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EFFECTIVENESS OF CLUSTER TRAINING ON LESSON NOTE PREPARATION OF PRIMARY SCHOOL TEACHERS

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ABSTRACT

This study examined the effectiveness of cluster training on lesson plan preparation of primary school teachers in Osun State, Nigeria. Before the training started, a pre-test in the form of a self-designed questionnaire titled "Teachers' Knowledge on Qualitative Lesson Note Questionnaire'' (TKQLNQ) was administered on 48 teachers purposively selected from the cluster venue in Saint Patrick's Primary School, Ifetedo. The post-test was re-administered, using the same instrument after two contacts into the program. Two hypotheses guided the study. The t-test and multiple regression statistical analysis were employed to test the two hypotheses. Results of the study revealed that the cluster training had significant impact on the teachers' professional skills in preparing qualitative lesson notes. Similarly, the teachers' gender, qualification at entry into teaching, teaching experience, educational qualification, and their present status had no combined contributions on the effectiveness of the cluster training on improving their knowledge of preparing lesson notes. It was concluded that teacher development programs such as cluster training can be effective in improving teachers' professional skills in Nigeria.

Keywords: Cluster Training, Lesson Note, Primary School, Teachers, Education, Nigeria

INTRODUCTION

Teachers are the most important professionals relevant to attaining the laudable aims, objectives, and quality in any educational system. Hence they can be described as the bedrock on which rests the achievement of the aims, goals, and objectives of any national education system. According to Adekunle (2012), teachers are the cogs in the educational machines of any nation; they play an instrumental role in the growth and direction of education across levels, thus making them relevant to the success of any educational system. Indeed, the view held by the Federal Government of Nigeria (FGN, 2004) on the relationship between the quality of the nation's teachers and the educational system is contained in the National Policy on Education (NPE) where Nigeria affirms that no educational system can rise above the quality of its teachers (FGN, 2004). There is global consensus that teachers are the most important determinant of the quality of the educational system of any nation (Aghenta, 2001; Lassa, 1992; Oyo State Universal Basic Education Board, 2009). Given that quality is not static, but contingent upon changes in human life, teachers must continuously find ways to enhance the teaching-learning process, and use effective innovative methods to improve their pedagogic skills.

Qualitative education is that educational program its value is assessed and judged in reference to a specific quality (or standard). Thus, to achieve qualitative education, the relevance of effective teacher preparation must constantly be stressed, because the better trained the teachers are, the better the quality of education (National Teachers' Institute, 2000a). Given that teachers are indispensable in delivering qualitative education, and particularly if the goals of Universal Basic Education (UBE) are to be attained in Nigeria, teacher preparation and professionalization must be pursued with all seriousness (Universal Basic Education Commission, 2013). According to Akerele (2008), academic qualifications and experience influence academic staff quality in educational institutions, adding that consistent professional development is crucial to maintaining high quality service. On the relationship between a nation's educational system, the teachers and teachers' PDP, Ojerinde (2011) argued that no educational system can attain its educational objectives devoid of a programmed training of its teachers given that good teachers have responsibilities of implementing educational policies. Interestingly, one of the ways to achieve this is through the cluster in-service teacher training and mentoring. Thus the cluster in-service teacher training is a method of providing teacher professional support for updating their competency and professionalism. Its objectives include creativity in problem-solving, production of teaching and learning materials, preparation of comprehensive and meaningful lesson notes, and classroom management, among others (Universal Basic Education Commission, 2013).

Similarly, it can be asserted that the quality of teachers' work has significant effects on their pupils. Hence, education policy administrators need to explore avenues to improve teaching-learning quality through an institutionalized framework for lifelong professional capacity building for teachers (Oyo State Universal Basic Education Board, 2009). According to the Oyo State UBE Board, teachers prepare learners for an increasingly dynamic world and considering that the requisite teaching skills are also evolving, no initial course of teacher education can be adequate to prepare and equip teachers for a career lasting 30 or 40 years; hence the need for continuous professional development.

