

# EFFECT OF VIDEO - ANALYSIS ON TEACHING PRACTICE PERFORMANCE AMONG COLLEGES OF EDUCATION STUDENTS IN NORTH -WEST ZONE, NIGERIA

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08060101203

## Abstract

*This study investigated the impact of video analysis on teaching practice performance among Colleges of education in North -West Zone Nigeria. The research design adopts for the study was pure experimental design specifically, Post-test only Control Group design. The population consists of 1,770 NCE II Chemistry Students from eight(8) Colleges of Education, a sample of 105 N.C.E II were drawn from the population using simple random sampling technique and were categorized into Experimental and Control groups. Teaching Practice Performance Assessment Sheet (TPASS) with a reliability coefficient of 0.79 determined using Pearson Product Moment Correlation (PPMC) was the instrument used for data collection. One research question and one research hypothesis were raised to guide the study and analysed using Mean and independent t- test. Findings from the study revealed that Pre-service Chemistry teachers exposed to Video- self, and peer - analysis performed better in their teaching practice exercise than their counterparts in the Control group who were not exposed to video self and peer analysis. Based on the findings of the study, it was concluded that video -self, and peer-analysis of assessment enabled pre-service chemistry teachers perform better in their teaching practice exercise. Based on the findings of the study it was recommended that video should be used as a tool for observation and feedback during teaching exercise in teacher education programmes.*

**Keywords:** Teacher Education, Teaching Practice, Video Analysis

## Introduction

Quality teachers are very important to the success of any educational system and to a greater extent of the success of any nation. Aina (2014) opines that the quality of any educational system depends on the quality of teacher qualifications and competency. Teacher quality is said to be an 2important factor in determining students' achievement even after considering their prior knowledge, peer group influence and family background and character. Riley(2009) differentiates between teacher quality, which he describes as what teachers "do" and teaching quality which he considered as what students "learn". Churchill, Ferguson, Godinho, Johnson, Keddle, Lett (2011) were of the view that teachers' quality incorporates teachers' identity together with knowledge and skills in pedagogy, content and theory. They were of the view that teaching quality depends upon the ability to personalize learning, nurture a supportive classroom and implement a relevant

curriculum and constant monitoring and evaluating the performance of their students and this could be achieved through Teacher Education Programme.

For any Educational system to be considered as been effective the attainment of the teachers needs to be considered because it is said that no system of education can be qualitatively higher than the quality and commitment of its teachers. Teaching and learning depend greatly on the quality of teachers for there can be no meaningful socio-economic and political development in any country without teachers, the educational planners may have the best educational policies and designs, the government may budget the largest sum of its revenue to education, but the ultimate realization of any set of aims for education depends on the teachers (Aina, 2014). It is the teacher who will ultimately be responsible for translating policy into action and principles into practice in their interactions with their students.

Unfortunately, result from teacher trainers such as Sunusi(2009) Akinmusuru (2009) and Okebukola(2007) shows that student teachers go to the classroom with minimum or zero Teaching Skills. Also, Okebukola (2007) was of the view that most graduates from Colleges of Education in Nigeria are incompetent in knowledge of subject matter (content knowledge), in teaching methods and teaching skill. He was of the view that the subjects offered at teacher training institutes are more of theories rather than practical. The teaching of skills acquisition towards micro teaching are generally poorly handled there by making Teaching Practice ineffective. The findings of Okebukola (2007) outlined the following weakness in colleges of education graduates as follows; Shallow subject matter knowledge, Inadequate teaching skills, inability to acquire practical skills, lack of commitment to teaching as a profession.

Therefore, there is a need for professional development of teachers which can be done through Teaching Practice (Ogunyinka, Okeke & Adedoyin, 2015).

According to (Odia & Omofonmwan, 2012) Teacher Education refers to professional Education of Teachers towards attainment of attitudes, skills and knowledge considered desirable so as to make them efficient and effective in their work, in accordance with the need of a given society at any point in time. It includes training and or Education acquired before commencement of service (pre-service) and during service (in-service or on-the-job). Adewuyi and Ogunwuyi (2002) opines that Teacher Education is the provision of Professional Education and specialized training within a specified period for the preparation of individuals who intends to develop and nurture the young ones into responsible and productive citizens. Teacher Education is the teaching and training experiences provided not only within teacher institutions but also outside them with the basic aim of preparing and grooming potential teachers for teaching activities.

Anho (2011) was of the view that Teacher Education is the process which nurtures prospective teachers and updates qualified teacher knowledge and skills in the form of continuous professional development. Teacher Education involve policies and procedures designed to equip prospective teachers with the knowledge, attitude, behaviour and skills required to perform their duties affectively in the classrooms, and in other social gatherings including religion institutions.

