning; although creative performance may be more evident in some areas of study/learning than others. This point of view has been corroborated by many researchers [3,4].

Educators in Nigeria have been searching for ways of ensuring that most Nigerian children acquire some measure of creativity as part of their learning outcomes on graduation from a basic level of education and even at other higher levels [5]. They believe that the acquisition of creativity is possible and that the children require help in several areas especially by providing a rich enabling environment as well as other tools and essential materials. One major constraint that has been identified as constituting an obstacle to the realisation of creativity among school children is the lack of teacher commitment and motivation. Scholars such as [5,6,7] highlighted the dearth of specialist teachers that can provide leadership and mentorship in creativity for school children and their teachers. These researchers are of the view that trained or specialist teachers may be easily recruited from the pool of unemployed graduates that abound. What is in contention is whether these teachers would possess the skills, commitment and leadership required for engendering creativity.

Most schools lack studios, workshops and laboratories where creativity may be taught and learned; where structures exist for such facilities, one would find they are without equipment [7]. The authors had argued that as a consequence, teachers employ inappropriate methods to teach children at the basic and higher levels of education in Nigeria. Researches abound that support the use of methodological approaches in teaching and fostering creativity in children [3,8]. [9,10] employed a heuristic method in teaching creative process across several disciplines and obtained significant results. The researchers believe that if well-trained teachers who are skillful and innovative in the use of resources could be found and provided with necessary guidance, such teachers could make a difference in the attainment of creativity among primary school children.

Despite these observations, some scholars believe that the impact of gender on essential learning outcomes in education needs to be given adequate consideration [11,12]. These researchers hold the view that gender effect ought to be given consideration in the planning and execution of modern educational activities since literature reveals that gender effect had been found to be present at various degrees in most educational studies [13,14]. [14] investigated learning of English as a second language in Poland and obtained a significant gender difference in favour of girls. [11] had obtained a similar result. [15] obtained significant gender effect in language achievement in favour of boys; whereas [12,16] found no gender effect.
in language achievement and attitude. It appears from these studies that the impact of gender is not settled yet. More researches ought, therefore, to be done in order to establish the most appropriate condition for gender equity.

Ogboji B. A. [5] had blamed poor achievement in creative arts among Nigerian children on several factors that included the use of poor and inappropriate teaching strategies to teach young children. Other factors included the lack of facilities and materials for practice as well as inadequate time and space for creative content. These findings are similar to what other researchers had blamed for poor achievement in other school subjects [17]. This particular study focused on the development of literacy in English, for which teaching materials and other resources abound. What is required is for the teacher to strategise the deployment of these learning materials (reading, writing, listening, and speaking) for optimum benefits of the learners, whether they are boys or girls. The presence or absence of laboratories and studios is not important; what is important is the availability of needed resources in sufficient number to allow each pupil adequate exposure and interaction time. This study was designed to accomplish teaching for creativity through impactful active learning strategy, with or without studios and laboratories.

However, the problem of most teachers resorting to the use of inappropriate teaching strategies to teach almost everything in the school curriculum is a recurring problem [18,19]. The teachers in this study did not have the opportunity to choose a strategy of teaching outside the ones that were designed for implementing this study. This arrangement was done to debar the use of inappropriate teaching strategy to teach any group in this study. When the results of the study become available, it will then become desirable and necessary to encourage teachers to replicate the effective teaching strategies that had been identified in this research. It is probable that practising teachers failed to adopt these strategies in their classrooms because they lacked the opportunity of observing these teaching strategies in action or experience of encountering them while in training. These reasons might have led [5] to recommend more researches on creativity in primary school children’s learning outcomes by employing methods that involve child-centeredness.

Kohl A. M. [4] observed that creativity focuses primarily on the process of forming original ideas which could be derived from exploration or discovery. The author had argued that creativity does not refer to doing something better than others. It is rather the authors’ view that creativity refers to original thinking, original exploration and discovery, including doing old things in the entirely new way. It, therefore, follows that creativity involves adding something that is particularly new and different from what had been in existence before. The author recommended various ways of promoting creativity in learners such as making the learners to learn processes and things by themselves; getting them involved in learning by doing and not by being told; allowing learners to explore, make mistakes and learn from them. [4] emphasised that teachers should focus mainly on the process rather than the product. He also expected teachers to provide environments that permit and encourage children to explore, make findings and verify their findings. Similarly, [20] had found that active modelling strategy was significantly more effective than activity with direct teaching adjunct and also direct teaching alone. However, these strategies are yet to be replicated for very young learners in Nigerian Schools.

