

Do the Challenges Perceived by Pre-Service Teachers Predict the Effectiveness of Their Teaching Practice?

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Abstract

This quantitative study analyzed the effectiveness and challenges in teaching practice as perceived by the undergraduate pre-service teachers. Adopting a descriptive and correlational survey research design, a questionnaire was used for data collection from all the undergraduate student (n = 23) enrolled for teaching practice at the Botswana University of Agriculture and Natural Resources, Botswana. Data were analysed through the statistical tools of a One sample t-test, Independent sample t-test and Regression analysis. Findings revealed that the teaching practice was effective and neither gender nor age differences were determined in the teaching practice effectiveness. Ranking of the challenges in teaching practice revealed five challenges: insufficient time for teaching practice, lack of teaching aids/material, uncondusive environment at host schools, undisciplined behaviors of students and poor alignment between teaching practice period and the host school calendar. Further, neither gender nor age differences were determined in the challenges faced by the pre-service teachers. Insufficient time for teaching practice, uncondusive school environment and unfair allocation of host schools were determined three challenges as predictors of teaching practice effectiveness. Thus, the teaching practice effectiveness can be improved if the pre-service teachers are provided with sufficient time for teaching practice, condusive school environment and a fair allocation and placement mechanism of the host schools.

Keywords

Challenges, Effectiveness, Experiential Learning Theory, Pre-Service Teachers, Teaching Practice

1. Introduction

Teachers play a pivotal role in achieving the goals of an education system and preparing potential good citizens and therefore, teachers should be knowledgeable enough to perform the mandate of the education system. Teachers create an environment that supports students' learning (Schuitema et al., 2016) and, enables students to identify their personal interests for working independently using their freedom of choice (Johnson, 2017). Teaching is an activity that completes a learning process (Ganal, Andaya, & Guiab, 2015). In the teaching-learning process, effective planning, interaction, communication, arrangement and utilization of material resources among stakeholders depend on teacher facilitation, and they need all the opportunities to develop and produce a better future teacher (Borja, Ompoc, Temblor, & Torello, 2019). Pre-service teacher (undergraduate students) training is the integral part of teacher education program as it equips pre-service teachers with the knowledge and skills to become a qualified teacher (Ulla, 2016). Teaching practice is pivotal for achieving quality teacher education (Yusuf, Odutayo, & Tuoyo, 2022). Therefore, student teacher benefit appropriately by participating in teaching practice as it builds their confidence and competence in teaching as they develop skills of a good teacher during the teaching practice (Okoro, 2019).

Pre-service teaching practice acts as a strategy to make student teacher competent enough to carry out their responsibilities as the future teacher. Teaching practice refers to learning for teaching by applying theoretical knowledge into practice enabling student teachers to become a teacher (Cheng, Tang, & Cheng, 2016). The theoretical knowledge student teacher receive in class unless they practice it in actual school environment and, acquire practical skills and knowledge that they need in real environment provided by the teaching practice in a classroom situation (Surucu, Unal, & Yildirim, 2017). Thus, pre-service teachers gain practical experience and exposure in a classroom setup.

Teaching practice is intended to introduce student teacher to the field of teaching and prepare them to educate the future generation of youth (Ganal & Andaya, 2015). It enables student teacher to obtain teaching experiences by linking theoretical knowledge acquired on campus to the actual environment they face in the future. The wide range of learning experiences can be applied in real school settings, which are useful for the future development of the teaching profession (Gilbertson, Ewert, Siklander, & Bates, 2022). Teaching practice provides student teacher a platform to expose them to the opportunities to demonstrate the theoretical knowledge they have learnt during class teaching. It also provides the opportunity for student teacher to test their knowledge and skills in the profession of actual environment of teaching and learning. It leads the future teacher to understand his/her teaching experiences against the teaching itself which involves many challenging tasks and hard work that need getting used to and living with (Abas, 2016). Therefore, it becomes crucial to evaluate pre-service teacher education practices can provide the basis for strengthening the quality of pre-service teacher education program as it provides basic information to streng-

then the quality of teaching program (Tasdemir, Iqbal, & Asghar, 2020).

Although several researchers previously examined the challenges in teaching practice, the profession is evolving and is recently influenced by the fourth industrial revolution hence the need for more research to investigate student teacher' perceptions on the challenges during teaching practice which may influence its effectiveness. Student teacher are better positioned to provide information on the factors which affect teaching practices so that identified challenges could be resolved through careful planning and implementation of the exercise to be more efficient (Aljafar, Saeed, & Fatima, 2020). Therefore, this study analyzed student teacher' perceptions on the teaching practice and challenges encountered to predict the effectiveness of the teaching practice program.

