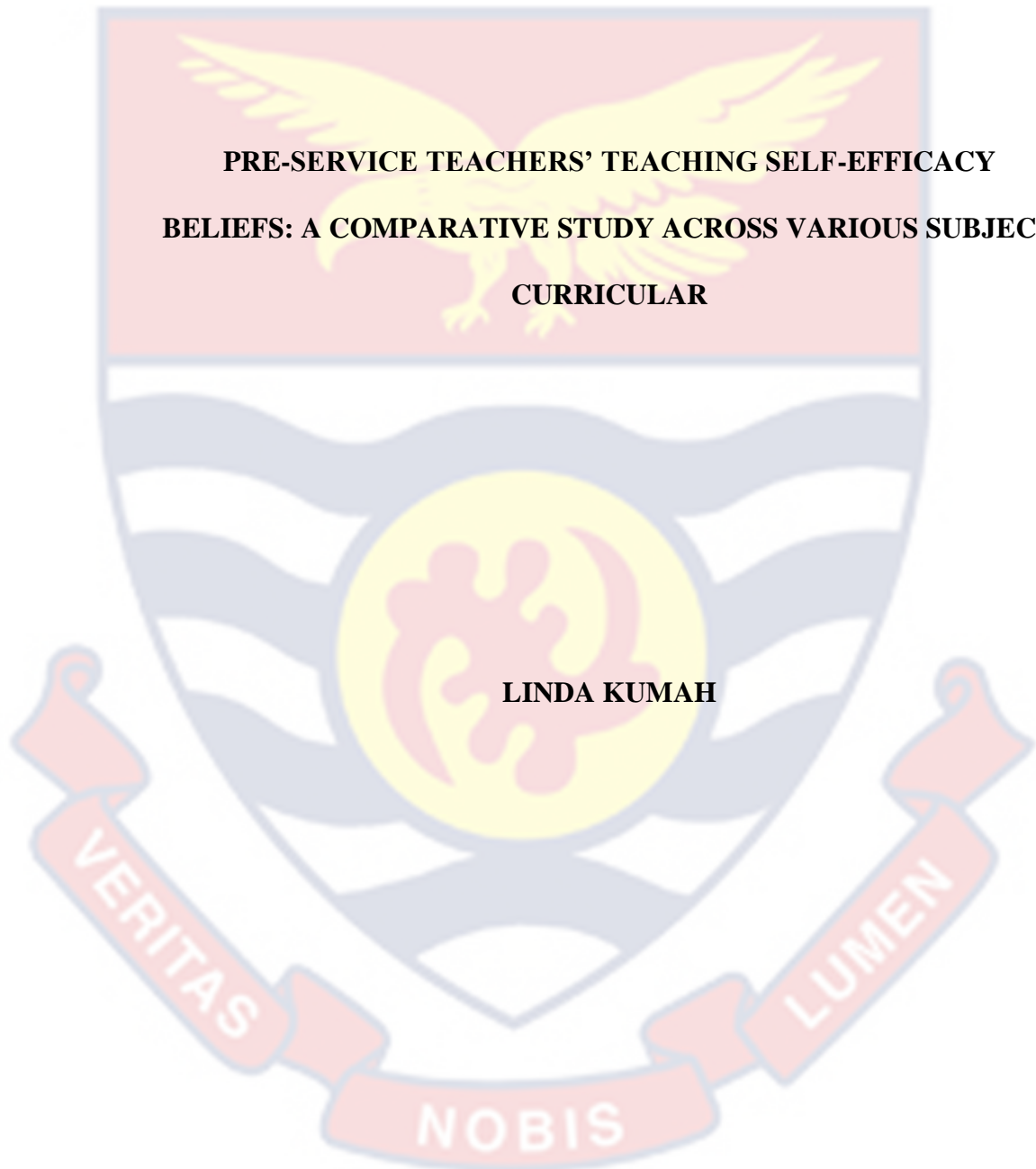


UNIVERSITY OF CAPE COAST



**PRE-SERVICE TEACHERS' TEACHING SELF-EFFICACY
BELIEFS: A COMPARATIVE STUDY ACROSS VARIOUS SUBJECT
CURRICULAR**

LINDA KUMAH

2023

UNIVERSITY OF CAPE COAST

PRE-SERVICE TEACHERS' TEACHING SELF-EFFICACY BELIEFS: A
COMPARATIVE STUDY ACROSS VARIOUS SUBJECT CURRICULAR

BY

LINDA KUMAH

Thesis submitted to the Department of Business and Social Sciences
Education of the Faculty of Humanities and Social Sciences Education,
College of Education Studies, University of Cape Coast, in partial fulfillment
of the requirements for the award of Master of Philosophy Degree in
Management Education

JULY, 2023

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature: Date:

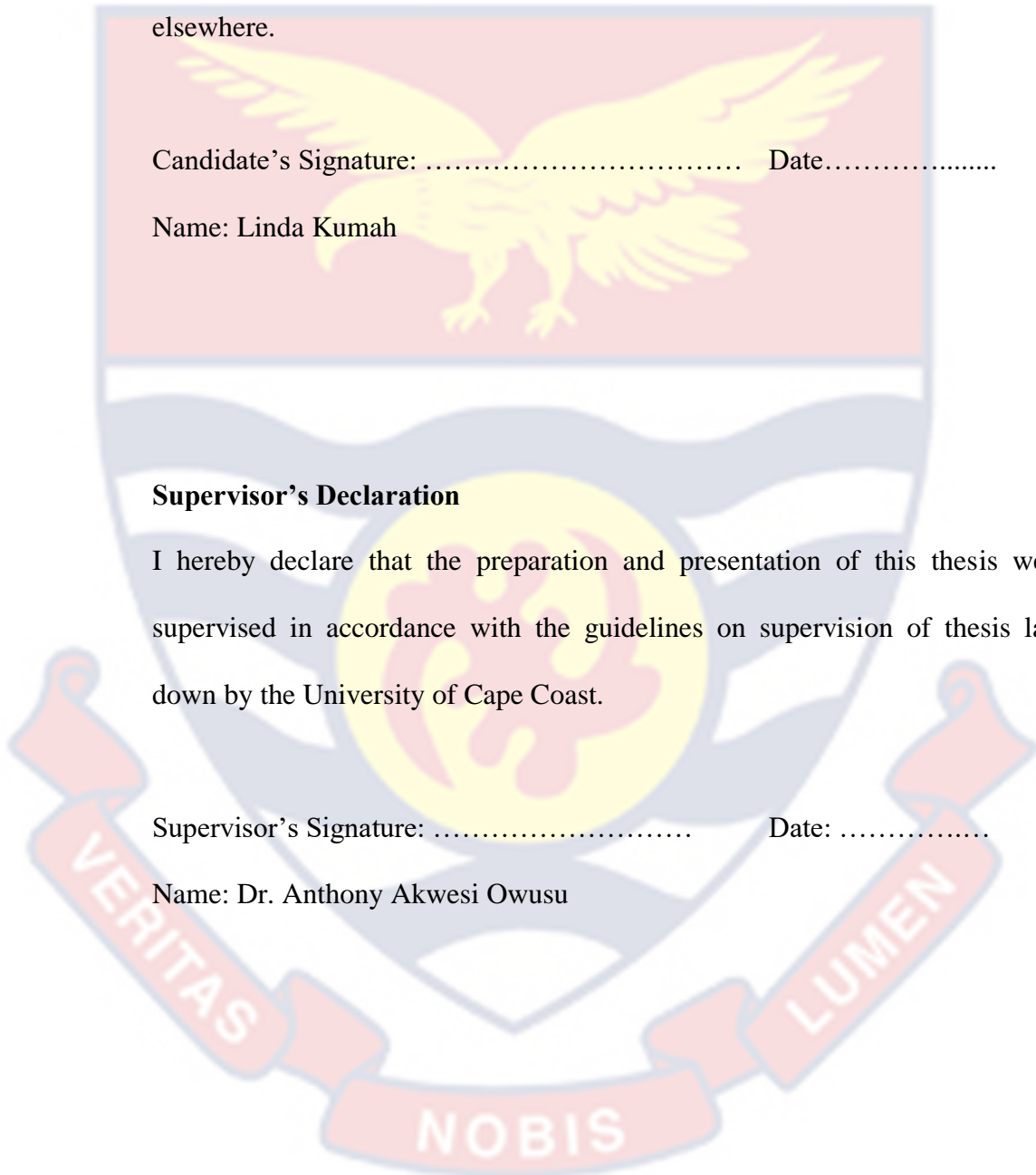
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Supervisor's Declaration

I hereby declare that the preparation and presentation of this thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Supervisor's Signature: Date:

Name: Dr. Anthony Akwesi Owusu



ABSTRACT

The study measured and compared the University of Cape Coast pre-service teachers' teaching self-efficacy across four programme areas: Bachelor of Education in Accounting, Management, Social Science, and Social Studies. It employed the descriptive survey design as a blueprint to obtain data from the final year University of Cape Coast pre-service teachers on their teacher self-efficacy levels. The study adopted the extended version of the Teacher Self-Efficacy Scale of 24 items. Data analysis was done using descriptive (frequencies, percentages, means, and standard deviation) and inferential statistics (Kruskal-Wallis H-Test and Mann-Whitney U-Test). The study found that pre-service teachers in the Department of Business and Social Science Education (B.Ed Accounting, Management, Social Science, and Social Studies) had a high level of self-efficacy in teaching their respective specialized subjects. Comparatively, the study found no significant difference in the level of teacher self-efficacy of the pre-service teachers in these four programme groups. Findings also revealed no statistically significant differences between teacher self-efficacy and the ages and gender of pre-service teachers. Based on the findings, it was concluded that the self-efficacy of the pre-service teachers do not differ with regards to age, programme, and gender variables. To enhance student engagement efficacy, it is recommended that educators and programme developers focus on effective strategies and practices while targeting all programme groups for future educational interventions and programmes.

KEYWORDS

Classroom management

Instructional strategies

Pre-service teachers

Self-efficacy

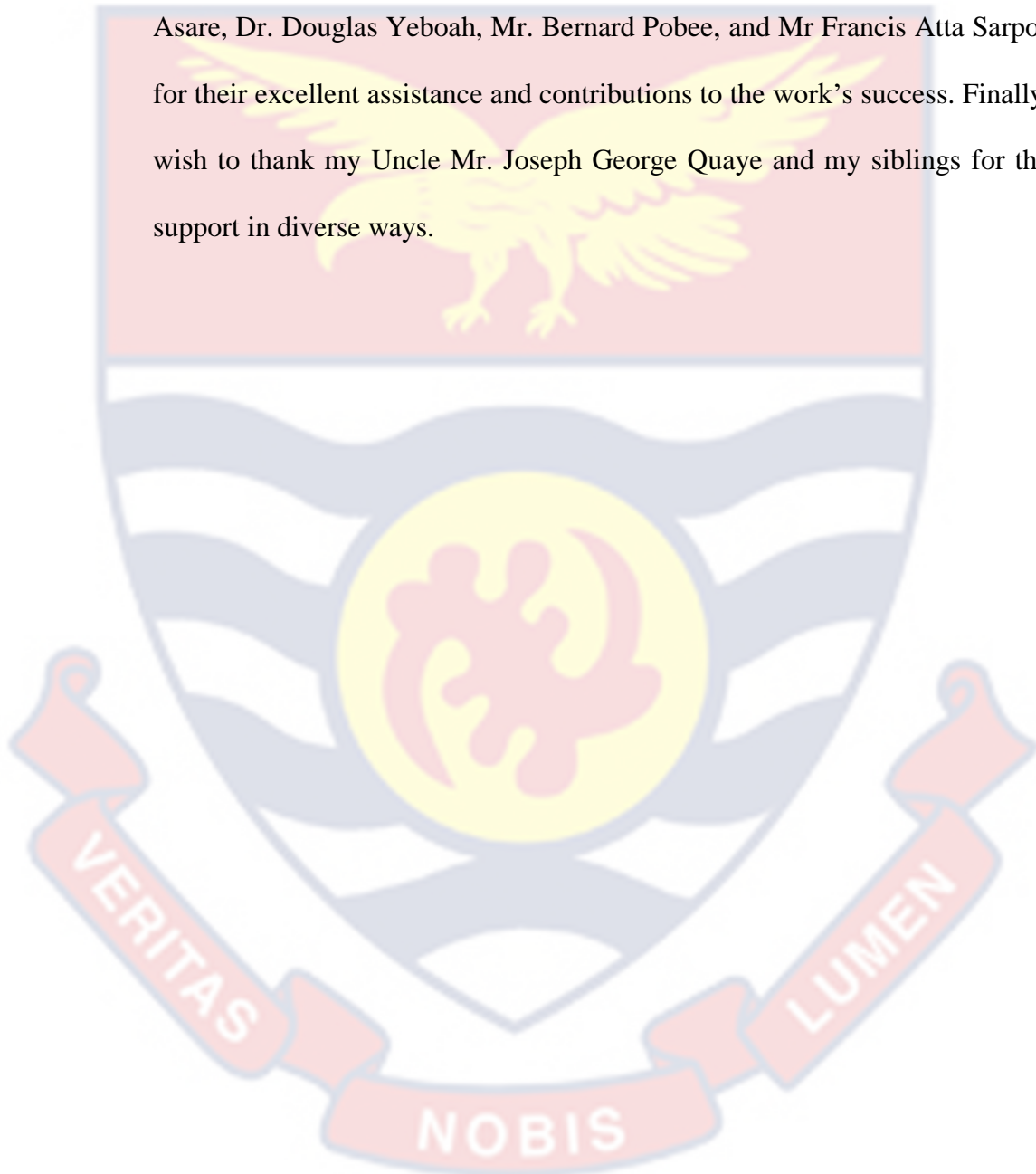
Student engagement

Teacher self-efficacy



ACKNOWLEDGMENTS

I express my profound gratitude to my supervisor, Dr. Anthony Akwesi Owusu, for his selfless effort, guidance, patience, commitment, and useful suggestions in completing this thesis. I also want to thank Dr. Prince Yeboah Asare, Dr. Douglas Yeboah, Mr. Bernard Pobee, and Mr Francis Atta Sarpong for their excellent assistance and contributions to the work's success. Finally, I wish to thank my Uncle Mr. Joseph George Quaye and my siblings for their support in diverse ways.



DEDICATION

To my late Mum, Mrs. Elizabeth Maame Ekua Essoun Sagoe



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LIST OF ACRONYMS

OFCTP Off-campus Teaching Practice

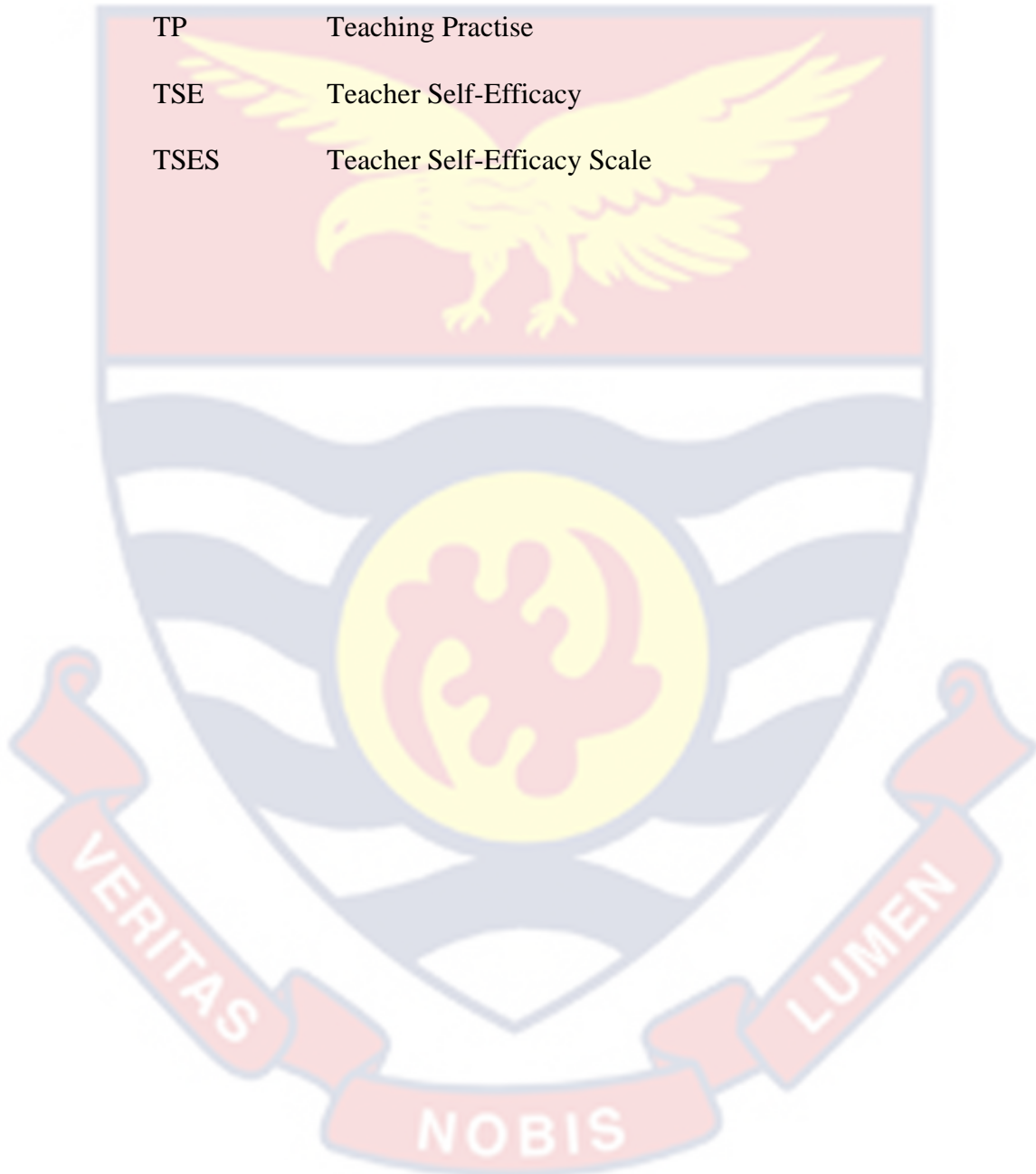
ONCTP On-Campus Teaching Practice

PSTs Pre-service Teachers

TP Teaching Practise

TSE Teacher Self-Efficacy

TSES Teacher Self-Efficacy Scale



CHAPTER ONE

INTRODUCTION

Existing literature has made it evident that producing quality teaching force is a prerequisite for all nations which aim at improving their educational sector. A quality teaching force must have high level of teaching competencies and a high level of believe in their ability to teach and perform all other teaching task as expected. To attain this, teacher education institutions must put strategies in place to make sure they produce pre-service teachers with higher level of teaching self-efficacy. The study therefore aims at measuring and comparing the self-efficacy levels of pre-service teachers in four selected programmes offered in the University of Cape Coast.

Background to the Study

Teacher education in Ghana is based on the philosophy of producing teachers who have the necessary professional skills, attitudes, values, confidence, content knowledge, as well as a spirit of inquiry, innovation, and creativity to be dynamic, use inclusive strategies, and engage in life-long learning (National Teaching Standards for Ghana, 2017). Tertiary teacher education programmes in Ghana aim to prepare teachers to develop and nurture young minds to be functional citizens to facilitate national development (Ministry of Education, 2002). Teachers must be passionate about teaching, and this enthusiasm must be reflected in their work. To be effective change agents, teachers must interact with members of the school community and the larger community (National Teaching Standards for Ghana, 2017). Another quality that makes a good teacher is the teacher's

beliefs about his/her ability to teach. This is referred to as teacher's self-efficacy.

The self-efficacy concept as proposed by Bandura (1979) was defined "as individuals' beliefs about their capabilities to carry out a particular course of action successfully" (p. 8). Thus, the belief that a person holds in his/her ability to perform a certain task as expected. Also, Dibapile (2012) explained that the self-efficacy of a teacher refers to the teacher's belief in his or her own ability to perform the teaching activities. In the work of Berman (1977), teacher efficacy was defined as "the extent to which the teacher believes he or she can affect student academic performance" (p.19). Narrowing it to the field of education, teacher self-efficacy is the teacher's belief or conviction in their teaching competence to effectively manage the classroom, use instructional strategies, and engage students. Both teachers' and students' performances are impacted by these factors (Batool & Shah, 2018). Teaching self-efficacy was conceptualized in this study as the belief of the pre-service teacher in his or her ability to employ variety and appropriate instructional strategies, effectively manage the classroom, and engage students in a manner that will facilitate teaching and learning.

Self-efficacy beliefs operate as a mediator between a teacher's knowledge of their skills and their future actions. As a result, "efficacious people are less likely to engage in demanding tasks that may be beyond their ability, are less likely to exert more effort and persevere longer in the face of difficulty, and are less likely to dwell on personal flaws or perceive future obstacles as more difficult than they are" (Bandura, 1979, p. 24). According to Bandura (1979), "self-efficacy can increase upon four main sources of

information which are mastery experiences, vicarious experiences, social persuasion and stress reactions or psychological and physical aspects” (p.10). Aside from these sources, the amount of content knowledge (CK) and pedagogical knowledge (PK) are important predictors for teaching self-efficacy, mostly for personal and social science teachers' teaching self-efficacy (Rohaam, Taconis, & Jochems, 2012; Schoon & Boone, 1998).

An analysis of the professional education standards shows that teachers must be prepared in three domains; knowledge, disposition, and performance. At the University of Cape Coast, the teacher education programme is structured alongside four critical components which are content courses, education and pedagogy, professional studies, and practicum (Asare, 2021). The content courses are structured and taught to increase the knowledge base of PST and prepare students with the content knowledge to teach children with diverse and varying learning needs and backgrounds. Appropriate educational pedagogical content knowledge is also taught to boost the pedagogical skills of all PST. At the university, teachers are trained in specialized curriculum areas and are made to specialize as subject teachers depending on their major and minor courses of study.

The Department of Business and Social Science Education (DOBSSE), as a department under the Faculty of Humanity and Social Sciences Education of the University of Cape Coast, offers 4-year Bachelor of Education (B.Ed.) programmes in Accounting, Management, Social Science, and Social Studies. Although the PSTs may differ in terms of age and gender, the entry requirement for these programmes is from an aggregate of 13 to 16 or better, meaning that students who enroll in these programmes have similar entry

characteristics in terms of academic performance and task ability (UCC, 2020). The four-year programme is designed so that the students who enroll in the educational programme (pre-service teachers) are wholly equipped with the theoretical and practical aspects of teaching. This total training package must aid in the development and improvement of the beliefs and confidence level of the PST at the final stage of training is expected to make them ready for the actual teaching task ahead irrespective of their gender or age.