The National Teacher Education Policy, (2009) states that the goals and objectives of Teacher Education in Nigeria is to produce quality, highly skilled, knowledgeable and creative teachers based on explicit performance standards through pre-service and in-service programs who are able to raise a generation of students who can compete globally through teaching. Day (2004) and Pollard (2005) view teaching as a complex cognitive skill acquired to conduct and construct a lesson. Teacher Education is a vital tool towards educational development. This is the reason why there is a clear objective for it in National Policy on Education (FRN, 2014) which is: to produce highly motivated, conscientious and efficient classroom teachers for all levels of our education system, to encourage further the spirit of enquiry and creativity in teachers, to help teachers to fit into the social life of the community and society at large and to enhance their commitment to national objectives.

Teacher Education refers to professional training given to teachers to enable them develop positive attitudes, acquire skills and knowledge essential to make them effective practicing teachers to meet up with the need of the society. It involves the Training Education teachers undergo before practicing as teachers (pre-service) and Education/Training teachers undergo when practicing as teachers (in-service or on-the-job) (Osuji, 2009). According to United Nation Education, Scientific and Cultural Organisation (UNESCO) (2005) Teacher Education looks into environmental, social, political, cultural and economic contexts of the society to create locally relevant appropriate Teacher Education Programme for both pre-service and in-service Teachers. Ogunyinka, Kayode and Adedoyin (2015) view Teacher Education as a process whereby individuals are provided with professional and standardized skills within a specific period of time in order to prepare them to develop and nurture the young ones into responsible and productive citizens. It can be seen as professional Education, training and lifelong development of teachers which usually comprises of pre-service courses, work combined with supervised Teaching Practice, formal in-service courses and career long self-development of practicing teachers.

Teaching Practice is a form of work-integrated learning that is described as a period of time when students are working in the relevant industry to receive specific in-service training in order to apply theory in practice. According to NCCE (2020) Teaching Practice exercises serve as an avenue where student teacher showcases and develop the acquired experience upon the use of teaching skills. It is a crucial aspect of Teacher Education where pre-service teachers are faced with real classroom situation. It provides pre-service teachers with an opportunity for the acquisition of necessary professional skills through practical experience to prepare them for an effective professional practice after graduation and regarded as an integral part of Teacher Education Programme in Colleges of Education which is aimed at providing student teachers with the opportunities of putting theories acquired during classroom interaction in to practice in a real-life school situation.

Teaching Practice is recognised as a vital instrument towards preparing pre-service teachers to face the challenges attached to teaching profession. It is a major component of a Teacher Education Programme (Adeleke, 2011) which main purpose is to produce effective practicing teachers (Kalande, 2006). The NCE Minimum Standard (2020) states that to ensure effective Teaching Practice exercise, all the NCE awarding institutions

should ensure that teachers design and coordinate a comprehensive Teaching Practice preparation programme for student teachers. Such a preparation programme should present pre-service teachers with a gradual building up of Teaching Practice preparation assignment which should require pre-service teachers to develop lesson plans, learning materials, and assessment tasks that could be use when they are in a school during Teaching Practice. In this way, pre-service teachers are prepared through their various courses in consistent and effective manner for a Teaching Practice experience that adds value and allows pre-service teacher to develop and apply professional teaching skills.

The objective of Teaching Practice in Teacher Education Program according to National Commission for Colleges of Education, (2020) are:

- i. to enable student teachers, develop positive attitude towards teaching profession,
- ii. expose student teachers to real life classroom experiences under the supervision of professional teacher,
- iii. provide a forum for student teacher to translate educational theories and principles in to practice,
- iv. familiarize student teachers with school environment as their future work place,
- v. to provide student teachers with an opportunity to acquire professional skills competence,
- vi. personal characteristics and experiences for full time teaching after graduation,
- vii. to serve as a means of assessing the professional competence of student teachers,
- viii. to enable student teachers to\ discover their strengths and weakness in teaching and 2look to consolidate the former and overcome the latter.

The central goal of student teaching programmes is to provide aspiring teachers challenging, relevant and rewarding field experiences to inculcate essential teaching skills and professional growth. Muset (2012) was of the opinion that Teaching Practice is an opportunity for aspiring teachers to understand the role and operation of how the business of schooling is done. This field of experience provides a challenging yet rewarding experience of working with students in actual classrooms and acquiring professional competence. It is believed that these experiences have the potential to enhance the teacher acquisition of professional competence. However, Muijs & Reynolds(2002) were of the view that acquired experiences will include among other things, their ability to assume the various responsibilities of the classroom teacher, plan and deliver instruction that meets the learning needs of all students regardless of their individual learning styles, developmental and cognitive levels, Organize and manage the classroom environment for maximum academic performance, manage classroom interactions and student's behaviour to create safe, conducive learning atmosphere for student academic success.

