

Impact of Teaching Practice Experience on Physics Education Students in University of Nigeria, Nsukka, Ikere-Ekiti Campus, Ekiti State, Nigeria

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Abstract

The study examined the impact of teaching practice experience on Physics Education Students in University of Nigeria, Nsukka, Ikere-Ekiti Campus, Ekiti State, Nigeria. The study adopts descriptive survey of research design. The population for this study consists of all 300level and 400level Physics Education students in the department of Physics Education, University of Nigeria, Ikere-Ekiti Campus. Simple random sampling technique was used to select twenty five (25) Physics students each from 300Level and 400Level respectively among the students of University of Nigeria, Nsukka, Ikere-Ekiti campus. A total of fifty (50) degree Physics students were used as samples for the study. Four research hypotheses were raised and tested at 0.05 level of significance. The instrument for the study was self-designed questionnaire. The data collected were analysed using Chi-Square (X^2) statistical analysis package. The results of the analyses showed that there is significant impact of teaching practice experience on Physics Education Students knowledge in lesson preparation, there is significant impact of teaching practice experience on Physics Students knowledge in lesson presentation, there is significant impact of teaching practice experience on Physics Education Students knowledge in skills of class management and communication skills and there is significant impact of Teaching practice experience on Physics Education Students knowledge lesson evaluation skills and teachers' personality/ professional attitude. Based on the findings of the study, conclusion and recommendations were made.

Keywords: *Impact, teaching practice, teaching practice experience, physics students.*

Introduction

The role of the teacher in curriculum implementation cannot be over emphasized. It is “the teacher” who “will have a general guide of topics in a subject field, a sequence among topics, a general set of aims, textbooks, and other instructional resources”, to effectively organize and plan the curriculum to suit that level and background of the learner in the classroom (Eisner, 2014). According to National Policy on Education (2013), in recognition of the pivotal role of quality teachers in the provision of quality education at all levels, teacher education shall continue to be emphasized in educational planning and development. It is thus very important to ensure that the quality of teachers training institutions churn out year after year possess the professional competencies necessary for them to play their roles as teachers effectively. Teacher training is thus considered a major priority in Nigeria, with public universities, fully charged with the

responsibility of meeting the nation's need for qualified teachers from the primary school level, through the junior and senior secondary school levels, and even to the tertiary level.

Jekayinfa (2016) described teacher education is an educational programme that involves a deliberate upbringing of individuals through training in order to acquire knowledge, skills and values and transmit such to others. It is a cyclic affair in which both the content area and pedagogical skills are packaged for the trainees in order to prepare them to meet the requirement of the teaching profession. As part of the package, internship or teaching practice is often earmarked specific period of time during which teachers-in-training are posted to schools to teach, demonstrate in practical terms the knowledge and skills they had acquired during training. It is a replica of the Houseman-ship in Medicine and Student Industrial Work Experience Scheme (SIWES) for the Engineers and Court Attachment for the Lawyers. Teaching practice offers opportunity to student-teachers to learn basic skills of teaching and put their newly acquired knowledge into actual practice. The exercise allows teacher-in-training to get familiar with educational ethics and the rules and regulations governing the practice of education as a professional career. Through this exposure, the ethics, the rules and regulations become internalised by the student-teachers through the process of interaction with the administrative and academic staff as well as the students in their schools of practice (Idowu, 2016).

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 (2016), 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 (2016), is not limited to the cognitive domain; it also covers the affective and psychomotor domains. He further stressed that the responsibilities of 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. According to Gujjai (2013), 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, Hirst & Pocklington (2015) noted that it affords the teacher-in-training unique opportunity to internalise 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, Idowu (2016), Gujjai (2013), Hirst and Pocklington (2015) & Gujjar (2013) identified with the views of Bybee (2014) on the potential of teaching practice to make student-teachers feel fulfilled, grow in experience and internalise the enviable culture of teaching, while they are engaged in productive challenges.

According to the Federal Republic of Nigeria (2013), the mandate of all Faculties of Education is summed up as follows:

- i. Production of highly motivated, conscientious and efficient classroom teachers for all levels of the education system;
- ii. Encouraging further the spirit of enquiry and creativity in teachers;
- iii. Help teachers to fit into the social life of the community and society at large and enhance their commitment to national objectives;
- iv. Provide teachers with the intellectual and professional background adequate for their assignment and to make them adaptable to any changing situation not only in the life of their country, but in the wider world, and
- v. Enhance teachers' commitment to the teaching profession.

