

Effects of Mastery Learning Instructional Strategy on Lower Primary School Pupils' Academic Performance in Social Studies in Ife Central Local Government Area of Osun State

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Abstract

The study investigated the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies in Ife Central Local Government Area of Osun State. It also examined the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies based on gender in the study area and finally the study determined the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies based on school type in the study area. These were with the view to enhancing and improving academic performance of lower primary school pupils in some Social Studies concepts through the use of mastery learning instructional strategy in Ife Central Local Government Area of Osun State. The study employed the pretest, post-test control group quasi experimental research design. The population for the study comprised all lower primary school pupils in Ife Central Local Government Area of Osun State. The study sample consisted of 53 lower primary school two pupils in two intact classes. The sample was selected using multi-stage sampling technique. From the local government area, two schools were selected through simple random sampling technique. In each school, an intact class was also selected through simple random sampling technique. The two schools were randomly assigned to one experimental group (Public School) and one control group (Private School) respectively. The research instrument used for this study titled; "Social Studies Mastery Learning Test" (SSMLT) has two sections. Section A comprised the demographic data of the respondents. Section B tested the pupils' performance in Social Studies with ten itemized questions availed with options. Data collected were analysed using mean, standard deviation and analysis of covariance (ANCOVA) statistics. The results of the study showed that there was significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies within the study area at ($F = 17.317, p < 0.05$). The results further revealed that there was no significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies based on gender in the study area at ($F = 0.910, p > 0.05$). The results of the study finally showed that there was significant effects of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies based on school type in the study area at ($F = 17.317, p < 0.05$). The study therefore concluded that mastery learning instructional strategy is effective and innovative that is capable of improving lower primary school pupils' academic performance in Social Studies.

Keywords: Social Studies, Mastery Learning, Strategy, Pupils, Academic Performance

INTRODUCTION

Social Studies is taught in lower primary schools across Nigeria. As a field of study, Social Studies may be more difficult to define unlike the single disciplines such as history or geography, precisely because it is multidisciplinary and interdisciplinary and because it is sometimes taught in one class (perhaps called "Social Studies") and sometimes in separate discipline-based classes within a department of Social Studies. Two main characteristics, however, distinguish Social Studies as a field of study: it is designed to promote civic competence; and it is

integrative, incorporating many fields of endeavor. In specific and more detailed terms, these distinctions mean that Social Studies programs have as a major purpose the promotion of civic competence-which is the knowledge, skills, and attitudes required of students to be able to assume "the office of citizen" (as Thomas Jefferson called it) in our democratic republic. Although civic competence is not the only responsibility of social studies nor is it exclusive to the field, it is more central to social studies than any other subject area in the schools.

At primary levels, children often learn Social Studies through learning opportunities that are highly integrated across several disciplines. This often takes the form of units constructed around themes. For example, teachers using the theme “time, continuity, and change” would likely engage young learners in studies using history, science, and language arts. Introduction Educational system tries to provide all learners with the opportunities for learning fundamental and emotional specifications. Learning method in other educational system is group based (each group being 20 to 40 persons) and this causes some pupils to learn material well and some others to learn material in lower levels. Each teacher works with a group of the pupils and the interaction between teacher and pupils is suitable for some pupils and not suitable for others, because there are some learners who learn material with speed lower than medium level due to their past specifications (such as congenital and family specifications). These pupils can make achievement in learning but they need more time, attention and resources Bloom [1]. Some educators believe that learning should be organized in such a manner that each learner can act and learn to have more academic achievement on the basis of their abilities. For achieving such goal, individual training methods are very suitable methods because learners proceed on the basis of their abilities in this kind of methods.

