

## EFFECTS OF SKILLS-BASED INSTRUCTIONAL APPROACH ON PRE-SERVICE TEACHERS' LESSON PLAN DELIVERY SKILLS AND PUPILS' BASIC LITERACY IN SOUTH-WEST, NIGERIA

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### **Abstract**

*In teacher education, there appears to be a methodology gap between the methodology courses designed for basic education pre-service teachers in colleges of education and the basic education curriculum at the primary schools/adult learning centers in Nigeria. The didactic teaching narrative of training basic education teachers is no longer acceptable for basic literacy classroom practice in the 21<sup>st</sup> century. Hence, this study was carried out to change the narrative by introducing skills-based instructional approach and examining its effects on pre-service teachers' literacy lesson plan delivery skills and primary school pupils' learning achievement in south-west, Nigeria. A total sample size of 80 pre-service teachers and 185 primary school pupils, drawn from three south-west states, namely Ogun, Ondo and Oyo states participated in the study. Three hypotheses were formulated and tested at 0.05 level of significance with the aid of four different instruments for data collection. The study adopted a pre – test, post – test, control group, quasi-experimental design with a 2x2x2 factorial matrix. Analysis of Covariance (ANCOVA) was adopted for data analysis, while Sidak post-hoc analysis was used to show any significant difference between the experimental and the control groups. The results of the study revealed among other things that after adjusting for the covariance, the effect of treatment on literacy lesson plan delivery skills was statistically significant. The difference between the experimental group and the control group was also found to be significant. Similarly, the effects of treatment on pupils' learning achievement in Reading and Writing were also found to be statistically significant.*

**Key words:** Skills-based Instructional Approach, Literacy Lesson Plan Delivery Skills, Basic Education Pre-service Teachers, Pupils' Learning Achievement, Colleges of Education

### **Introduction**

Acquisition of innovative skills in teaching and learning has been gaining global interest and attention in teacher education space, especially at the basic education sector, of which Primary Education (PED), and Adult and Non-Formal Education (ANFE) are a component. In the 21<sup>st</sup> century teaching a need to change the narrative in the instructional approach being used to train the basic education

teachers particularly at the micro-teaching level, in order for the pre-service teachers to experience a classroom engagement that is learner-centered, interactive, participatory and activity-based.

In Nigeria, the mandate to produce quality teachers for the basic education sector is that of colleges of education, with the award of a Nigeria Certificate in Education (NCE), being the minimum qualification for entering into the teaching profession. According to the National Commission for Colleges of Education (NCCE) 2021 edition, all colleges of education in Nigeria, except the colleges of education (Technical), are expected to train and produce teachers in the following areas of study: i. Early Childhood and Care Education (ECCE), ii, Primary Education (PED), iii. Adult and Non-Formal Education (ANFE), iv. Special Needs Education, and v. Junior Secondary Education (JSE). The general admission requirements into any of these programs include, a Senior Secondary School Certificate (SSSC) or General Certificate in Education (GCE) 'O' Level with passes in 5 subjects at one sitting, three of which must be at credit level or four credits at two sittings. Teacher Grade II Certificate with credit or merit passes in at least three subjects and pass in two other subjects, (NCCE, 2021).

Basic education is the foundation of other forms of education, and it comprises an educational process involving three basic areas of study namely: (i) basic literacy (Reading and Writing), (ii) basic numeracy (Arithmetic), and (ii) basic knowledge (general subjects). This basic educational process since 1842 that the formal education was brought to Nigeria by the Missionary, has gone through a number of reforms. According to Amadioha, 2016, Jeremiah and Alamina, 2017, basic education, started as Universal Primary Education (UPE) Programme in 1955 in the Western region of Nigeria and 1957 in the Eastern region. The UPE resurfaced in 1976 with the first National Policy on Education (NPE) of 1977 which was revised in 1998. In 1999, the Universal Basic Education (UBE) was launched in Nigeria to replace the UPE, with the goal of providing free, universal and compulsory basic education for every Nigerian child aged 6-15 years. However, the UBE of 1999 was neither backed up with any Act nor signed into law. In April 2004, the UBE Act was signed into law, and the National Policy on Education (NPE) of 1998 was revised to accommodate the UBE Act, signaling the full implementation of the UBE programmes. As a result of the commitment of the Federal Government of Nigeria (FGN), to the Education For All (EFA) initiative, and the Millennium Development Goals (MDG), the scope of the UBE programmes was expanded to include the following:

