

## **Predictive Performance of Pre-Service Teachers' Teaching Techniques at Osun State University**

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**Abstract:** The study compared pre-service teachers' scores in micro-teaching and teaching practice for three sessions ranging from 2019/2020 to 2021/2022 academic sessions for micro-teaching and 2020/2021 to 2022/2023 academic sessions for teaching practice. The study is an ex-post facto research design because it used the existing data of students' scores in micro-teaching and teaching practice in the concerned sessions. Four hundred and thirteen (413) pre-service teachers were involved. Data were analysed using frequency count, percentage and correlation analysis. The results showed that students performed well in both micro-teaching and teaching practice with that of micro-teaching on the higher side. It also revealed a positive relationship between pre-service teachers' performance in micro-teaching and teaching practice across the sessions. The study therefore recommends that teaching exercise should be given more attention in the training of teachers by teacher training institutions while appropriate mechanisms should be designed to attend to the shortcomings realised by pre-service teachers' supervisors during the teaching practice exercise.

**Keywords:** Academic Performance, Micro-Teaching, Pre-service Teachers, Teaching Practice

### **A. Introduction**

Education is core to the socio-economic and political advancement of a nation since it is through it that the needed skills, knowledge and attitude that will make a nation relevant among the comity of nations can be acquired. Premised on this, the teaching and learning process should be given a premium in terms of the quality of teachers engaged in the teaching-learning process since no education can grow beyond the limit of the teachers (Silas, 2023).

Reddy (2023) stated that the act of teaching is a multifaceted process which goes beyond mere development of the learner in the cognitive domain through communication between the teacher and the learners but also entails effective verbal and non-verbal communication skills thereby making micro-teaching and teaching practice a must in the pre-service teacher training programmes. The scholar identified one skill at a time, small-scale content, practice makes

perfection, experiment, instantaneous feedback, self-opportunities and continuous efforts as the basic principles of micro-teaching (Koross, 2016; Otsupius, 2014).

Premised on the above principles, it can be deduced that micro-teaching is designed to inculcate the professional skills needed by would-be teachers to function effectively before going to the field for actual practice. Kris (2020) viewed micro-environment teaching as a teacher training approach that enables potential teachers to demonstrate and upgrade their teaching skills in a low-risk, simulated classroom. In the view of Mothofela (2021), micro-teaching is intended to empower student-teachers with the skills and professional competencies required of a teacher. Reddy (2019) posited that micro-teaching helps pre-service teachers to better understand the process of teaching and learning and provides the opportunity to learn teaching skills and study their teaching and that of others. The scholar viewed micro-teaching as an organised, scale-down teacher training programme where a trainee teacher plans a short lesson unit within an average of 3-10 members of a group for about 5-20 minutes. The lesson is video recorded for the individuals and group to watch thereby making it possible to review, discuss, analyse and evaluate for necessary feedback that allows for improvement on the part of the trainee. Micro-teaching is meant to be a learning opportunity for pre-service teachers before embarking on teaching practice.

In the view of Sa'ad et al. (2015), teaching practice is one of the core aspects of all teacher education programmes as it allows the would-be teachers to have practical experience of teaching as a profession. According to Aglazor (2017) teaching practice is an important part of pre-service teacher training. These scholars see it as a compulsory aspect of the curriculum for teacher education and therefore no student can be certified without passing the exercise. Wanja and Njagi (2018) posited that teaching practice affords would-be teachers the hands-on experience to put into practice what they have learnt theoretically during classroom interactions with lecturers into practice by applying the fundamentals, procedures, techniques and methods of teaching and philosophy of education during the period of their internship. Teaching practice allows trainees to undergo real-world use of teaching methods, strategies, techniques and exercises of different activities of daily school life.

Ode et al. (2020) asserted that teaching practice enables would-be teachers to acquire the competencies required of teachers because it is a hands-on exercise that serves as a foundation in the building of teachers' professional skills and identity. Teaching practice provides an avenue through which student-teachers can be familiarised with the ethics of the teaching profession as interaction with students provides a high degree of emotional involvement in a positive way (Anees, 2022; Maseko, 2022). These scholars believe that teaching practice introduces student-teacher to the culture of teaching as they feel engaged, challenged and also empowered as potential teachers. The above-stated relevance of teaching practice in inculcating professional competencies in would-be teachers reveals the salient role of the exercise in the training of future teachers.