1.1. Statement of the Problem

Botswana University of Agriculture and Natural Resources (BUAN) is the only public sector university which offers a Bachelor degree in Agricultural Education, and, thus prepares secondary school agriculture teachers in Botswana (BUAN, 2021). However, students' performance in agriculture is reportedly poor in secondary schools in the country which has been a concern for some years (Sibanda, Hulela, & Tselaele, 2016; Botswana Examinations Council, 2019). Teaching practice is a crucial component of teacher training program all over the world (Marais & Meier, 2004) including the developing countries such as Botswana. However, effectiveness of teaching practice can be influenced or compromised by several challenges pre-service teachers face. These challenges need to be identified and addressed appropriately as they may affect student teacher' performance not only during teaching practice but during their teaching profession (Carrillo & Flores, 2020) which may contribute to the poor performance of students. Therefore, assessing teaching practice becomes important as it provides information to peruse career paths for prospective teachers. Hence this backs the questions, does training of student teacher effectively prepare them to deliver the curriculum at the schools? What challenges do the teachers face during teaching practice which may influence the effectiveness of teaching?

1.2. Aim and Objectives of Study

The study aimed to analyze the effectiveness and challenges in teaching practice as perceived by the undergraduate student teacher. The study had five objectives:

- i). To Identify the challenges in teaching practice as perceived by undergraduate student teachers.
- ii). To determine gender and age differences in the challenges faced by undergraduate student teachers in teaching practice.
- iii). To determine the effectiveness of teaching practice as perceived by undergraduate student teachers.
- iv). To determine gender and age differences in the effectiveness of teaching practice.

v). To determine the challenges in teaching practice as predictors of effectiveness of teaching practice.

1.3. Research Questions

The study had the following research questions to achieve the objectives of the study.

- i). What are the challenges in teaching practice as perceived by undergraduate student teachers?
- ii). Is there any gender and age differences in the challenges faced by undergraduate student teachers in teaching practice?
- iii). Is teaching practice effective as perceived by undergraduate student teachers?
- iv). Is there any gender and age differences in the effectiveness of teaching practice?
- v). Do the challenges in teaching practice predict the effectiveness of teaching practice?

1.4. Research Hypothesis

To answer these research questions, five research hypothesis we formulated as follows.

H₁: There are challenges in teaching practice as perceived by undergraduate student teachers.

H₂: There are gender and age differences in the challenges in teaching practices as perceived by undergraduate student teachers.

H₃: Teaching practice is effective as perceived by undergraduate student teachers.

H₄: There are gender and age differences in the effectiveness of teaching practices as perceived by undergraduate student teachers.

H₅: Challenges in teaching practice predict the effectiveness of teaching practice.

1.5. Theoretical Background

Teaching practice is technically part of any teacher education programme which is designed to prepare students to perform as regular and future teachers. The teaching practice triad is composed of a cooperating teacher, university supervisor, and student teacher and, makes the teaching practice a learning success (Aglazor, 2017). A graphical representation of a teaching practice triad is presented in **Figure 1**.

An effective alignment of these three components determines the success and effectiveness of teaching practice. Cooperating teacher is the most important component of effective teacher education program and, are field mentors to the student teacher while university supervisor equip them with the theoretical knowledge and logistics during teaching practice. Thus, both of them are expected to guide and supervise student teacher in all aspects of teaching and learning during the teaching practice period.

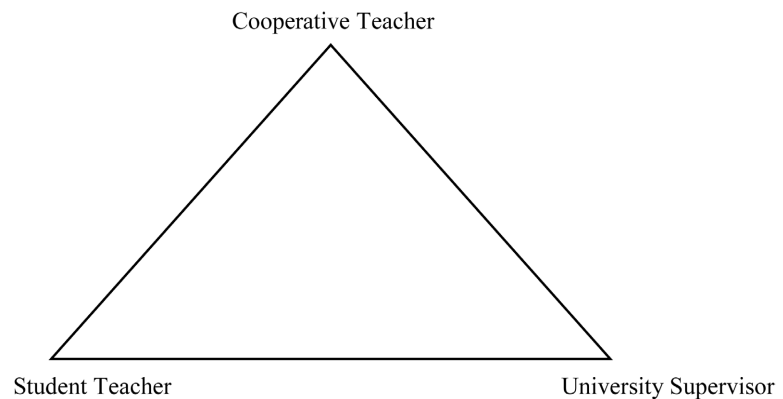


Figure 1. Teaching practice triad.