This continuous professional development is the process whereby teachers reflect upon their professional competence, keep abreast of time, besides developing further. According to Aziz (2012), the teacher development programs equip teachers with the latest content knowledge, use of advanced technology, and enable teachers to fulfil their responsibilities to the students, parents, society, and finally their personal satisfaction as teacher, guide, and facilitator. One way to achieve this is through in-service training; this would include activities such as workshops, seminars, conferences, and so forth, that enhance professional growth and qualification of employees, including teachers, leading to a sense of security and feeling of self-confidence in discharging their professional duties in the school (Rahman, Jumani, Akhter, Chisthi, & Ajmail, 2011). Relatedly, though specific to tertiary institutions, the training and development of academics is to widen their skills, knowledge, develop positive work attitude, increase service quality as well as personal and organizational productivity, reduce absenteeism and turnover rate, including enhanced coordination of both human and material resources in these institutions (Peretomode & Peretomode, 2001).

Many teachers in Nigeria are not well-equipped and lack up-to-date pedagogical skills because they have not received any in-service training apart from their pre-service training, which has resulted in being poorly equipped, ill-motivated, thus teaching with obsolete skills (UBEC, 2013, 2004). Realizing the critical role of continuous professional development (CPD) for school teachers by way of training and retraining them for optimal qualitative performance, Osun State government in alliance with Osun State Universal Basic Education Board commenced a state-wide cluster in-service training program for primary school teachers in 2013. The major thrust of this training program was to build primary school teachers' capacity in the state in specific areas such as creativity in problem-solving in teaching-learning situation, production of teaching-learning materials, preparation of good lesson plan, effective classroom communication and management, among others (Universal Basic Education Commission, 2013). The participating teachers, therefore, are expected to become effective in the areas listed upon completing their cluster training. In order to ascertain whether or not this is being achieved for lesson note preparation, we need to empirically determine the effectiveness of the cluster training on the participants' knowledge of, and preparation of good lesson notes.

Just as pilots and sailors need the compass for navigation, teachers require a well written, sequential, and comprehensive guide to show them how to go about delivering lessons. Thus, that which the class teachers prepare to aid in this mission is the lesson note. A lesson note is derived from a lesson plan. A lesson plan is the orderly preparation of teachers' coverage of topic (or topics) on weekly basis. The lesson note, however, further develops the lesson plan by giving elaborate details in the form of step-by-step preparation for lesson presentation on a given topic during a particular lesson (UBEC, 2013; NTI, 2000a; Mkpa, 1986; Onwuegbu, 1979). Some teachers opined that the emphasis on drawing of a qualitative lesson note is irrelevant given that teachers know what to teach and what teaching techniques to adopt. Effective teaching, however, serves as an offshoot of a well written lesson note. Furthermore, both the NTI (2000a), and Mkpa (1986) concur that a well written lesson note is relevant both to learners and teachers in a number of ways: as a meaningful guide for lesson delivery, a time and energy saver, as a reminder to class teachers, besides being a ready guide for the teacher-substitutes in the teacher's absence.

The lesson note has subthemes such as the subject, topic (or subtopic), description of the pupils, instructional/behavioral objectives, duration of the lesson (or period time), teaching aids, pupils' previous knowledge (or pupils' entry behavior), introduction of the lesson, lesson procedure or development (that is, stepwise presentation of the lesson), summary, conclusion, evaluation, assignment, and references (Mkpa, 1986; NTI, 2000; Onwuegbu, 1979; UBEC, 2013). As each subtheme has its distinctive features, a professional teacher is, therefore, expected to know what each subtheme stands for, its relevance, the relationship between and among the different subthemes, including their relationship with effective delivery of the lesson note.