The teaching strategies outlined by [4] are lacking in appropriate procedural implementation in present-day pre-schools and primary (basic) schools in Nigeria, but they are essentially what the schools require. The conditions that are described by [4] here are very appropriate for replication in the Nigerian primary school classroom to encourage the development of creativity among the school children. Frost [21] made similar recommendations with [4], although [21] had added brainstorming as an important strategy for developing creativity among school children. The author recommended the use of the four-step procedure for implementing brainstorming: set ground rules; choose a topic that is relevant and meaningful; create brainstorming web with the topic at centre; complete the web by adding point/facts to radial arrows from the centre. Some of the ideas and recommendations from [4] and [21] are interesting and may be integrated into the implementation of this study, but the creation of brainstorming web appears too advanced for this category of learners.

Apart from the strategy of teaching, school type by ownership (public or private) is regarded as another factor that influences the level of performance of Nigerian school children to a considerable extent [22]. These researchers had
observed that previously public schools had better provision of qualified teachers, resources for teaching, classroom space and playground facilities. As a consequence, they attracted more pupils and the patronage of more affluent parents as well as government patronage. These factors appear to have influenced school performance and achievement. Presently, the public school teachers are owed several months of salary arrears, and school infrastructure had been left to decay by lack of care and maintenance. Public school teachers often embark on prolonged strike action. These adverse conditions have switched high patronage to private schools, even when it is known that most private schools were established as commercial ventures for profit-making [22]. The effect of school type by ownership on the achievement of pupils needs to be investigated in the face of the current circumstances. The finding may help the public to objectively situate the effect of school type (if any), on the performance of primary (basic) level pupils in achievement in literacy in English.

Creativity has not been established to be a gender-sensitive phenomenon. This researcher would want to find out the effect of this approach to teaching creativity on literacy performance of both boys and girls. It was believed that this strategy of instruction would be beneficial to both. The actual situation would be determined statistically.

2. STATEMENT OF THE PROBLEM

Very little is known about teaching for creativity in literacy among Nigerian primary school boys and girls, but this is not the case for other school subjects. This study investigated the effect of child-centered teaching strategy (engaged learning), school type by ownership (public or private), and gender on the achievement of primary school (basic level) boys and girls in basic literacy in English.

Null hypotheses: The following null hypotheses that were propounded in the development of this study were tested for significance at the 95% probability level:

H01: There is no significant main effect of creative instructional strategy (engaged learning) on primary school pupils’ achievement in basic literacy in the English language.

H02: There is no significant main effect of school ownership type (public or private) on primary school (Basic Level) pupils’ achievement in basic literacy in the English language.

H03: There is no significant main effect of gender on primary school (basic level) pupils’ achievement in basic literacy in the English language.

H04: There is no significant interaction effect between:
(a) The strategy of teaching and school ownership type;
(b) The strategy of teaching and gender;
(c) School ownership type and gender;
(d) The strategy of teaching, school ownership type and gender; in the achievement of pupils in basic literacy in the English language.

3. SIGNIFICANCE OF THE STUDY

Primary and secondary school leavers in Nigeria had been found to be deficient in both written and spoken English language [23], and generally show lack of interest in reading and expressive communication [24,25]. The poor level of English language performance of these children had been acknowledged [5,7]. These researchers had attributed parts of the problem to poor teacher quality; inappropriate teaching strategies in use and poor management of school learning activities in most institutions. Further, still, other researchers [2,26] had blamed the problem on the unequal patronage of schools by both the State and Federal governments; public schools received greater grants, facilities and attention, while private schools were mostly neglected [2]. Notwithstanding this differential patronage of schools, the private schools had been producing greater satisfaction to pupils, parents and guardians. It had been speculated that this situation might have accounted for the recent upsurge in private school enrollment [27]. This study, therefore, examined the contributions of strategy of instruction, school ownership (public or private) and gender to pupils’ achievement in basic literacy in the English language.