To facilitate the realization of the laudable mandate, the Minimum Academic Standard (MAS) for all Faculties of Education was developed in 1989(FRN, 2013). The importance of this

is to set parameters that would lead to the attainment of the desired goals. The MAS is still in use, while the recent attempt to review and improve on it remains on the drawing board.

Gujjar (2013) affirmed that in Nigerian universities, teaching practice is a compulsory course in the Faculties of Education and it attracts 2 or 4 credit load, depending on the nature of the programme being offered by the students. Teaching practice duration is usually between four and six weeks which begins in the third and fourth year as teaching practice (i) and (ii) respectively of studentship as undergraduate. Students are usually required to practice in their schools of choice and teach based on their areas of specialisation. Although, teaching practice is expected to expose student-teachers to all school programmes, emphasis is laid on classroom practice during which they are supervised by lecturers and given instant feedback. The supervision is usually twice during each of the exercise. The students' performance is determined by finding the means of assessors' grades. The external examiner conducts a random assessment of students on teaching practice and moderate internal assessors' grades.

As a practical subject, Physics is one of the subjects in science education which involves the study of matter, energy and their interactions (Chu & Lin, 2013). It plays a key role in the future progress of mankind. The interest and concerns of physics education form the basis of technology. Physics generates fundamental knowledge needed for the technological advancement which will in turn spearhead the economic engineering of the world (Zhaoyao, 2014). For such a positive vision to be realized there is the need for the training of adequate and quality physics teachers. Hence the Bachelor of Education programme in the University of Nigeria, Nsukka, Ikere campus provides mandatory requirement for preparation of students who wish to teach physics in the senior schools an active participation in a teaching field experience.

Teaching practice exposes the student-teacher to the real school and class situation where he acquires some practical experiences in the art of teaching, as well as get adapted or acquainted with the social settings of the institution. Students are required to practice the theories they have acquired in the classroom under the supervision of their lecturers and teachers on the field to further develop their teaching proficiencies (Eisner, 2014). Jekayinfa (2016) also affirmed that, although, the primary concern is passing useful educational knowledge over to the students using every achievable means until learning takes place in them, they still have to participate in all teaching activities within the school system.

Idowu (2016) also noticed the fact that student-teachers are also full of enthusiasm at initial state of the exercise and generally have the drive towards activity participating in the exercise. As time goes on, one discovers that they become relaxed and seem not willing to put in their best anymore. This is further expressed after the period of teaching practice when they put on an expression of "Thank God, it's all over". They do have a cause to rejoice, having gone through the rigours of teaching practice successfully, but they make it seem so much more of a burden than a gainful exercise.

According to Marais & Meier (2014), the question now is "how ready (mentally) are they to put what they have learnt into practice when they finally go into full-time teaching" Knowing fully well that those qualities displayed before the supervisor were as a result of the academic reward behind it. On the contrary, teaching practice is meant to help them cultivate teaching habits such that the teaching process becomes part and parcel of them (Chu & Lin, 2013).

Marais and Meier (2014) further argue that teaching practice is a challenging but important part of teacher training, especially in developing countries such as Nigeria, where the

effectiveness of the teaching practice can be diminished or eroded by a range of challenges, such as geographical distance, low and uneven levels of teacher expertise, a wide-ranging lack of resources as well as a lack of discipline among a wide cross-section of learners and educators. Therefore, there is need to find out the perception of students towards teaching practice and impact of the exercise on the teaching and learning of physics in tertiary institution. Hence, the essence of this study is to appraise the impact of Teaching Practice Experience on Physics Education Students in University of Nigeria, Nsukka, Ikere-Ekiti Campus, Ekiti State, Nigeria.

Research Hypotheses

The following null hypotheses were formulated and tested at 0.05 level of significance:

1. There is no significant impact of Teaching practice experience on Physics Students knowledge in lesson preparation.
2. There is no significant impact of Teaching practice experience on Physics Students knowledge in lesson presentation.
3. There is no significant impact of Teaching practice experience on Physics Students knowledge in skills of class management and communication skills.
4. There is no significant impact of Teaching practice experience on Physics Students knowledge lesson evaluation skills and teachers' personality/ professional attitude.

Methodology

The study adopts descriptive survey of research design. The target population for the study specifically consists the totality of 300Level and 400Level students in the department of Physics, University of Nigeria, Ikere campus. The size of the population is relatively large since it consists of people of different sex, age and educational cadre.

Simple random sampling technique was used to select twenty five (25) Physics Education students each from 300Level and 400Level respectively among the students of University of Nigeria, Nsukka, Ikere-Ekiti campus. A total of fifty (50) Degree Physics students were used as samples for the study. Four research hypotheses were raised for the study.