Video Analysis is described as a situation whereby students are video-taped in a teaching situation and then prompted to constructively analyse their performance (Sherin& Van ES, 2005). During Teacher Education Programme, teacher educators can prompt the students to watch for specific elements when viewing their video which compels the students to look more deeply than they might otherwise have done. Cornish and Jenkins (2012) argue that teachers who engage in regular critical reflection shape their own

development and that this self-assessment is a key element in continual self-improvement and consequently, teacher quality.

Teacher Education students need to translate the relationships between the various events that occur in the classroom and this can be done using video. Kane and Picci, Calvani and Bonaiuti (2012) were of the view that the use of video provides effective solutions to problems pre-service teachers encounter during Teaching Practice by providing real and authentic situations of their learning process. Using video to analyse learning within complex class room settings encourages deep analysis and higher order thinking on the part of pre-service teachers Teaching Practice. It allows teachers to peer into real classrooms which are the actual place where teaching takes place. Student - Teachers has been reported to develop previous habits as well as apply new habits as a result of video enabled reflection, and this process enables them to draw attention to aspects that they would not have noted from their memory (Harlin, 2014). The video medium enables teachers to customize all learning experiences by providing images of classrooms practices that are most relevant (Beck, King & Marshall, 2012).

Reflection practice is a key component to improving teacher quality, regardless of differences in approach. Korthagen and Wubbels (2001) are of the view that the use of Video Analysis can be seen as a means of reflection. It has the potential to provide a means by which all the process in teaching can be captured to enable pre-service teachers identify not only areas of improvement but also in helping them find ways to address their deficiencies. The video analysis will enable student see their personal features and behaviours that may have impact on their teaching. It is against this background that this study aims at investigating the impact of video analysis on Teaching Practice Performance among Colleges of Education Students.

### **Purpose of the Study**

The purpose of the study is to assess the impact of video analysis on teaching practice performance among colleges of education students in North -West Zone Nigeria.

Specifically, the study sought to examine:

1. the difference between the teaching practice performance of students exposed to video self and peer analysis of teaching procedure and those not exposed to video self and peer analysis of teaching procedure.

### **Research Question**

The study was guided by one research question

1. What is the difference between the teaching practice performance of students exposed to video self and peer Analysis of teaching procedure and those not exposed to video self and peer analysis of teaching procedure?

### **Hypothesis**

One null hypothesis guided the study and was tested at 0.05 level of significance

1. There is no significant difference between the teaching practice performance of students exposed to video self and peer analysis of teaching procedure and those not exposed video self and peer analysis of teaching procedure?

## Methods

The Research Design for this study was pure experimental design specifically, Post-test only control group design. Both Experimental and Control Groups were pretested ( $O_1$ ) to determine their similarities in Teaching Practice Performance. Pre-service Teachers in the Experimental Group (EG) were treated using multiple interactive video activities ( $X_1$ ) on their Practical skills when teaching a particular concept in Chemistry. Here the video was set up during each lesson, all lesson procedures were captured and recorded through digitized video. Teaching process were analysed by observation, analysis was discussed and presented to the students. Questions were asked and strategies for improvement were discussed. Pre-service Teachers in the Control Group (CG) were analysed using peer and self-analysis ( $X_0$ ) without Video. Posttest  $O_2$  was administered to the two groups to determine the effect of Video analysis on students' Teaching Practice Performance. The population of the study comprises all NCE II 2018/2019 Chemistry students in 8- Federal Colleges of Education in North-west Zone Nigeria. 1770, N.C.E II Chemistry Students are enrolled in the 8 Federal Colleges of Education. The sample of the study covered a total number of 105 NCE students from two Colleges of Education in North-West Nigeria. 80 students from Federal College of Education Zaria, Kaduna State and 25 students from Federal College of Education Kano State. This was done according to their population size. The choice of 105 students as a sample size is in line with central limit theorem which recommended that 30 as minimum sample size for an experimental research, Andy (2009), Usman (2010), Fraenkel, Wallen & Khun (2012) who suggest sample size of less than 30 in an experimental research and the sample size in this research is greater than 30 therefore viable for the study as an experimental research with the distribution as follows:

Sample for the Study		
Institution	Group	No. of Students
FCE, Zaria	Experimental	80
FCE, Kano	Control	25
Total		105

Teaching Practice Performance Assessment Sheet (TPPAS) with reliability coefficient of 0.79 determined using Pearson Moment Coefficient of Correlation (PPMC). The form is of two sections (Section A and B). Section A contains information about the students' teacher and Cooperating Teaching Practice School, Section B contains teaching skills to be observed and their scores.