4. METHOD OF STUDY

This study was a quasi-experiment that utilised the pretest, posttest, control group design. The study employed 2x2x2 factorial matrix in the marching of variables of this study. The independent variable was an instructional strategy which was stratified into two: creative
instructional strategy (experimental) and teacher-centered instructional strategy (control). School ownership was stratified into two: public schools and private schools. Gender was also stratified into males and females. The subjects of this study were primary three (Basic 3) school pupils who attended public or private primary schools in Ile-Ife town of Osun State, Nigeria. Two public and two private primary schools that were equivalent were purposively selected for this study. The two treatment conditions were randomised for the public and private schools, such that one public and one private school belonged to the same experimental condition. From the pupils who completed the study, stratified sampling technique was used to select five boys and five girls from each of the four classes that participated in the study. The final sample size was forty (40) pupils.

The researchers approached the head teachers of the eligible schools for permission to mount the study in their schools, utilising some of the children’s free periods and the permissions were granted. The children were then given consent forms for parents who were willing to complete to enable their children to participate in this study. The sample for this study was drawn from the pool of eligible participants, who completed the study.

5. STUDY CONDITIONS

Two study conditions were adopted for this study which were: (a) Engaged learning study condition, (b) Teacher centred study condition of expository teacher talk.

(a) Engaged learning study group: For this group of learners, the teacher adopted small group arrangement of pupils for most of the class work. Each group elected its leader for the first day, and the leadership position had to rotate among group members until it had gone round everybody in the group. Group members sat together at places allotted to them. Most activities were centred on reading, writing, storytelling, discussing answers and sketching scenes. For reading, the study group adopted the reading cycle. The teacher duplicated stories to be read so that on each day, a new set of five different stories was given to each small group of five pupils. Each pupil would read, summarise the story and pass the story booklet to the next person according to the group’s rotation order. The stories for the day were numbered 1 to 5. At the end of the reading interval allowed, the teacher would ask one member from each group to read aloud in turn, his/her story for the class to discuss. After reading, the teacher pauses for one minute and then read out the question/s for the groups to confer and provide group written and oral answer/s. One of the questions each day was an open type question, for which the group would be asked later to justify their answers.

For storytelling, story extension was employed in which individuals were required to provide a continuation of a story from where the teller stopped. The continuation needed not be real but was supposed to be plausible or imaginary. The children were also required to write down part of their contribution to the story extension. The teacher then scored the written extension for the level of creativeness. Each pupil was required to submit a short story on any topic that the child found interesting during the week. The teacher scored all individual and group work for creativity as well as for overall achievement.

6. TEACHER CENTRED STUDY GROUP

Pupils in this study group studied the same content but adopted expository teacher talk strategy of teaching. In this strategy, the teacher followed a preordered content arrangement, speed of coverage and nature of the teacher-learner interaction. Small group instruction was adopted during some of the practice periods, or whenever the teacher thought it necessary. This group used the same number of class teaching periods, but the teacher employed only the school prescribed textbooks and reading materials. The teacher adopted whole class teaching most of the time while dominating and controlling proceedings. The teacher strictly implemented the lessons following the traditional outline of: Topic, introduction, presentation, practice, review, evaluation and summary/conclusion. Home works were given from school prescribed textbooks, and they were marked by the teacher and recorded for later use.

7. INSTRUMENTATION

The instrument used for this study consisted of short passages requiring pupils’ response with (a) single word; (b) one sentence; (c) complete the story. The teachers also used the observation schedule to rate pupils’ performance in reading, writing and sketching activities. Teachers kept records of every pupil’s weekly class work score, homework score and class test
score. The pretest consisted of a reading, writing and spelling test which was given on the first day of study in each class. The pretest was a parallel version of the post-test. The posttest consisted of two sections: Section A: a read aloud and spelling section organised for individual pupils; and section B consisted of sentence construction, meaning extraction and story completion. The posttest score consisted of the pupils’ score in section A in addition to B.

8. METHOD OF DATA ANALYSIS

The data obtained from this study were subjected to analysis of variance of the posttest scores, using the pretest scores as covariate. Where a significant main effect occurred, comparisons of mean scores were done in pairs to determine the mean scores that caused the significant effect. For significant interaction effects, graphs were used to disentangle the interactions. The descriptive statistics is attached as Appendix 1.