- (i) Programmes and initiatives for Early Childhood, Care and Development Education (ECCDE);
- (ii) Programmes and initiatives for the acquisition of functional literacy, numeracy, and life skills, especially for adults (persons aged 15 and above);
- (iii) Out-of-school, non-formal programmes for the updating of knowledge and skills for persons who left school before acquiring the basics needed for lifelong learning;
- (iv) Special programmes of encouragement to all marginalized groups: girls and women, nomadic populations, out-of-school youths, and the almajiris (Qur'anic students); and

In furtherance to the implementation of the UBE programmes, a basic education curriculum was designed for each of the three levels of the UBE, namely: (i) Lower basic education level, (Basic 1-3 classes) (ii) Middle basic education, (Basic 4-6 classes), and (iii) Upper basic education classes, (Basic 7-9 otherwise known as the Junior Secondary School). The focus of this study is on the lower basic education, with emphasis on the basic literacy.

The basic education curriculum for the lower basic education (Basic 1-3) include: English Studies (basic literacy); Mathematics (basic numeracy); One Nigerian Language; Basic Science and Technology; Prevocational Studies; Religion and National Values; Cultural and Creative Arts. In teaching these subjects, the basic education teacher is expected to emphasize the understanding of basic concepts and their explanations while teaching and learning must be skill-based, creative, innovative and practical (Udofia, 2021). However as expected, the objectives of the basic education curriculum, differ from the former primary education contents under UPE, which were targeted towards ensuring a content-based teaching and learning, teacher-centered methodology, and an examination oriented purpose. All these factors have a direct implication for the general education curriculum otherwise known as the minimum standard which is designed to guide teaching and learning in the Nigerian colleges of education.

One of the impediments to the production of quality teachers in Nigeria is the didactic nature of the methodology courses which are meant to equip the prospective basic education teachers with relevant teaching and learning skills. According to Akinde (2015), didactic teaching otherwise known as traditional teacher-centered instruction is a teaching method that requires students to be passive receivers of knowledge. That is, active participation of learners in an instructional process is virtually absent while the teacher is seen as the sole custodian of knowledge. From personal experience, it is quite obvious from the way basic education pre-service teachers in colleges of education deliver their lessons during a teaching practice exercise that the emphasis of the NCE methodology courses is on the use of traditional method of teaching or content-based instructional approach. To corroborate this, Adelekan, (2009), also observed that pre-service teachers at the basic education level still use the traditional method of teaching. This could be attributed to a number of factors. It could be lack of awareness of research documents on the mode of training basic education teachers in the 21st century. It could also be negligence on the part of methodology lecturers in updating their knowledge and skills of training the basic education pre-service teachers in accordance with the global best practices.

Primary school pupils appear to learn better and faster when they are actively involved in the teaching and learning process. Jayashree (2017) argues that learners contribute meaningfully to teaching and learning when they are actively engaged with a learning task or activity rather than following a set of rules which is common to didactic instructional process. Though this argument is apparently yet to be verified empirically, and of course the reason for this study, it is worthy of note that the instructional process as recommended in the basic education curriculum, requires a classroom practice that would encourage skills-based content and foster a classroom engagement that is learner-centered, participatory, activity-based, and interactive. By implication, the methodology courses in

the Nigerian colleges of education are expected to lay emphasis on the use of skills-based instructional approach by the pre-service teachers during the micro-teaching practicum which is a preparatory course for teaching practice exercise.

