
Assessing the effectiveness of teaching practice towards quality preparation of preservice technical teachers

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ABSTRACT

The study assesses the effectiveness of teaching practice towards quality preparation of preservice technical teachers for the world of work considering support received from cooperating teachers vis-à-vis: planning/development of lessons, classroom management/control, professional personality/responsibility, teaching skills, number of periods and challenges confronting preservice teachers, were investigated. The study adopted a descriptive survey research design. Data were obtained using a structured questionnaire from the sample of 82 preservice technical teachers. The collected data were analysed using mean, standard deviation, independent sample t-test and ANOVA to test hypotheses at 0.05% significance level. The study found that supports and training positively impact preservice technical teachers with vis-a-vis training domains towards quality preparation. However, the study shows that gender and school type do not influence preservice technical teachers' perceived support and training. Consequently, the study recommended that school administrators and cooperating teachers should increase acceptability and guidance of preservice teachers. It also cover work out modalities with institutions to ensure quality preparation of teachers for the world of work, and challenges identified should be taken care of to improve preservice teachers' competence.

Keywords: Assessing, Quality Preparation, Teaching Practice, Preservice Technical Teachers

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INTRODUCTION

The debate and interest in the quality of school programmes led several researchers to conduct studies related to teacher education preparation programmes. In Nigeria, one of the aims of education is to acquire appropriate skills, abilities, and competencies both mental and physical as tools for an individual to live in and contribute meaningfully to the development of the Nigerian Society (Federal Republic of Nigeria, FRN, 2014) so interest in developing the quality of teacher education programmes and the production of quality technical teachers for the world of work has always been and continued to be the concern of colleges of education, faculties and institutes of education in universities which offer teacher education programmes around the world (Anh, 2009; Lich, 2009; Mason, William, & Cranmer, 2009; Nguyen, 2009; Tuyet, 2010; darling, Olabiyi, Ogunleye & Udeani, 2017) and the influence of globalisation has widened the scope of skills required for teaching technical subjects (Olabiyi, 2014). This implies that high-quality technical teachers in addition to other skills need pedagogical content knowledge, and subject area content knowledge. Technical education is vocationally oriented; in addition to general

education, it provides both the scientific knowledge and practical skills required for employment or profession.

Technical education emphasises individuals' skill development in a chosen or emerging occupation (Olabiyi & Chinedu, 2018). It refers to a range of relevant learning experiences for employability, portability of competencies, qualification and recognition of skills, decent work opportunities, and lifelong learning in and related to the world of work. (Olabiyi, Efenure & Ayano, 2019), Technical teachers are responsible for teaching both classroom and laboratory work but may also supervise practical workshop training to the extent required to integrate the theoretical and practical aspects of technical vocational education (Okoro, 2003). Teaching is the science and art of assisting a person to learn (Chinedu & Olabiyi, 2015). The science in teaching entails the use of the acquired knowledge from natural and behavioural science to help appreciate the circumstances and personality of a learner. In contrast, the art aspect of teaching involves the use of creative and demonstrative skills in aiding the delivery of instruction. Technically, teaching involves assisting the learner to develop insights into a problem or forming an association between a response and a stimulus. The primary purpose of teaching is to promote learning.

In 2004, National Universities Commission (NUC) carried out a study to assess the quality of graduates from the Nigerian university system through labour market surveys (Fatade et al., 2012; Okebukola, 2010) the study revealed that graduates from Nigerian universities across most disciplines lacked the required competencies needed to be work-ready. However, this large-scale study did not consider the work readiness skills of the Nigerian technical teachers. This is although the future of most disciplines lies in the hand of the teachers and the saying that teacher education is the key to nation-building cannot be underestimated. Various scholars agreed that the objectives of any technical education can only be achieved if there are qualified teachers in content and pedagogical to teach the subject. Thus, carrying out an effective evaluation of teaching practice towards preparing preservice technical for the world of work is a matter of necessity. Thus, gaining an appreciation of preservice technical teachers' performance during teaching practice could provide useful insight into various challenges, area of weakness and future performance as well as their suitability to fit for the teaching profession (Okoro, 2000, Olabiyi (2009).