This study is grounded on the Experiential Learning Theory (ELT) which was introduced by David Kolb in 1984. The experiential learning theory is based on Learning by doing. As this theory focuses on learning by doing, the pre-service teachers can learn through hands-on-experience helping them in retaining information and recall facts which they have learnt in theory classrooms. Experiential learning is focused on using real situations to help students learn, so they are better prepared for the future. This theory provides a number of benefits to the pre-service teachers as well as the students. Experiential learning provides opportunity to apply theoretical knowledge which helps them retain the information better. It often involves working in a team which allows students to promote and practice teamwork. It is full of opportunities for reflection as the students spend time on what they are experiencing and learning.

2. Review of Literature

2.1. Challenges in Teaching Practice as Perceived by the Undergraduate Student Teachers

Omodan (2022) did a thematic analysis of the response of pre-service teachers on the challenges faced by student teachers in South Africa and, revealed that lack of infrastructure, physical resources, teaching aids, absenteeism and truancy among students were the major challenges in schools. Aljafar, Saeed and Fatima (2020) identified the challenges in teaching practice as: distance to host school, lack of financial support, lack of guidance and lack of cooperation from cooperative teachers in host schools. No significant difference in the perception of male and female student teacher regarding factors affecting teaching practices effectiveness was determined. Jarrah (2020) conducted a study to determine the challenges encountered by pre-service teachers during their teaching practice in the United Arab Emirates and, thematic analysis revealed the major challenges of: difficulties in transferring theoretical knowledge into practice, availability of cooperative teachers, problematic student discipline and classroom management, implementing innovative pedagogical practices, and the timing of the students' teaching practice programme.

[Almazroa \(2020\)](#) investigated experiences and challenges of pre-service teachers during the teaching practice period. Poor support at the host school; lack of cooperation and supervision were the three key challenges. A thematic analysis revealed seven challenges during teaching practice: assessment, lesson presentation, promoting critical thinking, motivating learners, dealing with fast and slow learners, language communication skills, and time management ([Dube, 2020](#)). Similarly, [Kamara \(2020\)](#) reported the major problems pre-service teachers face during teaching practice: problems in allocation of schools for teaching practice, poor payment of arrears, lack of support from host schools and, uncondusive classroom environment. On the other hand, [Araya, Hailu and Kesete \(2020\)](#) reported the short practicing period, lack of transportation facilities, inadequate school infrastructure, and lack of support at the placements schools as the major challenges faced by the trainee students during teaching practice at Mekelle University, Ethiopia.

Furthermore, [Borja, Ompoc, Temblor, and Torello \(2019\)](#) identified the challenges encountered by the student teachers: personal issues, teacher's preparation, classroom management, delivery of instruction, assessment learning, emotional issues, and student adjustment. [Baltazar, Bernaldez, Ligayna and Malazarte \(2019\)](#) determined the challenges encountered among pre-service with the delivery of instruction is the most challenging part of practice teaching and therefore recommended that teachers should use a variety of techniques and teaching strategies to come up with an instruction that brings better achievements of the learners. [Muzindutsi and Khanare \(2018\)](#) explored challenges faced by pre-service teachers in South African schools and reported that the challenges were related to pedagogical terminologies and the learning style used in education, the structure of the programme, and students' background from their previous qualifications. [Mahmood and Iqbal \(2018\)](#) revealed poor physical infrastructure, lack of academic resources, poor classrooms, and unprofessional attitude of school administration as the major problems faced by the student teachers. A similar study by [Khan, Urooj, and Aijaz Ahmed \(2018\)](#) concluded that there is no significant difference between male and female student teacher regarding problems encountered during the teaching practices.

[Amankwah, Oti-Agyen and Sam \(2017\)](#) analysed the perception of student teacher on teaching practice and, the major challenges identified include lack of teaching aids, inadequate practice time, lack of administrative support, and inadequate orientation of student teachers. Among others major recommendations include provision of adequate time and material resources, regular orientation programmes for the student teachers as well as the supervisors, improve on the availability of teaching aids and ensuring a conducive environment to facilitate the implementation of programme to achieve its intended objectives. [Al-Momani \(2016\)](#) reported the important challenges of practicum from student teacher' perspective: overcrowded classes, lack of educational technologies; large classes; supervision and administrative workload. The study suggested the need for continuous review of the practicum programme and organizing train-

ing workshops for student teacher and host schools. Koross (2016) investigated the experience of student teacher for teaching practice and reported the following challenges: insufficient preparation of teachers and students, geographic distance, lack of teacher professional knowledge, among supporting teachers lack of resources, and poorly disciplined students and educators, lack of funds, poor accommodation and, lack of participation in extracurricular activities at school.