The micro-teaching practicum is the first encounter that a pre-service teacher has with classroom teaching at the college level. According to NCCE (2021), micro-teaching is a scaled down teaching encounter (in terms of time, skills and number of students) aimed at preparing students for the actual teaching and skills' acquisition/improvement in a practical and professional setting. Moyer (2016), also asserts that it is essential to build support for skills by bridging the gap between skills and content particularly in the teaching and learning of basic literacy, within a stipulated time. Thus, the time of accomplishing a teaching task in the classroom is also an important factor in determining how the pre-service teacher's teaching performance in lesson /instructional delivery is to be measured. Amusan and Odunuga (2016), observe that most pre-service teachers schedule and allocate the appropriate amount of time for learning in their lesson plan during the teaching practicum, but few of them actually ensure that learners are actively engaged with activities geared towards the learning of the subject within the allocated time. This could be attributed to poor time management skill which an innovative instructional approach would apparently take care of especially during a teaching practice exercise.

Yahyah, Abdullah and Mansor (2017) defined teaching practice as the practical section of teacher preparation programmes and it is valued as a critical component in the teacher education which enable pre-service teachers to perform the theory acquired at their teacher training institution and put it into practice. In another perspective, Fajana (2002) conceived teaching practice as a training process that involves developing skills and learning concepts, rules or attitude in order to increase teaching effectiveness of pre-service teachers. Similarly, Olaniyan and Ojo (2008) conceived teaching practice as on-the-field acquisition of skills and attitudes required by pre-service teachers to perform adequately after their graduation. In all these definitions, it is evident that an effective classroom instructional approach at the basic education level is one that emphasizes the use of instructional delivery skills particularly for teaching and learning of basic literacy at the primary school level. Hence the import of this study.

### **Purpose of Study**

The purpose of this study was to:

- (i) Find out if there is any significant main effect of the treatment on pre-service teachers' teaching practice performance in lesson/instructional delivery on basic literacy.
- (ii) Find out if there is any significant main effect of the treatment on primary school pupils' learning achievement in Reading.
- (iii) Find out if there is any significant main effect of the treatment on primary school pupils' learning achievement in Writing.

### Research Hypotheses

Three null hypotheses, formulated and tested to guide the findings of this study are presented as follows.

**Ho1:** There is no significant main effect of the treatment on pre-service teachers' teaching practice performance in lesson planning and delivery on basic literacy.

**Ho2:** There is no significant main effect of the treatment on pupils' learning achievement in Reading.

**Ho3:** There is no significant main effect of the treatment on pupils' learning achievement in Writing.

### Methodology

This study adopts a pre – test, post – test, control group, quasi-experimental design with a 2x2x2 factorial research design. The treatments are at two levels, gender at two levels and situational interest at two levels. The outlay of the instructional approaches, with the pre-test, post-test notations, is shown below:

$O_1$   $X_1$   $O_2$  Experimental Group (Skills-Based Instructional Approach)  
 $O_1$   $X_2$   $O_2$  Control Group (Traditional Learning Approach), where  
 $O_1$  – represents pretest measure,  $O_2$  – represent posttest measure  
 $X_1$  – (Skills-Based Instructional Approach),  $X_2$  – (Traditional Learning Approach)

**Table 1. The 2 x 2 x 2 factorial design is shown as follows**

GENDER	TREATMENTS			
	Skills-Based Instructional Approach (SBIA)		Traditional Learning Approach (TLA)	
	Situational Interest			
	H	L	H	L
Male(M)	SBIA MH	SBIA ML	TLA MH	TLA ML
Female(F)	SBIA FH	SBIA FL	TLA FH	TLA FL

The two independent variables that constitute the treatments of this study are (i) Skills-Based Instructional Approach and (ii) Traditional Learning Approach. This study also has three dependent variables which are (i) Pre-service teachers' teaching practice performance in basic literacy lesson plan delivery skills, (ii) Pupils' learning achievement in Reading, and (iii) Pupils' learning achievement in Writing.

The population of this study included all the 300 level students in the department of Primary Education (PED), and the department of Adult and Non-Formal Education (ANFE) in all the colleges of education located in the six south-west states of Nigeria namely: Ekiti state, Lagos state, Ogun state, Ondo state, Osun state, and Oyo state. It also included all the pupils in the primary

schools within the locations of the colleges of education in the six south-west states. Ondo town, Oyo town and Abeokuta metropolis.