There is, therefore, an urgent need to assess the effectiveness of the teaching practice programme offered towards quality preparation of preservice technology teachers for the world of work as it will assist to determine the extent to which the objectives and goals of teaching practice have been attained and to also establish better kinds of preservice technical teachers' preparation, skills, and how these could be improved to meet the objectives of preparing quality technical teachers for the world of work. The main objective of the study is to assesses the

effectiveness of the teaching practice programme towards quality preparation of preservice technical teachers vis-a-vis training and support received from cooperating teachers taking into consideration the: planning and development of instruction, classroom teaching management and control, professional personality/responsibility, teaching skills, time allotted for learning certain skills in the programmes and challenges confronting preservice technical teachers. The study was designed to answer the following questions.

- a. What are the perceptions of preservice technical teachers regarding support and training received from cooperating teachers concerning planning and development of lessons, classroom management and control, professional personality/responsibility, teaching skills, numbers of periods allotted for learning technical subjects towards ensuring quality preparation for the world of work?
- b. What are the challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession?
- c. Do preservice technical teachers' perception of support and training received from cooperating teachers differ in terms of gender, and school type regarding planning and development of lessons, classroom teaching management and control, professional personality/responsibility, teaching skills, numbers of periods allotted for learning technical subjects towards quality preparation?

Teaching is one of the most influential professionals in the society, Olabiyi (2014) observed that in day-to-day work, teachers make huge differences in children's lives, directly, through the curriculum they teach, and indirectly, through their behaviour, attitudes, values, relationships with and interest in students. Therefore, teaching is a challenging and multidimensional process that requires knowledge and understanding in different areas and the ability to synthesise, incorporate, and relate this knowledge in different situations, under changing conditions, and in different of groups and individuals. In quality teaching, knowledge, skill and attitude are useful to provide equitable access and opportunities that build upon and extend what learners knew in facilitating the ability to acquire, construct, and create new experiences. The quest for quality teacher education has left the teacher training institutions with the burden of producing preservice teachers who are competent in handling the teaching profession. Nations that aim to offer quality education for all their citizens should be able to rely on teachers who are well prepared, competent and committed. Observed that the strongest predictor of student performance is the quality of teaching. Quality of teaching makes difference in learning; thus, indicated that improving the quality of education delivered to students requires quality teacher preparation

Quality in a technical teacher education programme is that distinguishing parameter which brings out or exposes the worth associated with the programme (Olaitan, Nwachukwu,

Igbo, Onyemachi & Ekong, 1999). Quality is the excellent performance level, which can be measured by establishing acceptable criteria and standards of good performance. (Olabiyi, 2014). Quality should be the watchword activities of the technical teacher education programme. This depicts that it should not be only in one aspect of the programme, but in all its totality, it must be given adequate attention. This means that quality should be expressed as the functional character of the entire technical teacher preparation, with respect to content, instructional materials, instructional methods, and resource personnel to meet the broad objectives of technical teacher preparation as spelt out in National Policy on Education (2014). Preservice technical teachers required preparation that will enhance their competency in both areas of speciality and pedagogical skills, and keep their knowledge and skills, up to date by a period of further experience in the world of work.

The cooperating teacher is the professional who should have frequent and direct contact with the preservice teacher. The cooperating teacher arranges the schedule, so the preservice teacher takes full responsibility for the teaching practice period. Full responsibility includes planning, teaching and evaluating lessons, correcting papers, meeting with faculty and parents, and all other related aspects of teaching. In every facet of performance, the cooperating teacher observes the student at work and provides feedback essential to the preservice teacher's growth. In the teaching profession, teaching skills are the technical skills amenable to the profession (Olabiyi, 2014). Teaching skill is defined as a set of teachers' behaviour considered effective in bringing about desired changes in students. Preservice technical teachers on graduation are expected to possess skills in lesson planning, the skill of set induction, the skill of presentation, the skill of stimulus variation, the skill of proper use of instructional materials, the skill of reinforcement, the skill of questioning, skill of silence and nonverbal cues, and skill of closure or summary (Awofala, Olabiyi, Ogunleye & Udeani, 2017).