2.2. Effectiveness of Teaching Practice as Perceived by Undergraduate Student Teachers

Teaching practice is an integral part of the teacher training programme as it train teachers to achieve the quality of teacher education which are key in achieving its effectiveness (Bichi & Musa, 2017). Yusuf, Odutayo and Tuoyo (2022) conducted a quantitative study whereby data was collected through a survey of randomly sampled 150 student-teachers to solicit their perceptions on the effectiveness of teaching practice and, reported that teaching practice was effective as it improved students' teaching knowledge and skills. Nja & Sampson (2020) examined the effectiveness of science education students teaching practice using a sample of 200 student teachers and determined a significant relationship between the orientation and professional standard of mentors on teaching practice effectiveness. It was recommended that the duration for teaching practice should be increased, and only professional teachers should be assigned to serve as supervisors to the pre-teachers teachers.

Tindowen, Bangi and Parallag Jr. (2019) evaluated the student teaching practice program and, determined that 62 pre-service student teachers perceived the internship program effective as it enables students to gain the hard and soft skills necessary for success in their preferred professions. In their study, Gule, Farinde and Ngcamphalala (2019) investigated factors that influenced the teaching practice effectiveness and, reported factors teaching practice programme timing, supervision by cooperating school, and behavior of students that had a negative on the teaching practice effectiveness. Data collection was accomplished through survey using a validated 45-items questionnaire and, teaching practice was found to be effective. Supervision and duration of teaching practice was inadequate and, it was recommended that atleast two cooperative teachers be allocated to each student teacher to ensure objectivity and effective in the supervision. On the other hand, Msangya, Mkoma and Yihuan (2016) used a semi-structured questionnaire for qualitative data collection data from undergraduate student teacher to solicit their perceptions of teaching practice effectiveness and, reported that pre-service teachers perceived teaching practice as a crucial component of learning since it help them gain experience and prepared them for the actual workplace.

A study by Remington-Doucette and Musgrove (2015) assessed competency differences between male and female students and, younger and mature teacher students and determined that male student were found to be better than males in

improving interpersonal competence. [Komba and Kira \(2013\)](#) on the “Effectiveness of teaching practices in Tanzania to improve the teaching skills of teacher students”, researchers investigated the views of students on the effectiveness of teaching practice. Prospective teachers were posed the question “Do you think teaching practice is effective in improving your teaching skills?” Majority of the student teacher (76%) stated that teaching practice is not effective as the implementation of teaching practice was not done properly. [Gorgoretti and Pilli \(2012\)](#) investigated the perceptions of teachers in training on the effectiveness of teaching practice. It was reported that the evaluations of the teachers in the training of the teaching practice courses were mostly positive. They recognized that the course prepared them for their careers, but allocating more hours of teaching was recommended to improve the effectiveness teaching practice. [Jekayinfa, Yahaya, Yusuf, Ajidagba, Oniye, Oniyangi and Ibraheem \(2012\)](#) determined that male and female student teachers had no significant difference in the quality of teaching practice.

Effectiveness of teacher instruction during theoretical classes can potentially influence the teaching practice and preparation of student teachers which may influence the effectiveness and learning outcomes of teaching practice program ([Corcoran, 2018](#)). [Corcoran and O’Flaherty \(2018\)](#) studied student teacher performance and reported that prior teaching performance and previous academic achievement of student teachers determined as significant predictive factors of teacher performance. [Juuti, Christophersen, Elstad, Solhaug and Turmo \(2018\)](#) problematic behaviour negatively contributed to student teacher’ instructional efficiency while the supervisor’s feedback from the cooperative supervisor was among the factors that contributed positively to student teacher’ teaching efficiency.

Prior research suggests a relationship between teacher characteristics such as gender, race, teaching experience, ethnicity and teacher effectiveness ([Aloe & Becker, 2009](#); [Aaronson, Barrow, & Sander 2007](#)). However, [Bastian, McCord, Marks and Carpenter \(2015\)](#) highlighted that these factors contributes very little to the variance in the teacher effectiveness. No age and gender difference in teaching effectiveness was reported by [Baliyan and Moorad \(2018\)](#). Contrarily, [Dewaele, Gkonou and Mercer \(2018\)](#) reported that gender did not influence the effectiveness of trainee teachers’ classroom practices. Considering the contrary findings, there is a need to understand why some teachers are more effective than others ([Corcoran & O’Flaherty, 2018](#)).

