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**FEF** believes Nigeria needs a practical, transparent and holistic approach to tackle education-related issues, one that requires result-oriented partnership between and among the government, the private sector, empowerment NGOs and the academia, in order to find lasting solutions to our challenges. This belief informed the choice of topics for the Annual Lecture Series which are often thoroughly dissected by seasoned speakers, and left participants convinced that in the world of pragmatic and competitive science and technology, Nigeria's education must move away from sheer qualitative consideration to functionalism and relevance. Such is the thinking behind the themes of FEF's National Conferences and publication of this journal – **FAFUNWA JOURNAL OF CONTEMPORARY EDUCATION (FAJOCE)**.



# EDITORIAL POLICY

## Preamble

The need to document our past and research into the contemporary and future necessitated the birth of this journal. Fafunwa Journal of Contemporary Education (FAJOCE) is sponsored by Fafunwa Educational Foundations (FEF) in collaboration with the Faculty of Education, University of Lagos, Akoka, Lagos. Its primary objective is the dissemination of empirical and non-empirical research reports in the field of education. It will act as a forum for experts in all fields of Education and human endeavors to disseminate research findings or new issues that will benefit mankind and the process of teaching and learning in particular.

## Objectives/ Scope:

The Journal aims to publish new discoveries in Education, which will be contributed by researchers from around the world. It is an international peer reviewed journal that provides avenue for scholars to publish their research findings for advocacy and utilisation. And to undertake enlightenment of readers and experts in their areas of focus.

Fafunwa Journal of Contemporary Education (FAJOCE) has a generalist focus and publishes works specifically in the following areas:

1. Articles on all aspects of Education
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Manuscripts should be original, clearly and precisely presented in English. Authors should submit 3 copies of their manuscripts plus an electronic copy (preferably double space and saved in Word Documents).

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# EFFECT OF PARTICIPATORY TRAINING PROGRAMME ON EARLY CHILDHOOD EDUCATION PRE-SERVICE TEACHERS' KNOWLEDGE OF LOCALLY AVAILABLE RESOURCES FOR CLASSROOM INSTRUCTION IN KWARA STATE, NIGERIA

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## Abstract

*This study examined the effect of participatory training programme (PTP) on early childhood education pre-service teachers' knowledge of available resources in their local environment that can be used for classroom instruction. One research question was answered and seven hypotheses tested at 0.05 level of significance. Two Intact classes of 200 Level ECE pre-service teachers of Kwara State College of Education, Ilorin and Oro were purposively selected for the study. A total of 65 pre-service teachers (16 males and 49 females, ages 20 years  $\pm$  1.6) participated in the study. Participants were randomly assigned to PTP (51) and control (14) groups. The pretest-posttest, control group quasi-experimental research design with 2x2x3 factorial matrix was adopted for the study. Four instruments were developed and used to gather data for the study. Descriptive statistics of frequency count, percentage, mean and standard deviation was used to analyse the research question. In addition, inferential statistics comprising t-test was used to determine how significant the differences between the pre-test and the post-test of the groups were. Analysis of Covariance (ANCOVA) in conjunction with post hoc analyses were used to determine main interaction effects of the variables. Findings show that the participatory training programme improved the pre-service teachers' knowledge of locally available resources. Also, gender and creative ability do not have significant effect on pre-service teachers' knowledge of locally available resources. Hence, among other recommendations teacher educators should consider this approach for training of pre-service teachers.*

**Keywords:** Participatory training programme, Early Childhood Education, Pre-service teachers, Knowledge of locally available resources.

## Introduction

Ignorance is said to have led to underproductivity of many people in which teachers are inclusive. When information is not adequately accessed or understood by individuals, among its adverse effects is low self-esteem, loss of opportunities to great achievements, and not being able to maximise one's potentials. It is the level of knowledge acquired that influences the quality of services provided. For a teacher to be effective in the classroom, he/she ought to be knowledgeable and skilled in many areas such as mastery of subject matter, planning the lesson, preparing the learning environment (indoor and outdoor), provision of instructional materials among others. It is a fact that you cannot give what you do not have.