It should be noted that while the general teaching skills help in the different subject areas, specific teaching skills help to teach a particular subject and the focus now to identify skills needed for teaching technology education taken to consider the following area planning and preparation for instruction, classroom environment, professional responsibility, teaching skills, time allotted for learning different subjects, and time allotted for learning certain skills in the programme (Olabiyi, 2014). In preparing technical teachers for the world of work, scholars have recommended practice (training) in school, or professional teaching practice, as one of the strategies to enhance quality teacher preparation and achieve technical skills relating to the teaching profession among preservice technical teachers (Yusof., Mohd Fauzi, Abidin, & Awang, 2013). Teaching practice refers to initiating trainees with some theoretical knowledge and convergent interactive exposure to the actual professional field of ethical conduct, skill exhibitions, and the development of expertise and competencies in the teaching

profession (Kagaari, 2007, Khaled, & Dweikat, 2016). Teaching practice serves as practical work exposure given to the preservice teachers to allow them to experiment in schools (labour market) such opportunity is the most relevant part of teacher preparation programmes (Olabiyi, 2014). It tends to align individual students' course of study with the labour market situations. It serves as internship and practical exposure where all the content courses for the professional education taught at colleges, institutes and faculties of education find their application, and it is compulsory for students studying for Nigerian Certificate in Education or Bachelor of Education degrees. Teachers' training institutions have become more compelling to engage their yet-to-be certified students with intensive practical exposure and field-based demonstrations. Thus, the production of quality teachers, more than ever requires the practical engagement of trainees to control the difficulty, frustration and bitter experiences that have suddenly become the bane of education, employment and employability in Nigeria. (Awofala, Olabiyi, Ogunleye & Udeani, 2017; Kennedy, 1996).

According to Okoro (2000) in Olabiyi (2009), evaluation is the appraisal of the worth or value of a programme or action and the making of appropriate decisions based on such appraisal. If provided as feedback and integrated into education, will help students to stimulate growth and form new habits. Evaluation provides an objective means of monitoring the progress of preservice technical teachers over time. It will further help to capitalise on the strength of quality preservice technical teacher preparation and minimise the impact of his/her weakness to produce expected quality technical teachers, it is through evaluation that the objectives of technical vocational education' curriculum could be assessed (Khaled., Dukmak, & Dweikat, 2016).

METHOD

The study employed a descriptive survey research design. Survey design is concerned with conditions or relationships that exist, practices that prevail, beliefs, points of view, or attitudes that are held, processes that are going on, and effects that are being felt. This design is suitable because it enabled the researcher to elicit information on the issues under investigation. The target population of this study consists of ninety preservice technical teachers in the Department of Science and Technology Education, University of Lagos, Nigeria who participated in the 2021 teaching practice exercise and were purposely selected for the study. The data collection tool was a structured questionnaire. Model for teaching was adapted to develop questionnaires and available literature on teaching practice. The instrument had three sections A to C. Section A sought information on the personal data of the respondents such as the name of the teaching practice school, school type, school location and gender. Section B sought information on preservice technical teachers' opinions regards support and training received towards their preparation on the components of the five domain scales measured. Each domain

was structured on V.A-Very Appropriate, A-Appropriate, M.A-Moderate Appropriate, I.A. Inappropriate, and V.I.A Very Inappropriate and section C sought information on challenges confronting preservice technical teachers during teaching practice.

Challenges were structured on a 5-point Likert scale SA=5, A=4, UD=3, D=2, and SD=1. The questionnaire was subjected to face and content validation by three experts. The internal consistency of the instruments was determined using Cronbach Alpha, with an alpha value of $\alpha = .88$. The instrument was administered to the respondents during 2021/2022 teaching practice through research assistants and personal contact. Out of 90 questionnaires administered, 86 were duly filled and returned to the researcher. These represented 95 % questionnaire retrieval rate. Data collected were analysed using mean and standard deviation. A t-test and ANOVA were used to test null hypotheses at .05 level of significance using SPSS version 16. The standard deviation is used to determine the homogeneity or otherwise of the respondents' opinions. The t-test and ANOVA statistics were compared with the significant value (using SPSS) at .05 level of significance and appropriate degree of freedom. The null hypothesis was not rejected where the value was less than the .05 level at the degree of freedom. Otherwise, the null hypothesis was rejected.