A number of studies have investigated the impact of training (or in-service training) on teachers' performance and skills. Gibbs and Coffey (2004) researched the impact of training on university teachers' teaching skills, approach to teaching and approach to learning among their students. They found that training was effective in producing student-focused teachers, improved teaching skills, besides enhancing students' learning and approach to study. The difference in the training group's scores before and after the training was statistically significant, in sharp contrast to the control group's score which did not change significantly. Similarly, in a study on in-service training for secondary school science teachers, Shakoor, Ghumman, and Mahmood (2013) found that teachers exposed to in-service training had better understanding of core science concepts, how students learn, understanding of students' diverse needs, development of critical thinking among students, understanding of professional and legal obligations of teaching, implementation of technology in science teaching, competence in planning subject content, and assessment and evaluation competence, and so forth, than the science teachers without in-service training. In addition, Peretomode and Chukwuma (2012) who investigated the effectiveness of manpower development on productivity of academics in tertiary institutions in Nigeria found a significant difference in productivity before and after manpower development activities. Manpower training was positively related to academics' productivity regardless of gender or faculty (whether education, humanities, social sciences, or sciences).

PURPOSE OF THE STUDY

The purpose of this study was to examine the effectiveness of cluster in-service training program on the knowledge of the teachers in writing a professionally qualitative lesson note, before the commencement of the cluster training and after it. Also, to find out if independent variables such as gender, entry qualification, years of teaching experience, highest educational qualification, and present teaching status would affect the effectiveness of the knowledge of the participating teachers in writing a professionally qualitative lesson note before, and after the training programme.

HYPOTHESES

This study investigated the following hypotheses:

> H_O1. There is significant difference at pre-test and post-test of cluster training program on the knowledge of teachers in writing a professionally qualitative lesson note.
>
> H_O2. There is no combined contribution of gender, entry qualification, years of teaching experience, highest educational qualification, and present teaching status on the effects of cluster in-service training on teachers' knowledge in writing a professionally qualitative lesson note.

METHODOLOGY

The design used in the study was experimental, qualitative research design adapting the pre-test, treatment, and post-test design, without the use of any control group.

Participants

Using the purposive sampling technique, the sample used in the study consisted of forty-eight (48) out of the fifty (50) primary school teachers who participated in the cluster in-service training program for primary school teachers in Ife South Local Government Area of Osun State. The cluster in-service training program venue was Saint Patrick's Primary School, Ifetedo. Although, as part of the logistics, each center was to have fifty (50) participants, out of the whole 50 who would have participated in the study, two were disqualified because of they failed to participate in the pre-test, even though they were present at the post-test session.

Instrumentation

The instrument used for data collection was a questionnaire designed by the researchers. The instrument titled 'Teachers' Knowledge of Qualitative Lesson Note Questionnaire' (TKQLNQ) with 20 items covered teachers' opinion on need for a good lesson note; relevance of teaching aids and their proper use; instructional objectives, their use and knowledge of how to state them in terms of pupils or teacher-activities oriented, using action verbs; improvisation and when to use local/foreign examples; pupils' previous knowledge, its synonym and relationship with every new topic; evaluation, and its relationship with stated lesson objectives, and so forth. The instrument was designed using a four way response pattern of "Strongly Agree"(SA), "Agree"(A), "Strongly Disagree"(SD)," "Disagree"(D) in which Strongly Agree is worth 4 points; Agree 3; Disagree 2; while Strongly Disagree takes a value of 1. Instrument validation was carried out by two senior colleagues, one each in curriculum studies and Tests and Measurement; their corrections led to the modification of the instrument items from 26 to 20.

Instrument reliability was established through pilot testing with twenty (20) teachers (13 females and 7 males), after a two week interval. The test-retest reliability coefficient was .76, using Pearson Product Moment Correlation. Some of the items in the instrument were negatively worded, and in the scoring, therefore, their scores were reversed.