One of these individual learning methods is mastery learning strategy. As Gentile [2], asserted that mastery learning method includes two systems each being derived from different theories but they are common in learning goals and standards. The first system is "Keller Personalized System of Instruction" which is an individual method in which some large groups are taught. Basis of this system is on a behavioral model of which development and progress depend on success of the learners in doing their homework in the curriculum. The second system is "Mastery for Learning Group-Based Approach" which is applied as communal approach. This idea was presented in John Carroll learning model (1963-1965) and was expanded later by Benjamin Bloom. In Carroll model, classroom learning is a time-based phenomenon that is the longer the time of learning, the higher the rate of learning will be. Bloom confirming this material believed that if the learners were provided with learning opportunity and quality of instruction is commensurate with their personal need, about 95% of them reach mastery learning level.

Bloom converted theoretical model of Carroll to a practical model for classroom learning, so that one can provide opportunity in the classroom that all learners can achieve high level of academic achievement and their differences in learning can be minimized. Bloom believes that there are three

dependent variables in classroom learning and if they are considered carefully, the schools will be able to take step toward an educational system free from mistake. On the basis of this theory, change in cognitive entry behaviors and affective entry characteristics and learning quality determine learning outcome. Bloom believes that one of the methods which can be useful for study on thoughts of this theory and its practical application in classroom is mastery group-based approach. For application of mastery group-based approach in schools, a formative test is taken after the primary training. The learners who don't pass this test in specified level (80 to 90% of correct performance) are taught again and receive final exam until all students pass the exam and some of them have mastery on lesson unit. Then teacher decides to continue teaching.

Mastery Learning is a model where students are expected to master a learning objective or goal, before they can move on to the next goal. This is a model that was first described in the 1960's and has been proven effective by many researchers. In a mastery learning classroom, teachers break up their curriculum into a series of skills or instructional units. The teacher will usually teach a topic, and then conduct an evaluation to record each student's understanding of that unit. Next, students who have mastered the unit go on to do enrichment activities while the learners who didn't achieve their goals are given additional opportunity to practice their skills. The mastery learning model has been found to be beneficial in many settings. It allows struggling learners an opportunity to master critical concepts before new content is introduced. At the same time, it provides a challenge for high achieving learners. This style of education allows gifted learners to accelerate through the program and move on to either the next level (year) or to engage in extension studies which will broaden their understanding of the subject.

The model also allows for an individual learning pace. In addition, feedback that is given during this process is helpful for the student. This model stands for the fact that every learner can learn if given the time and the right learning environment. Learners who have learnt the specified concepts continue their learning experiences while others who have not properly learnt the concept receive feedback paired with corrective activities different from the initial instruction and offer guidance and direction on how to remedy their learning challenges. These correctives can include varying activities, individualized instruction, and additional time to complete assignments. The challenge therefore becomes providing enough time and employing appropriate instructional strategies so that all learners can attain the same level of learning Obih & Ekomaru,[3]. Mastery learning is of the idea that teaching should organize learning through ordered

steps. In order to move to the next step, learners have to master the prerequisite step. Mastery learning engages the learners in multiple instructional methods, learning levels and multiple cognitive thinking type. Mastery learning is unique when compared to the traditional method of teaching known as conventional method of teaching.

Statement of the Problem

The rate at which pupils perform in Social Studies in external examination of junior secondary schools in Ife Central Local Government Area is worrisome and a great concern for the stakeholders. Literature has revealed some factors among which is the inappropriate methods of teaching the pupils Social Studies right from the primary school level. It is on that basis that mastery learning strategy is used in this study to improve the academic performance of the lower primary school pupils in the aforementioned local government area. Hence, this study.

Purpose of the Study

The study aims at improving the lower primary school pupils' academic performance in social studies in Ife Central Local Government Area of Osun State through the use of mastery learning instructional strategy. Specifically, the objectives of the study are to:

- i. Investigate the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies in Ife Central Local Government Area of Osun State.
- ii. Examine the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies based on gender.
- iii. Determine the effects of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies based on school type.

Hypotheses

- i. There is no significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies in Ife Central Local Government Area of Osun State.
- ii. There is no significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies based on gender in the study area.
- iii. There is no significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in Social Studies based on school type in the study area.

Theoretical Framework

The study was hinged on Behaviourist theory of learning.