The awareness and understanding of facts or skills which is acquired through experience or education can be regarded as knowledge. The level of knowledge of a group varies according to the exposure or experience of individuals that comprise the group. According to the old version of Bloom's taxonomy of 1956, knowledge as an aspect of the cognitive domain of learning was the foundation on which other levels of thinking were built (Anderson and Krathwohl, 2001). Moreover, these levels of thinking are concerned with the behaviour of students, in this context, the pre-service teachers' awareness of the materials around



them that can be used for classroom instructions. Agarry (2017) asserted that the immediate environment is well equipped with lots of materials that can be harnessed for classroom instruction. In spite of all these, many classrooms in Nigeria still lack sufficient instructional materials. As a result of this, many teachers including those in early childhood and primary schools become underproductive in their effort to impart knowledge in their pupils. One of the aims of early childhood and primary education in the National Policy on Education is to inculcate in the child the spirit of inquiry and creativity through the exploration of nature and the local environment (FGN, 2013). For this to be achieved, it is necessary for pre-service teachers to be exposed to activities that will make them to be aware of what they have in their locality through exploration. In addition, the implementation guidelines for UBE did not clearly state its intention regarding the provision of instructional materials that will help achieve the set goals for this level of education. Thus, the Teachers' knowledge of locally available materials becomes inexcusable.

Abolade (2009) pointed it out that it is when original materials are not available for use in teaching and learning that other types or forms of instruction can be applied. Agudzeamega (2014) also explained that in situations where there are no sufficient ready-made materials for teaching and learning, research has suggested that alternative can be sourced by teachers and learners from resources that are available in their immediate environment to aid the teaching and learning exercise. Agudzeamega (2014) further reported that locally available instructional materials were capable of teaching topics that teachers had tagged as difficult to teach with or without the instructional materials with ease. Ekukinam (2012) identified teachers' knowledge of locally available resources as helpful in motivating the learners and preparing them for the lesson. It was claimed that the locally available materials are already part of the learners' home experience which when brought to class makes learning meaningful and exciting to learners.

The studies of Falade (2007) and Salami (2014) revealed learners' participation in classroom activities is very effective for realising set objectives of any lesson. Ekukinam (2012) also affirmed that the responsibilities of classroom teachers may not be fully accomplished without them acquiring certain skills during their training programmes. Apart from acquiring the knowledge of subject matter and the skill to deliver the lesson, the knowledge of locally available resources for classroom instruction is very germane for maximum teaching and learning outcomes. Agarry (2017) ascribed teachers' inability to identify useful materials for classroom instructions to poor mode of training which apparently has led to diverse negative instructional outcomes. Thus, there is need for effective coordination and utilisation of the benefits of different components of an instructional system. This study therefore adopted a participatory training production as an intervention to alleviate the problem of insufficient instructional materials in Nigerian classrooms as it exposed pre-service teachers to varieties of learning resources in their immediate environment.

### Research Question

What is the level of ECE pre-service teachers' knowledge of locally available materials in their locality before and after the training?

### Hypotheses

1. There is no significant main effect of treatment on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.
2. There is no significant main effect of gender on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.
3. There is no significant main effect of creative ability on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.



4. There is no significant interaction effect of treatment and gender on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.
5. There is no significant interaction effect of treatment and creative ability on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.
6. There is no significant interaction effect of gender and creative ability on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.
7. There is no significant interaction effect of treatment, gender and creative ability on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.