RESULTS AND DISCUSSION

Table 1: Mean scores and standard deviation of study areas N=86

S/N	Study Areas	Mean	SD
1	Planning and development of lesson	3.49	1.23
2	Classroom management and control	3.63	1.00
3	Professional personality/responsibility	3.64	1.43
4	Teaching skills	3.50	1.17
5	Numbers of time allotted for learning technical subjects	3.51	1.09
	Overall Mean	4.58	.31

Results presented in Table 1 above show average total mean scores and standard deviation of respondents regarding their understandings of support and training received from cooperating teachers with preparation to planning and development of lesson; classroom management and control; professional personality/responsibility; teaching skills and numbers of time allotted for learning technical subjects. The total mean scores for the study areas were used to indicate that the higher the scores, the more positive assessments preservice technical teachers have about the support and training received in preparation for quality teaching. The overall mean score of (4.58) shows that preservice technical teachers perceived support and training appropriate. In addition, a further examination of mean differences between the five study domains scales showed that respondents scored the highest on the Professional personality/responsibility sub-scale (3.64), followed by the classroom management and control sub-scale (3.63), number of times allotted for teaching sub-scale (3.51) and teaching skills sub-scale with a mean (3.50), above the cutoff point

of 3.50 was appropriate. While planning and developing of lesson sub-scale (3.49), below the cut-off mark of 3.50. This, indicate that support and training in this area are not appropriate. Furthermore, mean and standard deviation were calculated on the items in each domain scale to investigate the views of preservice technical teachers concerning support and training received in these items/skills. The rating scale used to reflect the preservice technical teachers' understandings was a 5-point Likert-type scale ranging from 5, indicating respondents perceived training and support as very appropriate in a particular component of the domain, to 1, indicating that they thought the support and training are very inappropriate in that item/skills. Most respondents believed that the training and support were appropriate for all domains. This is shown in Table 2.

Table 2: Mean Scores and Standard Deviation of Study Domains N = 86

Scale	S/N	Item Statement	Mean	SD
Planning & development of lessons	1	Select suitable pedagogy fit for the content in the technical subject	3.62	.47
	2	Recognise students' abilities	3.68	.53
	3	Stating behavioural/ learning objectives	3.49	.33
	4	Design quality, relevance and accessible instructional resources	3.45	.47
	5	Select and effective utilisation suitable resources	3.47	.37
	6	The organisation of materials presented to benefit students	3.35	.54
	7	Select evaluation techniques appropriate for students learning.	3.42	.64
	8	Plan suitable classroom activities, Organisation	3.36	.40
Subtotal (PDL)			3.49	.43
Classroom management and control	1	Demonstrate suitable class control and discipline	3.65	.52
	2	Work ethics	3.51	.66
	3	Ability to sustain students' interest and motivation to learn	3.79	.86
	4	Put up classroom management skills	3.59	.97
	5	Make rapport and respect among students	3.61	.89
	6	Illustration with relevant examples	3.55	.76
	7	Effective use of workshop/ classroom space for specific tasks.	3.58	.52
	8	Ability to effectively supervise practical activities	3.52	.53
	9	Applies various learning theories	3.56	.67
	10	Social and emotional intelligence/stability skills	3.54	.56
	11	Administrative leadership skills	3.05	.99
Subtotal (CMC)			3.63	.75
Professional personality responsibility	1	Improvisation of instructional resources	3.64	.71
	2	Develop self-management skills	3.72	.71
	3	Adaptability	3.68	.56
	4	Independence	3.67	.61
	5	Keep records of students' performance	3.63	.65
	6	Reflective skills and critical thinking	3.64	.52
	7	Facilitative skills	3.66	.87
	8	Conversing with parents regarding their children's learning	3.61	.35
	9	Cultivate an effective working relationships with colleagues	3.75	.26
	10	Making professional decisions on issues affecting work performance	3.61	.35
	11	Innovative and entrepreneurial skills	3.39	.94
	12	Willingness to learn	3.14	.38
	13	Emotional intelligence	3.17	.97
	14	Enthusiasm	3.31	.72