Out of the eight semesters, the first five are used to train PST on theoretical knowledge, which spans from general knowledge history of Education to subject content and methodologies used in teaching. In each area of specialization, programme-specific contents are structured and rolled out to teach the PST to increase their content and pedagogical knowledge, enhancing their confidence level to perform the teaching task. During the four-year programme, various presentations, seminars, workshops, conferences, and orientation sessions are organized to increase vocal abilities, knowledge base, and general confidence and beliefs of the PST. The sixth and seventh semesters are the times for practicum. The Center of Teacher and Continuing Professional Development is responsible for facilitating the process of teaching practicum by coordinating teaching practice among pre-service teachers in sessions. Teaching practice sessions are hands-on, student-centred activities that equip pre-service teachers with the skills, knowledge, and abilities needed to become professional educators. This exercise is a requirement for the successful completion of all education programmes. Brown and Brown (1990) stated that the teaching practice session is one of the most crucial components of every teacher-training programme. The practical

session is carried out in two main phases: the campus teaching or On-Campus Teaching Practice (ONCTP) and field experiences (Off-Campus Teaching Practice - OFCTP).

The ONCTP is a form of simulation or peer teaching where students are sub-divided into mini-groups to represent a class. These mini-groups are made to teach in sessions. The sessions are carried out in the presence of two supervisors (mostly professional teachers) who observe, appraise, and advise the performance of PST. After each teaching session for the ONCTP, peers are invited to appraise or assess the performance of their colleagues in a feedback discussion. The feedback given to students may be a form of verbal persuasion that provides a source of information that helps to develop or reduce the beliefs of PSTs. This phase is based on the premise that providing opportunities for prospective teachers to teach in a familiar context will increase their self-confidence as teachers. Also, through the feedback they offer, this phase assists lecturers in reinforcing what has been trained in various courses (i.e., topic, technique, psychology, and curriculum). It ensures the modification and development of professional competencies before real practical experiences. The purpose is to adequately prepare PSTs and increase their confidence and belief to face the real world.

The next phase of the practical aspect of the training is the Off-Campus which is the actual field experience. Since a natural teaching setting is required, true teaching is given during practice to maximize the likelihood of transferring the acquired teaching abilities and activities. The OFCTP sessions are supervised teaching practice sessions in which the PST participates in teaching activities that demand the demonstration and adaptation of skills and

knowledge acquired in ONCTP sessions to real-world classroom scenarios under the observation of a trained professional. It is anticipated that when pre-service teachers go through this model of teacher development, they will gain a deep understanding of the content in their various subject areas, become well-versed in methodologies, and be able to skillfully integrate content knowledge and appropriate pedagogical knowledge, boosting their confidence in the classroom. All these critical component activities are embedded with the main aim of enhancing pre-service teachers' quality, abilities, confidence, beliefs, and readiness to engage students effectively, provide accurate and varied instructional strategies and ensure effective class management. Teachers' perceived self-efficacy is not an assessment of their skill set but rather their confidence and belief in what they can and cannot do, given their skills, in particular situations (Sarfo, Amankwah, Sam & Konin, 2015). The future success of the nation's educational system depends upon many things, one of which is the belief teachers have in themselves to manage the classroom, introduce varied instructional strategies and engage students in all domains.

Lecturers who are made to train these PST are academicians with the varied qualifications and specializations needed to improve the teaching of various subject areas. Teachers are encouraged to put theory into practice by using various teaching methods and strategies when delivering a unit of instruction to ensure that students acquire the intended knowledge and skills (Voss, Kunter & Baumert, 2011). The nature of specialization in the procedures and lecturing methods of the various programmes may induce a corresponding level of confidence and belief in each specialized group. It

might create variations in their confidence and belief level, thus, their level of teaching self-efficacy.

Statement of the Problem

The problem of this study originated from my observation as a class teacher in a public school. I observed that pre-service teachers go through a series of teaching phases during the actual field teaching, coupled with doubts about their abilities. This makes them unstable and negatively affects their instructional strategy application and delivery, classroom management, and student engagement skills. This observation is in line with an article by Ellen Moir titled phases of first-year teaching. According to her, first-year teaching is a difficult challenge, and newly trained teachers go through phases of anticipation, survival, disillusionment, rejuvenation, and reflection (Moir, 2013). Ideally, it is expected that PSTs, after going through the programme, should be able to master the teaching skill and develop a solid belief to perform the teaching task as expected.

In contrast, most pre-service teachers need help teaching their own specialized subject areas they have learned throughout their training. Teachers' boldness and confidence levels seem to reduce when they face the actual teaching experience. They become uncertain and question their confidence, beliefs, and ability to manage the classroom effectively, employ accurate instructional strategies, and engage students. Tschannen-Moran and Woolfolk-Hoy (2007) suggest that it is essential to encourage the development of the self-efficacy of teachers to produce successful, dedicated, and enthusiastic teachers. Therefore, there is a need to determine pre-service teachers' level of

teaching self-efficacy and find a way to develop and improve upon them if necessary.

Existing literature revealed that several studies had been done on teachers' self-efficacy in specific subject areas worldwide. Philippou and Christou (2002) conducted studies on teacher beliefs in mathematics; Blonder, Benny, and Jones (2014) and Liang and Richardson (2009) in science; Wyk (2012) Ntarmah, Gyan, Gyedu and Cobbinah (2019); Quartey (2016) in Economics; Erer and Hazir (2017) in Accounting; Siaw-Marfo (2011) in Social Studies; Batool and Shah (2018) in the English Language. Many of these studies focused on the in-service teacher (ISTs) but not PSTs' self-efficacy about other variables. The findings from these studies interpreted teachers' level of teaching self-efficacy in various subject areas, but there was no comparative study.

Teacher efficacy studies conducted at the University of Cape Coast measured the teaching self-efficacy of various department programmes and course areas. Some of these include investigations on self-efficacy beliefs of cost accounting pre-service teachers (Sappor, 2020; Kwarteng & Sappor, 2021). A different survey by Kwarteng (2016) on anxiety levels of pre-service accounting teachers in the university revealed that some were ill-prepared to implement the Cost Accounting curriculum. This means that the belief levels of pre-service Accounting teachers to implement the Cost Accounting curriculum were low due to anxiety levels during teaching practice sessions. Asare (2021) also concluded that management pre-service teachers' anxiety and confidence levels greatly affect their teaching quality and effectiveness. However, in his findings, pre-service management teachers had a high level of

teacher self-efficacy. All other things being equal, since applicants for the business and social sciences programmes have similar entry requirements in terms of grades and go through the same years of training. It is expected that by the end of their training, they will all have developed their teaching self-efficacy in instructional strategies, classroom management, and students engagement to enhance teaching and learning.

A careful review of the literature shows that studies came with different conclusions and findings in their respective subject or programme areas. However, it must be noted that since other circular subject specialists or lecturers are assigned to train these various groups, their approaches, methodologies, and steps in the developmental processing of the PSTs may differ. This may result in differences in belief and confidence levels among various groups or programmes. There is no empirical evidence for a comparative study of the various pre-service groups on teachers' efficacy in teaching multiple subjects at the pre-tertiary level. The focus of this study is to provide information that will add to existing literature. The preceding has necessitated the conduct of this study, which sought to measure the teaching self-efficacy levels of the various programme under the department and compare to find out the multiple levels of teaching self-efficacy in terms of classroom management, students' engagement, and the uses of instructional strategies.

Purpose of the Study

The study aims to measure and compare University of Cape Coast pre-service teachers' self-efficacy in teaching Accounting, Management, Social Science, and Social Studies. The study specifically sought to:

1. measure the teachers' self-efficacy beliefs of PST in the teaching of their major teaching subjects .
2. compare the self-efficacy levels of PST in Bachelor of Education in Accounting, Management, Social Science and Social Studies in the areas of:

- i. Instructional Strategies Efficacy
- ii. Classroom Management Efficacy
- iii. Students Engagement Efficacy

3. compare the self-efficacy levels of PST based on age and gender

Research Question

What are pre-service teachers' self-efficacy beliefs in teaching their major teaching subject?

Hypotheses

The following hypotheses were formulated to compare the teachers' self-efficacy beliefs of pre-service teachers based on gender and age.

1. H_0 : there is no statistically significant difference in pre-service teachers' level of instructional strategy efficacy with regard to their programme of study.
2. H_0 : there is no statistically significant difference in pre-service teachers' level of classroom management efficacy with regard to their programme of study.
3. H_0 : there is no statistically significant difference in pre-service teachers' level of student engagement efficacy with regard to their programme of study.

4. H_0 : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to their gender.
5. H_0 : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to their age.

Significance of the Study

This study contributes to the existing knowledge on teacher self-efficacy of pre-service teachers. The findings from this study will provide rich information to various interest groups such as instructional evaluators, lecturers, administrators, instructional designers, PST, and researchers at the University of Cape Coast.

Information on the level of teacher self-efficacy will help instructional evaluators to depict the quality of training in each programme. Also, the study provides data to lecturers to address the teacher self-efficacy of pre-service teachers in the programmes examined. Also, the study provides information that will help one see how students might differ in self-efficacy levels. This might help one revisit assumptions about a particular programme of study for PST.

Availability of information on PST efficacy beliefs is an important step that enables positive educational experiences to be designed for pre-service teachers in teacher education programmes. Therefore, this study will also provide instructional developers with information to help adjust and amend the training process and programme course delivery in a way that will address the training needs of pre-service teachers to develop their confidence and impart their belief level on their ability to perform the teaching task ahead.

The findings also provide recommendations that benefit PST to understand their efficacy in classroom management, instructional strategies, and student engagement to improve upon them soon as teachers and also become aware of their weaknesses as pre-service teachers and ways to overcome them should they become teachers after graduating school. Lastly, the study's findings provide grounds for further studies since researchers in education within the university can capitalize on the gaps and related areas of the study.

Delimitation

This study was purely quantitative and adopted solely to the descriptive survey design. Descriptive design was employed for this study because it aims at characterizing current phenomena and their features. In this study, the recent phenomenon under investigation is the teaching self-efficacy of preservice teachers. In terms of population, the study was restricted to level 400 pre-service teachers pursuing education programmes within the Department of Business and Social Sciences Education (DOBSSE) within the Faculty of Humanities and Social Sciences Education (FOHSSE) at the University of Cape Coast. Only level 400 students were involved in the study because they had practical teaching experience as PST during the off-campus teaching practice. Again, they have had enough experience as pre-service teachers compared to their counterparts in Levels 300, 200, and 100.

In terms of content, the only psychological variable measured was teaching self-efficacy. This was subdivided into only three-dimensional variables; the study focused on teachers' self-efficacy in student engagement, classroom management, and instructional strategies, and the Teacher Self-

efficacy (TSES) instrument was adapted. The demographics data on the participants were delimited to age, gender, programme of study, and major course. Lastly, the study was delimited to self-efficacy theory propounded by Bandura (1979).

Limitations

This study, just like most studies, had limitations. Descriptive statistics are limited in that they can only be used to produce summaries about the people or objects you have measured. You cannot generalize the information you've gathered to other populations. Furthermore, only close-ended questions were employed because the study was strictly quantitative. This may have prevented respondents from responding, which may have added to the study's value. The use of a close-ended questionnaire can be impacted by biases due to the inclusion of biased statements in the measuring instrument, thereby distorting the study findings.

Participation in the study, especially the Social Science pre-service teachers, were also a limiting factor. Many individuals were reluctant to take a few minutes to complete a survey. Even if it was for the cause of study, some people needed more time to devote their time. This reduced the return rate to 70%. The above limitations were anticipated in the course of the research, and therefore efforts were taken to minimize their effects on the study findings. Another limitation of this study was the need for more literature on the subject. Although there are numerous studies on teacher self-efficacy, much had not been done comparative-wise. This did not give the researcher more literature base to argue on and compare finding.

Definition of Terms

Pre-Service Teachers (PSTs): Students who are under training in an educational programme to be professional teachers. In some contexts, they are referred to as student-teachers.

Self-efficacy (SE): beliefs a person holds in their ability, which are an individual's perception about their capabilities to accomplish specific tasks.

Teacher Self-efficacy (TSE); confidence and belief in one's ability to perform the teaching task as expected. This study has three variable dimensions: Instructional Strategies, Classroom Management, and Student engagement.

Classroom Management (CM): Pre-servers teachers' efforts to oversee classroom operations, including learning, social interaction, and student behaviour.

Student Engagement (SE): The act of involving students in learning using motivational techniques to progress in their educational goals and outcomes.

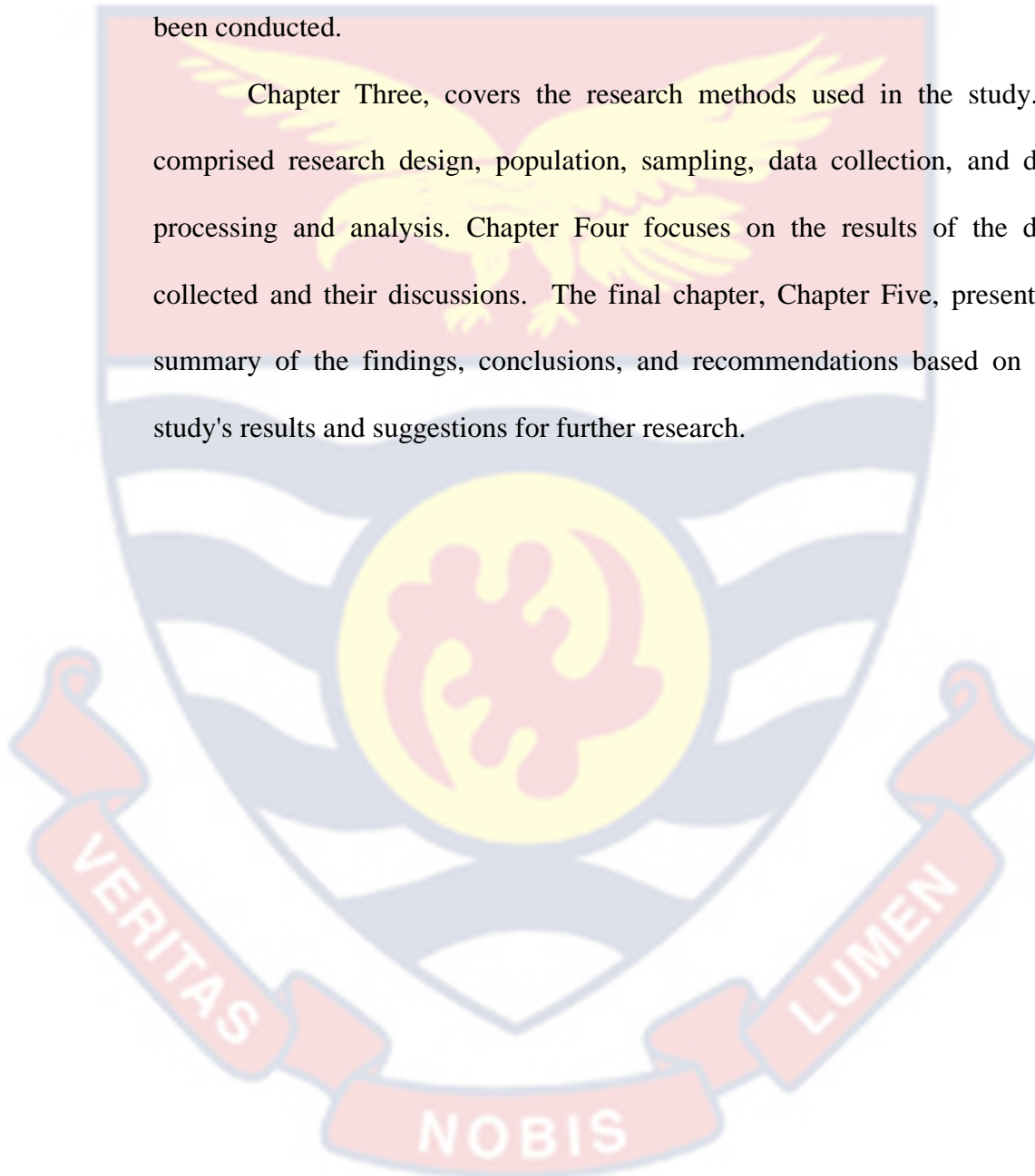
Instructional strategies (IS): The techniques and methods that teachers apply to their instructional delivery to make lessons effective and promote better understanding.

Organisation of the Study

This study consisted of five chapters that discussed the various aspects of the research study. Chapter One of this study focuses on the introduction, which includes the background to the study, statement of the problem, the purpose of the study, research objectives, research questions, significance of the study, delimitation, limitations, definition of key terms, and finally, the

organisation of the study. Chapter Two also discusses relevant literature relating to the survey; this chapter was divided into sub-sections; thus, theories that served as the basis of the study, the review of related concepts, conceptual framework, and empirical review, which looks at associated studies that have been conducted.

Chapter Three, covers the research methods used in the study. It comprised research design, population, sampling, data collection, and data processing and analysis. Chapter Four focuses on the results of the data collected and their discussions. The final chapter, Chapter Five, presents a summary of the findings, conclusions, and recommendations based on the study's results and suggestions for further research.



CHAPTER TWO

LITERATURE REVIEW

Introduction

This study reviews studies undertaken by other researchers that are relevant to the topic. The review of pertinent literature allows for a comparison of the findings of this study with those of other comparable studies, which may be used to validate or refute previous findings and conclusions, as well as place the current research in context. The chapter consists of a theoretical review, conceptual review, conceptual framework, and empirical review.

Theoretical Review

This study aimed to measure and compare the teacher self-efficacy levels of PST at the University of Cape Coast. This section of the study was devoted to the review of theories that are relevant to the study. The study reviewed the self-efficacy theory by Bandura (1979).

Self-Efficacy Theory

Self-efficacy belief is a component of social cognitive theory. It has its foundation from Rotter and Rand researchers. According to Julian Rotter in 1966, if an individual changes how they think or change the environment they respond to, then such an individual's behavior will undoubtedly change. This brought the idea that an individual's thought influences behavior, which is the foundation for the self-efficacy theory that Bandura postulated.

Bandura (1979) described self-efficacy as an individual's belief in their capacity to do an activity that will effectively lead to achieving a specific objective. This means the self-efficacy belief gives an individual the needed

confidence to perform a given task and yield desirable and expected outcomes. Self-efficacy is regarded to be context and domain-specific. This indicates that one may have differing self-efficacy beliefs in different domains or situations. Bandura (1979) proposed two self-efficacy expectation models. There are two types of expectation: outcome expectancy and efficacy expectancy. Efficacy expectancy refers to the conviction that a person can complete the conduct that leads to the intended outcome. Outcome expectancy, on the other hand, refers to the idea that a person's activity will result in a specific product.

In the views of Mani and Prabu (2019), self-efficacy is the judgement a person gives on their capabilities to create and execute a task to achieve maximum performance. This level of confidence and belief encourages individuals to invest more effort and persist in facing a challenging task. Also, Olson and Peterson (2015) indicated that self-efficacy is the degree or quality of an individual's belief in one's abilities to execute tasks and achieve the desired goal. However, it must be noted that ideas alone do not bring about a complete job accomplishment. The achievement of a task is the product of both knowledge skills and a strong sense of efficacy of the accomplisher to deploy resources effectively (Bandura, 1979).

According to Bandura (1979), self-efficacy can develop from four critical sources of information: "mastery experiences, verbal persuasion, vicarious experiences, and physiological and affective states. These sources of self-efficacy beliefs depict that self-efficacy beliefs are formed and developed over time" (Bandura, 1979, p. 79).

These proposed sources imply that PSTs' self-efficacy beliefs can be developed through information obtained from various mastery and vicarious

experiences encountered in their training process, specifically, the actual practicum activities and experiences as well as one's mental arousal. According to studies, "enactive mastery experiences are regarded as the most significant source of efficacy information among the four sources since they provide the most direct and real evidence that an individual can acquire the personal resources required to achieve" (Bandura, 1979, pp. 32). Mastery of skills increases self-efficacy and encourages people to see themselves as competent and able to achieve their goals. Furthermore, regular mastery of tasks and activities reassures people that they can achieve their goals and succeed (Bandura, 1997). An individual's efficacy level is likely to increase when continuous progress is attained on a difficult task with less or no assistance and setbacks. Since mastery of experience has been acknowledged as the most important source of information, the university, in its programme structure for the Bachelor of education programmes, has embedded various sessions of teaching practices from which all forms of mastery of the teaching task are obtained. The rich information obtained from both the on-campus and off-campus teaching practice has a high degree of tendency to improve the teaching self-efficacy of PSTs.

Again, Bandura (1979) indicated that PST, from the first of their enrollment to be trained as teachers tune their psychological make-ups toward teaching and take the various components seriously. They observe and gather experiences from their lecturers and mentors in the teaching field. During on-campus instruction, PSTs practice these experiences and advance to the actual teaching field, where they exhibit mastery of a range of skills and experiences obtained. Vicarious experiences are witnessed examples or incidents endured

by others who are similar to oneself and have the potential to improve one's sense of efficacy (Tschannen-Moran & Woolfolk-Hoy, 1998). Vicarious experience refers to situations in which someone else models the talent. The observer's self-efficacy is influenced by how much they identify with the model. When pre-service teachers observe lecturers during the lecturing of content, they observe and pick up certain essential elements that activate their interest and increase their beliefs to perform teaching skills. Some lecturers make the teaching profession appealing and exciting, while others make it unattractive to learners.

Also, pre-service teachers can gather vicarious experiences by observing their peers as they practice teaching during on-campus teaching sessions. When a model with whom the observer has a positive relationship performs well, the observer's efficacy is increased. When a model performs poorly, the observer's efficacy expectations drop. Also, during the teaching practice, both 'on' and 'off-campus teaching sessions, supervisors and mentoring teachers give constructive feedback, and complimentary comments or pep talk forms part of verbal persuasion, which together gives relevant information to build the teaching self-efficacy of PSTs. Feedback can encourage or criticize one's performance, which can indicate failure or success that needs to be addressed to improve performance. Past achievements, as one might assume, boost efficacy perceptions, whereas repeated failures, on the other hand, diminish them (Bandura, 1979).