### Methodology

The pretest-posttest, control group quasi-experimental research design was adopted for the study. A 2 X 2 X 3 factorial matrix was equally adopted. Participatory Training Manual on Locally Available Materials (PTMLAM); Conventional Lecture Guide on Knowledge on Locally Available Materials (CLGKLAM); Pre-service Teachers' Knowledge of Local Resources Assessment Test (PTKL RAT), ( $r = 0.81$ ) and Pre-service Teachers' Creative Ability Scale (PTCAS), ( $r = 0.84$ ) were the instruments developed by the researchers for this study. The training programme exposed the ECE pre-service teachers in the experimental group to the numerous locally available resources that could be used as or transformed into instructional materials wherein participation in identifying of the resources by all pre-service teachers was ensured. Whereas, those in the control group were only exposed to the conventional way of teaching the course – lecture method. An intact class of ECE 200 Level students of Kwara State College of Education Ilorin (experimental group) and Oro (control group) were purposively selected to participate in the study. This was based on the fact that the selected participants were to offer a relevant course - ECE 227 titled, "Production and Use of Instructional Materials" as at the time of the study. Also, both institutions are State owned. Before the treatment, pretest was administered. The participatory training and the lecture running concurrently lasted four weeks and then the posttest was administered on the same participants. Data generated to answer the research question was analysed using frequency counts, mean and standard deviation, while inferential statistics comprising t-test was used to determine how significant the differences between the pretest and the posttest of the groups were. Analysis of Covariance (ANCOVA) in conjunction with post hoc analyses were used to determine main interaction effects of the variables.

### Findings

**Research Question:** What is the level of ECE pre-service teachers' knowledge of locally available resources and materials in their surroundings before and after the training?

**Table 1: ECE Pre-service Teachers' Knowledge of Locally Available Resources before and after the Training**

Knowledge Area	Before Treatment		After Treatment				Mean Gain
	N	Mean	Std.D	N	Mean	Std.D	
Knowledge of Use of Local Resources	65	8.23 (24.94)	.61	65	21.43 (64.94)	7.66	13.2 (40.0)
Knowledge of Identification	65	6.17 (12.34)	5.94	65	18.15 (36.3)	8.63	11.98 (24.0)
Knowledge of Concepts to Teach	65	5.91 (14.78)	6.83	65	14.29 (35.73)	5.38	8.38 (21.0)



Table 1 reveals the difference between the pre-service teachers' knowledge of local resources before and after the training. Their knowledge of the use of local resources for classroom instruction was 24.9% before the training and 64.9% after the training which gave a mean gain of 40%. The knowledge of identification of local resources that can be used for classroom instruction was 12.3% before the training and 36.3% after training which gave 24% mean gain. Again, the knowledge of concepts that can be taught with the local resources was 14.8% before the training and 35.7% after the training which gave 21% mean gain. All these revealed that the level of knowledge of pre-service teachers about local resources for teaching is higher after the training than before the training.

### Hypotheses Testing

H<sub>0</sub>: There is no significant main effect of treatment on ECE pre-service teachers' knowledge of locally available resources for classroom instruction.

**Table 2: Summary of Analysis of Covariance on ECE Pre-service Teachers' Knowledge of Locally Available Resources**

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	13875.205 <sup>a</sup>	12	1156.267	14.573	.000	.771
Intercept	15212.550	1	15212.550	191.733	.000	.787
Pre-knowledge	47.238	1	47.238	.595	.444	.011
Treatment	3350.841	1	3350.841	42.233	.000	.448
Gender	412.632	1	412.632	5.201	.027	.091
Creativity rate	97.988	2	48.994	.618	.543	.023
Treatment * Gender	303.664	1	303.664	3.827	.056	.069
Treatment * Creativity rate	95.726	2	47.863	.603	.551	.023
Gender * Creativity rate	54.464	2	27.232	.343	.711	.013
Treatment * Gender *Creativity rate	148.452	2	74.226	.936	.399	.035
Error	4125.810	52	79.343			
Total	206678.000	65				
Corrected Total	18001.015	64				

R Squared = .771 (Adjusted R Squared = .718)

Table 2 shows that there is a significant main effect of treatment on pre-service teachers' knowledge of locally available resources ( $F_{(1,52)} = 42.23$ ;  $p < 0.05$ ;  $\eta^2 = 0.45$ ). Therefore, hypothesis 1a is rejected. To find out the source of the significance, the Estimated Marginal Mean was computed. Table 3 below shows the findings.