	15	Integrity	3.28	.76
	Subtotal (PPR)		3.64	.53
teaching skills	1	Use teaching methods appropriate to students' age and learning ability	3.43	.54
	2	Make teaching suit diverse students' needs and challenges	3.32	.65
	3	Encourage students to reflect and investigate learning situations	3.51	.53
	4	Observe individual differences among students	3.43	.59
	5	Effective use of technology tools in teaching and learning	3.59	.68
	6	Use various appropriate assessment tools	3.51	.71
	7	Mastery of content knowledge	3.64	.58
	8	Ability to improvise instructional resources in absence of real objects	3.41	.48
	9	Involve students' participation in a practical lesson	3.71	.67
	Subtotal (TS)		3.50	.56
numbers of periods allotted for learning technical subjects	1	Time spent on teaching specific content of the lesson objectives	3.54	.79
	2	Time assigned for assessing students' works	3.41	.34
	3	Numbers of periods spent teaching theories in the classroom	3.57	.49
	4	Numbers of time spent on the teaching drawing aspect	3.42	.48
	5	Numbers of periods allotted for learning practical activities	3.65	.49
	6	Time allotted for students to carry out practical activities per week	3.46	.55
	7	Time assigned for students to visit industry for industrial activities	3.52	.69
	8	Numbers of visits school supervisors make to supervise TP	3.46	.44
	9	Number of time cooperating teachers supervise in the classroom	3.56	.55
	10	Lesson notes write per week and mark by cooperating teacher	3.51	.40
	Subtotal (NPLTS)		3.51	.59

Table 2 presents preservice technical teachers' average total scores and standard deviations on support and training received on five study domain scales observed. A close look at the planning and development of lesson scale, respondents disagreed with 6 out of 8 items listed; this shows that preservice technical teachers perceived that support for planning and development is not appropriate. The results on classroom management and control revealed that respondents approve that 8 out of 9 items on support and training received were appropriate, with means ranging from 3.52 to 3.79 above 3.50, while disagreed with administrative leadership skills. Furthermore, the finding on professional/personality responsibility showed that respondents agreed with all items except item nine which implies that they did not receive appropriate support and training in innovative and entrepreneurial skills. The findings also showed that preservice technical teachers have different perspectives regards teaching skills as four items out of eight were considered not appropriate in preparing them for quality teaching in the use of teaching methods appropriate to students' age and learning ability; making teaching suit diverse students' needs and challenges; ability to improvise instructional resources in absence of real objects. On the number of periods allotted for learning technical subjects' sub-scale, the

preservice technical teachers perceive that time allotted for learning technical subjects is appropriate, however, respondents indicate that time assigned for assessing student's work; time spent on teaching drawing aspect; time allotted for students to carry out practical activities per week and numbers of visits school supervisor make to supervise teaching practice are not appropriate with mean scores of 3.41; 3.42; 3.46; 3.46 respectively.

Table 3. challenges confronting preservice technical teachers during teaching practice N=86

S/N	Challenges Confronting Preservice Technical Teachers During Teaching Practice	Mean	SD
1	A large number of students in the classroom affect preservice technical teachers' performance	4.49	.50
2	School principals are not willing to accept preservice technical teachers for teaching practice in their schools	4.62	.55
3	Cooperating teachers not interested in developing required competency in preservice technical teachers	4.68	.47
4	Lack of resources to improvise or develop instructional materials required in each lesson	4.69	.46
5	Participating in schools does not have an impact on the academic performance of preservice technical teachers	4.69	.46
6	Preservice technical teachers do not receive adequate guidance and support from cooperating teachers	4.67	.47
7	Inadequacy of the training period related to the design and implementation of lessons	4.61	.48
8	School supervisors' social relationship with preservice technical teachers affects their final assessment	4.58	.66
9	Cooperating schools not convinced of teaching practice role for professional development of preservice technical teacher		
10	Preservice technical teachers faced difficulties in preparing good lesson note	4.55	.57
11	Preservice technical teachers have limited knowledge of subject content	4.64	.48
12	Inadequate skills in the use of teaching aids and technology tools	4.50	.60
13	Insufficient classroom area in comparison to the number of students	4.44	.71
14	Anxiety experienced by preservice teachers related to the inspection by school inspectors	4.47	.66
15	Lack of pedagogical and subject content knowledge	4.49	.74
16	Preservice technical teachers find it challenging when could not find a conducive environment in schools	4.42	.76
17	Educational resources are scarce in schools	4.53	.60
18	Cooperating school regarding preservice teachers as servants	4.62	.55
19	Preservice technical teachers are not aware of the discipline, rules, code of conduct and dress code of the schools.	4.54	.58
20	Inability to design, plan, and organise learning tasks due to lack of experience in executing these learning tasks	4.34	.56
OVERALL		4.57	.34