3. Methodology

3.1. Research Design

A descriptive and co-relational survey research design was employed in this quantitative study. This study aimed to describe the challenges faced by pre-service teachers in teaching practice, a descriptive research design was suitable. A co-relational research was appropriate as the challenges in teaching practice were

used to predict the effectiveness of teaching practice. Surveys are useful in soliciting information on experiences and opinions of various categories of participants. Survey is also a cost-effective and less time consuming method of data collection (Creswell & Creswell, 2017). It also embedded with the provision for gathering facts and asking questions to obtain views of respondents (Biza, Nardi, & Zachariades, 2018). As this study aimed to analyze perceptions of pre-service teachers on the effectiveness of teaching practice and challenges, a quantitative descriptive survey research design was found suitable.

3.2. Participants

Third and fourth-year students perusing for the Bachelor of Agricultural Education Program at the Botswana University of Agriculture and Natural Resources constituted the population for the study ($N = 23$). A total population sampling method was adopted and, all the undergraduate students were selected for the study ($n = 23$). Total population sampling is a type of purposive sampling technique that involves the entire population whose characteristics are defined for a purpose that is relevant to the study (Andrade, 2021). Out of 23 students, there were eight (8) students enrolled in the third-year and fifteen (15) in the fourth-year of their program. The age of the participants varied from 22 to 48 years with a mean age of 24.7 years ($SD = 3.74$). Male students contributed to 39.1% while 60.9% were female students. All the male participants were above 25 years of age while females were less than 25 years old.

3.3. Instrument and Measurements

Several items, depending on the context, are used to measure teaching effectiveness which helps to identify the areas to strategies for enhancing teaching effectiveness (Baliyan & Moorad, 2018). Based on the literature, researchers constructed a questionnaire for the purpose of data collection. The questionnaire had three sections. The first section was designed to obtain participants' information on their gender and age. The second section contained 17 items on the challenges faced by students during teaching practice. The third section is composed of 18 items measuring the effectiveness of teaching practice and, were measured on a six-point Likerts' scale: 1 = strongly disagree, 2 = Disagree, 3 = slightly disagree, 4 = slightly agree, 5 = agree and 6 = strongly agree. The instrument was validated by a panel of experts in Agricultural Education. Based on the comments from the experts, the instrument was modified accordingly where by some items were reworded and removed. Reliability was ensured by calculating the Cronbach's alpha for the challenges in teaching practice and the effectiveness of teaching practice to be .848 and .917, respectively which were greater than the acceptable level of .70 (Taber, 2018; Juneau, Pellerin, Trives, Ricard, Shankland, & Dambrun, 2020).

3.4. Data Collection and Data Analysis

Data were collected from all the 23 pre-service teachers participating in teaching

practice at the end of their teaching practice period. The researchers scheduled a meeting with the pre-service teachers, and the purpose of the study was explained to them. The questionnaire was given to each student teacher. Upon receiving the completed questionnaire, the data were entered into the SPSS software ver. 23 for analysis. The research questions of the study were answered by testing the research hypothesis in their null form as follows.

H_{01} : There are no challenges in teaching practice as perceived by undergraduate student teachers.

H_{02} : There is no gender and age differences in the challenges in teaching practices as perceived by undergraduate student teachers.

H_{03} : Teaching practice is not effective as perceived by undergraduate student teachers.

H_{04} : There is no gender and age differences in the effectiveness of teaching practices as perceived by undergraduate student teachers.

H_{05} : Challenges in teaching practice do not predict the effectiveness of teaching practice.

A one-sample t-test was employed to determine the challenges in teaching practice and its effectiveness. Gender and age differences in the students' perceptions on the challenges and, the effectiveness of teaching practice were determined by an Independent t-test. Stepwise multiple regression analysis was employed to predict the effectiveness of the teaching practice.

4. Findings

4.1. Challenges in Teaching Practice as Perceived by the Undergraduate Student Teachers

The challenges in teaching practice faced by the student teachers were determined by employing a One sample t-test. The null hypothesis was accepted ($M = 57.68$, $SD = 15.41$, $t = -1.623$, $p = 0.623$), implying that overall there are no significant challenges faced by the student teachers in their teaching practice (**Table 1**).

The observed mean of each of the 18 items measuring the challenges in teaching practice was calculated to determine their importance and, were compared with the average theoretical mean of the individual response (3.5) to determine if the pre-service teachers face any specific challenge or not (**Table 1**). Only five challenges are perceived to be important as their observed mean value were greater than the theoretical mean ($M \geq 3.5$). These challenges included: insufficient time for teaching practice ($M = 4.47$, $SD = 1.85$); lack of teaching aids/material ($M = 4.17$, $SD = 1.66$); uncondusive environment at school ($M = 4.04$, $SD = 1.43$); undisciplined behaviors of students ($M = 3.69$, $SD = 1.33$) and, time mismatched with host school calendar ($M = 3.56$, $SD = 1.85$). **Table 1** further reflect that out of the five challenges, insufficient time for teaching practice was the only significant challenge in teaching practice perceived by the student teacher ($M = 4.47$, $SD = 1.85$, $p < 0.05$).