Behaviourism Theory:

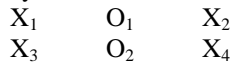
The concept of mastery learning is rooted in the behaviourism principles of operant conditioning (Skinner, 1984). According to the operant conditioning theory, learning occurs when an association is formed between a stimulus and response. In line with the behaviour theory, mastery learning focuses on overt behaviour that can be observed and measured, Baum [4]. Mastery learning as a theoretical approach goes back to the work of Bloom, who came up with "learning for mastery" method. Bloom was interested on how he could improve traditional classroom instruction by examining what it was about individual tutoring that made it an effective instructional approach. Bloom contended that most instructors were dividing their instructional materials into smaller units of instruction, but the way the students' progress was assessed was not helpful for their learning. He observed that instructors typically had the students take an assessment at the end of the instruction, which served to give the students a grade for their performance, but regardless of how the students did, he or she continued on into the next unit of instruction not minding his or her grade.

Mastery learning as a strategy believes that all children can learn if they are provided with the appropriate learning conditions. In mastery learning, students are assisted by the teacher to master each learning unit before proceeding to the next which is more advanced. This instructional philosophy is based on the belief that all learners can learn if given the appropriate amount of time and the appropriate instructional opportunities. Three basic indicators of learning output could be identified in the work of Bloom. These are cognitive introduction behaviours (i.e preliminary learning which is assumed to be a necessary pre-requisite for learning a concept); emotional introduction features (the extent of learner's motivation to learn); and the quality of teaching activity. The variables (clues, reinforcement, student's participation, feedback and correction) which Bloom described as the quality of teaching activity, explain the activities which are prepared by the teacher to enable mastery learning. According to this theory, if the related introduction features of the student along with the teaching activities are positive, the learning output will reach a high level and the differentiation between the students in terms of performance will be at a minimum level, Sever [5] On this note, if these three variables of mastery learning are approached systematically by the teacher, the learning of the learners should improve significantly.

METHODOLOGY

The population for the study comprised all lower primary school pupils in Ife Central Local Government Area of Osun State The study employed

the pretest, posttest control group quasi experimental research design. The design was used in order to minimize the threats to external validity of the study outcome. In the design, two independent variables (Mastery Learning Strategy and Teacher Expository Method) were used on lower primary school pupils to determine their effects on pupils’ academic performance. The design for the study is shown structurally as follows:



Where X_1 and X_3 represent the pretest in the two groups while X_2 and X_4 represent the posttest in the two groups.

O_1 is the experimental treatment group for mastery learning strategy group,

O_2 is the teacher expository method that serves as the control group.

The sample for the study consisted of 53 lower primary school two pupils in public and private schools of intact classes. The sample was selected using multi-stage sampling technique. One Local Government Areas (LGAs) was used for the study. From the LGA, one public school and one private school were selected using simple random sampling technique and from each school, one intact class of Primary Two was selected through simple random sampling technique to take part in the study. The schools were randomly assigned into one experimental group (Private School) and one control group (Public School). Experimental group was taught using Mastery Learning Strategy while the control group was taught using the Teacher Expository Method. One research instrument was used for data collection.

The research instrument used for the study is titled; ‘‘Social Studies Mastery Learning Test’’ (SSMLT). The complete set of items was given three experienced and seasoned Social Studies experts for their comments on the validity and appropriateness of the questions and options. Their corrections and suggestions were incorporated into the final draft and upgraded for final approval. The reliability of the instrument was determined through a pilot study on twenty-five (20) pupils who were selected from primary school class two in a school outside the scope of the study using test-retest method. The results of the test-retest method using Cronbach’s Alpha coefficient yielded reliability coefficient of 0.78 which is assumed high enough as being suitable and reliable for the study. The treatment was administered on the pupils for six weeks. Data collected were analysed using mean, standard deviation and analysis of covariance (ANCOVA). All these were achieved through the use of Statistical Package for Social Sciences (SPSS).

RESULTS

Testing of Hypotheses

Hypothesis One: There is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies in Ife Central Local Government Area of Osun State.