9. RESULTS OF DATA ANALYSIS

The result of the analysis of the posttest scores, using the pretest scores as covariate is presented in Table 1. The Analysis of Variance (ANOVA) of the posttest achievement of pupils in literacy studies employing pretest in literacy as the covariate is contained in Table 1. The data in Table 1 are used in answering the research questions raised in this study. The results of this study are presented following the order of hypotheses that were raised.

Null hypothesis 1 stated as follows: There was no significant effect of creative instructional strategy (engaged learning) on primary school pupils’ achievement in basic literacy in the English language. The data in Table 1 shows that the main effect of instruction was significant: \( F(1, 39) = 10.266; p < 0.05 \). Null hypothesis 1 was therefore rejected. This result implies that the instructional strategies employed produced significantly different effects on the pupils’ achievement in literacy in English. Since there were two instructional conditions for this study, a pair-wise comparison of mean scores (Table 2) was carried out to determine the instructional strategy that caused the observed significant difference.

### Table 1. Analysis of variance of the posttest literacy scores with the pretest scores as covariate

<table>
<thead>
<tr>
<th>Source</th>
<th>Type III Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model</td>
<td>192.760*</td>
<td>8</td>
<td>24.095</td>
<td>7.534*</td>
<td>.000</td>
</tr>
<tr>
<td>Intercept</td>
<td>399.603</td>
<td>1</td>
<td>399.603</td>
<td>124.951*</td>
<td>.000</td>
</tr>
<tr>
<td>PRETEST</td>
<td>.860</td>
<td>1</td>
<td>.860</td>
<td>.269</td>
<td>.608</td>
</tr>
<tr>
<td>Treatment</td>
<td>32.831</td>
<td>1</td>
<td>32.831</td>
<td>10.266*</td>
<td>.003</td>
</tr>
<tr>
<td>school type</td>
<td>52.303</td>
<td>1</td>
<td>52.303</td>
<td>16.355*</td>
<td>.000</td>
</tr>
<tr>
<td>Gender</td>
<td>26.041</td>
<td>1</td>
<td>26.041</td>
<td>8.143*</td>
<td>.008</td>
</tr>
<tr>
<td>Treatment * school type</td>
<td>9.210</td>
<td>1</td>
<td>9.210</td>
<td>2.880</td>
<td>.100</td>
</tr>
<tr>
<td>Treatment * Gender</td>
<td>6.862</td>
<td>1</td>
<td>6.862</td>
<td>2.146</td>
<td>.153</td>
</tr>
<tr>
<td>School type * Gender</td>
<td>.968</td>
<td>1</td>
<td>.968</td>
<td>.303</td>
<td>.586</td>
</tr>
<tr>
<td>Treatment * school type *</td>
<td>13.418</td>
<td>1</td>
<td>13.418</td>
<td>4.195*</td>
<td>.049</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>99.140</td>
<td>31</td>
<td>3.198</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18868.000</td>
<td>40</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corrected Total</td>
<td>291.900</td>
<td>39</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. R Squared = .660 (Adjusted R Squared = .573)  \* = significant, p < .05*

### Table 2. Pair-wise comparison of means scores for treatment groups

<table>
<thead>
<tr>
<th>(I) Engaged learning centered</th>
<th>(J) Teacher centered</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engaged learning</td>
<td>Teacher centered</td>
<td>2.517</td>
<td>.786</td>
<td>.003</td>
</tr>
<tr>
<td>Teacher centred</td>
<td>Engaged learning</td>
<td>-2.517</td>
<td>.786</td>
<td>.003</td>
</tr>
</tbody>
</table>
Table 3. Pair-wise comparison of mean scores for public and private schools

<table>
<thead>
<tr>
<th>(I) Type of school</th>
<th>(J) Type of school</th>
<th>Mean Difference (I-J)</th>
<th>Std. Error</th>
<th>Sig.</th>
<th>95% Confidence Interval for Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private</td>
<td>Public</td>
<td>2.289</td>
<td>.566</td>
<td>.000</td>
<td>1.134, 3.443</td>
</tr>
<tr>
<td>Public</td>
<td>Private</td>
<td>-2.289</td>
<td>.566</td>
<td>.000</td>
<td>-3.443, -1.134</td>
</tr>
</tbody>
</table>

Based on estimated marginal means
* The mean difference is significant at the .05 level.
b. Adjustment for multiple comparisons: Least Significant Difference (equivalent to no adjustments).