The target population of the study comprised all 300 level students in two departments namely the PED department and the ANFE department in four colleges of education that are offering primary education and adult and non-formal education programmes in Ogun, Oyo and Ondo states and were eligible to proceed on Teaching Practice (TP). All the pupils in the primary schools where the pre-service teachers would serve as student-teachers were part of the target population.

This study adopted a multi-stage sampling procedure for its sample selection. First, the purposive sampling technique was used to select the four colleges of education that are offering primary education, as well as adult and non-formal education programme. Also, the primary schools where the student-teachers would serve were purposively selected. A simple random sampling technique was however used to select 20 primary education students, and 20 adult and non-formal education students from each of the four institutions. Alternatively, an intact class was used for any department with an enrolment figure that is less than 20 students. Similarly, an intact class was used to determine the pupil participants. However, the study suffered a sample set-back as some of the basic education pre-service teachers initially selected to participate in the study were not available. Thus, only the pre-service teachers within the reach of the researcher actually participated in the study. Table 2 provides the sample frame summary, involving the number of pre-service teachers that actually participated in the study.

**Table 2: Sample Frame Summary**

State	Name of Institution	Number of Basic Education Pre-service Teachers		Sample
Ogun	Federal College of Education, Abeokuta	23	7	30 (EG)
Ondo	Adeyemi College of Education, Ondo	9	4	13 (EG)
Oyo	Federal College of Education, (Special) Oyo	7	4	11 (CG)
Oyo	Emmanuel Alayande College of Education, Oyo	14	13	27 (CG)
	<b>Total</b>	<b>53</b>	<b>28</b>	<b>81</b>

**Key; EG (Experimental Group) ; CG ( Control Group)**

The following instruments were used for this study: (i) Basic Education Student-Teachers' Instructional Delivery Scale (BESTIDS), and (ii) Basic Literacy Achievement Test (BLAT). The BESTIDS was designed to rate the delivery of the lessons on Reading and Writing taught by the basic education student-teachers. The BESTIDS is a lesson delivery assessment tool which covers the skills-based

instructional steps/moves designed by LeMaster (2019), for lesson planning and delivery in any subject area in order to create a classroom engagement that is learner-centered, interactive, participatory and activity-based. It was modified and adapted by the researcher to measure the rate at which the basic education student-teachers were able to apply the SBIA lesson plan format for lesson delivery on five response options as follows: 5 - Excellent, 4 - Very Good, 3 - Good, 2 - Fair and 1 - Poor. The instrument was subjected to a content validity test by a set of experts in educational curriculum and instructional technology. It was latter try tested for its appropriateness in measuring the lesson plan delivery skills of the student-teachers.

The BLAT on the other hand was constructed by the researcher, and consisted of twenty multiple choice items with four options (A,B,C and D). The items were widely spread to cover the Reading and Writing aspect of the 3Rs drawn from the Basic Education Curriculum (BEC) for basic 1-3. The instrument was trial tested on a sample of 30 basic 3 pupils/learners from a cross section of primary schools that were not part of the main study. The internal consistency (reliability) of the instrument was determined by the use of Kuder-Richardson formula (KR-20) with a reliability index of 0.86. However, the content validity of the BLAT was established by the use of test blueprint covering the first three levels of the Reversed Bloom's Taxonomy of educational objectives (Remembering, Understanding and Applying).

## Results

**Hypothesis 1:** There is no significant main effect of the treatment on teaching practice performance of basic education pre-service teachers in lesson planning and delivery of basic literacy.