Table 3 presents the mean and standard deviation of preservice technical teachers regarding the challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession. A close look at the mean score of each item shows that respondents agreed with all the identified challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession. Among which include: large numbers of students in the classroom affect preservice technical teacher's performance; school principals not willing to accept preservice technical teachers for teaching practice in their schools; cooperating teachers not interested in developing required competency in preservice technical teachers; lack of resources to improvise or develop instructional materials required in each lesson; show that gender does not

influence preservice technical teachers' perception of support and training received from cooperating teachers to enhance quality preparation for the world of work. preservice technical teachers are not aware of the discipline, rules, code of conduct and dress code of the schools, and inability to design, plan, and organise learning tasks due to a lack of experience in executing these learning tasks. With means values ranging from 4.34 to 4.69 above the cut-off point of 3.50, it was evident that respondents considered those challenges as impediments in developing the required competencies for the teaching profession.

Table 4: t-test results of preservice technical teachers' perception towards support and training received from cooperating teachers during teaching practice by gender difference N=86

Study domains	Gender	N	Mean	SD	t	Sig
Planning and development of lesson (PDL)	Male	61	3.49	.23	-.079	.937
	Female	25	3.47	.27		
Classroom management and control (CMC)	Male	61	3.55	.99	1.509	.133
	Female	25	3.79	.02		
Professional personality /responsibility (PPR)	Male	61	3.60	.16	.533	.595
	Female	25	3.70	.11		
Teaching skills (TS)	Male	61	3.44	.13	1.046	.297
	Female	25	3.64	.25		
Numbers of period allotted for teaching technical subjects (NPATTS)	Male	61	3.47	.05	.712	.478
	Female	25	3.60	.18		
Overall scale	Male	61	4.50	.31	3.55	.001
	Female	25	4.74	.22		

As seen in Table 4, female preservice technical teachers had a relatively higher mean than male colleagues on the overall study domain and on other sub-scales except for planning and development of lesson scale. However, there were no statistically significant differences between males' and females' mean scores in the study domain. Planning and development of lesson ($t = -.079, p > .05$); Classroom management and control ($t = 1.509, p > .05$), Professional personality/responsibility ($t = .533, p > .05$), Teaching skills ($t = 1.046, p > .05$), Numbers of period allotted for teaching technical subjects ($t = .712, p > .05$), and overall study domain ($t = 3.55, p > .05$). The results show that gender does not influence preservice technical teachers' perception of support and training received from cooperating teachers to enhance quality preparation for the world of work.

Table 5: ANOVA results of preservice technical teachers' perception towards support and training received from cooperating teachers during teaching practice by school type N=86

Study domains	Sch. type	N	Mean	SD	F	Sig
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Planning and development of lesson	Private	41	3.32	.30	1.463	.238
	Public	25	3.35	.26		
	Unity	20	3.45	.28		
Classroom management and control	Private	41	3.15	.37	.345	.709
	Public	25	3.20	.36		
	Unity	20	3.11	.37		
Professional personality/responsibility	Private	41	3.25	.25	3.464	.036
	Public	25	3.44	.34		
	Unity	20	3.24	.33		
Teaching skills	Private	41	2.36	.24	.369	.692
	Public	25	2.42	.22		
	Unity	20	2.36	.31		
Numbers of periods allotted for teaching technical subjects	Private	41	3.44	.33	.705	.497
	Public	25	3.45	.39		
	Unity	20	3.55	.31		
Overall scale	Private	41	3.42	2.04	.331	.719
	Public	25	3.17	.17		
	Unity	20	3.14	.22		

As shown in Table 5, there were no statically significant differences between the school type groups perception means scores on the five domain sub-scales: Planning and development of lesson ($F= 1.463, p > .05$); classroom management and control ($F= .345, p > .05$); professional personality/responsibility ($F= 3.464, p > .05$); teaching skills ($F=.369, p > .05$); numbers of period allotted for teaching technical subjects ($F= .705, p > .05$) and overall study domain scale ($t = .331, p > .05$). the results show that school type does not influence the perception of preservice technical teachers regards to support and training received from cooperating teachers during teaching practice towards enhancing effective preparation for the world of work.