In an attempt to produce professionally qualified teachers, teacher training institution curricula at all levels have incorporated microteaching and teaching practice as compulsory aspects that all would-be teachers should pass before the award of the teaching certificate. According to Bada and Akinbobola (2022) and Ilya (2022), micro-teaching and teaching practice are important and compulsory complementary courses in training would-be teachers in Nigeria to acquire the professional competencies required of teachers with the former serving as harbingers for the latter.

In the view of Solanki and Patel (2017), micro-teaching and teaching practice in the field of teaching aim to inculcate the needed skills in potential teachers. In a bid to do this, pre-service teachers are exposed to microteaching before the actual teaching practice. Premised on the interconnectivity between micro-teaching and teaching practice with the former serving as the forerunner for the latter, student-teachers' performance in micro-teaching can serve as a predictor of their success in teaching practice. Sa'ad et al. (2015), found that micro-teaching is germane in fostering the teaching skills of prospective teachers. The scholars found a positive correlation between students' performance in micro-teaching and that of teaching practice. Olusanya (2020) while working on the relationship between micro-teaching and teaching practice concerning business education revealed that micro-teaching prepares students for teaching practice and promotes their inclination towards the teaching profession. Bada and Akinbobola (2022) revealed a positive moderate relationship between physics students' performance in micro-teaching and teaching practice with the first predicting students' performance in the second. Anathe et al. (2021) revealed the effectiveness of micro-teaching in providing prospective teachers with the opportunity to acquire basic teaching skills such as preparation of a scheme of work, writing of lesson plans, classroom management and motivational strategies coupled with gaining experiences that can be put to use during teaching practice. According to the findings of Zulfikar et al. (2020), exposure to micro-teaching enhances the development of pedagogical skills such as confidence, communication skills and questioning skills that can be put to use during teaching practice.

### **Statement of the Problem**

Micro teaching and teaching practice are core aspects of all teacher training curricula premised on the need to acquaint potential teachers with the necessary skills and competencies required in the teaching profession. Micro teaching is a scale-down teaching experience where each pre-service teacher is allowed to demonstrate his or her teaching skills in a concise form in terms of time and audience. The presentation is usually video recorded and played for the concerned student-teacher, other student-teachers and lecturers to watch for comments and observations aimed at fostering the professional development of the would-be teacher. On the other hand, teaching practice is an on-field exercise which allows student-teacher to engage in practical teaching in primary or secondary schools under the guidance of a cooperative teacher while

lecturers are assigned by the teacher training institution to examine the classroom activities of the student-teacher at intervals.

Both micro teaching and teaching practice are complements with the former aiming at fostering performance during the latter. The two exercises are graded and form parts of the criteria for awarding teaching certificates to would-be teachers. It is also perceived that students' performance in micro-teaching will affect their performance in teaching practice. However, much attention has not been exerted on correlating students' scores in micro-teaching with that of teaching practice. The view studies such as Olusanya (2020), and Bada and Akinbobola (2022) that have delved into it are limited to specific subject areas. This study therefore examined the correlation between students' performance in micro-teaching and teaching practice based on a longitudinal investigation spanning three years and covering students across various disciplines in the Faculty of Education, Osun State University, Nigeria.

#### Research Questions

1. What is the academic performance of students in micro-teaching across the sessions?
2. What is the academic performance of students in teaching practice across the sessions?
3. How well did students' scores in micro-teaching predict their teaching practice scores across the sessions?

## **B. Methodology**

This study adopted an ex post facto research design. According to Kerlinger (1966), an ex-post factor occurs when the independent variable or variables have already occurred and the researcher starts by observing a dependent variable or variables. This method was adopted in this study because the researchers could not manipulate existing data. It was also suitable for exploring predictive relationships. It enables the researcher to examine how variations in micro-teaching scores relate to differences in teaching practice performance, even if causality cannot be established. The study population comprised all undergraduate students from the Faculty of Education at Osun State University. Intact cohorts of 300-level and 400-level pre-service teachers who participated in teaching practice were purposively selected from five education programmes (Economics Education; Educational Management; Guidance and Counseling; Science Education; and Political Science Education) for three consecutive sessions between the 2020/2021 session and 2022/2023 session. Ninety-three (93) pre-service teachers in the 2020/2021 session, one hundred and sixty-nine (169) pre-service teachers in 2021/2022 and one hundred and fifty pre-service teachers in 2022/2023 session, making a total of four hundred and thirteen (413) pre-service teachers. All these pre-service teachers had also observed micro-teaching exercises before their teaching practice years. The micro-teaching and teaching practice scores of the pre-service teachers were obtained and analysed using descriptive and inferential statistics. The data were analysed using SPSS.