## Results

### Research Question One

What is the difference between the teaching practice performance of students exposed to video self and peer Analysis of teaching procedure and those not exposed to video self and peer analysis of teaching procedure?

**Table 1: Mean and Standard Deviation Scores of Pre-service Chemistry Teachers in the Experimental and Control Groups**

Variable	Study groups	N	Mean	STD	Mean Difference	Remark
Performance	Experimental Group	80	68.50	3.91	33.03	Difference exists
	Control Group	25	35.46	9.24		

Result in Table 1 shows that Pre-service Chemistry Teachers in Experimental Group had a Mean Score of 68.50 and Standard Deviation of 3.91 While those in the Control Group had a mean score of 35.46 and standard deviation of 9.24. This shows that Pre-service Chemistry Teachers in the Experimental Group who were exposed to Video self and peer analysis had higher Mean scores when compared to their counterparts in the Control Group who were not exposed.

### Hypothesis

#### Hypothesis One

There is no significant difference between the teaching practice performance of students exposed to video self and peer analysis of teaching procedure and those not exposed to video self and peer analysis of teaching procedure.

**Table 2 Independent t test Statistic Result on Performance of Pre-service Chemistry Teachers in the Experimental and Control Groups**

V\ariable	Study Groups	N	Mean	STD	df	p value	Remark
Performance	Experimental	80	68.50	3.91	103	0.00	Sig.
	Control	25	35.46	9.24			

*p value* < 0.05.

In Table 2 the Independent t test statistics shows that significant difference exists between Performance of Pre-Service Chemistry Teachers in Colleges of Education exposed to Video self and peer- analysis of teaching procedure and those who are not exposed. This is because the p value of 0.00 is lower than the 0.05 alpha level of significance set for the study. Pre-service Chemistry Teachers in the Experimental Group had a Mean value of 68.50 and those in the Control Group had a mean value of 35.46 with a mean difference of 33.03 in favour of those exposed to video self and peer- analysis of teaching procedure. This showed that the video self and peer- analysis of teaching procedure has positive effect on the pre-service teachers Performance in Teaching Practice. Therefore, the null Hypothesis which state that there is no significant difference between the performance of Pre-service Chemistry Teachers in Colleges of Education exposed to Video self and peer-analysis of teaching procedure and those that are not exposed, is not accepted.

## Discussion

Result in Table 2 shows that a significant difference exists between the performance in Teaching Practice of Pre-service Chemistry Teachers exposed to video self and peer analysis and those who were not exposed in favour of Pre-service Chemistry Teachers who were exposed to Video Self and peer analysis of Teaching. This shows that the use of Video self and peer analysis in observing Pre-service Chemistry teaches' Teaching Procedures enabled pre-service teachers to perform better in their Teaching Practice. This result is supported by Harlin (2014) who opines that the use of Video Analysis allows teachers to peer into real classrooms which are the actual place where teaching takes place. Student teachers have been reported to develop previous habits as well as apply new habits as a result of video enabled reflection, and this process enables them to draw attention to aspects that they would not have noted from their memory. Cornish and Jenkins (2012) argue that teachers who engage in regular critical reflection shape their own development and that this self-assessment is a key element in continual self-improvement and consequently, teacher quality. Kane and Picci, Calvani and Bonaiuti (2012) were of the view that the use of video provides effective solutions to problems pre-service teachers encounter during Teaching Practice by providing real and authentic situations of their learning process. Using video to analyse learning within complex class room settings encourages deep analysis and higher order thinking on the part of pre-service teachers Teaching Practice. It allows teachers to peer into real classrooms which are the actual\ place where teaching takes place. Harlin (2014) was of the opinion that Student teachers develop previous habits as well as apply new habits as a result of video enabled reflection, and this process enables them to draw attention to aspects that they would not have noted from their memory. The video medium enables teachers to customize all learning experiences by providing images of classrooms practices that are most relevant (Beck, King and Marshall, 2012).

## Conclusion

The findings of this study revealed that Pre-service Chemistry Teachers who were exposed to Video self and Peer analysis of their teaching procedure were able to translate educational theories and principles and apply them into their teaching and this enabled them to perform better during Teaching Practice when compared to their counterparts who were not exposed to Video self and peer analysis.

## Recommendations

### **Based on the findings from the study, the following recommendations are made:**

Video should be used as a tool for observation and feedback during Teaching Practice exercise in Teacher Education programmes.

Colleges of Education Tutors should adopt the use of Video analysis during Teaching Practice to enable pre-service teachers draw attention to aspects that they would not have noted from their memory.



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