Table 1. Determination and ranking of the challenges in teaching practice (df = 22).

Rank Challenges in teaching practice	M	SD	t	MD*	p
1) Insufficient time for teaching practice	4.47	1.85	2.53	0.97	0.019
2) Lack of teaching aids/material	4.17	1.66	1.93	0.67	0.066
3) Unconducive environment at school	4.04	1.43	1.82	0.54	0.082
4) Undisciplined behaviors of students	3.69	1.33	0.7	0.19	0.488
5) Time mismatched with host school calendar	3.56	1.85	0.169	0.06	0.868
6) Problem of accommodation	3.43	1.99	-0.15	-0.06	0.877
7) Lack of orientation by university	3.3	1.58	-0.594	-0.19	0.558
8) Lack of financial support	3.21	1.62	-0.835	-0.28	0.412
9) Overload with work at schools	3.17	1.52	-1.02	-0.32	0.317
10) Negative attitude of school teachers	3.08	1.64	-1.2	-0.41	0.242
11) Lack of coordination between host schools and university	2.91	1.56	-1.8	-0.58	0.086
12) Inadequate supervision	2.83	1.3	-2.48	-0.67	0.021
13) Unfair placement of host schools	2.82	1.77	-1.82	-0.68	0.082
14) Lack of proper sitting place to work	2.74	1.79	-2.04	-0.76	0.05
15) Negative attitude of students	2.7	1.71	-2.24	-0.8	0.035
16) Lack of skills among cooperative supervisor	2.69	1.46	-2.64	-0.81	0.015
17) Lack of cooperation from cooperative supervisor	2.56	1.34	-3.34	-0.93	0.003
18) Exclusion from staff meetings at schools	2.34	1.49	-3.69	1.15	0.001
19) Overall challenges in teaching practice	57.78	15.41	-1.623	-5.21	0.623

*Mean differences (MD) are significant at $p < 0.05$

4.2. Gender and Age Differences in the Challenges Faced by the Undergraduate Student Teachers in Teaching Practice

The student teachers' gender and age differences in the challenges in teaching practice, were determined by an Independent t-test whereby gender and age of students were used as independent variables and the score of challenges was treated as the dependent variable. The results are presented in **Table 2** which show that the null hypothesis was accepted $t(21) = 0.379$, $p = 0.708$). It implies that there is no significant difference in the challenges in teaching practice as perceived by male and female teacher students.

Further, female student teacher faced fewer challenges in teaching practice ($M = 56.78$, $SD = 14.92$) than their males counterparts ($M = 59.33$, $SD = 16.92$). On the other hand, students of age up to 25 years (young students) faced fewer challenges in teaching practice ($M = 56.35$, $SD = 18.17$) than the students with age above 25 years (mature students) ($M = 60.00$, $SD = 10.36$), and this difference was also not significant, $t(21) = -0.544$, $p = 0.592$).

Table 2. Gender and age differences in the challenges faced by student teachers in teaching practice (df = 21).

Variables	Levels	n	M	SD	SE	t	<i>p</i>
Gender	Male	9	59.33	16.92	5.64	0.379	0.708
	Female	14	56.78	14.93	3.99		
Age	≤25 years	14	56.35	18.17	4.85	-0.544	0.592
	>25 years	9	60	10.36	3.45		

4.3. Effectiveness of Teaching Practice as Perceived by the Undergraduate Student Teachers

A sample t-test was employed to determine the effectiveness of teaching practice by testing the hypothesis: teaching practice is not effective. The score of all the items measuring teaching effectiveness was considered a test variable. The null hypothesis was rejected ($M = 77.08$, $SD = 12.88$, $t = 6.55$, $p \leq 0.01$), implying that teaching practice was effective (Table 3).

