

*Full Length Research*

# **A correlational study of NCE physics students' performances in micro teaching and teaching practice**

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**The study finds the level of correlation between physics students' performances in micro teaching and teaching practice. The t-test value for no significant relationship between the micro teaching and teaching practice was found to be 0.93 while r- value for correlation between physics students was found not significant at  $p < 0.05$ . The study indicated that micro teaching scores might not be a suitable predictor for the actual teaching practice. It was recommended that both staff and students should devote more time for the micro teaching course before embarking on the actual teaching practice.**

**Key word:** Microteaching, teaching practice, physics students, correlational study, NCE.

## **INTRODUCTION**

The idea of micro teaching was developed at Stanford University, California in 1963. It was established to provide a reliable training environment where trainees could practice before taking up actual classroom teaching. Kwara State College of Education, Ilorin introduced micro teaching in 1999 to provide a safe setting for the acquisition of techniques and strategies in teaching. The course (micro teaching) is regarded as a pre-requisite to teaching practice. Students are required to do micro teaching practicum in the second semester of their two hundred levels.

Micro teaching was introduced in teachers training program whereby students teach classes made up of members of their own student group. The exercise is between five to twenty minutes, depending on the skill of practice. One skill is emphasized at a time and the content is limited. The student's teachers receive constructive criticism from the supervisor and his mate as feedback. Supervisors are drawn from the entire department in the college. Each student is allowed for twenty minutes to demonstrate his/her teaching skill. They were always treated in a short time. Microteaching is a technique which is used to train student teachers in a minimized and restricted or artificial teaching environment

(Yasemin, Kaya and Bahceci, 2012). In teacher training, microteaching is especially important in the application of theory to practice (Kuran, 2009). Microteaching enables student teachers to perceive teachers' behaviours extensively and observe each other's performance through analyzing and reflecting on the experiences. Therefore, microteaching enables student teachers to be aware of their own shortcomings in the subject matter knowledge and enables them to develop their pedagogical content knowledge.

Teaching practice is a six-credit course for third year NCE students of college of education. The college posts them out to various primary and secondary schools within and outside the state. Students are given orientation course in the college by the schools of education as soon as they are about to proceed to teaching practice field. The orientation program is geared towards briefing students on what to expect and to do while on teaching practice. Teaching practice is an important pre-qualification requirement that affords the teachers-in-training the opportunity to put into practice what they have learnt in theory. It is like the laboratory for practical demonstration. According to Taneja (2000), teaching practice is usually interchanged with such words as practice teaching, field studies, infield experience, and internship, among others. The scope of teaching practice, according to Idowu (2000), is not limited to the cognitive domain; it also covers the affective and psychomotor domains. He further stressed that the responsibilities of

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student-teachers are not limited to classroom teaching (cognitive domain). They also include the promotion of the psycho-social development and growth of their pupils. Experience has shown that this very crucial aspect of teacher education is being confronted with many challenges which have given various stakeholders a lot of concern. For instance, Idowu (2000) observed that the programme is beset with a multiplicity of problems and difficulties confronting student-teachers, cooperating teachers as well as the co-operating schools and the supervisors. He stressed that most of the problems are not resolved even at the end of the exercise. Some of the problems identified include psychological makeup of the trainees, pedagogical preparations, classroom adaptation, and mode and means of assessment. There seems to be a controversy among the stakeholders as to what is to be done to revitalize the scheme for the general good of the beneficiaries of education enterprise (Jekayinfa, Yahaya, Yusuf, Ajidagba, Oniye, Oniyangi, and Ibraheem, 2012).