The instrument for the study was self-designed questionnaire. A structured questionnaire was the instrument used to collect data from respondents. The questionnaire survey was segmented into two parts which is section A and section B. Section A consists of the bio-data of the respondents while in section B, the respondents indicate the extent to which they agree or disagree to the items provided. The questionnaire comprised of twenty items for the students. The study subject was required to tick (✓) the option they feel was most appealing to them.

To make the instrument valid as far as this study is concerned; the research instrument was validated before administration of the instrument by the ensure face, content and purpose validity of the research instrument for necessary corrections and amendment before being administered.

The researcher visited the selected department to administer questionnaires developed for the study. The questionnaire was personally given to the selected students by the researcher. The researcher collected the questionnaires from the students immediately after responding.

The researchers personally administered the instrument (questionnaire) on the selected sample to elicit the relevant information needed for the study. Three research questions were raised and tested at 0.05 level of significance. The data collected were analysed using Chi-Square (X^2) statistical analysis package.

Results and Discussion

Results

Research Hypothesis 1

There is no significant impact of Teaching practice experience on Physics Students knowledge in lesson preparation.

Table 1: chi- square analysis of impact of Teaching practice experience on Physics Students knowledge in lesson preparation.

S/N	ITEMS	YES	NO	χ^2 -cal	χ^2 -tab	Df
1.	Teaching practice experience enables me to have the knowledge of lesson preparation.	46	4	10.32	3.84	1
2.	Teaching practice experience assists me to have the knowledge of statement of objectives in lesson preparation.	47	3			
3.	Teaching practice experience enables me to have the knowledge of content (logical/sequential) in lesson preparation.	39	11			
4.	Teaching practice experience makes it possible for me to have the knowledge of adequacy lesson preparation.	41	9			
5.	Teaching practice experience enables me to have the knowledge of adequate lesson preparation.	42	8			

P < 0.05; * = Significant

A cursory look at table 1 reveals that χ^2 -calculated was 10.32 and χ^2 - critical was 3.84 in research hypothesis one. Showing that χ^2 -calculated is greater than χ^2 -table value at 0.05 and df = 1 (i.e.. $\chi^2_{-cal} > \chi^2_{-tab}$). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in lesson preparation.

Research Hypothesis 2

There is no significant impact of Teaching practice experience on Physics Students knowledge in lesson presentation.

Table 2 : chi- square analysis of impact of Teaching practice experience on Physics Students knowledge in lesson presentation.

S/N	ITEMS	YES	NO	χ^2 -cal	χ^2 -tab	df
1.	Teaching practice experience enables me to have the knowledge of mastery of the subject matter in lesson presentation.	47	3	11.65	3.84	1
2.	Teaching practice experience assists me to have the knowledge of skillful use of chalkboard in lesson presentation.	43	7			
3.	Teaching practice experience enables me to have the knowledge of Time management in lesson presentation.	38	12			

4.	Teaching practice experience makes it possible for me to have the knowledge in the use of instructional materials.	33	17			
5.	Teaching practice experience enables me to have the knowledge in enhancing class participation in lesson.	46	14			

P < 0.05; * = Significant

The table 2 above reveals that χ^2 -calculated was 11.65 and χ^2 - critical was 3.84 in research hypothesis one. Showing that χ^2 -calculated is greater than χ^2 -table value at 0.05 and $df = 1$ (i.e.. $\chi^2_{-Cal} > \chi^2_{-tab}$). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in lesson presentation.

Research Hypothesis 3

There is no significant impact of Teaching practice experience on Physics Students knowledge in skills of class management and communication skills.

Table 3 : chi- square analysis of impact of Teaching practice experience on Physics Students knowledge in skills of class management and communication skills.

S/N	ITEMS	YES	NO	χ^2 -cal	χ^2 -tab	df
1.	Teaching practice experience enables me to have the knowledge of mastery of the subject matter in class management.	48	2	12.67	3.84	1
2.	Teaching practice experience assists me to have the knowledge of reaction of pupils during lesson presentation.	38	12			
3.	Teaching practice experience enables me to have the knowledge of class control.	37	13			
4.	Teaching practice experience makes it possible for me to have the knowledge in the clarity of voice/audibility in lesson presentation.	45	5			
5.	Teaching practice experience enables me to have the knowledge in the appropriate use of language gestures, sketches/illustrations etc.	44	6			

P < 0.05; * = Significant

The table 3 above reveals that χ^2 -calculated was 12.64 and χ^2 - critical was 3.84 in research hypothesis one. Showing that χ^2 -calculated is greater than χ^2 -table value at 0.05 and $df = 1$ (i.e.. $\chi^2_{-Cal} > \chi^2_{-tab}$). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in skills of class management and communication skills.