**Table 3: Estimated Marginal Means on Knowledge**

Variable	Mean	Std. Error
<b>Intercept</b>		
Pre-Knowledge	20.308	
Post Knowledge	46.788	-1.947
<b>Treatment</b>		
Control	32.181	3.700
Experimental	61.394	1.999
<b>Gender</b>		
Male	42.717	3.004
Female	50.858	2.220
<b>Creativity</b>		
Low	47.193	3.830
Average	44.432	2.615
High	48.737	3.052

Table 3 shows that pre-service teachers exposed to participatory training programme acquired more knowledge of locally available resources with mean score (61.39) than their counterparts exposed to the conventional method of teaching (32.18). This implies that, those exposed to the participatory training programme performed better in acquiring knowledge of locally available resources needed for classroom use than those exposed to the conventional method of teaching.

**H0<sub>2</sub>:** There is no significant main effect of gender on early childhood education pre-service teachers' knowledge of locally available materials for classroom instruction.

To test this hypothesis, Analysis of Covariance (ANCOVA) was adopted. Table 2 presents the findings. It shows that there is a significant main effect of gender on teachers' knowledge of locally available materials ( $F_{(1,52)} = 5.20$ ;  $p < 0.05$ ;  $\eta^2 = 0.09$ ). Hence, hypothesis 2a is rejected. Table 3 indicates that female pre-service teacher scored a higher knowledge mean score (50.86) than their male counterparts (42.72).

**H0<sub>3</sub>:** There is no significant main effect of creative ability on early childhood education pre-service teachers' knowledge of locally available materials for classroom instruction.

Analysis of Covariance (ANCOVA) was also employed to test hypothesis 3 above and the results, as presented in Table 2, shows that there is no significant main effect of creative ability on pre-service teachers' knowledge of locally available materials ( $F_{(2,52)} = 0.62$ ;  $p > 0.05$ ;  $\eta^2 = 0.02$ ). The hypothesis 3 is not rejected.

**H0<sub>4</sub>:** There is no significant interaction effect of treatment and gender on early childhood education pre-service teachers' knowledge of locally available materials for classroom instruction.

Hypothesis 4 was tested using ANCOVA and the results are presented in Table 2 which shows that there is no significant interaction effect of treatment and gender on pre-service teachers' knowledge of locally available resources ( $F_{(1,52)} = 3.83$ ;  $p > 0.05$ ;  $\eta^2 = 0.07$ ). Thus, hypothesis 4 is not rejected.



$H_{0_3}$ : There is no significant interaction effect of treatment and creative ability on early childhood education pre-service teachers' knowledge of locally available materials for classroom instruction. Analysis of Covariance (ANCOVA) was also employed to test hypothesis 5a above and the results as presented in Table 2 reveals that there is no significant interaction effect of treatment and creative ability on teachers' knowledge of locally available materials ( $F_{(2,52)} = 0.60$ ;  $p > 0.05$ ;  $\eta^2 = 0.02$ ). The hypothesis 5 is therefore not rejected.

$H_{0_6}$ : There is no significant interaction effect of gender and creative ability on early childhood education pre-service teachers' knowledge of locally available resources for classroom instruction.

Analysis of Covariance was employed to test hypothesis 6a and Table 2 shows that there is no significant interaction effect of gender and creative ability on teachers' knowledge of locally available materials ( $F_{(2,52)} = 0.34$ ;  $p > 0.05$ ;  $\eta^2 = 0.01$ ). Hypothesis 6 is therefore not rejected.

$H_{0_7}$ : There is no significant interaction effect of treatment, gender and creative ability on early childhood education pre-service teachers' knowledge of locally available materials for classroom instruction. Table 2 reveals that there is no significant interaction effect of treatment, gender and creative ability on teachers' knowledge of locally available materials ( $F_{(2,52)} = 0.94$ ;  $p > 0.05$ ;  $\eta^2 = 0.04$ ) using Analysis of covariance (ANCOVA). Hence, hypothesis 7 is not rejected.