The impact of a person's performance success is a little more complicated than that. For example, occasional failures' negative impact is likely lessened when repeated success leads to high efficacy expectations

(Bandura, 1979). As a result, the effect of loss on personal efficacy is influenced by the strength of an individual's current efficacy beliefs and the timing of failures in the context of their whole experience. In other words, when a strong sense of efficacy has developed, later failure has a lower influence on effectiveness than early failure. According to Tschannen-Moran and Woolfolk Hoy (1998), social persuasion can overcome failures that would otherwise produce enough self-doubt to sabotage tenacity. Persuasion power is determined by the persuader's credibility, trustworthiness, and expertise.

To ensure the continuous improvement of well-trained teachers, pre-service teachers need guidance in teaching practice (Restubog, Florentino & Garcia, 2010). For this to be verbal, social persuasion should frequently occur, especially when there is uncertainty about an individual's capacity to teach, causing inexperience. This becomes more possible when verbal or social persuasion frequently occurs, especially when the uncertainty about the capacity of teaching, arising from their inexperience, is commonly complemented with appropriate forms of reinforcement from other significant people in the field (Martins, Onofre, & Costa, 2014).

The last source of efficacy information is physiological and emotional feedback received while performing the teaching activities. Bad feedback and stress can harm one's mood. Individuals predict success to a greater extent when they are not overtaken by any discouraging element or stress reactions than when they are tensed and viscerally disturbed (Bandura, 1979).

The development of self-efficacy is a continuous process. It fluctuates giving new experiences in the classroom, and feedback from peers and

influential people, as well as an individual's state of mental being. Individuals mentally evaluate information presented by physiological responses, which can affect efficacy perceptions positively or adversely depending on arousal level and cognitive assessment (Bandura, 1986).

It must be noted that although all four kinds of information are essential for the creation of efficacy beliefs, however, the most critical issue is how this information was interpreted. Cognitive processing governs how information sources are weighed and how they influence understanding the teaching task, its context, and the evaluation of personal teaching competence.

Conceptual Framework

The framework adopted for this study was designed based on the Teacher Self-Efficacy Scale (Tschannen-Moran & Woolfolk -Hoy, 2007) and modeled the self-efficacy theory propounded by Bandura (1986) with the study's research questions and hypotheses as a guide. In the model, PSTs' self-efficacy level was measured on three dimensions of teaching self-efficacy; instructional strategies, student engagement, and classroom management. The researcher also considered the influence of age and gender on pre-service teachers' self-efficacy levels.

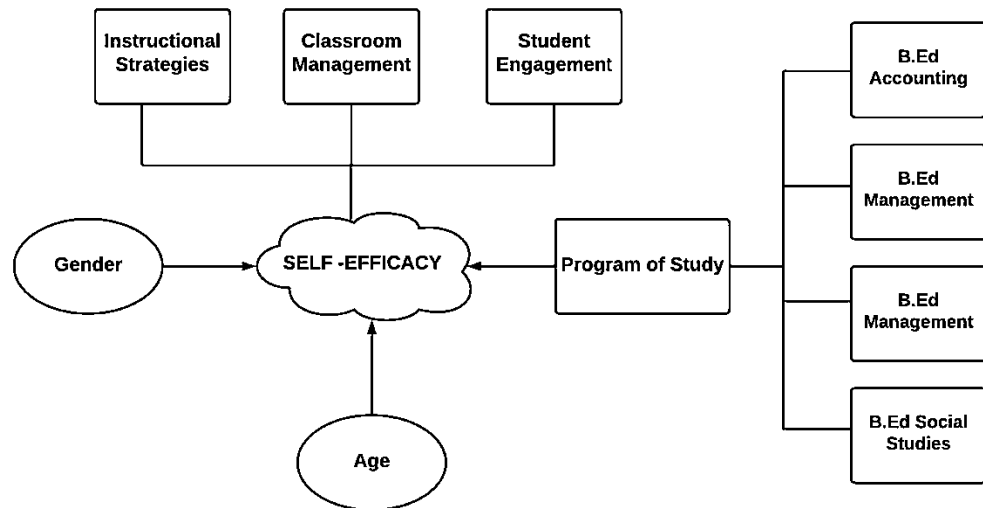


Figure 1: Conceptual framework

Source: Author's construct, 2021

As seen in the framework of figure 1, this section considered measuring the teaching efficacy levels of PST in teaching their various subject curricula (Accounting, Management, Social Studies, and Social Science). In this framework, PSTs' self-efficacy belief is subdivided into three dimensions (instructional strategies, student engagement, and classroom management efficacy). The diagram shows a one-way arrow from the programme of study to PSTSE, showing the influence of each programme of study on each of the three dimensions of TSE. The level of power of each programme in teaching the various subject curricula was used as the basis for comparison.

Figure 1 explains the influence of each of the programmes on their level of belief to manage the classroom effectively, to engage a student in all forms of activities both in and out of the class, and their level of confidence in their ability to employ the appropriate instructional strategies to the proper group of learners efficiently as expected. It also shows the link of influence between other variables, such as age and gender, on the level of TSE. These will serve as the basis for the comparison.

Conceptual Review

Concept of self-efficacy

Efficacy is an intellectual activity that leads to an individual's development of beliefs and capacity to attain or perform a task to a given degree. Bandura's work in 1979 has been linked to efficacy perspectives. He described efficacy as an intellectual activity that develops an individual's belief in their potential to reach a given level of success. Bandura ((1979) advocated for the formation of precise ideas about one's potential to change.

Self-efficacy is a person's conviction in their capacity to attain specific results based on their activities (Bandura, 1986). Self-efficacy is essential and influential in one's behaviour and performance. Although there are several dimensions of self-knowledge, none is arguably more significant in people's everyday lives than their perceptions of efficacy (Bandura, 1986). Individuals with a high level of self-efficacy might often accomplish tasks that exceed their capabilities. In contrast, those with a low level of self-efficacy might result in underestimation of their abilities, thus, leading to non-accomplishment of tasks (Bandura, 1986). Self-efficacy is a person's belief that they have control over their personal, professional, and social lives. Self-efficacy can influence feelings, thoughts, and behaviour (Schunk & Pajares, 2010). It is self-evident that for a task to be completed successfully as expected, the individual must possess the necessary skills backed up by the individual's opinion of their abilities to perform the activity effectively and efficiently (Sure, 2009).

According to Schunk and Pajares (2010), every behaviour is usually guided by perceptions of self-efficacy rather than true capabilities alone. That

means beliefs and capabilities are a stronger predictor of behaviour than sole knowledge in determining an individual's approach to a particular task or problem. Eggen and Kauchak (2007, p. 5) defined "self-efficacy as a person's belief in his or her ability to plan and carry out a sequence of actions to complete a certain goal." Also, self-efficacy was explained by Kinzie, Delcourt, and Powers (1994) as the confidence an individual holds about their abilities which may impact the performance of tasks. Self-efficacy reflects an individual's belief in his or her ability to perform an expected behaviour required to produce specific results and to influence the choice to engage in a particular task directly, the effort that will be used, and the persistence that will be displayed. Based on the above, self-efficacy is defined as a skilled individual's belief or confidence in their ability to do a task to the requisite level of satisfaction.

The above definitions all point out that the perception of an individual on their capabilities, to a large extent, tends to affect performance for the acquired skills. The acquisition of knowledge and skills must be backed with an appropriate level of belief to exhibit that skills or expertise. This will serve as an intrinsic motivation factor for the individual. Individuals' thoughts and perceptions are essential since they govern their actions and decisions.

Teacher Self-Efficacy Beliefs

The general performance of a teacher can be attributed to several characteristics. These characteristics include teacher competency, training, support services, experience, and efficacy. According to Tschannen-Moran and Woolfolk Hoy (2001), teacher self-efficacy is defined as the belief a teacher has about their competency to teach a particular subject matter

effectively and efficiently to students in such a way that yields anticipated results of students' performance and classroom engagement.

Guskey and Passaro (1994) describe teacher efficacy as a teacher's belief in their ability to affect pupils' learning, including those who are rigid or uninspired. The social cognitive theory by Bandura (1979) implied that a teacher's self-efficacy is deep-rooted in the way they see and understand their practices and experiences. Teacher efficacy refers to a teacher's belief in their competence to plan and carry out the steps necessary to complete a specific teaching task in each situation.

Teachers' ideas about their efficacy have been found to influence their activity and productivity (Ashton & Webb, 1982). Internal efficacy (or personal teaching) and external efficacy (or general teaching) are two elements of teacher efficacy identified by Gibson and Dembo (1984). Internal efficacy refers to teachers' confidence in their abilities to help pupils overcome obstacles in their learning. External efficacy, on the other hand, refers to the belief that external variables like socioeconomic status, family history, and parental influence significantly influence student learning more than any teacher's skills and abilities.

According to Ross and Bruce (2007), teacher efficacy is one of the strongest predictors of student accomplishment on both an individual and collective level. When teachers consider their teaching performance successful, their efficacy beliefs increase, which leads to the anticipation that the teaching task will be performed competently. On the other hand, if a teacher perceives their performance as a failure, their efficacy beliefs are lowered, increasing the likelihood that future performances would also fail.

Two primary linked judgments are made when evaluating teachers' perceptions about their capacity to teach in a specific situation. These include the requirements of a future teaching task and an evaluation of their teaching ability considering those requirements.

Teacher self-efficacy is influenced by four sources: mastery experiences, verbal persuasion, vicarious experiences, and emotional arousal. The four sources undergo a cognitive processing process that determines how each head is weighted and influences the desired teaching task. Studies show teacher self-efficacy rises during teacher education enrollment (Woolfolk Hoy, 1990; Wenner, 2001). It is important to note that making changes in self-efficacy after the establishment of beliefs is very difficult (Bandura, 1997); therefore, pre-service teachers' self-efficacy beliefs should be examined while training. Teacher self-efficacy has three vital dimensions or domains. Tschannen-Moran and Woolfolk Hoy (2001) identified these domains as teacher self-efficacy in classroom management, student engagement, and instructional strategies.

Classroom Management

According to Tschannen-Moran and Woolfolk Hoy (2001), teacher self-efficacy in classroom management is one dimension of teacher self-efficacy. Their study characterized this dimension as instructors' perceptions of their ability to plan and carry out actions that result in a favourable learning environment. Emmer and Stough (2001) also stated that in the preparation of PST and checking in-service teachers' behaviour, a major component that must be addressed is classroom management. Classroom management can be defined as a teacher's ability to keep order in the classroom, engage students

in learning and elicit students' cooperation in all activities in the school (Wong & Wong, 2009). This refers to everything teachers do to maintain order and control in the class to reduce distractions and enhance teaching and learning. Classroom management involves a purposeful and well-planned series of actions and activities.

Feiman-Neimser (2001) defines effective classroom management as the arrangement of physical and social conditions so learners have growth-producing experiences. Effective classroom management is a significant component of effective teaching and vital for pre-service teachers. Effective classroom management involves the management of general environmental and instructional variables that stimulate consistent classroom-wide setup procedures, structure, expectations, and feedback (Stichter et al., 2009). To ensure the achievement of positive educational outcomes, one major thing to consider is the ability of the teacher and the management of student's behaviour in the class.

According to Sugai and Horner (2006), classroom management consists of three main components: maximizing instructional time, structuring instructional activities to enhance academic engagement and achievement, and employing proactive behavior control strategies. These three aspects combine to form an effective classroom, which, according to Horner (1998), is the most critical factor impacting the academic advancement of any group of children. Sound behaviour management does not ensure effective instruction; instead, it creates an atmosphere where effective teaching can take place (Emmer & Stough, 2001). Classroom management is ultimately crucial because, according to Wong and Wong (2009), it provides a healthy, safe environment

for learning and equips students with the necessary skills to be socially and academically successful in life. A teacher's belief in performing the teaching task effectively as expected depends on their belief in his ability to effectively and efficiently manage the class and the learners to provide a conducive learning environment that aids progressive learning.

Student Engagement

A good teacher can effectively involve all students in all aspects of learning. The instructor is not the sole active agent in a well-engaged class; all learners are equally driven and engaged.

In education, engagement is the effort in educationally purposeful activities that result in the desired learning outcomes. Student engagement refers to students' involvement in educationally beneficial activities both in and out of the classroom that result in various measured learning outcomes (Kuh, Cruce, Shoup, Kinzie & Gonyea, 2008). According to Krause and Coates (2008), the amount of time students spend participating in higher education activities has been linked to high-quality learning outcomes. Kuh et al., 2008 defines student engagement as the time students dedicate to activities that are empirically linked to desirable outcomes and what teachers and institutions do to encourage students to participate in those activities.

Blazevski (2006) explained that student engagement efficacy as a dimension of teaching self-efficacy belief reflects teachers' belief in their ability to empower students efficiently and effectively and engage parents and assist a student in learning.

In the view of Tschannen-Moran and Hoy (2001), a teacher with a strong level of efficacy in student engagement can encourage individual

students to promote learning or improve their belief to perform well academically. A teacher who scores low in student engagement efficacy brings about students' disengagement, which leads to failure in academics of students and excessive school dropout of students who feel disengaged.

Instructional Strategies

Instructional strategies refer to various instructional approaches that teachers apply appropriately to help students learn and enhance a deep understanding of each subject matter. There are various instructional strategies, but not all are always appropriate. Therefore, a good and efficacious teacher must have knowledge of which to apply where, how, and when. For a teacher to have a high level of teaching self-efficacy, that teacher must have a high level of instructional strategy efficacy (Tschannen-Moran & Hoy, 2001)

The ability to employ effective instructional strategies in the classroom has been in the spotlight when discussing issues associated with teacher self-efficacy. Prominent among the challenges teachers encounter are adapting and integrating student-centred procedures and strategies that boost competency and foster independent learning. Teachers' self-perception and trust in their professional capacity to deal with the changes that learning-centred models imply are critical to the effectiveness of these instructional activities and practices (Rodríguez, Nunez, Valle, Blas, & Rosario, 2009).

Measuring of Teacher Efficacy

Teacher self-efficacy can be quantitatively and qualitatively measured. To explore the self-efficacy levels of teachers, several instruments have been developed. Efficacy study results have been interpreted in various ways depending on the researcher, study, measurement, and outcome (Tschannen-

Moran & Woolfolk Hoy, 2001). Gibson and Dembo (1984) produced the first efficacy scale instrument. This efficacy scale was designed to measure pre-service and in-service teachers' personal and general teaching efficacy. The effectiveness and validity of this instrument in measuring the teacher efficacy of PST were questioned by some researchers. Many researchers have developed many versions of efficacy scales. The prominent, current, and most used is the Teacher Sense of Efficacy Scale (TSES) produced by Tschannen-Moran & Woolfolk-Hoy (2001). This instrument has been accepted and used for several studies on teacher self-efficacy. Therefore, the researcher of this study also adopted the tool. This instrument measures self-efficacy through the lenses of Classroom Management, Instructional Strategies, and Student Engagement.

Teacher self-efficacy levels and influence on teaching

The efficacy of a teacher has both theoretical and practical implications. This indicates that for a teacher to have a high degree of effectiveness, both self-perceptions of teaching ability and beliefs about the task needs in a specific teaching circumstance play a role in teacher efficacy and the implications of efficacy beliefs (Tschannen-Moran & WoolfolkHoy, 2001). For a teacher's self-efficacy level to increase, such a teacher should have the self-perception of their competence in the subject area and all other relevant subject matter and pedagogy. According to Tschannen-Moran and WoolfolkHoy (2001), self-efficacy is cyclical because, at each point in time, a performance's competence generates a new mastery experience, which gives new knowledge that is processed to influence the teacher's future efficacy beliefs.

Greater efficacy leads to more significant effort and persistence, leading to better performance and yet another increase in effectiveness. On the other hand, lower efficacy leads to less effort and discouragement, which leads to bad teaching outcomes and causes in-service and pre-service teachers' self-efficacy to decrease. This implies that when a successful teaching performance is accomplished with a degree of effort and persistence driven by the performer's sense of efficacy, it becomes a source of past and future efficacy beliefs. In addition, compared to instructors with low levels of self-efficacy, high-efficacy teachers establish more significant objectives for themselves and their learners, work more to accomplish those goals, and persevere through hurdles (Henson, 2001).

Impact of Teacher Self-Efficacy on Students Engagement

Teachers are concerned about the success of their learners. They provide a plethora of information to help learners enhance their academic performance. Teachers' beliefs about their abilities to positively influence learners' learning have been established as having a strong influence on teaching effectiveness (Knoblauch & Hoy, 2008). As much as a student is responsible for their success or failure, it must be noted that there are many unseen contributing factors from the side of teachers that may have a tremendous effect on the student's academic performance. Teachers' efficacy has been proved in several studies to be a significant variable in education. This variable affects learning outcomes, such as academic scores.

Self-Efficacy Beliefs of Pre-Service Teachers

The development of efficacy beliefs among PSTs has recently sparked a lot of study attention. Once efficacy beliefs are formed early in the teaching

career, they are challenging to modify. Coursework and practical experiences have differential impacts on the teaching efficacy beliefs of PSTs. It appears the beliefs of PSTs about the teaching task tend to change when exposed to the various sources of information that build teacher self-efficacy, as stated in Bandura (1979). The most influential in the development of teacher efficacy beliefs are mastery experiences, which are learned during student teaching practice and have a more substantial influence on personal teaching efficacy (WoolfolkHoy, 1990). As postulated by Bandura, all four sources play a significant role in forming and developing PSTs' sense of efficacy. Before enrollment into the teacher-training programme, PSTs may need more belief in their ability to perform the teaching task. However, the elements embedded in the training programme can reshape and restructure one's belief system to yield a positive outcome.

However, general teaching efficacy has been found to decrease during student teaching (WoolfolkHoy, 1990; Wagler & Moseley, 1990), implying that when young teachers are confronted with the realities and complexities of the teaching task, their optimism may be tainted. A study on the links between teacher self-efficacy and student outcomes is an essential research subject that should be the focus of pre-service training and professional development programmes (Mitchell, 2019).

Empirical Review

This research component examines studies completed by other researchers that are relevant to the subject being investigated. It critically considered studies on teacher self-efficacy beliefs, classroom management, student engagement, and instructional strategies. These studies were reviewed

to identify gaps in the literature. Recent studies on teacher self-efficacy and its antecedents and consequences are on a growth level. The first part of this review was on studies on determinants or the development of teacher self-efficacy. The next studies reviewed focus on the impact of teacher self-efficacy on teacher and student performance. The last set of studies reviewed was studies on the different levels of efficacy.

Improving Pre-Service Teacher's Self-Efficacy Levels

According to some studies, the efficacy of PSTs may be influenced by their teacher training programme and field experiences. For example, Wingfield, Nath, Freeman, and Cohen (2000) studied the impact on self-efficacy beliefs after placing the whole population of preservice teachers from a university teacher preparation programme in Professional Development Schools (PDS) for one year. Pre-service teachers were exposed to successful modeling from mentor teachers, participated in authentic teaching experiences, and received ongoing support and encouragement throughout the year. The Science Teaching Efficacy Beliefs Instrument (STEBI-B) pre-and post-test results revealed that self-efficacy increased from the beginning to the end of the year. According to the authors, prospective teachers' self-efficacy may improve if they participate in context-specific learning experiences combined with on-the-job training to gain mastery experience, which appears to be an essential source of self-efficacy information. This study solely looked at how the sources of efficacy information can improve the pre-service teachers' level of efficacy but did not consider the influence of other demographic characteristics like age, programme of study, and gender.

Since self-efficacy is essential, it is necessary to ensure its development among PSTs during the training period. Visser and Pieters (2013) studied improving PSTs' self-efficacy for teaching science. The population comprises two Universities in the Netherlands across four different years of training programmes. A sample of 292 pre-service primary teachers was selected. A cross-sectional analysis was used to analyze the data and concluded that effective training programmes and education could improve teacher self-efficacy. Also, it was supposed that higher levels of self-rated subject area expertise are linked to increased personal teaching self-efficacy. Finally, mastery experience was found to impact teachers' self-efficacy beliefs positively. This study concentrated on subject-specific pre-service teachers. Thus, there was no comparative study with other pre-service teachers who specialized in different subjects.

Bernadowski, Perry, and Greco (2013) conducted survey research titled 'improving pre-service teacher self-efficacy through service learning of lesson learned.' The researchers examined the impact of service-learning on students' teaching self-efficacy when they were compelled to engage in a course-related activity versus when they volunteered in service-learning initiatives. A pre and post-survey was conducted with a sample of 37 full-time undergraduate early childhood education majors. The study implemented a questionnaire as an instrument for data collection, and the data were analysed using mean, standard deviation, and statistical regression tools. The study discovered that service learning helps preservice teachers to develop attitudes, beliefs, and values that will help them succeed in their future teaching careers. This implies that in-service education provides an opportunity where some of

the sources of information for self-efficacy development will be exposed. These sources have proven to be the most influential in forming and developing an individual's self-efficacy.

Another insightful study by Batool and Shah (2018) on causative factors behind an efficacious teacher: Evaluating teacher efficacy presented research on the analysis of teacher efficacy based on the teaching milieu. The study's participants were all secondary school teachers in the Islamabad area. A probability sampling method was employed to pick 171 secondary school teachers randomly. For data collection, Tschannen-Moran and Woolfolk (2001) constructed the Ohio State Teacher Efficacy Scale, which was modified to a five-point Likert scale. The data were discussed, and it was determined that the teaching environment broadly impacted the independent factors affecting teacher efficacy. According to the findings, topic specialization has a more significant impact on teacher efficacy than the other research factors. According to the results, teacher gender significantly influences teacher efficacy. Furthermore, characteristics such as the number of learners in a class and teaching experience impact teacher efficacy to some level; nevertheless, the study found that institution type had the most negligible impact on teacher efficacy.

Furthermore, t-tests show that public-school teachers have higher efficacy than private-school teachers, that less experienced teachers have higher self-efficacy than experienced teachers that female teachers have significantly higher teacher efficacy than male teachers, and that teachers teaching uncrowded classes have higher teacher efficacy than teachers teaching crowded classes. According to the findings, specialization and

extensive teaching experience lower teachers' effectiveness levels, which is challenging to comprehend, given Bandura's argument that mastery experience is the primary source of teacher efficacy development. Because this study focused on in-service teachers, pre-service teachers should have a high degree of teacher self-efficacy and a desire to succeed as future educators.