The data in Table 2 shows the Engaged learning study group (Mean score = 24.067) performed significantly better than the teacher centred study group (Mean score = 19.033).

Null hypothesis 2 stated as follows: There was no significant effect of school ownership (public or private) on primary school (Basic Level) pupils' achievement in basic literacy in the English language. The result for null hypothesis 2 is presented in Table 1. The result in Table 1 shows that the main effect of school ownership type (Public or Private) was significant: \[F(1, 39) = 16.355; p < 0.05\]. Null hypothesis 2 was therefore rejected. The school type, (public or private) influenced pupils' performance in literacy beyond what can be accounted for by chance alone. A comparison of mean scores of children from both school types (Table 3) was done to determine the source of the significant difference.

The Grand mean achievement for the pupils in this study was 21.550, and the mean achievement for pupils from private schools was 23.839, which is above the Grand mean by 2.289; while the mean achievement of pupils from public schools was 19.261, which was below the Grand mean. The private schools were therefore significantly higher achievers in literacy than pupils from public schools in this study. The superior achievement of private school pupils was a factor that yielded the observed significant difference in the factor of school type.

The contribution of gender was another factor that was investigated in this study as stated in null hypothesis 3. The hypothesis was stated as follows: There is no significant main effect of gender on primary school (Basic level) pupils' achievement in basic literacy in the English language. The result of this test is contained in Table 1. The data in Table 1 reveals that the main effect of gender was significant in the study: \[F(1, 39) = 8.143; p < 0.05\]. Null hypothesis 3 was therefore rejected. To account for the source of the significant difference in gender, the gender was stratified into two: male or female. The males obtained a mean literacy achievement of 23.193, while the females obtained a mean literacy achievement of 19.907. The observed higher literacy achievement of the males gave rise to the observed significant difference in gender effect in this study.

Four interaction null hypotheses were also tested in this study: two-way interactions were three in number, and three-way interactions were one in number. They were numbered as Null hypothesis 4(a), 4(b), 4(c) and 4(d) respectively.

4(a) Interaction of treatment and school type is contained in Table 1 and it is not significant: \[F(1, 39) = 2.880; p > 0.05\]. Null hypothesis 4(a) was not rejected.

4(b) Interaction of treatment and gender as shown in Table 1 is not significant: \[F(1, 39) = 2.146; p > 0.05\]. Null hypothesis 4(b) was not rejected.

4(c) Interaction of school type and gender was not significant as could be found in the Analysis of Variance (ANOVA) Table 1: \[F(1, 39) = .303; p > 0.05\]. Null hypothesis 4(c) was therefore not rejected.

4(d) Three-way interaction null hypothesis of treatment, school type and gender is contained in the data of Table 1. The data reveals that the three way interaction of treatment by school type by gender was significant: \[F(1, 39) = 4.195; p < 0.05\]. To disentangle the interaction, the graphical presentation was employed. Achievement by gender interaction graph was drawn for the two school types, with school types as linear abscissa in Fig. 1.

The result that is shown in Fig. 1 illustrates the interaction that existed in literacy achievement of
male and female pupils from private and public primary (basic level) schools in a Nigerian town. The data revealed that male and female pupils in private schools achieved significantly higher literacy scores than those in public schools. Again, the males were higher achievers in both private and public schools. The obtained interaction is disordinal in nature. This result tends to empirically support the current low regard which the society has for the public system of education in Nigeria [2,22].

The instructional strategies employed produced interaction with gender and school types as can be found in Fig. 2.

The data in Fig. 2 shows that child centred learning (engaged learning) produced significantly higher literacy achievement for boys in public and private schools than teacher dominated strategy in both public and private schools. Engaged learning strategy was more enhancing for boys in public schools than private schools. Similarly, teacher- dominated learning was more effective for boys in public schools than for those in private schools. On the whole, child centred learning was the better of the two strategies for both school types for boys.