Research Hypothesis 4

There is no significant impact of Teaching practice experience on Physics Students knowledge lesson evaluation skills and teachers’ personality/ professional attitude.

Table 4 : chi- square analysis of impact of Teaching practice experience on Physics Students knowledge lesson evaluation skills and teachers’ personality/ professional attitude.

S/N	ITEMS	YES	NO	x ² -cal	x ² -tab	df
1.	Teaching practice experience enables me to have the knowledge of suitability of assessment in lesson evaluation.	45	5	13.87	3.84	1
2.	Teaching practice experience assists me to have the knowledge of attainment of stated objectives in lesson evaluation.	46	4			
3.	Teaching practice experience enables me to have the knowledge of class control.	43	7			
4.	Teaching practice experience makes it possible for me to have the knowledge in appropriate dressing in teacher’s personality.	34	16			
5.	Teaching practice experience enables me to have the knowledge in comportment in the class.	47	3			

P < 0.05; * = Significant

The table 4 above reveals that x²-calculated was 13.87 and x²- critical was 3.84 in research hypothesis one. Showing that x²-calculated is greater than x²-table value at 0.05 and df = 1 (i.e.. x²-Cal > x²-tab). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge lesson evaluation skills and teachers’ personality/ professional attitude.

Discussion

A cursory look at table 1 reveals that x²-calculated was 10.32 and x²- critical was 3.84 in research hypothesis one. Showing that x²-calculated is greater than x²-table value at 0.05 and df = 1 (i.e.. x²-Cal > x²-tab). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in lesson preparation.

The result agrees with the findings of Eisner (2014) and Jekayinfa (2016) that teaching practice experience will enable them to develop their teaching proficiencies.

Similarly, The table 2 above reveals that x²-calculated was 11.65 and x²- critical was 3.84 in research hypothesis one. Showing that x²-calculated is greater than x²-table value at 0.05 and df = 1 (i.e.. x²-Cal > x²-tab). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in lesson presentation. The result agrees with the findings of Eisner (2014) and Jekayinfa (2016) that teaching practice experience will enable them to develop their teaching proficiencies.

Furthermore, the table 3 above reveals that x²-calculated was 12.64 and x²- critical was 3.84 in research hypothesis one. Showing that x²-calculated is greater than x²-table value at 0.05 and df = 1 (i.e.. x²-Cal > x²-tab). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge in skills of class management and communication skills. The result also agrees with the findings of Eisner (2014) and Jekayinfa (2016) that teaching practice experience will enable them to develop their teaching proficiencies.

Finally, the table 4 above reveals that χ^2 -calculated was 13.87 and χ^2 - critical was 3.84 in research hypothesis one. Showing that χ^2 -calculated is greater than χ^2 -table value at 0.05 and $df = 1$ (i.e.. $\chi^2_{-Cal} > \chi^2_{-tab}$). The result is significant; this implies that there is significant impact of Teaching practice experience on Physics Students knowledge lesson evaluation skills and teachers' personality/ professional attitude. The result also agrees with the findings of Hirst & Pocklington (2015) that teaching practice experience will affords the teacher-in-training unique opportunity to internalise certain social behaviour that is inherent in the noble profession.

Conclusion

Based on the results of this study, the findings revealed that: there was statistical significant relationship between the teaching practice experiences of Physics Education Students and Students knowledge in lesson preparation. Also, there was statistical significant relationship between the teaching practice experiences of Physics Education Students and Students knowledge in lesson presentation.

Furthermore, there was statistical significant relationship between the teaching practice experience of Physics Education Students and students knowledge in skills of class management and communication skills. Finally, there was statistical significant relationship between the teaching practice experience on Physics Education Students and Students' knowledge lesson evaluation skills and teachers' personality/ professional attitude.

Recommendations

Based on the findings of this study, the following recommendations were made:

- i. Schools of education and colleges should organize the teaching practice exercise very well so as to give the best professional practice to the trainee teachers. More attention should be paid to teaching practice as core of teacher education.
- ii. it would be recommended that reform efforts in teacher training institutions should incorporate efforts to adequately involve the teachers of partnership schools (organizing workshop on mentoring for them) so that student teachers can be provided suitable environment (particularly material and mentor support) to learn the rudiments of teaching.
- iii. Student teachers should participate at least once or twice in micro-teaching exercises as a way of exposing them to teaching practice.
- iv. The cooperating teachers should be trained on their roles while working with the student teachers.
- v. The government should provide finance inform of stipend for student teachers so as to boost their up keep and their attitude towards the profession.

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