### C. Results

**Table 1: Distribution of Students According to Academic Programmes**

Academic Session	2019/2020 2020/2021 Session	–	2020/2021 2021/2022 Session	–	2021/2022 2022/2023 Session	–
Programmes	Frequency	Percent	Frequency	Percent	Frequency	Percent
Science Education	24	25.8	64	37.9	60	39.7
Educational Management	28	30.1	32	18.9	21	13.9
Economics Education	20	21.5	16	9.5	17	11.3
Guidance and Counseling	7	7.5	19	11.2	18	11.9
Political Science Education	14	15.1	38	22.5	35	23.2
Total	93	100	169	100	151	100

The table shows the distribution of students according to their academic programmes across the academic sessions. Five education programmes were sampled; including Science Education; Educational Management; Economics Education; Guidance and Counseling; and Political Science Education. In the 2019/2020–2020/2021 sessions, most of the students' scores were from the educational management programme (30.1%), followed by the sciences (25.8%) while 7.5% were from the guidance and counselling program. In the 2020/2021–2021/2022 and 2021/2022– 2022/2023 sessions, the Science Education programme constituted the majority of the scores sampled, followed by the Political Science programme while the least were from the Economics Education programme.

Research question 1: what is the academic performance of students in micro-teaching across the sessions?

**Table 2: Descriptive Statistics of Micro-teaching Scores of Students**

Micro-teaching Score	2019/2020 – 2020/2021 Session	2020/2021 – 2021/2022 Session	2021/2022 – 2022/2023 Session
Minimum score	12.00	12.00	12.00
Maximum score	28.00	26.00	27.00
Mean	21.18	19.58	19.54
Std. Deviation	2.61	2.84	2.95

The academic performances of students in micro-teaching across the three sessions were examined. The minimum score of students was 12 marks out of an obtainable score of 30 marks; while the maximum scores were 28, 26 and 27 marks out of an obtainable score of 30 marks in the sessions respectively. The mean score ranged between 19.54 and 21.18 and their

respective standard deviation scores. The result revealed that students performed very well above average in the micro-teaching exercise.

Research question 2: what is the academic performance of students in teaching practice across the sessions?

**Table 3: Descriptive Statistics of Teaching Practice Scores of Students**

Teaching practice score	2019/2020 – 2020/2021 Session	2020/2021 – 2021/2022 Session	2021/2022 – 2022/2023 Session
Minimum score	45.00	40.00	45.00
Maximum score	82.00	77.00	85.00
Mean	61.10	61.66	62.89
Std. Deviation	6.84	5.33	6.98

The academic performances of students in teaching practice across the three sessions were examined. The minimum score of students was between 40 and 45 marks out of an obtainable score of 100 marks; while the maximum scores ranged between 77 and 85 marks out of an obtainable score of 100 marks in the sessions. The mean score ranged between 61 and 62 and their respective standard deviation scores. The result revealed that students performed a little above average in the teaching practice exercise.

Research question 3: How well did students' scores in micro-teaching predict their teaching practice score across the sessions?

**Table 4: Correlation analysis of students' micro-teaching and teaching practice scores in 2019/2020-2020/2021 sessions**

Variables	N	R	P-value	Remark
Micro-teaching	93	0.063	0.546	Non-Significant
Teaching practice	93			

The result is a correlation analysis of students' micro-teaching and teaching practice scores in the 2019/2020 and 2020/2021 sessions. It revealed that 93 students' scores were used for the analysis. It showed a correlation coefficient of 0.063 and a p-value of 0.546 which indicates a non-significant, very low and positive relationship between the micro-teaching and teaching practice scores of students.