The findings of this research are consistent with the results revealed in the literature (Durgunoglu & Hughes, 2010; Rosas & West, 2011; Hassan, Khaled & Al Kaabi, 2010).. These findings revealed helpful perceptions of preservice technical teachers regarding their pedagogical preparation. For all study domains, most respondents believed they received helpful support and training that prepared them for the world of work. The participants believed the support and training received prepared them for the acts of planning and developing lessons. The finding of this study corresponds to a finding by Hassan, Khaled, and Al-Kaabi (2010). Model of instruction, being prepared for instruction included the ability to select suitable pedagogy fit for the content in a technical subject, recognise student's abilities and state behavioural/ learning objectives. However, they observed that in Design quality, relevance and accessible instructional resources; selection and effective utilisation of suitable resources; organisation of materials presented to benefit students and plan of suitable classroom activities, the organisation they are not satisfied with those items. The majority of respondents perceived that they are equipped for effective teaching.

Furthermore, the finding is in agreement with Tairab's (2008) and Powers (2012) who reports that the majority of their participants expressed their satisfaction with their preparation for basic teaching skills in the effective use of technology tools in teaching and learning, use of

various appropriate assessment tools, ability to improvise instructional resources in absence of real objects and mastery of content knowledge. Though as observed majority perceived that they are not well prepared to use teaching methods appropriate to students' age and learning ability, make teaching suit different students' needs and challenges and observe individual differences. Tairab's reported that a greater number of the participants thought that they are well prepared to teach science when it comes to the knowledge of students and their learning characteristics. However, Durgunoglu and Hughes (2010) in their study reported that preservice teachers expressed that they are not satisfied with the support and training received to teach effectively.

Concerning professional personality/responsibility (PPR) majority of the participants in this study thought they are well-prepared in areas such as developing self-management skills; keeping records of students' performance; reflective skills and critical thinking; cultivating an effective working relationship with colleagues, and making professional decisions on issues affecting work performance, however, they confirm they are not well prepared in innovative and entrepreneurial skills and improvisation of instructional resources. The findings are similar to those of Perry (2004) and Tairab (2008) who reported that half of the participants in their study believed that they had been adequately prepared for this skill. Also, Hassan, Khaled, and Al Kaabi's (2010) in their study, reports that more than half of the respondents thought that they had been highly prepared in using various teaching methods to motivate student learning. About the number of periods allotted for teaching technical subjects (NPATTS) domain, the majority of respondents thought the time assigned for teaching specific content of the lesson objectives; periods spent teaching theories in the classroom; periods allotted for learning practical activities; students to visit industry for industrial activities; cooperating teacher supervises in the classroom and Lesson note write per week and mark by cooperating teacher are appropriate. However, they perceived that time assigned for assessing students' work; the number of time spent on teaching drawing aspects and the time allotted for students to carry out practical activities per week are not appropriate.

Findings on challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession revealed the following as major challenges: school principals not willing to accept preservice technical teachers for teaching practice in their schools; cooperating teachers not interested in developing required competency in preservice technical teachers; lack of resources to improvise or develop instructional materials required in each lesson; participating schools not having an impact on the academic performance of preservice technical teachers; inadequate skills in the use of teaching aids and technology tools and preservice technical teachers faced difficulties in prepare good lesson note. These findings agreed with what Kilgore, Ross, and Zbikowski (1990) and Chinedu and Olabiyi (2015) observed. The authors explained that the material required for interactive methodologies is a hardly

available, tightly planned scheme of studies that do not allow the flexibility expected by the prospective teachers to try out idealised teaching pedagogies.