The study also concluded that single-subject teachers who specialize in a specific subject like Accounting, Management, Economics, English, and Mathematics have a lower sense of efficacy due to specialization in these circular areas, making them narrow-minded compared to general subject teachers. This suggests that the efficacy levels of primary teachers in Ghana who are available subject teachers have higher teacher beliefs than teachers in senior high school. The findings showed that teacher gender is a significant component determining teacher efficacy when considering the gender characteristics of instructors. According to this study, female teachers had firmer teacher efficacy beliefs than male instructors. Freedman (2008) also presented a research that looked at several strategies for increasing teacher efficacy and empowering teachers to become positive change agents in their field. In-service teachers and administrators who work with students from various backgrounds were the target audience for the project.

On the other hand, its material might be used by any teacher working with any demographic or grade level. The study's findings revealed that instructors are essential to school forms and should be treated as such. The study discovered that to improve teachers' self-efficacy, they must accept and pursue professional growth to strengthen their internal beliefs (i.e., the idea that they have the power to impact all students). Teachers, according to

Freedman, should devote more time to researching tactics and approaches that will help them to be more effective. They should seek out encouraging and accountable professional partnerships.

Freedman (2008) also recommended that teachers be brave and take risks in the classroom daily and believe in the school daily and in the ability to do whatever should be done appropriately. Although strategies for improving teacher self-efficacy were spelled out in Freedman's study, it is evident that the purpose of this study differs from the understanding of the topic under review. The details of this project study did not exhaust the project topic as expected.

Finally, the reviewed literature points out various sources or ways of improving the teacher self-efficacy levels of PSTs. What cut across most of these studies is the relevance of Bandura's sources of efficacy information. It was evident in the reviewed studies that practical experience or mastery experience is the most influential among all the sources. However, most of these studies failed to look at the influence of other demographic characteristics such as age, gender, and programmes of study on teacher self-efficacy.

Measuring of self-efficacy levels

The level of efficacy effect can be used to predict an individual's performance. Whether they will be persistent or give up, all attempts are determined by their efficacy level (Barkley, 2006). The research "Teacher training and pre-service primary teachers' self-efficacy for scientific teaching" by Velthuis, Fisser, and Pieters (2014) aimed to improve pre-service teachers' self-efficacy for teaching science by including science courses in the teacher

training programme. Throughout the four-year training programme, 292 pre-service primary teachers were surveyed, representing a cross-sectional sample from two separate institutions in the Netherlands. The researchers observed differences between scientific content and science methods courses taken during the first year of university, which affected pre-service teachers' development of science teaching self-efficacy. After their first year, pre-service teachers from universities offering scientific content courses had much better self-efficacy than pre-service teachers from universities offering science techniques courses. The discrepancy in self-efficacy disappeared by the second year of teacher education. The study concluded that after the second year, the level of self-efficacy remains the same among all pre-service teachers, which cannot be the case throughout the training period.

Zuya, Kwalat, and Attah (2016) conducted another quantitative study to determine the confidence levels of pre-service mathematics teachers' teaching self-efficacy. A sample size of 49 pre-service mathematics teachers from a population of final-year pre-service mathematics teachers undergoing training in the university was used. A questionnaire was adapted as the primary data collection instrument. The instrument utilized mathematics self-efficacy items and mathematics teacher efficacy items. The data were analyzed using descriptive and inferential statistical methods. The data were analyzed using mean, standard deviation, and correlation. According to the study, pre-service mathematics teachers had a high degree of confidence in their ability to teach effectively. After several practical experiences, pre-service mathematics instructors had a very high degree of confidence in self-efficacy and teaching self-efficacy in general, according to the study. This

shows that pre-service teachers' teaching self-efficacy rises after completing their training and gaining some practical teaching experience.

In a similar study, Lee and Lee (2014) examined how pre-service teachers' self-efficacy beliefs for technology integration (SETI) may be strengthened throughout coursework and which course components (instructional media development skills, technical knowledge, and lesson planning practice) have the most impact on SETI. The study employed a pre-test, post-test, and pre-experimental design. One hundred thirty-six undergraduate students from a Korean teaching education university participated in the study. Following completion of an education technology course, prospective teachers' SETI grew dramatically, owing primarily to lesson planning experience, according to the data analysis. According to hierarchical multiple regression, pre-service teachers with more favourable attitudes about computers and a more excellent aptitude for lesson planning had more significant gains in SETI.

Briley (2012) investigated the relationships between primary pre-service teachers' mathematical instructional efficacy, self-efficacy, and beliefs in mathematics. Ninety-five elementary preservice teachers enrolled in four Mathematics for the Elementary School Teacher sections at a southeastern regional university for two semesters were employed in this study. The convenience sampling technique was used for the analysis. The Mathematics Teaching Efficacy Beliefs Instrument (MTEBI), Mathematics Self-Efficacy Scale-Revised (MSES-R), and Conceptions of Mathematics Inventory-Revised (CMI-R) were used in soliciting data from respondents. Means, standard deviations, and Pearson's correlation were used in data analysis. The

study found that the respondents had moderately strong beliefs in their capability to teach mathematics effectively, even with their limited mathematics teaching experiences, even though they had much confidence in their ability to solve mathematics problems.

Within one Physical Education Teacher Education programme, Gurvitch and Metzler (2009) examined the impact of Laboratory-Based (LB) and Field-Based (FB) practicum experiences on pre-service teachers' effectiveness levels. Two sets of 59 undergraduate students were formed: LB design and FB design. The study took a quasi-experimental method, with two degrees of treatment and no control group. At four stages of their preservice programme, both groups were given a physical education-adapted version of the Teacher Efficacy Scale (TES): at or near entry; at the start of their methods course sequence; at the end of the methods course sequence, just before student teaching; and at the end of the programme. A repeated-measures ANOVA found significant differences between groups on one component of teacher efficacy at Stages 2 and 3.

Aydin, and Kurt (2022) investigated pre-service English as a foreign language (EFL) instructors' self-efficacy beliefs. The research was descriptive and based on a survey model. During the autumn semester of the academic year 2018-2019, 291 freshmen, sophomores, juniors, and seniors from a state university in Turkey participated in the study. The Instructors' Sense of Efficacy Scale (TSES) was developed to measure pre-service EFL teachers' self-efficacy attitudes. Descriptive statistics were used to examine self-efficacy beliefs. One-way ANOVA was used to examine differences in participants' self-efficacy judgments by class level. ANOVA. The Tukey

multiple comparison test determined significant differences between the two class levels. The findings demonstrated that pre-service EFL instructors exhibited high levels of teacher self-efficacy in general and in the subscales of classroom management, student engagement, and instructional techniques.

Turkish pre-service science teachers' comprehension of science topics and confidence in their teaching were also investigated by Tekkaya, Cakiroglu, and Ozkan (2004). The research was purely descriptive. The study enlisted the participation of 299 senior science education majors. Data was collected using the Science Concepts Test (SCT) and the Science Teaching Efficacy Belief Instrument (STEBI). Means, standard deviations, and the Pearson product-moment coefficient were used to examine the data (r). Even though most survey respondents had misunderstandings about basic scientific ideas, they felt confident in their ability to teach them.

In a related study, Cakiroglu (2008) compared the attitudes of pre-service primary teachers about mathematics instruction efficacy at a Turkish university and a major American institution in the Midwest. The Mathematics Teaching Efficacy Beliefs Instrument was used to gather data for this study. There were 141 preservice elementary teachers in the Turkish sample and 104 preservice elementary teachers in the American model. When compared to preservice teachers in the United States, the study found that preservice teachers in Turkey had a stronger belief that teaching can influence student learning. Even though previous studies have been conducted to examine the teaching self-efficacy beliefs of pre-service teachers in teaching their various subjects in other jurisdictions and found varying results, the case of pre-service teachers in the University of Cape Coast needs to be included in the

literature. This presents a vacuum in the available literature that urgently needs to be addressed. This is because the findings derived from the reviewed studies may not necessarily apply to PSTs at the University of Cape Coast. Therefore, the study sought to fill this void created in the literature.

Teacher self-efficacy in instructional strategies

Even though the instructional practice has garnered attention in the literature, there has yet to be a systematic study on the relationship between teacher self-efficacy and instructional strategies or teacher instructional efficacy. In their research, Shaukat and Iqbal (2012) propose instructional strategies as one of the significant elements of teacher self-efficacy assessments. Teachers with high levels of teaching self-efficacy believe that even the most challenging students can be prepared if they put in much effort and utilize the correct instructional strategies.

Conversely, those with a low sense of teaching self-efficacy believe that a teacher can have less influence on unmotivated students and can do just a little to assist them since students' performance is regarded as dependent on the external environment (Gibson & Dembo, 1984). The ability to employ the appropriate instructional strategies in a particular situation to aid students' understanding is an essential measure of an effective teacher. Classroom management, instructional practices, and student engagement, according to Shaukat and Iqbal (2012), are factors that may promote one's efficacy beliefs.

The researchers used a convenience sample of 198 male and female professors in their study. According to the TSES, instructors in their first five years of teaching were better prepared than teachers with more than 20 years of experience to establish instructional techniques that would engage students.

Teachers having more years of experience than the average awarded their classrooms a higher evaluation for their effective use of teaching strategies than those with less experience (Shaukat & Muhammad-Iqbal, 2012). This indicates that teachers must have years of experience to obtain a high degree of teaching efficacy in instructional strategies.

Gürbüztürk and Sad (2009) undertook a study examining student teachers' conventional vs. constructivist educational ideas and their self-efficacy based on demographic characteristics, including gender, grade, and department. Out of a population size of 3817 student teachers in the Faculty of Education at İnönü University who were in their first semester of the academic year. The sample size of 411 students was sampled using the proportional stratified sampling technique. The study found that self-efficacy in instructional strategies was ranked higher, followed by self-efficacy in classroom management and in student engagement. The above studies and their corresponding findings were obtained from Western settings, with that of low- and middle-income countries such as Ghana missing significantly in the literature. Therefore, this study intended to fill this gap created in the literature by examining the differences in pre-service teachers' level of instructional strategies efficacy in the Ghanaian context using the selected pre-service teachers of the University of Cape Coast.

Teacher self-efficacy in classroom management

The research identified classroom management as the most important factors affecting student learning (Wang, Haertel, & Walberg, 1994). Pre-service instructors have been linked to classroom management and self-efficacy beliefs. Pre-service teachers' performance in the classroom is

influenced by their judgments of their readiness and ideas about how to manage their classrooms. Teachers must understand classroom management as a core pedagogical skill to maximize classroom instruction (Evertson & Weinstein, 2006).

According to studies, students earn higher levels of achievement when teachers are effective classroom managers. Teachers with a heightened sense of self-efficacy believe that with time and effort, they can solve problems in the classroom, whereas teachers with a low sense of self-efficacy are frequently plagued by discipline issues and resort to punitive classroom management methods.

In a study by Swan, Wolf, and Cano (2011) titled "Changes in teacher self-efficacy from the student teaching experience through the third year of teaching," it was observed that pre-service teachers, after their third year of teaching, reported the lowest levels of teacher self-efficacy ($M = 7.44$) and the most significant levels ($M = 7.84$) at the end of their student teaching experience. Individuals reported higher levels of teacher self-efficacy in the classroom domain than the other two domains at all testing periods except for the second year. This means that for a teacher to be assessed as having a high level of teacher efficacy, such a teacher must have a high or acceptable level of effectiveness in classroom management. It was also evident that classroom management efficacy increased as pre-service teachers climbed the training ladder and gave practical teaching experience.

The study mentioned above seems to align with studies by Stough, Montague, Williams-Diehm, and Landmark (2006) which instructors said that hands-on practical field experience is the best way for them to learn about

classroom management. However, there is not much proof, and it is unrealistic to assume that new instructors learn classroom management abilities just through time and experience (Oliver & Reschly, 2007).

Another study by Abu-Tineh, Khasawneh, and Khalaileh (2011) is teacher self-efficacy and classroom management styles in Jordanian schools. This study was conducted with two primary purposes. The second purpose of Abu-Tineh et al.'s study, which is relevant to this review, was to explore the relationships between classroom management styles and teacher self-efficacy.

According to the findings, personal teacher efficacy had the highest and most significant connection with each of the classroom management techniques. However, each of the classroom management techniques and classroom management, in general, was unrelated to overall teacher efficacy. However, this finding cannot be used to draw a direct causal relationship between instructional leadership and each of the management styles and management styles in general. The positive and significant relationships between instructional management and each management style suggest that the higher teachers' perceptions of their teacher efficacy are, the more they succeed in practicing management styles in general and the instructional style in particular.

Furthermore, the association between classroom management style and personal teacher efficacy was found to be the strongest across the many management styles. This research supports Jackson's (2005) conclusion that there is a link between classroom management style and personal teaching effectiveness. To explain this finding, it can be said that the relationship between classroom management style and individual teacher efficacy is

cyclical, which means that classroom management style influences a teacher's belief system in their efficacy and vice versa.

Mitchell (2019) also examined the correlation between classroom management methods and teacher self-efficacy. The population for the survey was teachers in the urban and rural areas of the West Tennessee school district. Seventy-two teachers were sampled for the study. A close-ended questionnaire was made available on the internet through Survey Monkey for the participants to complete. The main research question for the quantitative survey was to find out the relationship between classroom management practices and teacher self-efficacy. The study's finding was that the method of preventive strategies, a classroom management style, has a significant impact on developing teacher self-efficacy.

The study by Hicks (2012) sought to determine if new secondary teachers felt confident in their ability to manage a classroom successfully and to look into the elements that influenced this confidence. The extended version of the Teachers' Sense of Efficacy Scale (TSES) with a Likert-type nine-point scale. Descriptive and inferential statistics were used. Hicks also used factorial analysis and Pearson Product-moment correlation. According to the findings, the classroom management subscale and student behaviour scores exhibited a significant moderate direct relationship indicating that instructors with better classroom management scores had greater levels of teacher efficacy. Furthermore, instructors with more excellent self-efficacy scale scores, particularly those with higher scores on the classroom management subscale, had better student behaviour and also assisted their students in improving their

behavior. According to the findings, there is a direct link between instructors' self-efficacy and student behaviour.

Senler and Sungur (2010) evaluated pre-service science teachers' teaching self-efficacy regarding student engagement, instructional strategies, and classroom management. For the stated purpose, the survey included 1794 pre-service science instructors (876 males and 905 females). Pre-service science teachers' teaching self-efficacy was assessed using the Teachers' Sense of Efficacy Scale (TSES), commonly known as the Ohio State Teacher Efficacy Scale. Means, standard deviations, and Repeated measures ANOVA were used to analyze the data. The findings revealed that pre-service science teachers exhibit stronger self-efficacy in using instructional strategies and managing classrooms than in engaging all students in learning.

A study conducted by Shaukat and Iqbal (2012) on the topic 'Teacher Self-Efficacy as a function of Student Engagement, Instructional Strategies and Classroom Management' sought to measure the significant differences in efficacy in the three sub-scale using teachers with Masters in Education qualification (M.Ed.) and those with Bachelor of Education qualifications (B.Ed.). According to the findings of this study, there was no significant relationship between student engagement and instructional strategies; however, when it came to classroom management, male teachers had an advantage over female teachers. In the same study, there were no significant differences in student engagement and instructional strategies sub-scales between M.Ed. and B.Ed. Instructors, but there was a substantial difference in classroom management as a sub-scale of teaching self-efficacy between the two groups. Teachers with a master's degree and those with a bachelor's

degree in education. This implies that teachers' teaching self-efficacy may vary with the level of qualification a teacher holds, and thereby the breakdown of the total level of teaching self-efficacy may differ in each sub-scale, with classroom management being the greatest among the sub-scales. The findings did not clarify if the level of teacher self-efficacy may differ with the same level of qualification but different specialization areas.

Teacher self-efficacy in student engagement

Student engagement is a critical factor for the academic performance of students. An effective teacher can engage students cognitively, emotionally, and behaviorally. Teachers' belief about their ability to engage students is very relevant and essential to teacher self-efficacy. Few studies have examined differences in pre-service teachers' levels of self-efficacy in student engagement.

In a Turkish context, Dolgun and Caner (2018) investigated the degrees of self-efficacy beliefs held by pre-service and in-service EFL teachers in terms of instructional techniques, student engagement, and classroom management. Questionnaires were administered to 180 senior pre-service teachers studying English Language Teacher Education and in-service EFL teachers teaching in various primary or elementary schools. T-test and ANOVA were used in the data analysis. According to the findings, both in-service EFL instructors and pre-service EFL teachers have solid self-efficacy beliefs. The questionnaire's subscales revealed detailed data on self-efficacy beliefs in instructional strategies, classroom management, and student engagement. For example, whereas in-service teachers had higher levels of positive self-efficacy for the instructional strategies they utilize, pre-service

teachers have been demonstrated to have higher levels of efficacy in student engagement. This implies that after gaining some mastery experience, pre-service teachers can increase their rank in student engagement and general teaching self-efficacy beliefs just as the in-service teachers. This study made a comparison between in-service and pre-service teachers but failed to measure the different levels of self-efficacy beliefs of pre-service teachers in various programmes.

Also, Sarfo et al. (2015) researched the relationship between gender and self-efficacy beliefs in instructional strategies, classroom management, and student engagement among senior high school teachers in the Kumasi Metropolis of Ghana. A sample of 259 male and 178 female teachers were randomly selected from private and public high schools in Kumasi. The descriptive cross-sectional design was employed, and the TSES was adapted to collect data on a 5-point Likert scale. The findings of the study revealed that teachers scored higher in the student engagement subscale with ($M = 35.05$), followed by the classroom management with ($M = 33.82$) and instructional strategies as the lowest ($M = 30.51$)

Lastly, Voris (2011) conducted a study on teacher self-efficacy, job satisfaction, and alternative certification in early-career special education teachers. It was found that the teachers scored low in the student engagement subscale in both groups. It is assumed that teachers have the least amount of student impact and are the least effective. Student engagement encompasses areas such as motivating students, guiding them to think critically, increasing the degree to which students believe they can complete tasks successfully in school, assisting them in learning to value education and erudition, improving

their comprehension of complex content, and helping families in helping their students in being successful.

Gender Difference and Teacher Self-Efficacy

Yüksel (2014) investigated the impact of a classroom management course on pre-service teachers' perceptions of teacher self-efficacy. With 85 pre-service teachers, the study was done in a single-group pretest-posttest research methodology. The “Teacher Self-Efficacy Scale” was used to collect data at the beginning and end of the semester. The findings suggested that the classroom management course substantially impacted pre-service teachers' levels of teacher self-efficacy growth and that pre-service teachers' teacher self-efficacy views did not differ significantly by gender. This suggests that the level of teacher self-efficacy of PSTs can be high in the classroom management subscale irrespective of the variation in the gender of teachers. The study did not include the other sub-scales or did not look at teacher self-efficacy and gender in totality.

Another relevant study to consider is by Tajeddin and Khodverdi (2011). The researchers of this study discovered that there was no statistically significant influence of gender on instructors' self-efficacy through their investigation.

Al-Alwan and Mahasneh (2014) performed research with 679 teachers and 1,820 students from Jordanian primary and secondary schools, providing statistics on the efficacy of instructional strategies to learners. According to the study, students grasp subject content when teachers use a variety of instructional strategies and create goals for them. Finally, data revealed no

significant differences in male and female teachers' levels of self-efficacy in instructional methods (Al-Alwan & Mahasneh, 2014).

In addition, Matoti, Odora, and Junqueira (2011) compared the teaching efficacy beliefs of pre-service teachers before and after work-integrated learning (WIL) at a South African University of Technology. Both descriptive (percentages, averages, and standard deviations) and inferential statistics were used to analyze the data. There were 231 females and 220 males among the 451 pre-service instructors in the study. Descriptive statistics were used to gather demographic information from the participants, and an independent-sample t-test was used to assess the self-efficacy of pre-service male and female instructors. The findings revealed a substantial difference in the overall sense of self-efficacy of male and female respondents and their sense of self-efficacy in classroom management. However, there were no significant variations in self-efficacy between males and girls regarding student participation or instructional strategy.

However, other studies revealed contrary findings, and the conclusion was that there is a significant variation in teachers' self-efficacy levels in males and females. These studies stated that the self-efficacy of teachers varies for the gender of teachers. For example, studies by Anderson, Greene, and Lowern(1998) and Raudenbush et al. (1993) have found that female teachers have higher levels of teaching self-efficacy than males since the teaching task is noted and generally accepted as a task for females. Karinvand (2011) findings concluded that female teachers have significantly greater self-efficacy than their male counterparts in the Iranian context.

Ahmad, Khan, and Rehman (2015) employed a sample of 70 respondents from District Attock, including 35 female and 35 male primary school teachers, to perform a comparative study on male and female teachers' perceptions of teacher efficacy. The primary instrument was a questionnaire based on Tschannen-Moran and Hoy (2001) teacher efficacy scale. The t-test was employed to analyze the data. It was discovered that, female teachers exhibit more self-efficacy than male teachers. On efficacy to influence classroom management, instructional strategies, and student engagement subscales, female teachers show stronger self-efficacy than male teachers. Female teachers at Attock's public elementary schools performed better than male teachers due to their self-efficacy and solid perception.

Country to these revelations is seen in the study of Klassen and Chiu (2010), which concluded that male teachers had higher self-efficacy regarding classroom management than females, but no significant difference was found between male and female teachers regarding students' engagement and instructional strategies. In another study, Butucha (2013) found significant differences between male and female teachers regarding classroom management.

Conclusively, in a study conducted by Aydemi, Duran, Kapide, Kaleci, and Aksoy in 2014, the values of teacher candidates' according to gender variables; self-efficacy intended participation self-efficacy intended class management and self-efficacy intended teaching strategies were significantly different. Female students had a greater self-efficacy in planned engagement than male students. Similarly, females exhibit higher self-efficacy scores for class management than males. This data might be regarded as a gender

difference that favors women. However, there is a gender difference in self-efficacy intended teaching styles among teacher candidates . The overall self-efficacy ratings of teacher candidates destined for the teaching profession reveal significant gender differences.

Age difference and teacher self-efficacy

In most teacher self-efficacy research, age has been one of the demographic features that have received much attention. Bandura (1979) claims that generation has little bearing on efficacy because people's ability to manage their everyday lives varies widely. Many recent studies have lately confirmed similar conclusions. These studies discovered no link between age and levels of self-efficacy (Hoy & Tschannen-Moran, 2007; Voris, 2011; Hicks, 2012; Jenks, 2004).