**Table 5: Correlation Analysis of Students' Micro-teaching and Teaching Practice Scores in 2020/2021 – 2021/2022**

Variables	N	R	P-value	Remark
Micro-teaching	169	0.322**	0.000	Significant
Teaching practice	169			

The result is a correlation analysis of students' micro-teaching and teaching practice scores in the 2020/2021 and 2021/2022 sessions. It revealed that 169 students' scores were used for the analysis. It showed a correlation coefficient of 0.322 and a p-value of 0.000 which indicates a significant, low and positive relationship between the micro-teaching and teaching practice scores of students.

**Table 6: Correlation Analysis of Students' Micro-teaching and Teaching Practice Scores in 2021/2022 – 2022/2023**

Variables	N	R	P-value	Remark
Micro-teaching	151	0.036	0.664	Non-Significant
Teaching practice	151			

The result is a correlation analysis of students' micro-teaching and teaching practice scores in 2021/2022 and 2022/2023 sessions. It revealed that 151 students' scores were used for the analysis. It showed a correlation coefficient of 0.036 and a p-value of 0.664 which indicates a non-significant, very low and positive relationship between the micro-teaching and teaching practice scores of students.

#### **D. Discussion of Findings**

The study revealed that students performed well above average in micro-teaching across the sessions. This could be attributed to the fact that students are exposed to the theoretical aspect of the teaching profession before engaging in micro-teaching. They are also exposed to basic skills in teaching in their methodology courses which predate micro-teaching. Micro teaching is also carried out in the presence of their fellow students and lecturers that they are familiar with thereby reducing the level of anxiety which could result in poor performance. This supports the view of Onah et al. (2023), that micro-teaching helps pre-service teachers to put an end to frightens and stage shyness. This result also aligned with Wada and Shimamura (2005) and Şen (2009) that micro-teaching reduces anxiety among pre-service teachers during teaching practice.

The study further revealed that the students performed a little bit above average in teaching practice across the sessions. This could also be attributed to their prior exposure to various instructional strategies and teaching skills in their methodology courses coupled with their involvement in micro-teaching. Their exposure to micro-teaching could have empowered them

with the skills and professional competencies required of a teacher following Reddy (2019) and (Mothofela, 2021). The result of the students' performance in this study does not support the view of Sa'ad et al. (2015), Steiner & Lemke (2023) and Sonmez (2012) who found that student's performance in the teaching practice is much higher than their performance in micro-teaching.

The study also revealed a non-significant very low positive relationship between micro teaching and teaching practice in 2019/2020-2020/2021 sessions, a significant, low and positive relationship between micro teaching and teaching practice in 2020/2021-2021/2022 sessions and a non-significant, very low positive relationship between micro teaching and teaching practice in 2021/2022-2022/2023 sessions. It can be inferred from the findings that students who performed well in micro-teaching also performed well in teaching practice. This finding agreed with the results of Arslan (2021); Crichton et al. (2021) and Sofos et al. (2014) which showed that microteaching contributes to the improvement of students' teaching abilities in teaching practice.

However, the score in teaching practice may not be as high as that of micro-teaching this could be explained on the premise that micro-teaching is carried out within the trainees' institution involving students and lecturers that they are familiar with while teaching practice is conducted in either primary or secondary school environment involving unfamiliar students who are not as matured as those involved in micro-teaching which could increase the challenge faced by the pre-service teacher in classroom management and instructional delivery.

The positive relationship between micro-teaching and teaching practice scores serves as an indication of a positive correlation between micro-teaching and teaching practice as attested to by (Olusanya, 2020; Sa'ad et al., 2015).

## **E. Conclusion and Recommendations**

Based on the results of the study, the following conclusions were drawn: The experiences of micro-teaching, as well as its effectiveness, increased pre-service teachers' performance in the teaching practices exercise. The study also found that the student's performance during the micro-teaching presentation was a bit better compared to the teaching practice. Little or no substantial disparity in the performance of students in micro-teaching and teaching practice exercises across all the programmes because they perform above average in both exercises. It was therefore recommended by the researchers that:

1. Micro-teaching should be given more attention as part of the requirements for the award of a teaching certificate. Rather than having it once, it should be increased to at least two times.
2. Teacher training institutions should develop appropriate mechanisms for interaction with pre-service teachers after their teaching practice to address their areas of weakness during the teaching practice exercise.

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