Procedure

The study was carried out in Saint Patrick's Primary School, Ifetedo in Ife South Local Government Area of Osun State. The school was the venue chosen for the 2013/2014 cluster in-service training program for primary school teachers in Ife South Local Government Area in the State. There were 29 other venues for such training across the State, one in each Local Government Area. On Thursday November 28, 2013, the first day of the meeting, 49 participants were already present at about 2.25 pm (the program was meant to commence by 2 pm), leaving out just one participant. The researchers were impressed, and having enquired from the participants the reason behind the impressive turnout, they were told that the participants had been duly informed several days before the training date. The training program lead resource person welcomed the participants, introduced the second resource person (the lead corresponding author in this study, and himself), invited the representatives of the Local Government Area Education Authority to introduce themselves, and finally beckoned on participants to do likewise. Thereafter, he explained the meaning of the "cluster'' training, including why the Osun State Government had decided to break it into clusters by allowing each Local Government Area to gather in a selected school rather than the previous practice of gathering all beneficiaries in such programs at the State capital. The program format was announced; there would be six contacts in all (later increased to seven) to take place fortnightly (from 2 pm to 5 pm on each contact). The participants were informed about attendance taking, the core subjects to be covered, sit-in observations of micro-teaching, and so forth.

The assistant resource person (the corresponding author) then welcomed the participants, exhorted them to take the interactions seriously with receptive mind to update their pedagogical skills, and always remember to apply such on daily basis while teaching. He then told them that a study would be done to measure the success of the training on their performance, and that a questionnaire would be administered for this purpose. Before the administration, however, consent was sought and obtained from the participants, having given them a verbal information about the voluntary nature of the study, and assurance of anonymity (Cohen, Manion, & Morrison, 2007). The researchers collected the instrument from the participants after they fully responded to the items. Then the lead resource person thanked the participants for their participation in the study and told them the need to set ground rules for program participants. They all agreed and such rules included punishment for lateness in the absence of cogent reason(s), switching off handsets or putting them in silent mode, forbidding making and receiving of calls in the classroom, disallowing chorus response, penalties for refusal or failure to do homework, and so forth.

On Thursday December 5, 2013, the second session with the participants, the expected 50 participants for the center were already present at about 2.10 pm. The lead resource person opened the training manual to Module Two titled "Creative Teaching Professional Support" which has subthemes such as

effective teacher, and the characteristics; preparation of lesson plan and lesson note; production of teaching-learning materials, as well as classroom control and management. Having treated effective teacher and its qualities, production of teaching-learning materials, and classroom control and management, he announced that the assistant resource person shall take them on preparation of professional lesson plan and lesson note after their break. After the break, preparation of professional lesson plan and lesson note was discussed and demonstrated with the participants, stating the need for a lesson note, wherein essential features such as subject, topic, instructional objectives, instructional materials, date, period time, class taught, number of pupils, lesson procedure (i.e., stepwise delivery of the lesson), evaluation, conclusion and summary, including chalkboard summary, as well as homework and reference materials. After this exposition, permission was sought and obtained from the participants to administer the post-test, using the same set of questionnaire.

Data Analysis

The *t*-test statistical analysis was used to analyze hypothesis 1, while multiple regression statistics were employed to analyze hypothesis 2. The results are presented in the following, starting with Table 1 on the socio-demographic information of the participants.

Socio-demographic Variable of the Teachers

Table 1 gives the participant breakdown by gender, entry qualification, teaching experience, highest educational status and present status.

Table 1

The Socio-demographic Variables of Participants by Frequency and Percentage

Variables	**Levels**	**Frequency (f)**	**Percentage (%)**
Gender	Female	36	75.0
	Male	12	25.0
	Total	48	100.0
Entry Qualification	TC II	31	64.6
	NCE	17	35.4
	Total	48	100.0
Years of Teaching Experience	1-10	6	12.5
	11-20	8	16.7
	21 & above	34	70.8
	Total	48	100.0

		45	93.8
Highest Educational Qualification	ACE/NCE		
	B.ED	3	6.3
	Total	48	100.0
		35	72.9
Present Status	Class teacher		
	Assistant Head teacher	3	6.3
	Head teacher	10	20.8
	Total	48	100.0

Source. Field Work, 2015

In Table 1, 36 (75%) of the respondents are females, while only 12 (25%) of them are male teachers. The majority 31 (64.6%) of the teachers are holders of Grade II teaching qualification, while only 17 (35.4%) were found to have Nigerian Certificate in Education (N.C.E) which is the minimum teaching benchmark in Nigeria. Thirty-four of the 48 respondents (70.8%) have taught for over 21 years and above. Only 3 or 6.3% of the respondents have Bachelor's Degree in Education (B.Ed.) as their highest professional qualification. All the remaining respondents are: 35 class teachers (72.9%) and 3 assistant head teachers (6.3%) 10 head teachers (20.8%).