Students are the direct beneficiaries of any educational programme put in place in any community; they can also be the most disadvantaged for one reason or the other. According to Gujjai (2009), practice teaching is of crucial importance in any teacher education programme as it is a culminating experience in teacher preparation. On the importance of teaching practice in teacher education scheme, Furlong, Hirst and Pocklington (1988), noted that it affords the teacher-in-training unique opportunity to internalize certain social behaviour that is inherent in the noble profession. It can also serve predictive purposes, especially, concerning the actual performance of the trainees when finally engaged as permanent staff. Furthermore, Gujjar (2009) identified with the views of Trowbridge and Bybee (1990) on the potential of teaching practice to make student-teachers feel fulfilled, grow in experience and internalize the enviable culture of teaching, while they are engaged in productive challenges. Teachers engaged in teaching practice have an opportunity to reflect on their philosophical orientations and pedagogic styles as they practice their profession. It provides a kaleidoscopic lens through which teachers may view their teaching ideologies, analyze their methodologies and derive ways of improving their practice (Otieno, 2012; Qazi, Rawat, and Thomas, 2012). Brookfield (2004), notes that for teaching to be reflective, teachers need to be involved in a critical interrogation of their professional practice. This critical reflection is an essential component and forms the conceptual foundation of the teaching practice. Minott (2011) observes that reflective teaching “involves teachers examining, framing, attempting to solve dilemmas of classroom and schools, and asking questions about assumptions and values they bring to teaching.” p. 133.

Okhawere (1996) said that the teaching practice is intended to give the prospective teacher, the opportunity to demonstrate the methods of teaching and put into

practice the theories of education already acquired in the college. Abegunde (1990) also adds that it gives the prospective teacher an opportunity to demonstrate his prowess and have his teaching methods analyzed by his trainers. Olaitan and Agusibo (1982) assert that teaching practice provide the student teacher with the opportunity to identify the strength and weakness of his knowledge in his subject matter. The vocational student teacher undertakes teaching practice and work experience program during his/her training period. These programs were established to bridge the gap between theories and knowledge acquired by students in institution of high learning on one hand and the practical work on the other hand (Ahmed, 1992; ITF JOS, 1992).

Teaching practice and industrial attachment course in vocational and technical education are organized by the institutions which trains the vocational teacher (NCCE, 1990). Generally speaking the technique of handling science is broken into three parts (experimental, theory and objective). The paper will try to find out whether microteaching can bring out these three methods of teaching in physics. Since the time for microteaching is very short, this researches will like to compare the assessment of a student teacher in micro teaching with long time teaching where the concepts of physics can be taught clearly, and also like to know if the assessment (scores) in micro teaching can be used for actual teaching, if the student is unavoidably absent for teaching practice.

### **Problem of the study**

Students perform poorly in teaching practice. Various efforts by the colleges of education and institute of education are geared towards improving this performance. Typical effort is the introduction of micro-teaching. Resultant effort of micro-teaching on teaching practice is expected to give a positive correction. Whether this is achieved remained controversial from teachers and students opinion poll.

### **Purpose of the study**

The main purpose of this study was to carryout correlational study of NCE physics students' performance in micro teaching and teaching practice. Specifically, this study examines:

1. The level of relationship between physics student performance in micro-teaching and that of teaching practice.

### **Research question**

Is there any relationship between physics student

**Table 1.** Approved scoring and grading system for students on teaching practice.

RAW SCORE	LETTER GRADE	GRADE POINT
70 – 100	A	5
60 – 69	B	4
50 – 59	C	3
45 – 49	D	2
40 – 45	E	1
0 – 39	F	0

performance in micro teaching and teaching practice?

### Research hypotheses

The following hypotheses are tested to guide this investigation

(1) There is no significant relationship between the performance of physics students in micro teaching and teaching practice.

(2) There is no significant correlation between physics students' performance in micro teaching and teaching practice.

### RESEARCH METHODOLOGY

A descriptive survey method of physics students' performance in physics during micro teaching and teaching practice were recorded and interpreted accordingly. All the 27 students sampled were students of the school of science with physics combination, who were admitted in 2007/2008 session and participated in micro teaching and teaching practice in 2009 and 2010 respectively. Grade points awarded by supervisors during the program were utilized for the study. In converting the grade points, the college handbook (2007-2010) was used as shown in Table 1.

The data for this study was gathered from the record of the scores of students in micro teaching and teaching practice from the school of education of the college. The grade of the students in micro teaching practice was computed as shown in Table 2.

Table 2 presents the grade of the points of students who participated in micro teaching and teaching practice in 2009 and 2010 respectively.