In order to test this hypothesis, data collected on the post test scores of the pupils’ performance in social studies having been exposed to mastery learning strategy (MLS) and teacher expository method (TEM) were subjected to descriptive analysis and analysis of covariance (ANCOVA) using their pre test scores as covariates and the results are presented in Tables 1 and 2 respectively.

Table 1: Descriptive analysis of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies

S/N	Strategies	N	Mean	Standard Deviation
1.	MLS	28	6.4286	1.16837
2.	TEM	25	5.1600	0.85049
Total		53	5.8302	1.20473

Table 1 shows the result of the descriptive analysis of the effect of MLS and TEM on lower primary school pupils’ academic performance in social studies in the study area.

It can be observed from the table that pupils exposed to MLS had higher mean score of (\bar{x} =6.4286) than their colleagues that were exposed to TEM with a mean score of (\bar{x} =5.1600). Table 2 further shows the effects of the strategies on pupils’ academic performance.

Table 2: Analysis of covariance (ANCOVA) of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies

Tests of Between-Subjects Effects						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	21.265 ^a	2	10.633	9.808	.000	.282
Intercept	111.589	1	111.589	102.930	.000	.673
Pretest	.011	1	.011	.010	.921	.000
Strategies	18.774	1	18.774	17.317	.000	.257
Error	54.206	50	1.084			
Total	1877.000	53				
Corrected Total	75.472	52				

R Squared = .282 (Adjusted R Squared = .253)
(F = 17.317, p < 0.05)

Result in Table 2 showed that there is significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies in the study area at (F = 17.317, p < 0.05). Therefore, the null hypothesis that states that there is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies is hereby rejected.

primary school pupils’ academic performance in social studies based on gender in the study area. In order to test this hypothesis, data collected on the post test scores of the pupils’ performance in social studies based on gender having been exposed to mastery learning strategy (MLS) and teacher expository method (TEM) were subjected to descriptive analysis and analysis of covariance (ANCOVA) using their pre test scores as covariates and the results are presented in Tables 3 and 4 respectively.

Hypothesis Two: There is no significant effect of mastery learning instructional strategy on lower

Table 3: Descriptive analysis of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies based on gender

S/N	Gender	N	Mean	Standard Deviation
1.	Male	30	5.7333	1.22990
2.	Female	23	5.9565	1.16837
Total		53	5.8302	1.20473

Table 3 shows the result of the descriptive analysis of the effect of MLS and TEM on lower primary school pupils’ academic performance in social studies based on gender in the study area. It can be observed from

the table that there was no significant difference in their mean scores. Table 4 further shows the effects of the strategies on pupils’ academic performance in the subject based on gender.

Table 4: Analysis of covariance (ANCOVA) of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies based on gender

Tests of Between-Subjects Effects						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3.796 ^a	2	1.898	1.324	.275	.050
Intercept	87.719	1	87.719	61.191	.000	.550
Pretest	3.147	1	3.147	2.195	.145	.042
Gender	1.304	1	1.304	.910	.345	.018
Error	71.676	50	1.434			
Total	1877.000	53				
Corrected Total	75.472	52				

R Squared = .050 (Adjusted R Squared = .012)
(F = 0.910, p > 0.05)

Data presented in Table 4 showed that there is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies based on gender in the study area at (F = 0.910, p > 0.05). Hence, the null hypothesis that states that there is no significant

effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies based on gender is hereby not rejected

Hypothesis Three: There is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies based on school type in the study area. In order to test this hypothesis, data collected on the post test scores of the pupils’ performance in social studies based on school type having been exposed to

mastery learning strategy (MLS) and teacher expository method (TEM) were subjected to descriptive analysis and analysis of covariance (ANCOVA) using their pre test scores as covariates and the results are presented in Tables 5 and 6 respectively.

Table 5: Descriptive analysis of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies based on school type

S/N	School Type	N	Mean	Standard Deviation
1.	Public School	25	5.1600	0.85049
2.	Private School	28	6.4286	1.16837
Total		53	5.8302	1.20473

Table 5 shows the result of the descriptive analysis of the effect of MLS and TEM on lower primary school pupils’ academic performance in social studies based on school type in the study area. It can be deduced from the table that pupils in private school with a

mean score of (\bar{x} _6.4286) performed better than their colleagues in public school with a mean score of (\bar{x} _5.1600). Table 6 further shows the effects of the strategies on pupils’ academic performance in the subject based on school type.