4.4. Gender and Age Differences in the Effectiveness of Teaching Practice

The students' gender and age differences in the effectiveness of teaching practice was determined by an Independent t-test to test the hypothesis. The gender and age of students were used as independent variables whereas the score of effectiveness in teaching was treated as the dependent variable. Table 4 results show that female student teacher perceived teaching practice as less effective ($M = 76.68$, $SD = 14.49$) than males ($M = 77.55$, $SD = 10.71$), but this difference was not significant, $t(21) = .137$, $p = 0.893$. Thus, there is no significant difference in the effectiveness of teaching practice perceived by male and female teacher students. On the other hand, mature student teacher perceived teaching practice as less effective ($M = 75.11$, $SD = 10.46$) than young student teacher ($M = 78.36$, $SD = 14.46$), but this difference was also not significant, $t(21) = 0.581$, $p = 0.567$.

Table 3. Effectiveness of teaching practice (df = 22).

Variable	M	SD	t	MD	<i>p</i>
Effectiveness in teaching practice	77.08	12.88	6.55	17.58	0

*Mean differences (MD) are significant at $p < 0.05$

Table 4. Gender and age differences in the effectiveness of teaching practice (df = 21).

Variables	Levels	n	M	SD	SE	t	<i>p</i>
Gender	Male	9	77.55	10.71	3.57	0.137	0.893
	Female	14	76.68	14.49	3.87		
Age	≤25 years	14	78.36	14.46	3.86	0.581	0.567
	>25 years	9	75.11	10.46	3.48		

4.5. Prediction of Teaching Practice Effectiveness

A Stepwise Multiple Regression analysis was used to predict the effectiveness of teaching practice. The challenges in teaching practice and teaching effectiveness were considered independent variables (predictors) and dependent variables, respectively. **Table 5** presented the results of the regression analysis indicated that the challenges in teaching practice are significant predictors of teaching practice effectiveness [$F(3, 19) = 15.71, p \leq 0.001$].

Regression coefficients of challenges reflecting their relative importance in teaching practice as predictors of the teaching practice effectiveness are presented in **Table 6**. Three challenges predictors of teaching practice effectiveness are: insufficient time for teaching practice ($\beta = 0.471, t = 3.070, p = 0.006$), un-conducive school environment ($\beta = .447, t = 2.872, p = 0.010$) and, unfair allocation of host schools ($\beta = -0.283, t = -2.217, p = 0.039$). These three predicting challenges contributed 71.3 percent ($R^2 = 0.713$) to the total variance in the effectiveness of teaching practice (**Table 6**).

5. Discussion

The study determined the challenges in teaching practice and its effectiveness as perceived by the pre-service teachers. Among the eighteen challenges considered in the study, insufficient time for teaching practice was the only challenge found to be significant. This finding is supported by [Araya, Hailu, & Kesete \(2020\)](#) and [Amankwah, Oti-Agyen, & Sam \(2017\)](#) who reported the short duration of teaching practice as a challenge perceived by the student teachers. Insufficient teaching practice is a common challenge since the pre-service teachers are not given enough time by the host schools. This is for a simple reason that the cooperative teachers in the host schools are expected to complete their syllabus within a specified period of time. Lack of time for teaching practice is one of the significant barriers that hinders effective teaching practice process ([Merritt, Archambault and Hale \(2018\)](#)). Therefore, the duration for teaching practice should be increased to make the teaching practice effective ([Nja & Sampson, 2020](#)).

Unconducive environment in host schools was the another important challenge that student teachers faced and, this finding was supported by the findings reported by [Afolabi, Adesanya, Shuaib, and Jimoh \(2019\)](#) and [Mohamad Nasri, Husnin, Mahmud and Halim \(2020\)](#). Undisciplined behaviors and negative attitude of students in classes are the major causes of unconducive environment ([Al-Momani, 2016; Özdas, 2018](#)) which disrupts the process of teaching and learning and, thus influence teaching practice effectiveness adversely ([Özdaş & Akpınar, 2016](#)). Most of the challenges in teaching practices can be adequately addressed by proper planning, organizing meetings and consultative workshops to orient students and other stakeholders before going into teaching practice. Host schools should be integral part of the implementation process of teaching practice so that potential problems, gaps, and lapses can be identified and rectified in time for improving the effectiveness of teaching practice.

Table 5. Challenges in teaching practice as predictors of teaching practices effectiveness.

Source	SS	DF	MS	F	<i>p</i>
Regression	2601.54	3	687.18	15.71	0
Residual	1048.28	19			
Total	3649.82				

Table 6. Relative importance of the identified challenges in teaching practice as predictors of teaching practices effectiveness.

Predictors	B	Beta	t	<i>p</i>
Constant	53.966	-	11.029	0.000*
Insufficient time for teaching practice	3.268	0.471	3.07	0.006*
Unconducive school environment	4.032	0.447	2.872	0.010*
Unfair allocation of host schools	-2.054	-0.283	-2.217	0.039*

* $p < 0.01$, $R = 0.844$, $R^2 = 0.713$.