**Table 3:** Summary of Analysis of Covariance (ANCOVA) of Pre-service Teachers' Literacy Lesson plan Delivery Skills by Treatment (Skill-based Instructional Approach and Traditional)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	8716.640a	8	1089.58	114.523	0	0.927
Intercept	2167.316	1	2167.316	227.801	0	0.76
Pre_Lesson_Delivery (Literacy)	4.586	1	4.586	0.482	0.49	0.007
Treatment	4409.144	1	4409.144	463.434	0	0.866
Error	685.014	72	9.514			
Total	83870	81				
Corrected Total	9401.654	80				

Table 3 shows the summary of analysis of covariance (ANCOVA) of Pre-service Teachers' post-test Literacy Lesson Delivery skills by treatment (Skill-based Instructional Approach and Traditional), Gender and Situational Interest. The table revealed that after adjusting for the covariance, (pre-test Literacy Lesson Plan Delivery skills), the effect of treatment on Literacy Lesson Plan Delivery skills was statistically significant,  $F_{(1,72)} = 463.43$ ,  $p < 0.05$ . Consequently, the null hypothesis

which stated that there was no significant main effect of treatment on Literacy Lesson Plan Delivery skills of Pre-service teachers was therefore rejected. The table further shows that the partial Eta square, ( $\eta^2$ ) was 0.87, which was considered to be very high effect size according to Cohen (1988).

**Hypothesis 2:** There is no significant main effect of the treatment on Pupils' Achievement in Reading.

**Table 4:** Summary of Analysis of Covariance (ANCOVA) of Pupils' Achievement in Reading by Treatment (Skill-based Instructional Approach and Conventional)

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	352.426a	8		7.228	0	0.247
Intercept	529.766	1		86.926	0	0.331
Pre_Reading	105.288	1	44.053	17.276	0	0.089
Treatment	83.049	1	529.766	13.627	0	0.072
Error	1072.623	176	105.288			
Total	9723	185	83.049			
Corrected Total	1425.049	184	6.094			

a R Squared = .247 (Adjusted R Squared = .213)

Table 4 shows the summary of analysis of covariance (ANCOVA) of Pupils' Post-Test Achievement in Reading by treatment (Skill-based Instructional Approach and Conventional), Gender and Situational Interest. The table reveals that after adjusting for the covariance, (pre- test Reading), the effect of treatment on Reading was statistically significant,  $F_{(1,176)} = 13.627$ ,  $p < 0.05$ . Consequently, the null hypothesis which stated that there was no significant main effect of treatment on pupils' learning achievement in Reading was therefore rejected. The table further shows that the partial Eta square, ( $\eta^2$ ) was 0.072, which was considered to be an effect size according to Cohen (1988).

**Hypothesis 3:** There is no significant main effect of the treatment on pupils' learning achievement in Writing.



**Table 5:** Summary of Analysis of Covariance (ANCOVA) of pupils' learning achievement in Writing by Treatment (Skill-based Instructional Approach and Conventional)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	522.336 <sup>a</sup>	8	65.292	9.979	0.312	
Intercept	870.531	1	870.531	133.055	0.431	
Pre_Writing	239.161	1	239.161	36.554	0.172	
Treatment	146.611	1	146.611	22.409	0.113	
Error	1151.502	176	6.543			
Total	7492.25	185				
Corrected Total	1673.838	184				

<sup>a</sup> R Squared = .312 (Adjusted R Squared = .281)

Table 5 shows the summary of analysis of covariance (ANCOVA) of Pupils Post-Test Achievement in Writing by treatment (Skill-based Instructional Approach and Conventional), Gender and Situational Interest. The table reveals that after adjusting for the covariance, (pre- test Writing), the effect of treatment on pupils' achievement in Writing was statistically significant,  $F_{(1,176)} = 22.409$ ,  $p < 0.05$ . Consequently, the null hypothesis which stated that there was no significant main effect of treatment on pupils learning achievement in Writing was therefore rejected. The table further shows that the partial Eta square, ( $\eta^2$ ) was 0.113, which was considered to be an effect size according to Cohen (1988).