Table 6: Analysis of covariance (ANCOVA) of the effects of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies based on school type

Tests of Between-Subjects Effects						
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	21.265 ^a	2	10.633	9.808	.000	.282
Intercept	111.589	1	111.589	102.930	.000	.673
Pretest	.011	1	.011	.010	.921	.000
School Type	18.774	1	18.774	17.317	.000	.257
Error	54.206	50	1.084			
Total	1877.000	53				
Corrected Total	75.472	52				

R Squared = .282 (Adjusted R Squared = .253)

(F = 17.317, p < 0.05)

Data presented in Table 6 showed that there is significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies based on school type in the study area at (F = 17.317, p < 0.05). Thus, the null hypothesis that states that there is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in social studies based on school type is hereby rejected.

DISCUSSION OF FINDINGS

Findings of the study showed that there is significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies in the study area which is in line with the findings of Darliot [6], who found out that mastery learning instructional strategy influences learners’ academic performance. Lahey [7] explained that, many factors produce those changes, but are of the most important in the process of learning.

Learning does not occur on its own, it comes through interaction with other persons or things within the environment, and this may therefore be intended or spontaneous. Thus, learning will proceed smoothly and enthusiastically if pupils see the relationship between them and their teachers as non-threatening, warm and loving. They should see themselves as participating actively in the process of learning and also in some decisions that affect them. N.T.I [8], described learning as a change in behaviour for better or worse.

Results of the study further indicated that there is no significant effect of mastery learning instructional strategy on lower primary school pupils’ academic performance in Social Studies based on gender. The result supports the findings of Stryes [9], who stressed that gender is not a predictor of learners’ academic performance. However, there are indications of gender bias in examination performance i.e. male tend to perform higher than females in examination due to certain extraneous

factors Kabir [10]. In the same way to maintain the view that past performance was found to be related to future performance. This is also by Kalil [11], where he maintained that students past performance in '0' level examination was found to be related to their future performance. Meanwhile, Yusif [12], found that gender plays a role in determining the academic performance of the learners. He found out that male students perform better than female students in social studies because male students get enough time to go to library compared to their counterparts who are pre-occupied with many activities especially at home. The above research is similar to this study because he made comparative study on the academic performance of male and female in social studies in the higher institution of learning. The only difference between his research and my study is that, his research was in higher institution of learning, while my research was carried out on the academic performance of public and private schools in social studies in the primary schools not in the higher institution.

Results of the study finally revealed that there is significant effect of mastery learning instructional strategy on lower primary school pupils' academic performance in social studies based on school type. The result is in line with the findings of Gray [13], who underlined the fact that academic performance of pupils depends on their school type and school location. While emphasizing the important of conducive learning environment to students' academic performance, Mark [14] maintained that one cannot expect high level of pupil's academic performance where school buildings such as classrooms, libraries, technical workshops and laboratories are substandard. He emphasized that clean, quiet, safe, comfortable and healthy environment are importance components of successful teaching and learning. Similarly, Ajayi [15] reported that high level of academic performance may not be guaranteed when the learning environment is not conducive for teaching and learning process.

CONCLUSION

The results of the study had provided empirical evidence on the need to incorporate the use of mastery learning instructional strategy in teaching and learning of social studies in lower primary schools. The strategy significantly improved lower primary school pupils' academic performance in social studies.

RECOMMENDATIONS

Based on the findings of this study, it is hereby recommended that:

- i. This strategy be used in Social Studies to explain and discuss some concepts.
- ii. Curriculum planners should ensure that mastery learning instructional strategy is

included the teaching and learning of social studies.

- iii. Workshops, seminars and conferences should be organized for Social Studies teachers on the effectiveness of mastery learning instructional strategy in basic educational system.

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