Jenks (2004) conducted a comprehensive study on the effects that age, sex, and language proficiency have on self-efficacy levels. He discovered a link between self-efficacy and language competency, but not for age or gender. The findings revealed that language proficiency significantly impacts an individual's degree of self-efficacy. He concluded that age has no bearing on one's level of self-efficacy. This has been connected to teacher self-efficacy as well.

In the same vein, Hoy and Tschannen-Moran(2007) found a significant difference between teachers' self-efficacy across gender and age.

However, these findings are all at variance with the conclusions of a study in the Ghanaian setting by Amankwah, Aboagye, Konin, and Sam (2015) which evaluated the influence of demographic variables on self-efficacy beliefs of in-service teachers in the Kumasi metropolis and revealed

that age correlates positively with teacher self-efficacy although the relationship was weak but significant. This study result implies that older teachers are more likely to have firmer self-efficacy beliefs than younger teachers.

This finding is consistent with the previous results of Ghanizaden and Moafian (2009). Ghanizaden and Moafian examined the relationship between EFL teachers' sense of self-efficacy and their pedagogical success in language institutes and reported that the older the teachers, the firmer their beliefs regarding self-efficacy

Findings obtained from the study cannot be generalized to preservice teachers of Ghana, notably the University of Cape Coast, who have diverse socio-cultural and socio-economic backgrounds compared with the respondents of the reviewed studies. Therefore, this study tried to fill this gap by examining the difference in pre-service teachers' level of self-efficacy in student engagement based on their programme of study.

Chapter Summary

Chapter Two discussed a theory relevant to the study and a concept that is critical to the study. The self-efficacy theory was well explained and linked to the study. To enhance comprehension of this work, the relevant concepts were presented. A framework that outlines the research question and hypotheses was developed to help in a thorough understanding of the research question and hypotheses that motivated this study. Finally, there was a review of empirical data from previous Ghanaian and international studies relevant to this study. Even though some studies have been conducted on teacher self-efficacy levels, there are not enough comparative studies that measured the

teacher self-efficacy of PSTs on a subject or programme based. This call for the need to conduct a study on PSTs' teaching self-efficacy beliefs: a comparative study across various subject curricula.



CHAPTER THREE

RESEARCH METHOD

Introduction

This chapter is the methodological component of this study, which deals with the study design. It explains the reasons for the choice of study design. It also includes information on the population, sample and sampling technique, instrument utilized, instrument reliability and validity test, means of data collection, and data analysis procedures.

Research Design

This study was in line with the positivism paradigm. Selected pre-service teachers were surveyed on their levels of teacher self-efficacy using a descriptive survey methodology as a blueprint. A descriptive survey design was adopted as the study design to obtain data from the selected pre-service teachers on their teaching self-efficacy levels. Some scholars have addressed the relevance of descriptive design in education (Kir et al., 2021; Sarpong & Sarpong, 2020).

According to Aborisade (1997), a descriptive survey study was employed when a researcher wants to learn about a population's characteristics, attitudes, feelings, beliefs, motives, behaviour, and views without attempting to influence any factors. Descriptive research studies are conducted to obtain information about the current state of a phenomenon. (Ary, Jacobs, & Razavieh, 1990; Sappor, Atta Sarpong & Ahmed Seidu Seini, 2023). They can be directed toward determining the nature of a situation as it exists at the time of the study. It can, therefore, be concluded that the status of pre-service teachers' level of self-efficacy was what was currently being

sought. Consequently the design that was selected was the most appropriate for this study.

Another factor that influenced the design choice was that descriptive surveys are versatile and valuable, particularly for educators, in that they identify current conditions and point to current needs and a basic design for all types of research in assessing the situation as a pre-requisite for conclusions and generalizations (Osuala, 2001; Sarpong, Sarpong & Asor, 2020; Sarpong et al., 2020b).

Despite the numerous advantages, other things could be improved with the design. One of its flaws is that it often produces unreliable results because they delve into private matters that people may need to be more truthful about. There may be problems in gathering respondents to respond to items correctly and the struggle to complete all the questionnaires in time (Babbie, 1998). Regardless of these disadvantages, the descriptive survey design was considered the most appropriate for carrying out the PSTs' teaching self-efficacy study.

Population

The population for the study comprised Level 400 pre-service teachers in the Department of Business and Social Sciences Education of the University of Cape Coast in the 2020/2021 academic year. Specifically, the target population pursued Bachelor of Education programmes in Management, Accounting, Social Sciences, and Social Studies. The university's selected Level 400 pre-service teaching groups were targeted because they had gone through all relevant practical and theoretical teacher training, making them better suited for the study than those in the lower levels. The total number of

Level 400 students was 415 consisting of 119 from accounting, 95 from Management, 148 from Social Science, and 53 from Social Studies. Table 1 indicates the distribution of the target population.

Table 1: Distribution of the Target Population

Programme Major	Total
Accounting	119
Management	95
Social Science	148
Social Studies	53
Total	415

Source: SRMIS, 2020

Sample and Sampling Procedures

Due to the impracticality associated with the study of the whole population to generalize, I decided to use a sample to represent the study population. Literature has it that the researcher's wants should be considered before determining the appropriate sample size. A total sample of 210 was used for the study. Krejcie and Morgan (1970) influenced the choice of this sample size. The study population was 415; however, the sample size determination table did not capture the exact number; hence, the researcher decided to use the sample size of the nearest number in the table.

According to Krejcie and Morgan's sample size determination table, for a population of 415, it is appropriate to use a sample size of 200. The researcher increased the sample size to 210 to cater to respondents who might fail to complete their questionnaires. Cohen, Manion, and Morrison (2007) also affirmed that "there is no clear-cut answer for the correct sample size. It all depends on the purpose of the study and the nature of the population under

scrutiny” (p. 93). The justification for the sample size stated above is vivid in what Krejcie and Morgan wrote (as cited in Cohen et al., 2004).

The sample size was broken down to obtain the exact number of respondents required from each stratus. First, the PSTs were subdivided into four strata based on a programme of Accounting, Management, Social Studies, and Social Science. According to Ogah (2013), stratified sampling is used to ensure that each stratum is represented according to its quantity in the population. It is used to obtain a fair proportion of the various strata. In getting the sample for each stratum, the population for the stratum was divided with the overall population and multiplied by the sample size. The proportionate stratified technique was then used to select the sample size in each stratum. The sample size in Accounting, Management, Social Studies, and Social Science was 60, 48, 27, and 75 respectively.

Next, simple random sampling – specifically, the lottery method was used to select the actual respondents for the study from each stratum or group. The researcher numbered and folded pieces of paper and requested respondents pick papers from a box. Those selected number two were sampled for the study in each programme group. The lottery method of simple random sampling was used because the researcher wished to give all the level 400 pre-service teachers an equal chance of being selected for the study. Table 2 indicates the sample size distribution of the respondents.

Table 2: Sample Size Distribution

Pre-service Teachers	Sample Size
Accounting	60
Management	48
Social Science	75
Social Studies	27
Total	210

Source: Field work, 2021

Data Collection Instrument

The researcher used a questionnaire targeting the department's pre-service teachers of the programmes above to carry out the study. According to Cohen *et al.*, (2011) and Makwetta *et al.*, (2021), questionnaires are widely utilized and are a valuable tool for gathering survey data, providing organized numerical data, and may be delivered without the researcher's presence. A questionnaire (Appendix A) was utilized as the principal instrument for obtaining the primary data due to the enormous sample size and the anonymity respondents always seek in such a study. The study's questionnaire was chosen because it is appropriate for survey work and offers respondents adequate time to provide thorough responses (Kothari, 2004; Owusu *et al.*, 2022; Osei-Mireku *et al.*, 2020). A questionnaire comprised of 28 close-ended questions was used mainly to collect information on demographic characteristics and teachers' self-efficacy levels.

Section 'A' elicited information from preservice teachers on their demographic variables such as gender, age, and programme of study.

The second section collected information on teacher self-efficacy in three sub-areas measured with the Teacher Sense of Efficacy Scale (TSES) item adapted from Tschannen-Moran and WoolfolkHoy (2001). The total items 24 were put into three dimensions, namely, Teacher efficacy for student engagement (SE), efficacy for instructional strategies (IS), and efficacy for classroom management (CM). Each dimension has several items to measure teacher self-efficacy on a Likert scale (1 to 5). 7 out of the 24 items collected information on the efficacy on classroom management levels of pre-service teachers, followed by eight items on efficacy levels of students' engagement

and seven items on the efficacy of instructional strategies. Ten negatively worded items were reversed scored to produce consistent values between positively and negatively framed items. When negatively worded items are changed, the result has high scores (Enochs, Smith & Huinker, 2000). A Likert-scaled response format was used with the following response categories: Strongly Agree (SA), Agree (A), Uncertain (U), Disagree (D), and Strongly Disagree (SD).

Validity and Reliability of the Instrument

The instrument for the study was thoroughly vetted before final approval by teacher education and research experts to establish their validity. The questionnaire was then pre-tested to ensure its reliability and internal consistency.

The questionnaire was pilot tested using the Level 400 students in the Department of Art Education who were being trained as teachers for various Arts Courses in the senior high school. Comparable to the research participants, this group of PSTs exhibit similar characteristics. For the pilot test, only 20% of the actual sample size was used as participants. According to Baker (1994), a sample size of 10-20% of the real study's sample size is a sufficient number of individuals to consider recruiting in a pilot. The instrument's reliability was determined by measuring its internal consistency with a reliability coefficient calculated using Cronbach's alpha. Data collected were entered into Statistical Package for Service Solution (SPSS), and Cronbach's Alpha (α) was computed to determine the reliability coefficient.

A reliability coefficient of 0.763 was obtained (number of items=24). This was deemed acceptable since De Vellis (1991) considers such results

very respectable for determining the appropriateness of the instrument. A reliability value of 0.7 or greater, according to Fraenkel and Wallen (2000), is acceptable. The instrument was found to be trustworthy and suitable for gathering valuable data for the study since it had a proper Alpha value. All of the items were kept on the questionnaire. Cronbach's alpha was computed for the three sub-scales. The main sub-scales were instructional strategies. The researchers' supervisor vetted each item on the questionnaire to determine the face and content validity. In terms of face and content validity, the questionnaire was deemed valid.

Table 3: Reliability Coefficient for the Research Instrument

Sub-scales	Cronbach's Alpha (α)	N of Items
Instructional Strategy	.710	8
Classroom Management	.792	8
Student Engagement	.786	8
Reliability coefficients	.763	24

Source: Fieldwork, 2021

Data Collection Procedures

A few weeks after the pilot testing of the instruments, the actual data collection commenced. Before instrument administration, the researcher visited lecturers whose classes were used in reaching the respondents with a letter of introduction (Appendix B) from the Head Department of Business and Social Sciences Education (DOBSSE) of the University of Cape Coast. A week before the data collection, the introductory letter was sent to the lecturers whose classes were used to seek their permission. The questionnaire was administered in person. This is because administering questionnaires in person has some advantages, summarized by Osuala (1982), that the researcher has

the opportunity to brief the respondents to understand precisely what the items mean to obtain the correct responses.

The researcher used a week for the data collection since the participants had different lecture schedules. On the days of the administration of the questionnaire, the questionnaire was administered personally after the purpose of the study and the content of the questionnaire were explained to the respondents and assured of utmost confidentiality. I distributed the questionnaires to the students in their classes.

The students were asked to complete their questionnaires and return them after 15mins. Upon receipt, each completed questionnaire was quickly reviewed for completeness. When missing data were found, some students were contacted and asked to meet them. Providing the questionnaires to the students, collecting them now, and quickly following up on missing responses help to ensure a high response rate.

Table 4: Return Rate of Questionnaire

Programme (B.Ed)	Instrument Administered	Return Rate
Accounting	60	60(100%)
Management	48	48(100%)
Social Science	75	66(88%)
Social Studies	27	27(100%)
Total	210	201(95.7%)

Source: Fieldwork, 2021

Data Processing and Analysis

In analyzing the data collected from respondents using the questionnaires, the data were coded and processed with the Statistical Product for Social Sciences (SPSS) version 25. After the data entry, the data file was

reviewed twice before any analysis was conducted. Descriptive statistics, including frequencies, percentages, means, and standard deviation, were computed to address the research question. Descriptive statistics were used to describe the respondents' demographic characteristics and responses, whereas inferential statistics were used for hypotheses, as shown in Table 5. The study used non-parametric statistics to analyze the results based on the non-normal distribution of the dependent variables, which is explained in detail in the next chapter. The results and discussion were presented in the same order as the study's objectives.

Table 5: Data Analysis

Section	Research question	Tools of Analysis
	Demographic Information	Percentage and Frequencies
RQ1	What are pre-service teachers' self-efficacy beliefs in teaching their subjects?	Mean and Standard deviation
RH1	H ₀ : there is no statistically significant difference in pre-service teachers' level instructional strategy efficacy with regard to the programme of study.	Kruskal-Wallis H-Test
RH2	H ₀ : there is no statistically significant difference in pre-service teachers' level of classroom management efficacy with regard to the programme of study	Kruskal-Wallis H-Test
RH3	H ₀ : there is no statistically significant difference in pre-service teachers' level of student engagement efficacy with regard to	Kruskal-Wallis H-Test

the programme of study.

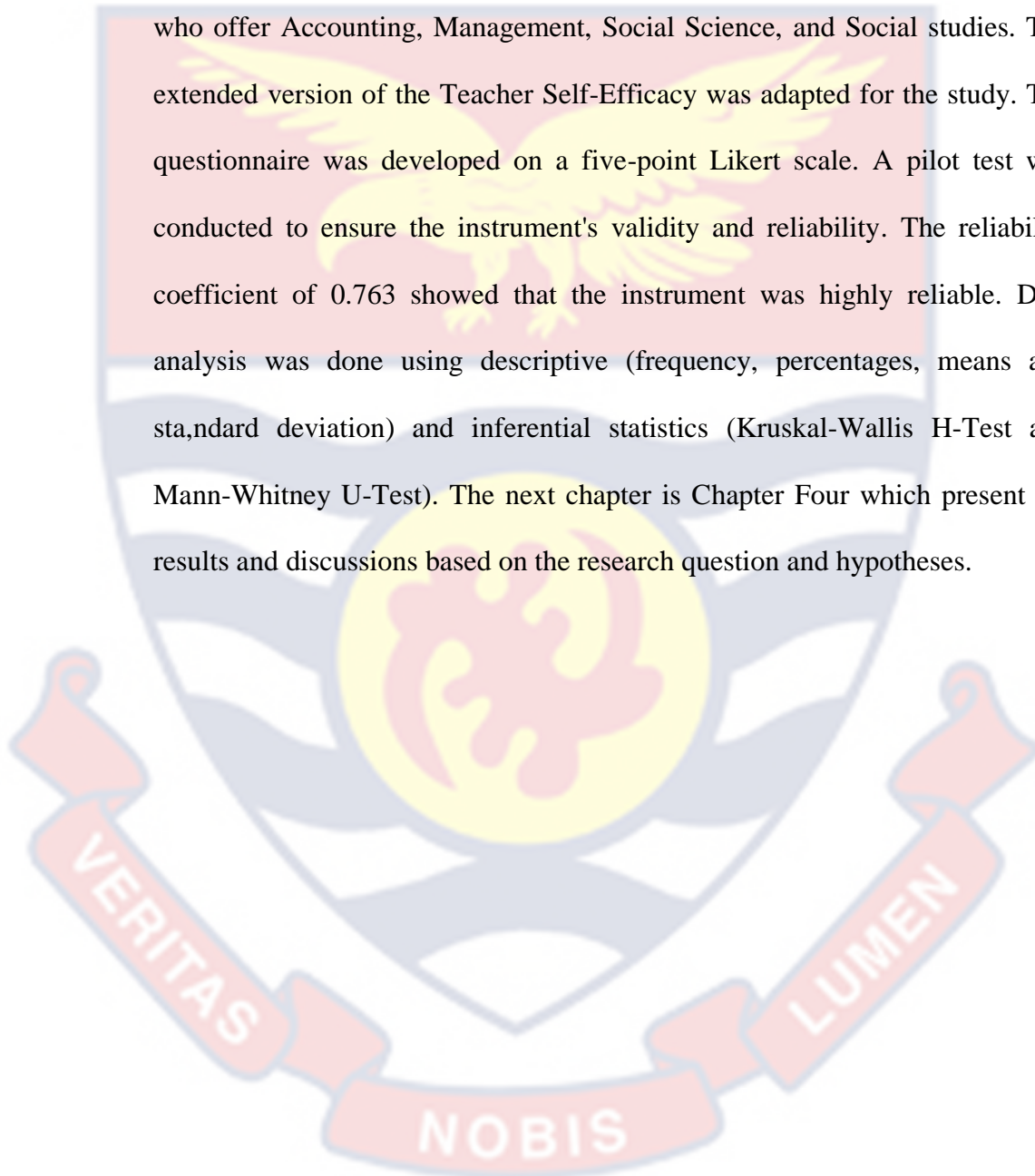
- | | | |
|-----|--|-----------------------|
| RH4 | H ₀ : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to gender | Mann-Whitney U-Test |
| RH5 | H ₀ : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to age | Kruskal-Wallis H-Test |
-

Ethical Consideration

Ethical clearance was obtained from the University of Cape Coast Institutional Review Board. A consent letter was submitted to every lecturer whose class was used before the fieldwork commenced. Since we are in the COVID-19 era, all Covid protocols were observed. Sanitizers were sprayed on participants' hands, and they were asked to wear the face mask while completing the form. A consent form was attached to the questionnaire before the respondent responded to items on the questionnaire. The purpose of the research was explained to the participants, and they were free to withdraw at any moment because participation was optional. No coercion, intimidation, or fear was used to compel any respondent's involvement. For confidentiality and anonymity, no respondent was requested to write their name, phone number, or anything that might link or serve as a lead to the completed form to the respondent. However, they were made to understand that their programme names would be used.

Chapter Summary

This quantitative study employed the descriptive survey design to measure and compare the teacher self-efficacy levels of PSTs in the four programme groups. Data was collected from final-year pre-service teachers who offer Accounting, Management, Social Science, and Social studies. The extended version of the Teacher Self-Efficacy was adapted for the study. The questionnaire was developed on a five-point Likert scale. A pilot test was conducted to ensure the instrument's validity and reliability. The reliability coefficient of 0.763 showed that the instrument was highly reliable. Data analysis was done using descriptive (frequency, percentages, means and standard deviation) and inferential statistics (Kruskal-Wallis H-Test and Mann-Whitney U-Test). The next chapter is Chapter Four which present the results and discussions based on the research question and hypotheses.



CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The primary intent of the study was to measure and compare the University of Cape Coasts' pre-service teachers' self-efficacy. The study specifically measured the teacher self-efficacy beliefs of pre-service teachers in the teaching of their major subjects, examined whether there are differences in self-efficacy levels of pre-service teachers in the four selected programmes, determined the extent of differences in PSTs' levels of instructional strategies efficacy with regard to the programme of study, examine PSTs' level of classroom management efficacy with regard to the programme of study and lastly determine the differences in PSTs' level of student engagement efficacy with regard to the programme of study.

In doing this, the demographic data were analyzed with frequencies and percentages; the research question was analyzed with Mean and Standard deviation; the first, second, third and fifth research hypotheses were analyzed with Kruskal-Wallis H-Test and Mann-Whitney Test for the fourth research hypothesis. This chapter covers the presentation and analysis of the data obtained from the field. The findings are discussed in the formulated research question and hypotheses that guided the study. The chapter is in two sections, and the first section presents results and discussions on the demographic characteristics of the respondents. The other section, which is the central part of the chapter, focuses on discussing the primary data to address the research question and five hypotheses. Findings were related to alternate or support existing views reviewed in the literature discussed in chapter two of this study.

Each discussion has been headlined with the title of the research question and hypotheses being addressed and with a tabular presentation to facilitate understanding.

Demographic information of Respondents

Under this part, the four initial data on the instruments sought information consisting of participants' demographic data, which are essential to address the research question and the five hypotheses. Also, for generalization reasons, demographic data was used to establish if the participants in a study were a representative sample of the target population. The demographic responses elicited were the programme of study, major teaching subjects, gender, and age. The results of the distribution are presented in Table 6.

Table 6: Characteristics of Respondents

Variable	Sub-Scale	Frequency	Percentage
Gender	Male	119	59.2
	Female	82	40.8
Programme	B.Ed. Accounting	60	29.9
	B.Ed. Management	48	23.9
	B.Ed. Social Sciences	66	32.8
	B.Ed. Social Studies	27	13.4
Major Teaching Subjects	Accounting	60	29.9
	Management	48	23.9
	Social Studies	27	13.4
	Economics	37	18.4
	Geography	29	14.4
Age	20-22 years	43	21.4
	23-25 years	117	58.2
	26-28 years	41	20.4

Source: Field Survey, 2021

A total of 210 participants participated in investigating preservice teachers' self-efficacy beliefs by comparing the programme of study. 201 (95.7%) of the distributed questionnaires were returned, representing a relatively higher return rate. Table 6 shows that n=119 participants representing 59.2% were males and n=82 representing 40.8%, were females. This implies that most of the respondents were males, and this is a low representation of females in various educational levels. In the past, this has been a common phenomenon experienced in the university. Although the university has put in place some affirmative actions to reduce the cut-off points for female entrants, it seems male entrants are higher than their female counterparts.

Under the age distribution, Table 6 indicated that more than half of the participants, 117 (58.2%), were between the ages of 23-25 years which is the average age range for final-year first-degree students at the university in the current educational system followed by 43 (21.4%) for participants within the ages of 20-22 years and lastly the group with the lower percentages 20.4% was those within the ages of 26-28 years. This suggests that most respondents were mature enough to provide the answers required for ascertaining their perceived self-efficacy beliefs. The programme of study of respondents showed that (n=60, 29.9%) were from the Accounting programme with accounting as their primary subject. 48(23.9%) from Management, with management as a significant subject. 55 (32.8%) from Social Science with a breakdown of (n=37, 18.4%) having economics as their primary subject and (n=37, 14.4%) majoring in geography. Lastly (n=27, 13.4%) were pursuing the Social Studies programme. This reflects that the study focused mainly on the four majors of

pre-service teachers and was systematically represented enough to provide adequate information to compare their perceived self-efficacy beliefs.

Results and Discussion

This section presents results and discussions of findings that address the research question and hypotheses formulated for the study. The study adopted a five-point Likert scale on the TSES instrument with scales (1– Strongly disagree, 2 – Disagree, 3 – Undecided, 4– Agree, and 5- Strongly agree). Tschannen-Moran and WoolfolkHoy (2001) proposed that TSES data be analyzed following Tschannen-Moran and WoolfolkHoy's (2001) principles, with average scores derived for all items and items within each subscale.