Female pre-service teachers faced fewer challenges in teaching practice as than the males and Aljafar, Saeed, & Fatima (2020) supported this finding. It may highlight to the fact that the female students are either more skilled to counter the challenges or compromise with the challenges. Though the young and mature teacher students had no differences in the challenges in teaching practice, the young students faced fewer challenges in teaching practice than the mature students which is consistent with the findings reported by Alshammari, Eyadat, & Ebrahim (2017). Conclusively, the findings reflect that the challenges in teaching practice were the same not only for the male and female student teachers but also, for the young and mature student teachers.

The study revealed that the teaching practice was found to be effective which indicates that the pre-service teachers are satisfied with the existing provisions of their teaching practice program. No significant difference in the effectiveness of teaching practice was perceived by male and female teacher students. The findings are supported by Aljafar, Saeed, & Fatima (2020) and Dewaele, Gkonou, & Mercer (2018). No significant difference in the effectiveness of teaching practice was perceived by young and mature teacher students. However, mature student teachers perceived teaching practice as less effective than the young student teachers, but this difference was not significant. These findings indicated that the teaching practice effectiveness was the same not only for the male and female student teachers but also, for the young and mature student teachers. Baliyan and Moorad (2018) supported these findings who determined no age and gender difference in teaching effectiveness.

Predicting the teaching effectiveness, insufficient time for teaching practice, unconducive school environment and unfair allocation of host schools were determined the three predicting challenges of teaching practice effectiveness. The

pre-service teachers were concerned about the insufficient time period for the teaching practice. Therefore, pre-service teachers should be given sufficient time to understand and practice the master the art of teaching in the actual school and classroom environment which can further improve the teaching practice effectiveness (Nja & Sampson, 2020). Further, providing students teachers with sufficient time for teaching practice would also give the supervisors enough time not only to guide the pre-service teachers but also assess their quality of teaching practice appropriately (Jekayinfa et al., 2012). Schools are complex host environments which are composed of complex socio-economic and political factors (Kame'enui, Simmons, & Coyne, 2000; Schmitt & Justice, 2011). The student teachers need to understand and familiarize with the host school environment for an effective teaching practice. Further, unconducive environment and poor relationship with the host school are the source of anxiety for student teacher (Matoti & Lekhu, 2016) and, it becomes counterproductive if students are not placed in the host schools of their own choice where they feel comfortable. Schools are complex host environments and, stakeholders should understand the integrity of the school environment that influence teacher students' teaching, learning and development and thus may reinforce and circumvent efforts to cater for the needs of student teachers (Schmitt & Justice, 2011) as the catalyst to teaching practice effectiveness. Sugai, Horner and Gresham (2002) highlighted that "the effective practices should be identified time to time to improve the host school environment enabling to nurture and sustain effective teaching practice. The stakeholders in the teaching practice system do not usually work collaboratively to support students which may develop into an unsupportive environment hindering the effectiveness of teaching practice Sosibo (2013). Therefore, a need arises for an appropriate collaboration among the university and host schools to strategize on how to work better towards the development of an effective teaching practice system.

6. Conclusion and Recommendations

This quantitative study analysed the effectiveness and challenges in teaching practice as perceived by the student teachers. One sample t-test determined that teaching practice was effective as perceived by the student teacher. Independent t-test revealed no differences were determined in the effectiveness of teaching either between male and female students or between young and mature students. One sample t-test determined that there were challenges in teaching practice as perceived by the students. Ranking of the challenges revealed five challenges in teaching practice: insufficient time for teaching practice, lack of teaching aids/material, the unconducive environment at school, undisciplined behaviors of students, and, time mismatched with the host school calendar. Among these five challenges, insufficient time for teaching practice was the only significant challenge in teaching practice. Independent t-test revealed neither gender nor age differences were determined in the challenges in teaching practice. It indi-

cated that the challenges in teaching practice were the same not only for the male and female students but also, for the young and mature student teachers. Stepwise multiple regression analysis determined the insufficient time for teaching practice, unconducive school environment, and unfair allocation of host schools as the three challenges predicting the teaching practice effectiveness. It is therefore recommended to the university and host schools that appropriate policy be formulated and implemented to ensure the provision of sufficient time for teaching practice, conducive school environment, and fair placement mechanism to host schools for improving the teaching practice effectiveness. Conducting a qualitative study to explore the nature and extent of these three predicting challenges of teaching practice effectiveness can benefit the education policy-makers and administrators to develop appropriate strategies for improving teaching practice effectiveness.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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