### Discussion of Findings

The results of this study revealed that there was a significant main effect of treatment on trainee-teachers' teaching practice performance of basic literacy lesson plan delivery skills. The results also confirmed that the difference between the participants in the experimental group and the participants in the control group was statistically significant. The implication of these findings is that SIA is a better teaching and learning approach for literacy education, than the TLA which is very insignificant to draw students' attention (Schwerdt and Wuppermann, 2011). This finding corroborates the study of Valli, Perkkilä and Valli (2014) who investigated how a group of Finnish adult pre-service teachers ( $n=21$ ) incorporated the skills-based instruction into a teaching and learning process. The SIA is learner-centered and activity-based and encourages learners' interaction with learning materials as well as active participation in the teaching and learning process. A classroom that is interactive is usually result-oriented and leads to an improved learning experiences. This assertion corroborates the research findings of Munna and Kalam (2021) and supported the evident that the more a lesson is interactive, the more the learners are engaged/motivated to improve their learning experiences. Development of pupils literacy skills depend largely on the effectiveness of teacher's instructional approach in literacy lesson delivery. The essence of an effective lesson delivery is to

make learning meaningful and enjoyable to the learners. Thus, the effectiveness of a classroom teacher is tied to the type of instructional approach that is used to make learning more meaningful, fruitful, and understandable particularly at the basic education level (Dash & Barman, 2016).

Regarding the pupils' learning achievement in Reading, the results revealed that after adjusting for the covariance, (pre- test Reading), the effect of treatment on Reading was statistically significant. It should be noted however that the pupils in the experimental group were taught by the student-teachers using the Skills-Based Instructional Approach (SBIA), while the pupils in the control group were taught with Traditional Learning Approach (TLA). From the findings, it is evident that the pupils that were taught with the SBIA performed better than the pupils that were taught with TLA, hence the positive effect of treatment (SBIA) on pupils' learning achievement in Reading and Writing. This finding corroborates Kuzborska (2011) whose study revealed that primary school teachers had a skill-based approach to reading, based on activities working on vocabulary and translation, and mostly at the word level. Incidentally, the three literacy topics covered by the pre-service teachers in Reading and Writing are Word formation, Forming simple sentences, and Punctuation marks.

Similarly, the findings revealed that after adjusting for the covariance, (pre- test Writing), the effect of treatment on Writing was statistically significant. Similarly, pupils that sat for the Writing test in the experimental group had the highest mean score = 6.69 followed by pupils in the control group with the mean score = 4.05. The results of the research study has therefore confirmed that the differences between pupils that sat for Writing test in the experimental group and their counterparts in the control were statistically significant. This implies that the use of effective methods for teaching Writing may also stimulate pupils' interest in Reading (Amadi, 2019)

## Conclusion

The importance of quality teacher education at the basic education level cannot be over emphasized because it possesses the power to shape and develop the future of every school aged children. More importantly, it is highly necessary to improve pupils' high-order language and cognitive skills in Reading and Writing through the instrumentality of basic literacy education. To do that, instructional approaches and models that centre on basic literacy learners should be adopted by agencies responsible for curriculum design both at the colleges of education level and basic education level. It has been established empirically that constructivist approach to learning is the basic requirement for teaching all categories of learners because of its propensity for development of individuals' learning skills. Thus, to make teaching and learning meaningful to both the teacher and the pupils, skills-based instruction should be encouraged in teacher education institutions. Firdevs, G and Yusuf, S (2018) opined that for teacher education at the basic literacy level to reach its potential in terms of purpose, priority should be given to the skills that constitute the basis of lifelong learning such as language and mental skills. They also suggested that to increase students' learning achievement and to save time, effort and cost, skill-based teaching should be used.

### Recommendations

Based on the findings of this study, the following recommendations are made:

- i. The narrative of training the 21<sup>st</sup> century teachers with the traditional approach of teaching should be changed to skills-based instructional approach in order to make learning meaningful and enjoyable to learners.
- ii. Teacher educators in colleges of education should endeavor to teach their students using the skills-based instructional approach. In most cases, pre-service teachers see their lecturers as role models, and tend to copy what they do in the classroom in order to replicate it during their teaching practice exercise.
- iii. Seminars and symposium should be organized for teacher educators in colleges of education, and in-service teachers in the primary and secondary schools on how to use the skills-based instructional approach to facilitate learning in their day to day teaching activities.

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