Pre-Service Teachers' Self-Efficacy Beliefs in teaching their major teaching Subject

This first research question sought to measure teacher self-efficacy levels of Accounting, Management, Social Science, and Social Studies final-year pre-service teachers in teaching their major teaching subject. This measure gave a general idea of the teacher self-efficacy levels of pre-service teachers in the four programme groups in teaching their major teaching subject. The level of teacher self-efficacy depicts the beliefs each group of pre-service teachers holds about their ability to prepare their subject and perform the general teaching task as expected. Tables 7, 8, and 9 illustrate pre-service teachers' self-efficacy under the three primary constructs (instructional strategy, classroom management, and students' engagement efficacy).

Descriptive statistics such as means and standard deviations were used in analyzing the research question. The study revealed that (Mean '0.5 – 2.4' =

low self-efficacy). (Mean '2.5 - 3.4' = moderate self-efficacy) and (Mean '3.5 - 5' = high self-efficacy) instructional strategy, classroom management, and student engagement. The use of standard deviation illustrates the dispersions of responses from the data collected. The study further revealed that (SD '< 1.00' = homogeneity) and (SD '> 1.00' = heterogeneity) in responses provided by the respondents.

Table 7 provides information on pre-service teachers' level of self-efficacy in instructional strategies for teaching their subjects. This part of the study sought to examine pre-service teachers' efficacy in adopting appropriate instructional teaching methods and approaches in helping students acquire an in-depth understanding of their respective courses of study. Table 7 regroups responses of pre-service teachers' instructional strategies from the highest to the lowest mean.

Table 7: Pre-service Teachers' Instructional Strategies Efficacy

Statement	Mean	SD
I believe I can implement alternative strategies in my classroom.	3.87	1.01
I adjust my lessons to the proper level for individual students.	3.84	1.06
When students are confused, I can provide an alternative explanation, for example to a particular instructional content.	3.81	1.14
I believe I can provide appropriate challenges for competent students.	3.75	.86
I will be able to gauge student comprehension of what has been taught.	3.74	.93
I respond to difficult questions from my students.	3.62	1.13
I cannot use a variety of assessment strategies for a single lesson.	2.24	1.18
I cannot craft good questions for my students.	1.95	1.09
Mean of means/Average Standard Deviation	3.35	1.05

Source: Fieldwork, 2021

Table 7 revealed that pre-service teachers overwhelmingly consented to the statement reflecting their perceived self-efficacy in instructional strategies. They were shown in their grand mean scores (Mean of means = 3.35, Average Std. Dev. =1.05), indicating a moderate efficacy in instructional strategy. This ignites the fact that most respondents moderately agreed with all eight items measuring pre-service teachers' instructional strategy efficacy. Pre-service teachers were somewhat effective in implementing teaching and learning instructions to students within and outside of the classroom. Responses from the 201 respondents were heterogeneous (Average SD >1.00) among all pre-service teachers in employing effective student-centred teaching methods to increase students' competence.

Pre-service teachers' self-efficacy in instructional strategies revealed that PSTs in the four programme areas were highly efficacious in implementing alternative classroom strategies, adjusting lessons to meet individual students' levels, and providing alternative explanations for confused students. This was amply reflected in their respective high mean scores of (Mean =3.87, 3.85, and 3.81, SD. = 1.01, 1.06, and 1.14). All the mean scores obtained showed that the respondents were efficacious in instructional strategies used in teaching accounting, management, social studies, and economics. This implies that most of the pre-service teachers' success in instructional strategy is evident in their ability to exhibit professional competence in adapting to changes in the learning needs of students. The findings further revealed that pre-service teachers were heterogeneous (SD >1.00) in their response on how self-efficacious they were in teaching courses they were being trained and prepared to teach. This

implies that responses from pre-service teachers were widely dispersed from each other.

It was further found that the pre-service teachers were highly efficacious in providing appropriate challenges, gauging students, and responding to difficult questions with mean scores of (Mean = 3.75, 3.74, and 3.62). This implies that the pre-service teachers have appropriate student-centred teaching methods to analyze and understand students' learning needs and diverse teaching strategies that will allow an adequate understanding of the subject matter and grasping of applicable content in the classroom.

Despite all the good ratings from the pre-service teachers in their efficacy in instructional strategy, it was further revealed that they possess low self-efficacy in using various assessment strategies and crafting good questions for students. Respective means scores of 2.24 and 1.95 indicate a low self-efficacy of pre-service teachers in employing diverse assessment strategies that cover students' cognitive, affective, and behavioral needs in the classroom. This gives the impression that pre-service teachers in the four programmes are not fully developed in covering all essential areas in instructional strategies in teaching accounting, management, economics, and social studies. Table 8 illustrates pre-service teachers' perceived classroom management efficacy using their means and standard deviations.

Table 8: Pre-service Teachers' Classroom Management Efficacy

Statement	Mean	Std. Dev
I can establish a classroom management system with each group of students.	3.97	.96
I keep activities running smoothly.	3.96	1.03
I can control disruptive behaviour in the classroom.	3.94	.90
I make clear expectations about students' behavior.	3.93	.94
I believe I will be able to calm disruptive or noisy students.	3.86	.97
I respond to defiant students.	3.77	1.06
I can prevent problem students from ruining an entire lesson.	3.72	1.28
I need help getting children to follow classroom rules.	2.36	1.21
Mean of means/Average Standard Deviation	3.68	1.04

Source: Fieldwork, 2021

Table 8 showed that pre-service teachers in accounting, management, social studies, and economics are highly efficacious in classroom management with grand means scores (Mean of means = 3.68, Average Std Dev. = 1.04). Using eight elements for measuring the efficacy of classroom management dimension illustrate the high efficacy of about more than half of the teachers maximizing instructional time, structuring instructional activities aimed at enhancing high academic engagement and controlling students' behaviour. Table 8 further showed that pre-services teachers responses on classroom management self-efficacy were widely dispersed (heterogenous). This implies that a significant number of the respondents did not perhaps share the same opinions on describing their self-efficacy belief in classroom management practices.

The results of the stance of PSTs revealed that they are highly effective in establishing a classroom management system, keeping activities running

smoothly, controlling disruptive behaviour, and making clear expectations of students' behaviour. The respective high mean scores of 3.97, 3.96, 3.94 and 3.94 indicate that PSTs involved in the study were highly efficacious in classroom management judging from the four elements under the efficacy of classroom management. Good behaviour, an appropriate classroom management system, and keeping instructional sessions running are needed for any effective classroom. Hence, as indicated above, PSTS' high capability in these areas proves that they are doing an excellent job in ensuring students experience quality teaching and learning with purposeful series of well-planned actions to achieve educational goals.

Moving away from those described above, the study further found that the pre-service teachers were said to be highly efficacious in calming disruptive students, dealing with deviant students, and preventing problem students from ruining an entire lesson. This implies that most pre-service teachers have a high level of efficacy in classroom management, with mean scores of 3.86, 3.77, and 3.72. The perception that PSTs are efficacious in classroom management gives the impression that the pre-teachers possessed high teaching capabilities in planning and carrying out favourable teaching practices that resulted in a good learning environment.

Regarding low efficacy in classroom management, Table 8 shows that PSTs could not get a student to follow classroom rules and regulations, as shown in the mean score of 2.36, indicating that PSTs are not performing that well in managing the classroom in terms of making students obliged to classroom rules and regulations. This is a problem since controlling students'

behaviour in the school is an essential factor in the daily behaviour of teachers in managing the classroom.

Table 9 illustrates the response of PSTs on the last dimension of their self-efficacy belief, thus, student engagement. Every good teacher's responsibility is to effectively involve and engage students in all aspects of teaching and learning within the classroom. Hence, measuring the efficacy of pre-service teachers on this dimension was deemed significant in measuring the diverse learning outcome of students.

Table 9: Pre-service Teachers' Student Engagement Efficacy

Statement	Mean	SD
I help my students to value learning.	4.12	1.01
I encourage students to believe they can do well in schoolwork.	4.06	1.06
I help my students think critically.	3.98	.94
I improve the understanding of a student who is failing.	3.96	.89
I motivate students who show low interest in schoolwork.	3.92	1.13
I get through to the most difficult students.	3.87	.94
I assist families in helping their children do well in school.	3.74	.98
I cannot foster student creativity.	2.76	1.37
Mean of means/Average Standard Deviation	3.68	1.04

Source: Fieldwork, 2021

The overall mean of the study, as shown in Table 9, clearly indicates that the pre-service teachers had a high level of efficacy in students' engagement (Mean = 3.68, Average SD = 1.04). Eight items were deemed to be efficient in appraising their effectiveness in student engagement to ascertain their self-efficacy. Most of the respondents were highly efficacious in dedicating time to meaningful teaching and learning activities that engage students in learning, focusing on all their learning domains. Despite this,

respondent responses were not closer to each other (homogenous). The Average Standard Deviation of 1.04 is more significant than 1.00, signifying heterogeneity in pre-service teachers' responses on their self-efficacy in students' engagement during their pre-service teaching practices. The details of PSTs' opinions of their efficacy in student engagement have been clearly illustrated below.

Information from Table 9 revealed that PSTs help students value learning, encourage students to do well in schoolwork, think critically, improve understanding, and motivate students to show high interest in schoolwork. Evident from the analysis of data in Table 9 revealed that the pre-service teachers are highly effective in the indicators of student engagement. This was shown in their mean scores of 4.12, 4.06, 3.98, 3.96, and 3.92. The pre-service teachers involved in the study had focused on developing students in acquiring the right skills to understand the cognitive, affective, and behavioural needs of diverse learning needs. In consonance with the findings above, the study found that PSTs were highly efficacious in getting through the most difficult students, assisting families in helping children, and fostering creativity. Evident in mean scores of 3.87, 3.74, and 2.76, it was found that PSTs had high efficacy in successfully engaging students in leading them to achieve the desired learning outcomes.

There is no statistically significant difference in pre-service teachers' level instructional strategy efficacy about the programme of study

This first hypothesis aimed to test and compare instructional strategies' efficacy of PSTs in accounting, management, social science, and social studies. The study sought to establish whether there is a significant difference

in pre-service teachers' level of instructional strategy efficacy by comparing their diverse programmes of study. The investigation hinged between conducting either a parametric (One-way ANOVA) or a non-parametric (Kruskal-Wallis H-Test) analysis in analyzing the data collected for the study.

This was deemed appropriate since the grouping variables were more than two groups and the variance for different conditions was markedly different.

The first step in analyzing the data was to check whether the basic assumption of normality was met for a parametric test or violated for the non-parametric test. The dependent variable (instructional strategy efficacy) was tested for normality using the mean-median analysis, skewness and kurtosis, histogram, and standard Q-Q plots. This fundamental assumption is deemed approximately appropriate in determining the the research hypothesis. The normality results are presented in Table 10 and Figures 2 and 3.

Table 10: Test of Normality for Instructional Strategy Self-Efficacy Belief

	Mean	Median	Skewness	SE Skewness	Kurtosis	SE Kurtosis
Instructional Strategy	26.86	28.00	-1.085	.172	1.485	.341

Source: Fieldwork, 2021

Table 10 revealed the test of normality of the dependent variable using its mean, median, skewness, and kurtosis. It was evident that the (Mean = 26.86) and (Median = 28.00) are approximately different, indicating that the data for instructional strategy self-efficacy of PSTs is not normally distributed. The study further confirmed the graphical presentation of normality to determine if the independent variable was not standard or otherwise. Figures 2

and 3 (*see appendices D & E*) demonstrated that the data was not symmetrical and not normally distributed.

The histogram indicated that the data set was negatively skewed and asymmetrical. The standard Q-Q plots further confirmed these assertions. Information from Figure 3 (*see appendix E*) showed that the data appears to be not normally distributed as most of the points were not lying reasonably on the straight diagonal line indicating a dispersion of issues in the dataset and a violation of normality. The study, since the data was not normally distributed, Kruskal-Wallis H-Test (a non-parametric test) was conducted to test the significant difference in instructional strategy self-efficacy among pre-service teachers based upon the programme of study.

Table 11: Kruskal-Wallis H-Test for Instructional Strategy Efficacy of Pre-service

	Programme of Study	N	Mean Rank
Instructional Strategies	B. Ed. Accounting	60	99.68
	B.Ed. Management	48	106.19
	B.Ed. Social Sciences	66	102.14
	B.Ed. Social Studies	27	91.93
	Total	201	
Kruskal-Wallis H			1.105
Df			3
Asymp. Sig.			.776

Source: Fieldwork, 2021

The Kruskal-Wallis H-Test in Table 11 showed no significant difference between the four groups, B.Ed. Accounting (Md = 99.68, n= 60), B.Ed. Management (Md = 106.19, n= 48), B.Ed. Social Science (Md = 102.14, n= 66) and B.Ed. Social Studies (Md = 91.93, n = 27) in instructional strategy efficacy of respondents ($H(3) = 1.105, p = 0.776$). The study retained the null hypothesis that there is no statistically significant difference in pre-service

teachers' level instructional strategy efficacy about the programme of study. The study concludes that all the PSTs currently under training for teaching subjects such as accounting, management, social studies, economics, and geography are almost the same. This implies that the pre-service teachers are acquiring the same guiding principles in assessing students, adjusting lessons for proper understanding, adopting alternative strategies, good assessment techniques, and other crucial instructional strategy efficacy. This implies that the programme of study of the pre-service teachers only plays a role in instructional strategies efficacy. Figure 4 (*see appendix F*) further summarizes the overall inferential statistics. This further provides a graphical representation of the test conducted to determine whether there is a significant difference in instructional strategy self-efficacy based on the programme of study of PSTs.

There is no statistically significant difference in pre-service teachers' level of classroom management efficacy with regard to the programme of study

The second research hypothesis sought to assess whether there is any statistically significant difference in pre-service teachers' level of classroom management efficacy with regard to the programme of study. Classroom management is among the most important variables used in ascertaining the self-efficacy of PSTs in the teaching and learning domain. This involves the effort to oversee operations of the classroom, such as learning, social interactions, and monitoring student behaviour. The study sought to provide answers to the research purpose of finding out whether there is a significant difference in PSTs' level of classroom management efficacy with regard to the

programme of study. The basic assumptions were tested for the dependent variable to determine whether they were normally distributed or not.

As earlier stated, the first step in analyzing the data was to check to see if the basic assumption of normality was met for performing the decision to choose a non-parametric test. The dependent variable (classroom management efficacy) was tested for normality using the mean-median analysis, skewness and kurtosis, histogram, and normal Q-Q plots. This basic assumption is deemed approximately appropriate in determining the kind of analysis deemed appropriate for the research hypothesis. The results of the normality are presented in Table 12 and Figures 5 and 6 (*see appendices G and H*).

Table 12: Test of Normality of Classroom Management Self -Efficacy Belief

	Mean	Median	Skewness	SE Skewness	Kurtosis	SE Kurtosis
Classroom Management	29.53	30	1.287	.172	1.952	.341

Source: Fieldwork, 2021

Table 12 revealed the test of normality of the dependent variable using its mean, median, skewness and kurtosis. It was evident that the (Mean = 29.53) and (Median = 30.00) are deemed approximately different indicating that classroom management self-efficacy of PSTs not approximately normal. The study further confirmed the graphical presentation of normality to determine if the independent variable was not normal or otherwise. Figures 4 and 5 (*see appendices E and F*) confirmed that the data was not symmetrical and not normally distributed. The histogram as shown in Figure 4 indicated that the data set was negatively skewed and asymmetrical. The normal Q-Q plots further confirmed these assertions. Information from Figure 6 (*see appendix H*) indicated that the data appears to be not normally distributed as

most of the points were not lying reasonably on the straight diagonal line indicating a dispersion of points in the dataset and violation of normality.

Table 13: Kruskal-Wallis H-Test for Classroom Management Efficacy of Pre-service

	Programme of Study	N	Mean Rank
Classroom Management	B. Ed. Accounting	60	101.38
	B.Ed. Management	48	98.02
	B.Ed. Social Sciences	66	102.39
	B.Ed. Social Studies	27	102.06
	Total	201	
Kruskal-Wallis H			.176
Df			3
Asymp. Sig.			.981

Source: Fieldwork, 2021

Since the dataset chosen for the study was approximately not normally distributed, a non-parametric analysis was chosen for the study for making a comparison. Table 13 summarizes the difference between classroom management self-efficacy among PSTs based upon the programme of study. A Kruskal-Wallis H-Test was conducted for analyzing the dataset. The Kruskal-Wallis H-Test in Table 13 showed that there is no significant difference among the four groups, B.Ed. Accounting (Md = 101.38, n= 60), B.Ed. Management (Md = 98.02, n= 48), B.Ed. Social Science (Md = 102.39, n= 66) and B.Ed. Social Studies (Md = 102.06, n = 27) in classroom management efficacy ($H(3) = 0.176, p = 0.981$). The study retained the null hypothesis that there is no statistically significant difference in PSTs' level classroom management efficacy with regard to the programme of study.

It can be concluded that all the PSTs' currently training for teaching subjects such as accounting, management, social studies, economics, and geography are acquiring the same instructions and methodology in classroom

management. This echoes the fact that PSTs are being prepared enough to maintain order in the classroom, control students' behaviour and elicit cooperation in all classroom activities aimed at helping students to achieve the desired goals. This implies that the pre-service teachers are acquiring important teaching skills in classroom management such as how to arrange the classroom and provide an appropriate and conducive environment that ensures students growth cognitively, affective-wise, and behaviorally. The fact that there appears to be an insignificant difference among a programme of study PSTs affirms the fact that their trainers are doing a great job in ensuring that they acquire the appropriate skills of creating an environmental and instructional variable that ensures that students achieved high and positive educational outcome. Figure 7 (*see appendix I*) further summarizes the H-test conducted to find out the significant difference in classroom management efficacy of the pre-service teachers based upon their programme of study.

There is no statistically significant difference in pre-service teachers' level of student engagement efficacy with regard to the programme of study

The third hypothesis examine whether there is statistically significant difference in pre-service teachers' level of student engagement efficacy with regard to the programme of study. The study further measured the last dimension under pre-service teachers' self-efficacy on student engagement. Student engagement encompasses the role played by the teachers in ensuring that students are involved in lessons to attain the educational goals.

This study sought to test and provide answers to whether there exists a difference in pre-service teachers' level of students' engagement regarding their programme of study. The test of normality was again performed for the

dependent variable to determine whether they were normally distributed or not. The dependent variable (student engagement efficacy) was tested for normality using the mean-median analysis, skewness and kurtosis, histogram, and normal Q-Q plots. This basic assumption is deemed approximately appropriate in determining the kind of analysis deemed appropriate for the research hypothesis. The results of the normality are presented in Table 14 and Figures 8 and 9.

Table 14: Test of Normality of Student Engagement Self -Efficacy Belief

	Mean	Median	Skewness	SE	Kurtosis	SE
			Skewness		Kurtosis	
Students' Engagement	29.53	30	1.287	.172	1.952	.341

Source: Fieldwork 2021

Table 14 revealed the test of normality of the dependent variable using its mean, median, skewness and kurtosis. It was evident that the (Mean = 29.53) and (Median = 30.00) are deemed approximately different indicating that classroom management self-efficacy of the pre-service teachers is not approximately normal. The study further confirmed the graphical presentation of normality to determine if the independent variable was not normal or otherwise. Figures 8 and 9 confirmed that the data was not symmetrical and not normally distributed. The histogram as shown in Figure 8 (*see appendix K*) indicated that the data set was negatively skewed and asymmetrical. The normal Q-Q plots further confirmed these assertions. Information from Figure 9 (*see appendix K*) indicated that the data appears to be not normally distributed as most of the points were not lying reasonably on the straight diagonal line indicating a dispersion of points in the dataset and violation of normality.

Table 15: Kruskal-Wallis H-Test for Student Engagement Efficacy of Pre-service

	Programme of Study	N	Mean Rank
Classroom Management	B. Ed. Accounting	60	107.64
	B.Ed. Management	48	92.67
	B.Ed. Social Sciences	66	100.02
	B.Ed. Social Studies	27	103.46
	Total	201	
Kruskal-Wallis H			1.851
Df			3
Asymp. Sig.			.604

Source: Field work, 2021

Based upon the normality distribution for the dataset chosen for the study, a non-parametric analysis was chosen for making the comparison. Table 15 reveals the difference between student engagements efficacies among PSTs based upon the programme of study. A Kruskal-Wallis H-Test was conducted to find out the difference between the dependent and independent variables. The Kruskal-Wallis H-Test in Table 15 showed that there is an insignificant difference between the four groups, B.Ed. Accounting (Md = 107.64, n= 60), B.Ed. Management (Md = 92.67, n= 48), B.Ed. Social Science (Md = 100.01, n= 66) and B.Ed. Social Studies (Md = 103.46, n = 27) in student engagement efficacy. This was evident in $H(3) = 1.851, p = 0.604$. The study retained the null hypothesis that there is no statistically significant difference in PSTs' student engagement efficacy with regard to the programme of study.

Using Figure 10 (*see appendix M*), the study further graphically summarizes the H-test conducted to find out the significant difference in student engagement efficacy of pre-service teachers based upon their programme of study.

There is no statistically significant difference in pre-service teachers' level of teaching self- efficacy with regard to gender

Research hypothesis four sought to find out whether there exists a statistically significant difference in the total self-efficacy of PSTs based on gender. This research hypothesis has been proven by other researchers as deemed important since the gender of PSTs play a significant or insignificant role in their self-efficacy. The Mann-Whitney U-Test was deemed appropriate for testing this research hypothesis for the independent variable (gender) comprising male and female PSTs and dependent variable (total self-efficacy) of pre-service teachers. As it has always been the case, the study first tested for normality before conducting the U-Test. The normality test was done using mean-median values, skewness, kurtosis, histogram, and normal Q-Q plots. The results of the normality test using the descriptive statistics were presented in Table 16, the Figures 11 and 12 (*see appendices N and O*).