### RESULTS

#### Testing research hypothesis

**Research hypothesis 1:** There is no significant relationship between the performance of physics students in micro teaching and teaching practice.

The X of 3.77 for micro teaching group when compared with teaching practice with X of 4.48 shows that no relationship exists between the two groups which is indicated by the calculated t- of 0.93 when compared with critical value of 2.060 at 0.05 alpha level (Table 3). Therefore the hypothesis is accepted.

**Research hypothesis 2:** There is no significant correlation between physics students' performance in micro teaching and teaching practice.

The data analyzed reflected in linear relationship ( $r=0.17$ ) in micro teaching and teaching practice. It showed that there was no significant correlation between the scores in micro teaching and teaching practice at 0.05 alpha level (i.e.  $t\text{-cal}=0.86 < t\text{-critical}=2.060$ ) (Table 4). This implies that the performance of student in micro teaching may not be a predictive for teaching practice. The hypothesis is accepted.

### Conclusion

Based on the data gathered and analyzed statistically in the study, it could be concluded that there is no relationship in the performance of physics students in micro teaching and teaching practice. It can equally be said that no correlation exists in the score in micro teaching and teaching practice. Therefore micro teaching score may not be used for the actual teaching if the students are unavoidably absent for the teaching practice.

### RECOMENDATIONS

1. Micro-teaching course should be giving more time and attention by staff and students in colleges of education and institutes of education of our higher learning.
2. Micro-teaching should always be videotaped, so that students will have the opportunity of observing their own teaching in other to improve upon it during re-teach.
3. Education department should give more instruction or education on how to conduct a lesson
4. Micro teaching and peer teaching should be constantly and effectively organized. Apart from the general education courses the entire department should effectively

**Table 2.** Physics students' grade points in micro teaching and teaching practice.

S/N	MICRO	TEACHING	X-Y	D <sup>2</sup>	XY	X <sup>2</sup>	Y <sup>2</sup>
1.	3	4	-1	1	12	9	16
2	4	5	-1	1	20	16	25
3	3	4	-1	1	12	9	16
4	3	3	0	0	9	9	9
5	3	5	-2	4	15	9	25
6	5	5	0	0	25	25	25
7	3	5	-2	4	15	9	25
8	3	3	0	0	9	9	9
9	4	5	-1	1	20	16	25
10	5	5	0	0	25	25	25
11	5	5	0	0	25	25	25
12	3	4	-1	1	12	9	16
13	4	4	0	0	16	16	16
14	2	5	-3	9	10	4	25
15	3	5	-2	4	15	9	25
16	5	5	0	0	25	25	25
17	4	4	0	0	16	16	16
18	3	5	-2	4	15	9	25
19	3	4	-1	1	12	9	16
20	3	5	-2	4	15	9	25
21	5	4	1	1	20	25	16
22	4	5	-1	1	20	16	25
23	5	5	0	0	25	25	25
24	5	5	0	0	25	25	25
25	3	5	-2	4	15	9	25
26	5	4	1	1	20	25	16
27	4	3	1	1	12	16	9
<b>TOTAL</b>	<b>102</b>	<b>121</b>	<b>-19</b>	<b>43</b>	<b>460</b>	<b>408</b>	<b>555</b>

**Table 3.** Performance mean score, standard deviation and t- value of physics students in micro teaching and teaching practice.

Course	N	X	S.D	t-test	t-critical	r
Micro Teaching	27	3.77	15.15			
Teaching Practice	27	4.48	20.57	0.93	2.060	0.17

Not significant at 0.05 level

**Table 4.** Correlation mean score, standard deviation and t- value of physics students in micro teaching and teaching practice

Course	N	X	S.D	t-test	t-critical	r
Micro Teaching	27	3.77	15.15			
Teaching Practice	27	5.48	20.57	0.86	2.060	0.17

Not significant at 0.05 level

handle the methodology aspects of each subject. The effective production, improvisation and utilization of self made relevant instructional material should be encouraged.

5. Government should provide more fund for teachers

education if Nigeria wants to achieve the objective of 6-3-3-4 system of education.

6. More research activities should be carried out in another subject area by using the raw scores of the students.

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