The graph of the disentangled interaction of strategy of teaching on gender and school types for girls alone was also sketched as presented in Fig. 3.

Fig. 3 illustrates the type of interaction that occurred for the strategy of teaching literacy and school type among female pupils. Although the interaction was disordinal in nature, teacher-dominated instructional strategy produced a negligible difference in achievement mean score in literacy between private and public school females. However, the effect of child centred learning (engaged learning) was outstanding for girls in private schools and very outstanding for girls in public schools (Fig. 3).

The interaction graphs in Fig. 1 through to Fig. 3 have shown that child centred learning (engaged learning), was a better choice for teaching boys and girls in both public and private schools. Although child centred learning was found more enhancing for males than females, the strategy is considered equally useful for teaching females, since it produced significantly higher achievement mean scores than teacher dominated strategy of teaching for both males and females.

10. DISCUSSION OF RESULTS

The results of this study have revealed that the strategies of teaching employed to teach young children have great influence on the amount and quality of learning attainment that the children exhibit at the end of any learning episode. It has been observed that engaged learning strategy proved to be more effective than teacher centred strategy of expository teacher talk. The effectiveness of engaged learning strategy was significantly higher than teacher centred strategy of expository teacher talk. This finding is in agreement with the findings and recommendations of Kohl [4] and [21] and was further corroborated by current findings by [20].

The result of this study further revealed that the achievements of pupils in private schools were much higher than those of pupils from public schools. This result provides an explanation to the report of [2] that private schools were providing more satisfaction to parents, pupils and society. The private schools might have been more costly than the public schools, they might have been rendering more impactful services because they do not go on strike as the public schools that do so frequently. Also, most public schools now lack equipment, learning materials and committed teachers, while some private schools are much better off in this regard. The effect of school type (public or private) which have been found to lead to higher achievement for private school pupils might have occurred as a result of the greater stability of programmes in private schools than in public schools.

In the case of gender, the results of this study have shown that there was a significant gender effect, and that experiment favoured the males more than the females. This finding is similar to the one obtained with exploration in reading strategies [15]. However, the result differs from the ones documented by [16] and [12], who obtained no gender effect in the studies they conducted. The result differed also from the results documented by [13] and [14] who obtained gender effect in favour of girls in their different researches. It can, therefore, be seen that the impact of gender on learning outcomes in education is still inconclusive especially when recent researches still show gender effect oscillating between three conditions; positive, neutral or negative with gender equity as origin.
Fig. 1. Interaction of gender and school type on literacy in English

Fig. 2. The interaction of strategy of instruction for male pupils
11. CONCLUSION

The creative instructional strategy of engaged learning employed in this study was more effective than the conventional strategy of expository teacher talk. The level of this effect was high that the probability of rejecting the null hypothesis was as low as three parts in a thousand (p = 0.003).

Secondly, the type of school (public or private) in which a child is enrolled had a profound effect on the achievement of the child in literacy in English; with private schools promoting higher achievement in literacy than public schools.

Thirdly the gender of pupils played a significant role in promoting achievement in literacy, with male pupils being more favoured than female. In addition, the effect of gender was more highly noticeable in private schools than in public schools.

Finally, engaged learning strategy was more enhancing in promoting achievement in literacy than expository teacher talk in both public and private schools.

12. RECOMMENDATION

The following recommendations are considered important for promoting literacy among primary school pupils: Teachers should adopt learner centred approaches especially engaged learning in teaching literacy at primary school (Basic education) level in Nigeria. Facilities for both teaching and learning should be harmonised for both public and private primary (Basic level) schools to remove the effect of school type on the performance of young children in educational achievement. Finally, professional associations for teachers in Nigeria should publish and circulate standardised protocols for implementing child centred teaching strategies for use in Nigerian schools. This recommendation will help to encourage more teachers to apply these strategies in their teaching assignment.

COMPETING INTERESTS

Authors have declared that no competing interests exist.
REFERENCES


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APPENDIX 1

Descriptive Statistics

Dependent Variable: Total score of pupil

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<th>Gender of pupil</th>
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APPENDIX 2

Primary 3 Literacy in English Test

(Sample Items from pre and post tests)

This test is not compulsory. It should be taken only by children whose parents granted permission to participate in this primary literacy performance study. The objective of this test is to find out more impactful ways of helping Nigerian primary school children to improve their performance in literacy in English. The results of the tests are for research purposes only. Neither the names of participating children nor that of their schools will be disclosed in any publications or discourses.