Table 16: Test of Normality of Total Self -Efficacy Belief

	Mean	Median	Skewness	SE	Kurtosis	SE
				Skewness		Kurtosis
Total Self- efficacy	86.83	89.00	-1.419	.172	2.676	.341

Source: Fieldwork, 2021

Table 16 revealed the test of normality of the dependent variable using its mean, median, skewness and kurtosis. It was evident that the (Mean = 86.83) and (Median = 89.00) are deemed approximately different indicating that the total self-efficacy of PSTs not approximately normal. The study further confirmed the graphical presentation of normality to determine if the independent variable was not normal or otherwise. Figures 11 and 12

confirmed that the data was not symmetrical and not normally distributed. The histogram as shown in Figure 1 indicated that the data set was negatively skewed and asymmetrical. The normal Q-Q plots further confirmed these assertions. Information from Figure 12 (see appendix P) indicated that the data appears to be not normally distributed as most of the points were not lying reasonably on the straight diagonal line indicating a dispersion of points in the dataset and violation of normality. Table 17 summarizes the level of difference among male and female pre-service teachers' total self-efficacy.

Table 17: Mann-Whitney U-Test for Total Self-Efficacy of Pre-service Teachers

	Gender	N	Mean Rank	Sum of Ranks
Total Self-Efficacy	Male	119	99.34	11821.50
	Female	82	103.41	8479.50
	Total	201		
Mann-Whitney U				4681.500
Wilcoxon W				11821.500
Z				-.488
Asymp. Sig. (2-tailed)				.626

Source: Fieldwork, 2021

Table 17 summarizes the difference between the male and female PSTs' total self-efficacy. A Mann-Whitney U-Test in Table 17 showed that there is insignificant difference among Male PSTs ($Md = 99.34$, $n = 119$) compared to Female PSTs ($Md = 103.41$, $n = 82$), $U = 4681.500$, $z = -.488$, $p = .626 > .005$. The study failed to reject the null hypothesis that there is no statistically significant difference in PSTs' level of total self-efficacy with gender. This implies that the gender of PSTs does not play a significant role in total self-efficacy in teaching accounting, management, economics, geography, and economics.

There is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to age.

The main aim of research hypothesis five is to investigate whether there exists a significant difference in pre-service teachers' total self-efficacy based upon their ages. PSTs are trained to acquire skills in dealing with students' learning difficulties, classroom behaviour, meeting diverse learning needs of students and motivating them to study and many others. The basic assumptions were again tested for the dependent variable to determine whether they were normally distributed or not. Moreover, since the data was not normally distributed, the Kruskal-Wallis H-Test test was conducted.

Table 18: Kruskal-Wallis H-Test for Self-Efficacy of Pre-service Teachers

	Age	N	Mean Rank
Self-Efficacy	20-22 years	60	117.63
	23-25 years	48	94.94
	26-28 years	66	100.85
	Total	201	
Kruskal-Wallis H			4.791
Df			2
Asymp. Sig.			.091

Source: Fieldwork, 2021

The Kruskal-Wallis H-Test was used to analyze the dataset. The Kruskal-Wallis H-Test in Table 18 showed that there is insignificant difference between the age groups of pre-service teachers, 20-22 years ($Md = 117.63.38$, $n = 60$), 23-25 years ($Md = 94.94$, $n = 48$) and 26-28 years ($Md = 100.85$, $n = 66$) in total self-efficacy. This was evident in $H(3) = 4.791$, $p = 0.91$. The study retained the null hypothesis that there is no statistically significant difference in PSTs' level of total self-efficacy with regard to age. It can be concluded that all PSTs currently training for teaching subjects;

accounting, management, social studies, economics, and geography are acquiring the same self-efficacy in instructional strategies, classroom management and students' engagement. This indicates that age does not also significantly play a role in the total self-efficacy of PSTs. Figure 13 (*see appendix Q*) further summarizes the H-test conducted to find out the significant difference in total self-efficacy of pre-service teachers based upon their ages.

Discussions

Pre-Service Teachers' overall level Self-Efficacy Beliefs in Teaching

The purpose of the first research question was to find the total level of teaching self-efficacy (TSE) of PSTs in general. Teachers' self-efficacy was measured across the three subscales: instructional classroom strategies, classroom management, and student engagement in the Teachers' Sense of Efficacy Scale (Tschannen-Moran & WoolfolkHoy, 2001). The study results, which were obtained with the use of means and standard deviations, measured the total level of TSES of pre-service teachers by combining the results of all three subscales that form the total efficacy. The development of the overall teaching self-efficacy of the PSTs indicated a high mean score. It revealed that PSTs in the Department of Business and Social Science Education (DOBSSE) have a high self-efficacy in teaching.

Specifically, DOBSSE Pre-service Teachers (DPSTs) have high classroom management, student engagement, and moderate instructional strategy efficacy. This finding that the DPST has a high TSE is supported by previous studies of Zuya, Kwalat, and Attah (2016), who, for example, aimed at determining the confidence levels of teaching self-efficacy of pre-service

mathematics teachers and found that pre-service mathematics teachers had a high level of confidence in teaching efficacy. The study also concluded that pre-service teachers, after several practical experiences developed a very high level of belief in self-efficacy and teaching self-efficacy in general. This implies that the teaching self-efficacy of PSTs increases after they have been able to go through the training period and have had some practical teaching experiences.

This implies that formal education, additional training, and teaching experiences increase pre-service teachers' efficacy. Then DPST has higher TSE because they are fully privy to all the sources of information for efficacy development postulated by Bandura (1979). The level may have varied when measured at the beginning or middle of their training. Similarly, Balci, Anal, and Üüten (2019) examined the self-efficacy views of pre-service teachers in English as foreign language (EFL) instructors. The findings demonstrated that pre-service EFL instructors exhibited high levels of teacher self-efficacy in general and in the subscales of classroom management, student engagement, and instructional strategies.

A higher level of TSE implies that pre-service teachers have a firmer belief in their ability to perform the teaching task as expected and demanded. DPST have firmer beliefs in managing and controlling the class and engaging students comprehensively in and out of the course to ensure they yield the best learning outcomes. However, they have a moderate belief in their abilities to employ varied and appropriate instructional strategies to get through the most challenging and weak students. This calls for theoretical and practical training on various instructional strategies application. A study by Darling-Hammond

and Cobb (1996) reported that fully prepared and certified teachers from multiple educational programmes generally have high levels of teaching self-efficacy.

Difference in pre-service teachers' level instructional strategy efficacy about the programme of study

In their study, Shaukat and Iqbal (2012) proposed instructional strategies as one of the significant elements of teacher self-efficacy assessments. Teachers with high levels of teaching self-efficacy believe that difficult pupils can be taught provided they put forth much effort and use the right instructional strategies. A measure of the overall instructional efficacy showed that the PSTs have a moderate level of Instructional effectiveness. This seems to align with AL Fadeley and Algahasab's (2018) studies on 'measuring the self-efficacy of EFL teachers in elementary governmental schools in Kuwait: exploring years of teaching experience.' The findings of this study showed a moderate score of teachers in instructional strategies. According to AL Fadeley and Algahasab (2018), teachers tend to require expertise and previous preparation regarding instructional strategies, which may be difficult for pre-service teachers to achieve. As a result, it reflects the reality that problems with grasping diverse topic information may arise throughout the teaching process. This necessitates not just the competence of teachers but also the provision of ongoing pedagogical training by policymakers and curriculum designers.

This particular hypothesis tested the differences between the self-efficacy of PSTs in Accounting, Management, Social Science, and Social Studies. A moderate level of efficacy in instructional strategies shows that

PSTs have average or adequate belief in their ability to use instructional strategies appropriately. However, more is needed, and therefore there is a need to inculcate in their training measures that will increase this domain across all programmes. The p -value shows no significant difference in the instructional strategies efficacy levels of the pre-service teachers in Accounting, Management, Social Science, and Social Studies. Comparatively, this implies their level of belief in the application of instructional strategies in delivering an instructional session as expected is the same. With this in mind, the kind of programme of study does not affect one's level of instructional strategy efficacy.

Difference in pre-service teachers' level of classroom management efficacy about the programme of study

Comparatively, the reported result has revealed no statistically significant difference between the classroom management levels of PST in Accounting, Management, Social Studies, and Social Science. All PSTs from the four programmes scored higher in the classroom management domain. The high scores of classroom management efficacy suggested that PSTs believe they have sufficient knowledge and abilities to effectively teach and create a conducive classroom management environment for all behaviours and learners. Every effective teacher is a manager in their class and must believe in their effective adapting approaches and strategies that can help to create a harmonious and favorable learning atmosphere for learners with varied learning needs. Classroom management is an essential component of pre-service teacher preparation and in-service teacher behaviour, according to Emmer and Stough (2001). Therefore, high scores in classroom management

efficacy across all four programmes imply that PSTs have acquired all relevant knowledge and skills, resulting in their level of belief.

This means PSTs in Accounting, Management, Social Science, and Social Studies as final year trained teachers can keep order in the classroom, engage students in learning and elicit students' cooperation in all activities in the classroom (Wong & Wong, 2019). The result of this study was backed and confirmed by findings from Sappor (2020) and Asare (2020) which reported that preservice teachers in both accounting and management respectively have higher levels of efficacy believes in classroom management. Studies by Swan, Wolf, and Cano (2011) titled "Changes in teacher self–efficacy from the student teaching experience through the third year of teaching," showed that for a pre-service teacher or an in-service teacher to have a higher level of total teaching self-efficacy, then such a teacher or group of teachers must possess high levels of classroom management efficacy. This means for a teacher to be assessed as having a high level of teacher efficacy then such a teacher must have a high or an acceptable level of efficacy in classroom management. It was also evident that classroom management efficacy increased as pre-service teachers climb the training ladder and give practical teaching experience.

As reported in the studies of Stough, Montague, Williams-Diehm and Landmark (2006), the high levels of classroom management efficacy scores can be attributed to the fact the all selected PST from Accounting, Management, Social Science and Social Studies are final year students and may have mastered a lot about classroom management through experience in the field. However, there is not much evidence, and it is impossible to assume

that all new teachers learn classroom management abilities and become highly efficacious with time and experience in the field (Oliver & Reschly, 2007).

Difference in pre-service teachers' level of student engagement efficacy with regard to the programme of study

The study concluded that there is no significant difference in the pre-service teachers' ability in engaging students cognitively, emotionally, and behaviorally irrespective of the programme of study (B.Ed. Accounting, B.Ed. Management, B.Ed. Social Science and B.Ed. Social Studies). This implies that the student teachers currently undergoing training on the appropriate teaching methods to adopt in engaging students in the classroom are probably taking their lesson with utmost seriousness to ensure that students are motivated to value learning and participate in instructional sessions and foster creativity and innovation for learning. This is no surprise because there appears to be no significant difference in the pre-service teacher self-efficacy in the other two main dimensions as earlier investigated. PSTs in the four programmes have a high level of student engagement efficacy.

The difference in pre-service teachers' level of teaching self-efficacy with regard to gender

This hypothesis was formulated to test the difference in teaching self-efficacy levels of pre-service teachers across gender. The study revealed that there is no significant difference in teaching self-efficacy levels across gender. The p-value implies there is no statistically significant difference between the male and female pre-service teachers in terms of the levels of teaching self-efficacy. This seems to suggest that both male and female DPST have similar levels of beliefs in their ability to perform the teaching task. Thus, since all

pre-service teachers, either male or female, go through the same training and teacher preparation sessions their level of TSE will not be induced by their gender elements. In the study of Tschannen-Moran and Woolfolk Hoy (2007), It was discovered that demographic characteristics such as gender and race were not found to be systematically connected to pre-service teachers' and career teachers' self-efficacy beliefs.

These findings are in line with the findings by Yüksel (2014) which showed that the classroom management course had a substantial impact on pre-service teachers' levels of teacher self-efficacy growth and that pre-service teachers' teaching self-efficacy levels did not differ significantly by gender. Tajeddin and Khodverdi (2011) drew another supporting finding from the study. The researchers found that there was no statistically significant influence of gender on teachers' self-efficacy through their investigation. Finally, Mitchual et al. (2010) used a quantitative study to investigate the influence of gender on pre-service teachers' self-efficacy beliefs and came to a similar conclusion. The findings revealed that PSTs general self-efficacy views do not differ substantially by gender.

However, the result of this study contradicts the study findings of Karinvand (2011), Ahmad, Khan and Rehman (2015), Butucha (2013), Klassen and Chiu (2010) and Aydemi, et. al (2014). Regarding differences in PTSE levels across gender, these studies gave varied results showing a clear difference in both males and females. The findings of Karinvand (2011) concluded that female teacher's posse a significantly greater level of self-efficacy than their male counterparts in the Iranian context. Another study with a contrary view is that of Ahmad, Khan and Rehman (2015) which

indicated that female teachers have better self-efficacy than male teachers. On efficacy to influence classroom management, instructional strategies, and engagement subscales, female teachers have higher self-efficacy than male teachers. Female teachers at Attock's public elementary schools performed better than male teachers due to their high self-efficacy perception.

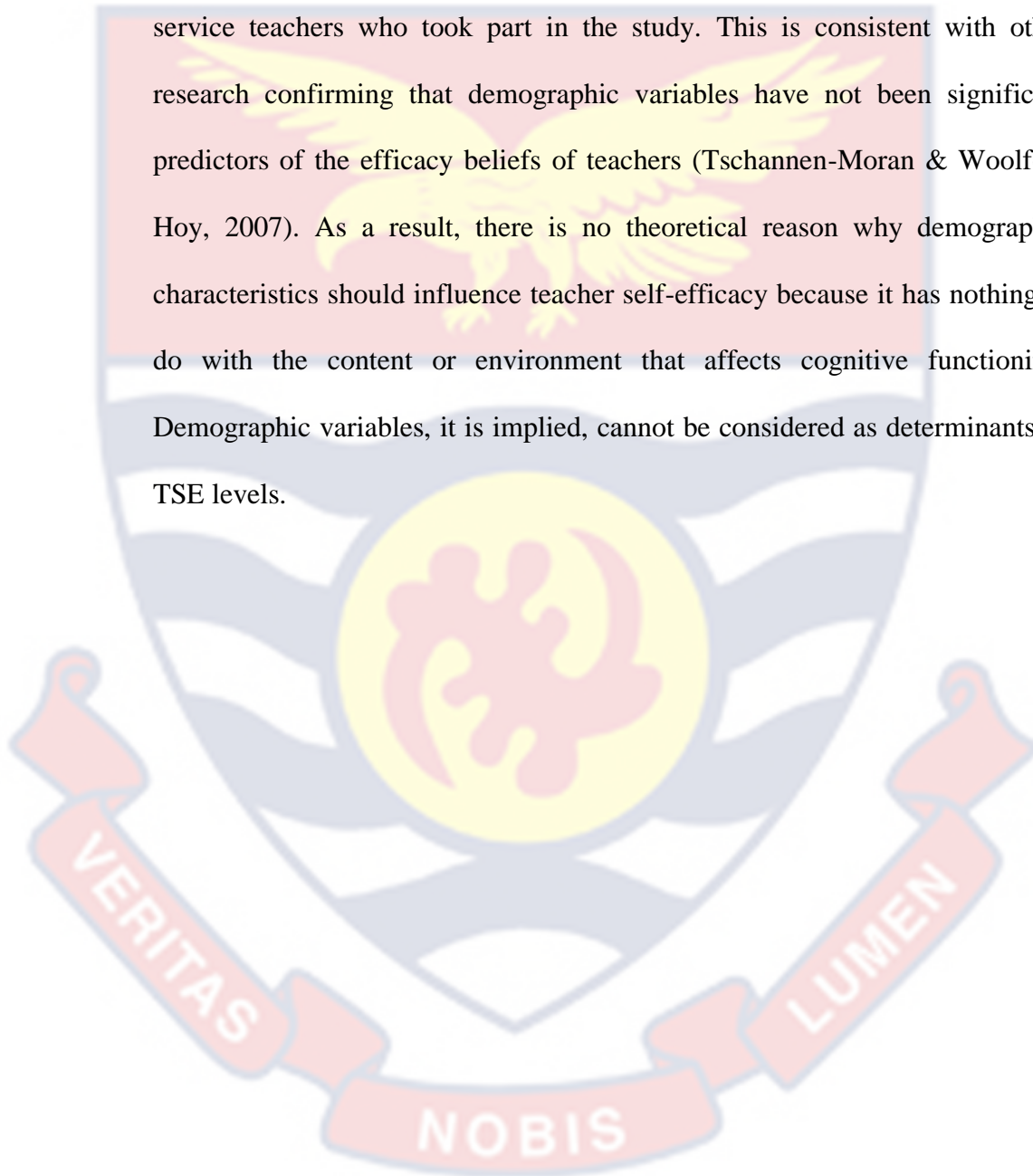
In support of the argument that males have a higher level of teaching self-efficacy, contrary revelation from Butucha (2013) identified males to be having higher levels of teaching self-efficacy than females specifically in the dimension of classroom management. Finally, Klassen and Chiu (2010) observed that male teachers had higher self-efficacy in classroom management than female teachers, but no significant differences in student engagement or instructional strategies were detected between male and female teachers.

Difference in pre-service teachers' level of teaching self-efficacy with regard to age

There was no significant difference between the TSE levels of PST in the various age groups. The final year pre-service teachers used for the studies were within the age bracket of 20 years to 28years. In addition, they were classified into three groups with two years intervals. The result failed to reject the null hypothesis in that the p-value was greater than .05 which implies there was no difference in their level of TSE. This implies that age in this case is not a determinant of the level of a teacher's self-efficacy beliefs.

The findings that age does not determine a teacher's level of self-efficacy was seconded by the findings from Pendergast, Garvis, Keogh and Jayne (2011). The study aimed that investigate Pre-service Teacher Self-efficacy Beliefs. Among some demographic variables that were investigated to

see their effect on teacher self-efficacy was age. Age is not shown to be systematically related to teacher self-efficacy, according to the study's findings. The researchers went on to say that age, programme, and gender were not shown to be systematically related to the self-efficacy of the pre-service teachers who took part in the study. This is consistent with other research confirming that demographic variables have not been significant predictors of the efficacy beliefs of teachers (Tschannen-Moran & Woolfolk Hoy, 2007). As a result, there is no theoretical reason why demographic characteristics should influence teacher self-efficacy because it has nothing to do with the content or environment that affects cognitive functioning. Demographic variables, it is implied, cannot be considered as determinants of TSE levels.



CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

This chapter concludes the study and presents a summary of the study findings, as well as conclusions made. Based on the conclusions, recommendations for policy and practice and restructuring are made. Areas for further study are also highlighted in this chapter.

Summary

This study was quantitative in and employed a descriptive survey design. The main intent of the study was to measure and compare University of Cape Coasts pre-service teachers' teaching self-efficacy in teaching their respective subjects areas. The following research question and hypotheses were formulated:

1. What are pre-service teachers' level of self-efficacy beliefs in teaching their subjects?
2. H_0 : there is no statistically significant difference in pre-service teachers' level of instructional strategy efficacy with regard to their programme of study.
3. H_0 : there is no statistically significant difference in pre-service teachers' level of classroom management efficacy with regard to their programme of study.
4. H_0 : there is no statistically significant difference in pre-service teachers' level of student engagement efficacy with regard to their programme of study.

5. H_0 : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to their gender.
6. H_0 : there is no statistically significant difference in pre-service teachers' level of teaching self-efficacy with regard to their age.

The long version of the TSE scale which consists of 24-items was adapted. Some modifications were made to suit the study. The instrument was pre-tested. The Cronbach's Alpha of 0.763 was obtained. The result indicated that the instrument was reliable and valid. Data was collected after ethical consideration was sought from the IRB, UCC. The instrument was administered to 210 final year pre-service teachers at the University of Cape Coast of which a 95% return rate was achieved. Both descriptive (frequencies, percentages, means and standard deviation) (Kruskal-Wallis H-Test and Mann-Whitney U-Test) and inferential statistics were used to analyse the data.

Key Findings

The following findings emerged from this study:

1. PSTs in the four programme groups (Bachelor of Education in Management, Accounting, Social Science and Social Studies) have a high level of teacher self-efficacy in teaching their respective subjects. A breakdown showed that PSTs generally have a high level of efficacy in classroom management, and student engagement, and a moderate level of efficacy in instructional strategies.
2. It was found that there is no statistically significant difference in the level of classroom management efficacy among PSTs in Accounting, Management, Social Science and Social Studies.

3. In comparing the level of instructional strategy efficacy between PSTs, it was found that pre-service teachers have the same level of instructional strategy efficacy. Thus, there is no statistically significant difference in the level of instructional strategies efficacy among Accounting, Management, Social Science and Social Studies PSTs.
4. There was no significant difference in the levels of student engagement efficacy among the PSTs in the four programme groups.
5. The level of teacher self-efficacy levels of the participating PSTs was found to be similar irrespective of characteristics such as age, programme and gender.

Conclusion

The finding seems to suggest that the pre-service Accounting, Management, Social Studies and Social Science teachers of the University of Cape Coast have a high level of teacher self-efficacy to teach their various specialized subjects. This implies that all four programmes have been structured in a way that seeks to prepare PSTs adequately to have a strong belief and preparedness towards their future teaching task. As stated by Bandura (1997), mastery experience is the most important source of information for building the self-efficacy of teachers. Since the group of pre-service teachers had gone through both on-campus and off-campus teaching experience they gathered all relevant information that has increased their level of teacher self-efficacy.

All pre-service teachers in the programmes have high levels of TSE in classroom management. The results of the stance of PSTs revealed that they are highly effective in establishing a classroom management system, keeping

activities running smoothly, controlling disruptive behaviour, and making clear expectations on students' behaviour. The study further concludes that pre-service teachers are highly efficacious in calming disruptive students, dealing with deviant students, and preventing problem students from ruining an entire lesson. The pre-service teachers in all four programmes have been fully prepared as managers of their future classes.

Also, all respondents were highly efficacious in student engagement. The study concluded that pre-service teachers, irrespective of the programme of study (B.Ed. Accounting, B.Ed. Management, B.Ed. Social Science and B.Ed. Social Studies), are similar in engaging students cognitively, emotionally, and behaviourally. This implies that student-teachers currently undergoing training on the appropriate teaching methods to adopt in engaging students in the classroom are taking their lesson with utmost seriousness to ensure that students are motivated to value learning, participate in instructional sessions, and foster creativity and innovation for education.

Pre-service teachers' moderate level in instructional strategies indicates that they pre-service teachers would be moderately effective in implementing teaching and learning instructions to students within and outside the classroom. Despite all the good ratings from the pre-service teachers in their efficacy in instructional strategy, it was further revealed that the pre-service teachers possess low self-efficacy in using a variety of assessment strategies and crafting good questions for students. Lastly, it can be concluded that PSTs have similar levels of teacher self-efficacy irrespective of their demographic characteristics such as age, gender, and programme.