### Discussion

The outcome of this study revealed that, at the end of the training programme, there was an improvement in ECE pre-service teachers' knowledge of locally available materials for classroom instruction. This implies that pre-service teachers were able to identify materials in their local environment and what each of the material can teach during classroom instruction. The improvement can be ascribed to the active participation of the pre-service teachers in the treatment delivery. During the training programme, the pre-service teachers did not only participate in the discussion on the use of local resources for classroom instruction, they were also actively involved in the identification of locally available resources that could be used for classroom instruction as well as in the discussion of the concepts that the local resources could be used to teach.

Consequently, the pre-service teachers were able to gain more knowledge about locally available resources that can be used for classroom instruction. This is in line with the position of the National Policy on Education (FGN, 2013); and the assertion of Oduolowu (2009) who emphasised that educational activities should centre on learners for maximum self-development and self-fulfilment. Also, it supports the objectives of FGN (2013) on ECCE programme for colleges of education in Nigeria which includes assisting learners to develop inquisitiveness and explore their environment through active involvement. Hence, it is believed that active participation of learners during the teaching and learning process increases their knowledge of the concepts they are exposed to. It also has a lasting effect on how much they will be able to grasp the content and apply the knowledge accordingly when the need arises.

It was further revealed that there was a significant main effect of gender on pre-service teachers' knowledge of locally available materials. It was clear that the female pre-service teachers had a higher knowledge mean score than their male counterparts. Perhaps, the female pre-service teachers gave more attention to details about items in their surroundings during the training programme than the males. This is in line with Salami (2014) who revealed in his study that female pre-service teachers were more creative and



more efficient than their male counterparts. The assertion of Mukuna and Mutsotso (2011) that teaching profession is dominated by females all over the world align with this study outcome. The National Association for the Education of Young Children (NAEYC) confirmed this in its report that 97 percent of teachers in pre-K programmes are women. A similar figure was reported in a Center for the Child Care Workforce study (2002); Cunningham and Dorsey (2004) that only 13 percent of elementary school teachers are men and these men mostly teach in grades 5 and 6.

Furthermore, it was revealed that creative ability of ECE pre-service teachers has no significant main effect on their knowledge of locally available materials. In other words, the pre-service teachers' creative ability does not affect the level of knowledge they could acquire. This contradicts Kennedy (1997); Rath and Roy (2005) who asserted that creativity is an important prerequisite for acquiring skills and knowledge for effective teaching. Additionally, that there is no interaction effect of treatment, gender and creative ability on the pre-service teachers' knowledge of locally available resources. This implies that the difference among low, average and high creative ability of pre-service teachers in both the experimental and control groups is not statistically significant. In line with this, Salami (2014) and Agarry (2017) in their studies expressed that active learning such as the participatory approach adopted in this study has records of being effective irrespective of the learners' gender and creative ability.

### Conclusion

It was concluded from the outcomes of this study that participatory training programme is considered to be more effective than the conventional lecture or direct instruction method commonly adopted for the training of pre-service teachers in colleges and other teacher training institutions in Nigeria. It has also been established that gender and creative ability are not strong factors that can hinder pre-service teachers' knowledge of available resources in their immediate environment needed for classroom instruction.

### Recommendations

Based on the findings of this study the following are recommended:

- a. The participatory approach has been found to be more effective and appropriate for ECE pre-service teachers. Thus, teacher educators are enjoined to adopt this approach in order to make teaching and learning process more fun and productive.
- b. Gender should not be considered as a factor that will limit teachers from being efficient and productive.
- c. Every classroom teacher should constantly explore their environment for resources that can aid teaching and learning activities in the classroom.
- d. During micro-teaching and teaching practice exercises, materials from immediate environment should be encouraged in the place of the ready-made or imported ones.

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