Instruction to pupils: Before you start answering the questions, kindly complete the following details at the top of the test paper:

[A] School Number (………….) [B] Pupils’ Number (………………….)
[C] Pupils Gender: M = male (………….) OR F = female (…………….)

SECTION A: [sample from Pretest]

1. SPELLING TEST: The teacher pronounces for each child, any one of the following word sets to spell: [famine, house, story], [farm, hungry, story], [pet, famine, friends], [farm, hungry, pet], [friend, farm, house]

2. Story Extension:

(a) Read the story that follow and complete the last sentence to extend the story.
Long time ago, the cat and the dog were friends. They lived together in one house with their owner whose name was Dibia. After many years, there was famine in the land because rain did not fall for three years. Dibia’s farm could not produce enough food for his household and his pet cat and rat.
After many days without food, the cat became very hungry. It therefore killed and ate the rat. From then, cats and rats

(b) Write down the underlined words:

(c) The cat and rat in the story were owned by 

(d) Dibia’s pets in the story were (…………………) and (………………….)

(e) One reason why Dibia’s household had not enough food was because

(f) Write down in one sentence the reason why there was famine in this story

Section A: From Posttest

Spelling Test: The teacher selects any three words among those underlined for each child to spell

Read aloud this story: Each child reads one paragraph for reading assessment

I live with my parents on the plateau of a hill, overlooking a busy river port. Most of the inhabitants of the plateau are missionaries, nurses and teachers. They work in the hospital, school and church that are located on top of the hill. The plateau is a modern settlement with beautiful houses and streets, adorned with street lights and pride of Barbados flowering plants.
With the beautiful sheds from trees and the sweet smelling flowers, the plateau offers home for visitors during the hot months of November to April.

The valley hosts the river port together with the local fish and timber market. The river port community consists mainly of traders and other businessmen especially artisans. You can see people in tugs, pulling timbers to sawmills at the river bank; boat of different types ferrying goods and people across the river, and fishermen casting their nets to catch fish and shrimps. The story of the river port will not be complete without mentioning the artisans with their noisy machines for fashioning tools for fishing, farming, and even for mending boats. Timber or wood are produced by sawmills for construction and other building purposes.

Section B

1. Read this story and answer the questions that follow

Once upon a time, all the animals lived in one large community called animal kingdom. They had a King whose name was Naku. Naku was big and strong and kind to other animals. He did not allow any animal to cheat or oppress the other animals. Naku's house was a big cave on a high hill. One night, there was an earth quake. The cave collapsed killing Naku and his entire household. The Lion quickly assumed the position of king of all the animals. It became boastful and wicked to other animals, unlike Naku. It even started to kill and eat any other animal it wanted. …………

(a) Use one sentence to complete the story

(b) Find the words from the passage that has the same meaning as:

[i] A land area that is governed by a king is called …………………………………

[ii] To break down into a confused heap means to ……………………………………½

[iii] To obtain something through a process that is not allowed means to ……………….

(c) Did the passage say that Naku was strong and kind while the Lion was boastful and wicked?

Select one response. (YES……) OR (No ……….

Scoring Guide

Spelling test: Each word correctly spelt scores 1mark each for 3 words total =3 marks

Story extension / completion: Sense correct = 1 mark; correct and complete sentence scores = 2marks. Total c= 3 marks

Transcription of words: each word correctly transcribed scores (½) each, Six words maximum; total score = 3 marks

Other questions such as c, d, e …. Correct response to score 2 marks

Reading test: Audible level poor….. (0 mark), good (1 mark) Fluency ….Poor (0 mark), Fair (1 mark), Good (2 marks. Total reading score = 3marks

Meaning extraction: Correct meaning scores 1mark; Correct set of three scores 3 marks

Maximum score for Test = 40 marks: Minimum Score = 0 marks.

Peer-review history:
The peer review history for this paper can be accessed here:
http://www.sciencedomain.org/review-history/26803

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