Furthermore, Trent (2012) and Mahmood and Iqbal (2018) observed that classroom practices are contrary because the schools are mostly traditional. They have concerned mainly about teaching students to do well in exams so there is a lot of time spent on past examination question papers and teaching them to pass the test. Therefore, interactive methods of teaching are hardly used. The schools have very limitation of class space and furniture. Also, there are scarce AV aids and other support material for teaching while preservice teachers expect facilities which are not even available to their cooperating teachers (Yusof., Mohd Fauzi, Abidin, & Awang, 2013, Nasir. & Zafar, 2018). Poor physical infrastructure, scarce and underused academic resources, inflexibility in classroom arrangement, the non-professional attitude of school administration, and trying out innovation without challenging the prevailing school norms (Mahmood & Iqbal, 2018).

There were no statistically significant differences between the study domains due to the preservice teachers' gender. Similarly, the findings of this study revealed no statistically significant difference between the study domains which include planning and development of lessons, classroom management and control, professional personality/responsibility, teaching skills, numbers of periods allotted for teaching technical subjects, and overall study domain. Thus, gender does not influence preservice technical teachers' perception of support and training received from cooperating teachers. Likewise, the study found no statistically significant differences between the study domains due to the preservice teachers by school type. Equally, the findings of this study revealed no statistically significant difference between the study domains by school type which include planning and development of lessons, classroom management and control, professional personality/responsibility, teaching skills, and the number of periods allotted for teaching technical subjects.

The findings of the study suggest several implications and can be useful to: preservice technical teachers, cooperating teachers, and school administrators. To enhance quality teacher education preparation programmes, there is a need to take into account how preservice technical teachers perceive their preparation through cooperating teachers. The implication is that teaching practice provides preservice technical teachers with valuable and lasting experiences that impact not only on themselves but also on the school level they are prepared for, it will allow contribute in many positive ways to the efforts exerted to improve and reform teacher education preparation programmes. The implication for cooperating teachers is to enhance the performance of preservice technical teachers by providing the most valued support for preservice technical teachers. Meaningful support from cooperating teachers will help preservice technical teachers in understanding student needs and getting feedback about shortcomings in their teaching beyond what they have learned during their course work, furthermore, the hands-on support during

teaching practice when preservice technical teachers needed support in the unforeseen class situation was value-added learning for them which was not possible to acquire during course work. Cooperating teachers' support worked as a catalyst in establishing the legitimacy of preservice technical teachers in class as equivalent to their teachers. The implication for school administration (principals, vice-principals and teachers) is the need to change the attitude towards preservice technical teachers to accommodate them, cooperating teachers should consider preservice technical teachers as colleagues in the system that need to put through to make required changes in school/classroom functioning. As human beings school administrators need to show love to develop preservice technical teachers professionally in prospective teachers' competence.

The major challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession should be taken care of, to create an enabling environment, improve the competence of subject content knowledge and instructions, develop appropriate, and maximally engaging learning tasks, faculties and cooperating schools must ensure closer interaction to increase mutual familiarity addressing the surprise element of challenges faced by preservice technical teachers. The attitude of administrators and cooperative teachers in schools is also creating hurdles in the path of preservice technical teachers. It is recommended that school administrators should increase the acceptability of preservice technical teachers, guidance from cooperative teachers and a supportive attitude of school leaders will ensure quality preparation for the world of work. Faculties of education and school administrators must organise orientation towards effective employment of cooperative teachers during teaching practice, this will afford a clear understanding of what requires cooperating teachers in relating with preservice technical teachers.

CONCLUSION

Based on the findings, and the subsequent discussion; the conclusion is made that Teaching practice offered in colleges of education, faculties of education and institutes in Nigerian universities should be regarded as an essential component of preservice technical teacher professional training through which they can be integrated successfully into the world of work. The quality of training and supervision preservice technical teachers receives regards planning and development of lessons, classroom management and control, professional personality/responsibility, teaching skills, number of periods allotted for teaching determines the extent of his/her worth to himself and society at large. The challenges confronting preservice technical teachers during teaching practice in developing the required competencies for the teaching profession include school principals not being willing to accept preservice technical teachers for teaching practice in their schools; cooperating teachers not being interested in developing required competencies in preservice technical teachers. the findings of this study

revealed. The findings revealed no statistically significant difference between the study domains by school type and gender. These include planning and development of lessons, classroom management and control, professional personality/responsibility, teaching skills, and the number of periods allotted for teaching technical subjects.

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