Hypothesis 1: There is no significant difference at pre-test and post-test of cluster training program of the knowledge of teachers in writing a professionally qualitative lesson note.

Table 2
Paired Samples t-Test of Significant Difference in Pre-test and Post-test of Participants' Knowledge of Writing Lesson Note

	Mean	N	Std. Deviation	Std. Error Mean	*t*	Df	*p*
Pre-test	51.3958	48	4.33560	.62579	-6.957	47	.000
Post-test	57.1458	48	5.32353	.76839			

A paired samples *t*-test was conducted to compare pre and post test scores of the teachers' knowledge of writing lesson note at the end of cluster teacher development training program. There was a statistically significant increase in the mean scores at pre (M = 51.396, *SD* = 4.336) and post-test (M = 57.146, *SD* =5.324), $t_{(47)} = -6.957$, $p = < .05$. Therefore, the hypothesis which states that there is no significant difference at pre-test and post-test of cluster training program of the knowledge of teachers in writing a professionally qualitative lesson note is hereby rejected.

Hypothesis 2: There are combined contributions of gender, entry qualification, and years of teaching experience, highest educational qualification, and present status on the effects of cluster in-service training on teachers' knowledge in writing a professionally qualitative lesson note.

Table 3
Summary of Multiple Regression Analysis on Predictive Contributions of Independent Variables to Participants' Knowledge of Writing Lesson Note

	Model Summary					
Variables entered	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate	*F*	*p*-value
Gender Entry qualification Teaching experience Educational qualification Present status	.409	.167	.068	5.13959	1.685	.159

Table 3 shows that using the five independent variables (gender, entry qualification, teaching experience, educational qualification and present status) to predict participants' knowledge of writing lesson note yielded a coefficient of multiple regression (*R*) of .409 and a multiple correlation square (R^2) of .167. These values are not statistically significant at the .05 level. This implies that the combination of all the independent variables is not adequately predictive of participants' knowledge of writing lesson note. These variables only accounted for 16.7% of the observed variance in the participants' knowledge of writing lesson note. The predictive contributions of each of the independent variables are presented in Table 4. By implication, the ability of teachers to write good and comprehensive lesson note in their various schools is not dependent on: experience, qualification, gender, age and working status. As indicated in Table 4 such ability was dependent on the kind of on the job training they received.

Table 4
Relative Contributions of the Independent Variables to Prediction of Knowledge of Writing Lesson Note

	Un standardised Coefficients		Standardised Coefficients		
Variables	B	Std. Error	Beta	*t*	Sig.
1 (Constant)	45.756	8.070		5.670	.000
Gender	3.321	1.793	.273	1.852	.071
Entry qualification	1.366	1.780	.124	.767	.447

Number of years of teaching experience	-.385	1.157	-.053	-.332	.741
Highest educational qualification	4.053	3.220	.186	1.259	.215
Present status	-1.332	.997	-.206	-1.336	.189

Dependent Variable: Post-Test Scores

As shown in Table 4, gender and entry qualification had *t*-values of 1.852 and .767 respectively; also, the values of the beta weights for the two variables are .273 and .124 respectively. Number of years of teaching experience and highest educational qualification had *t*-values and beta weights which are -.332, -.053, and 1.259, .186 respectively. Furthermore, present status had *t*-value and beta weight of -1.336 and -.206 respectively. These values are not significant at the .05 level of confidence. In addition, from the values of beta weights and *t*-ratio for each independent variable, it is shown that gender had the highest contribution in predicting the dependent variable followed by present status, next highest is educational qualification, then entry qualification while number of years of teaching experience had the lowest contribution in predicting the dependent variable. In the light of these findings, the appraisal of this hypothesis may be resolved; the combinations of gender, entry qualification, teaching experience, educational qualification and present status did not significantly predict the participant knowledge of writing lesson note. The second hypothesis, thus, is upheld.

RESULTS AND DISCUSSION

As revealed from the results of this study, teacher professional development programs such as the cluster in-service training could improve teachers' professional skills in Nigeria. The first hypothesis which states that there is no significant difference at pre-test and post-test of cluster training program on the knowledge of teachers in writing a professionally qualitative lesson note is rejected. This implies that the cluster in-service training has significant positive effect on improving the teachers' skills in their professional development, particularly in writing a professionally qualitative lesson note. This is consistent with the findings of Gibbs and Coffey (2004) who found that training of university teachers impacted positively on their professional effectiveness more than those who never benefitted from the training. Also, the finding aligns with that of Shakoor, Ghumman, and Mahmood (2013) who showed that in-service training of secondary school science teachers had significant positive effect on their working capacity as opposed to those who did not receive such training.

Similarly, the second hypothesis which states that there is no combined contribution of gender, entry qualification, years of teaching experience, highest educational qualification, and present status on the effects of cluster in-service training on teachers' knowledge in writing a professionally qualitative lesson note is retained. This finding contradicts general expectations among many teachers that there is nothing really new to learn in teaching-learning after having been on the job for decades. One would

thus have expected that variables such as years of teaching experience, highest qualification, and the teachers' present status would have significantly predicted their knowledge of writing a professionally qualitative lesson note; but the reverse is the case here. One plausible reason for this might be that both the class teachers who prepare a daily lesson note as well as the Head teachers who vet the teachers' lesson notes require updated skills to enhance their professional delivery, as it becomes obvious that whatever professional skills the teachers lacked, they would not be able to apply them in writing lesson notes; and whatever inadequacies present in the teachers' lesson notes would pass through Head teachers' vetting unnoticed.

Further implied is that cluster in-service development training program, like the cluster in-service training, is relevant to teacher professional development, irrespective of gender, entry qualification, years of teaching experience, highest educational qualification, as well as teachers' present status. This finding is consistent with the findings of a team of university consultants engaged to carry out an independent assessment of cluster in-service training programs in some selected states in Nigeria; the team found a tremendous improvement in the participant teachers' performance in the context of improved quality of lesson plan preparation, lesson plan delivery, effective classroom management, improvisation of teaching aids, monitoring and supervision (UBEC, 2004). The finding is also similar to that of Peretomode and Chukwuma (2012) who found manpower development activities to be significantly related to the productivity of the academics in their study, regardless of gender, institution, and faculties.

CONCLUSION AND RECOMMENDATIONS

From the findings of this study, it is concluded that teacher development programs such as the cluster in-service program can be effective in promoting teachers' professional skills in specific areas. The findings show that variables such as gender, entry qualification, and number of years of teaching experience, educational qualification as well as the present designation of teachers are not enough to make teachers effective in preparing their lesson notes. They need to be more and well-exposed to on-the-job training and development programs. On the basis of these findings, the following recommendations are made:

1. Both the Federal and state government should organize teacher professional development programs from time to time, to update and sharpen the professional skills of teachers in order to positively impact the quality of education in Nigeria.

2. Since all teachers cannot benefit in each program at a time, school-based arrangement should be in place whereby all participating teachers in a school would return to the school and engage in peer coaching with fellow teachers who could not benefit from the concluded professional development program; through this, the acquired skills in each program would be shared by a larger majority of teachers.

LIMITATIONS

From a number of objectives of the cluster in-service training, the effectiveness on lesson note preparation was explored. Again, from a total of 30 Local Government Areas across Osun State where such training was held between November 28, 2013--January 30, 2014, only that of Ife South Local Government Area was covered. More importantly, since effectiveness in lesson note preparation may not directly translate into automatic improved delivery (Aziz, 2013), caution may be required in generalizing the results of the study.

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