Recommendations

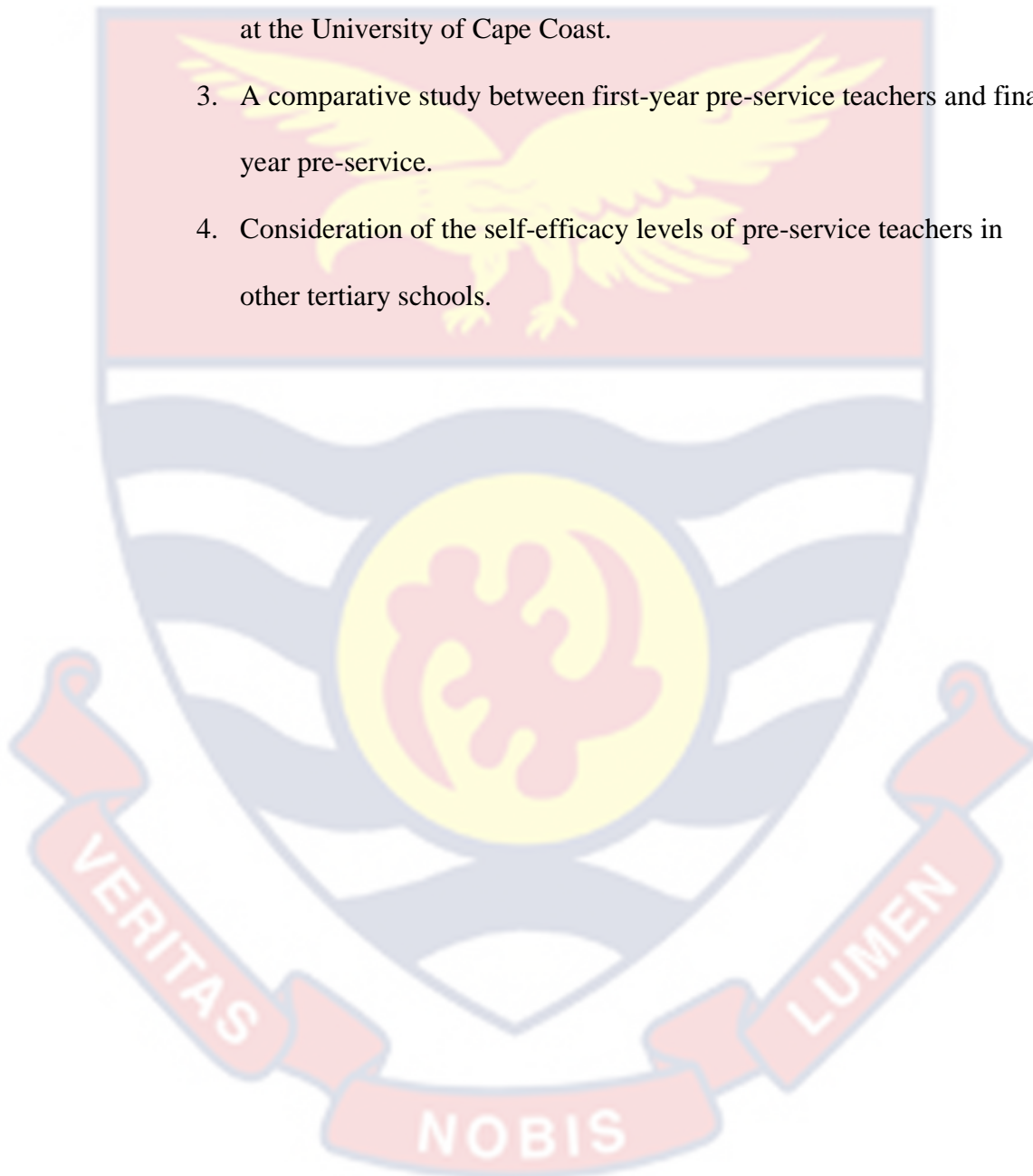
Based on the findings and conclusion of this study, the following recommendations were given;

1. Programme developers must restructure the programmes appropriately to either increase the total level of teacher self-efficacy or maintain the current level of teacher self-efficacy among PSTs
2. Teacher educators should pay more attention to competencies related to instructional strategies by aiding PSTs to apply a variety of these strategies during the on-campus teaching practice sessions.
3. The Centre of Teacher Professional Development and lecturers in charge of practical teaching sessions should orient pre-service teachers in various instructional strategies and their application.
4. To enhance student engagement efficacy, it is recommended that educators, and programme developers must focus on effective strategies and practices, while also targeting all programme groups for future educational interventions and programmes
5. Teacher education programmes and professional development initiatives should enhance teacher self-efficacy across all groups by providing tailored opportunities for ongoing professional development and encouraging collaboration and sharing of best practices among teachers to boost their confidence and effectiveness in teaching.

Suggestion for Further Research

Considering the scope and limitations of this study, the researcher gives the following suggestions for further research.

1. A replication of this study, taking into consideration all pre-service teachers in the University of Cape Coast to provide a more extensive view of preservice teacher level of self-efficacy.
2. Investigate the sources of teacher self-efficacy for pre-service teachers at the University of Cape Coast.
3. A comparative study between first-year pre-service teachers and final-year pre-service.
4. Consideration of the self-efficacy levels of pre-service teachers in other tertiary schools.



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APPENDICES

A: QUESTIONNAIRE

The purpose of this study is to measure and compare University of Cape Coasts pre-service teachers' teaching self-efficacy. All information gathered in this study will be treated with the strictest confidentiality and all participants will remain anonymous. All data will be kept by the researcher and any data that can identify the participants will not be given to any other researcher or agency.

Instructions

Kindly answer the questions in this questionnaire. Please tick [] the correct response from the options associated with each item.

SECTION A: BIOGRAPHIC DATA

1. Program of Study: B.Ed. Accounting [] B.Ed. Management []
B.Ed. Social Science [] B.Ed. Social Studies []
2. Major Subject: Accounting [] Management [] Social Studies [] Economics [] Geography []
3. Gender: Male [] Female []
4. Age: 20-22yrs [] 23-25yrs [] 26-28yrs []

SECTION B

This section of the questionnaire is designed to help us gain a better understanding of the kinds of things that create difficulties for pre-service teachers in their school activities and makes them efficacious. Please be truthful while you indicate your opinion about each of the statements below.

Please indicate the extent to which you agree to the following statements by ticking [] on a scale of 1 to 5. (1 – Strongly disagree, 2 – Disagree, 3 –

Undecided, 4– Agree and 5- Strongly agree) Please select only one to reflect your opinion


No	Statement	1	2	3	4	5
FACTOR 1: INSTRUCTIONAL STRATEGIES EFFICACY						
11	I cannot use a variety of assessment strategies for a single lesson					
12	When students are confused, I can provide alternative explanations or examples to particular instructional content.					
13	I cannot craft good questions for my students.					
14	I believe I can implement alternative strategies in my classroom.					
15	I respond to difficult questions from my students.					
16	I adjust my lessons to the proper level for individual students.					
17	I will be able to gauge student comprehension of what has been taught					
18	I believe I can provide appropriate challenges for very capable students.					
FACTOR 2: CLASSROOM MANGEMENT EFFICACY						
19	I am capable of controlling disruptive behaviour in the classroom.					
20	I cannot get children to follow classroom rules.					
21	I believe I will be able to calm disruptive or noisy students.					
22	I can establish a classroom management system with each group of students.					
23	I believe I can prevent problem students from ruining an entire lesson.					
24	I respond to defiant students.					
25	I make clear expectations about students' behaviour.					
26	I keep activities running smoothly.					
FACTOR 3: STUDENT ENGAGEMENT EFFICACY						
27	I encourage students to believe they can do well in school work					
28	I help my students to value learning.					
29	I motivate students who show low interest in schoolwork.					
30	I assist families in helping their children do well in school.					
31	I improve the understanding of a student who is failing.					
32	I help my students think critically.					
33	I cannot foster student creativity.					
34	I get through to the most difficult students.					

THANK YOU

B: INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF HUMANITIES & SOCIAL SCIENCES EDUCATION
DEPARTMENT OF BUSINESS & SOCIAL SCIENCES EDUCATION

Telephone: +233-(0)3321 35411 / +233-(0)3321 32480 /3
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Telegrams & Cables: University, Cape Coast
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E-mail: dbase@ucc.edu.gh



UNIVERSITY OF CAPE COST
PRIVATE MAIL BAG

Date: 28th September, 2021

Our Ref:
Your Ref:

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

INTRODUCTORY LETTER

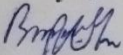
Ms. Linda Kumah is an M.Phil Management Education student of this Department and as a requirement for the programme, she is working on the research topic: **“Pre-service Teacher’s Teaching self-efficacy: A comparative study in various subject curricular”**.

The study is a comparative study which seeks to measure and compare the level of teacher self-efficacy of all level 400 pre-service teachers in Department of Business and Social Sciences Education. We would be grateful if you could give her the necessary assistance to enable her complete the research.

In case she flouts any ethical requirement as the study may necessitate, kindly get in touch with her supervisor, Dr. Anthony A. Owusu, on 0244832787 or through e-mail Anthony.owusu@ucc.edu.gh. You may also get in touch with the Department on 0209408788 or through dbse@ucc.edu.gh.

Thank you.

Yours faithfully,



Dr. Bernard Yaw Sekyi Acquah
Head



D: FIGURES FOR NORMALITY TEST



Figure 2: Histogram for normality test

E: Normal Q-Q Plot

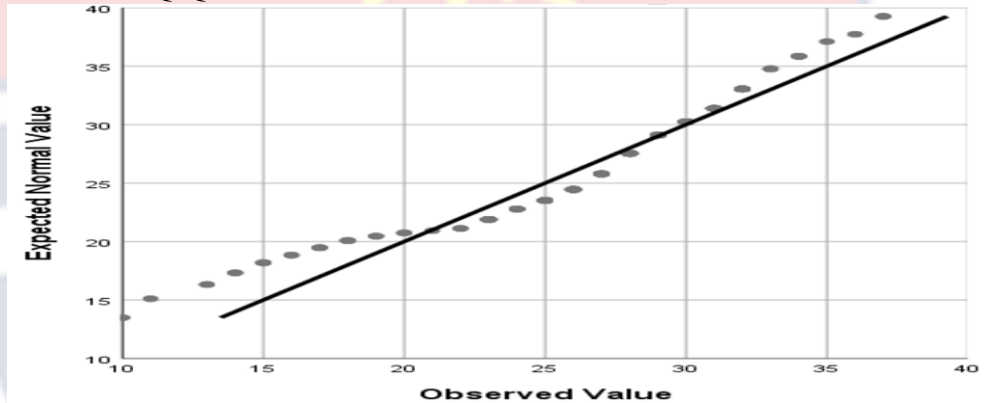


Figure 3: Normal Q-Q Plot

F: Summary of independent samples h-test

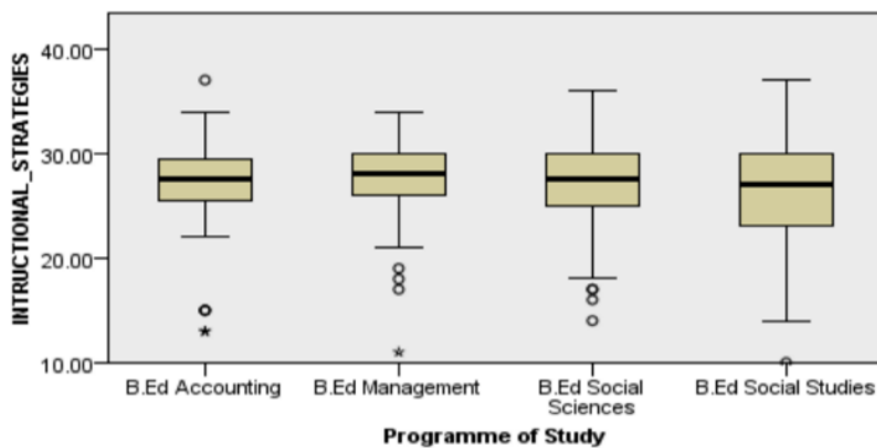


Figure 4: Summary of independent samples h-test

G: Histogram for normality test

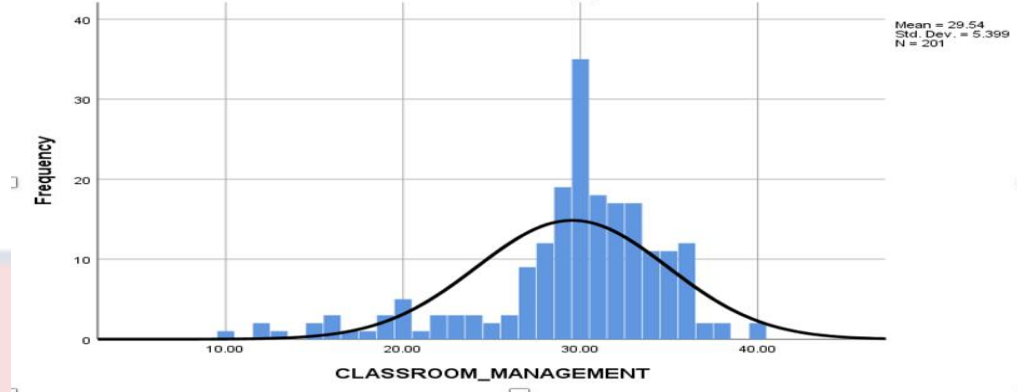


Figure 5: Histogram for normality test

H: Normal Q-Q plot

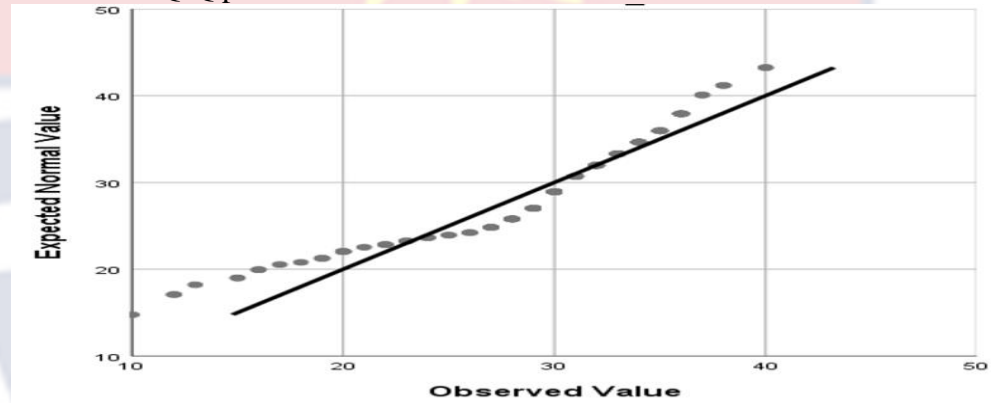


Figure 6: Normal Q-Q plot

I: Summary of independent samples h-test

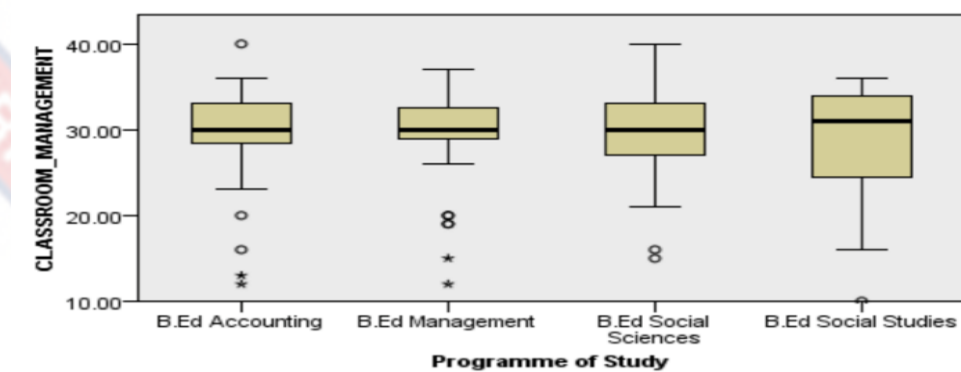


Figure 7: Summary of independent samples h-test

J: Histogram for normality test

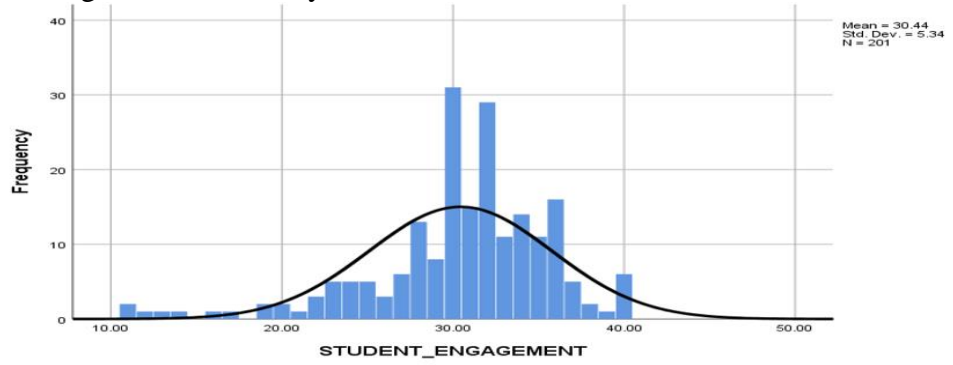


Figure 8: Histogram for normality test

K: Normal Q-Q plot

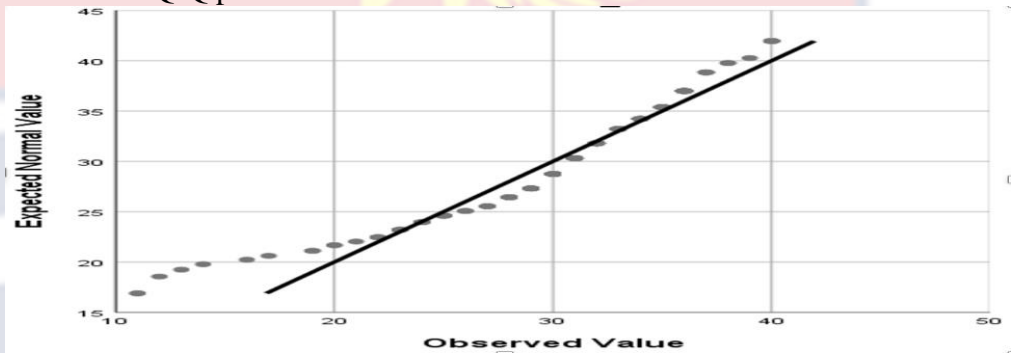


Figure 9: Normal Q-Q plot

M: Summary of independent samples h-test

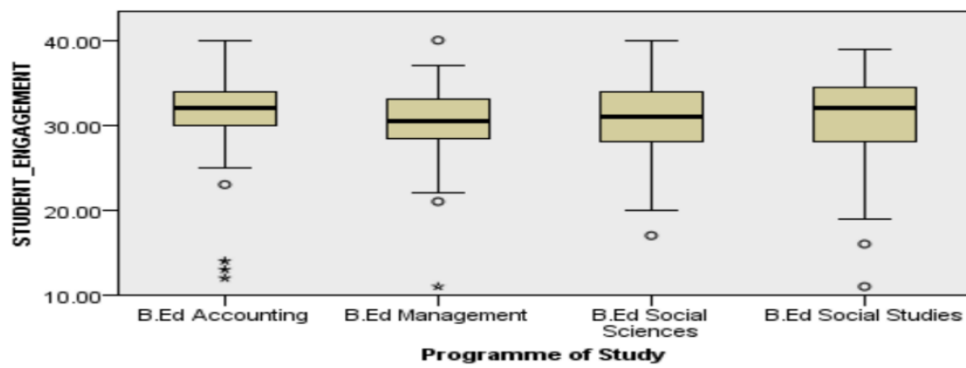


Figure 10: Summary of independent samples h-test

O: Histogram for normality test

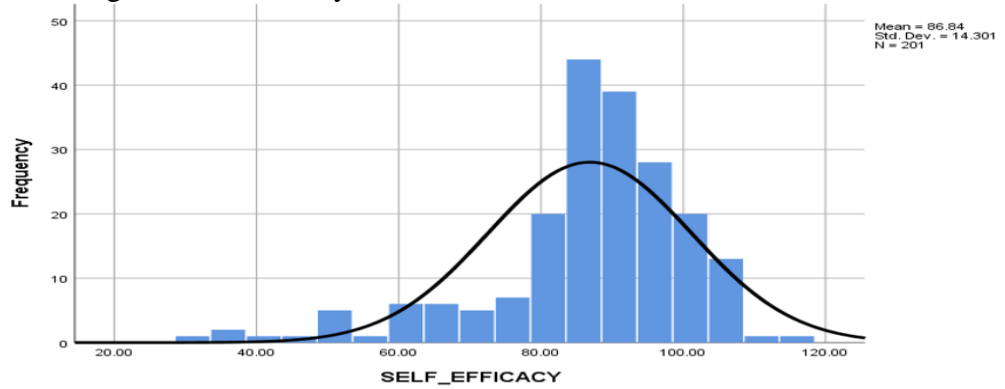


Figure 11: Histogram for normality test

P: Normal Q-Q plot

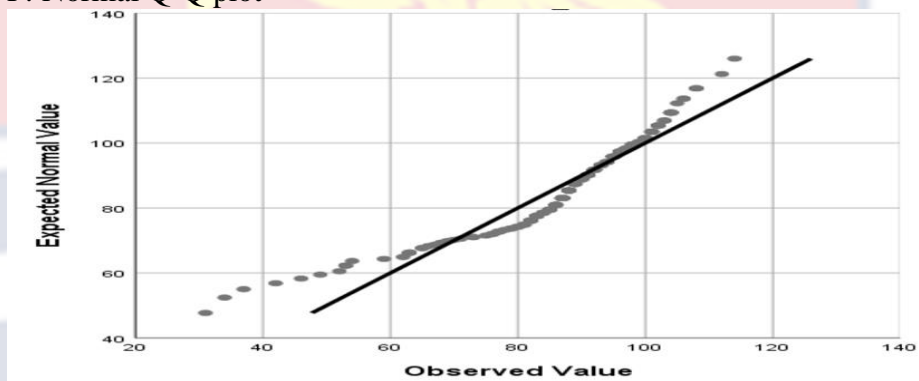


Figure 12: Normal Q-Q plot

Q: Summary of independent samples h-test

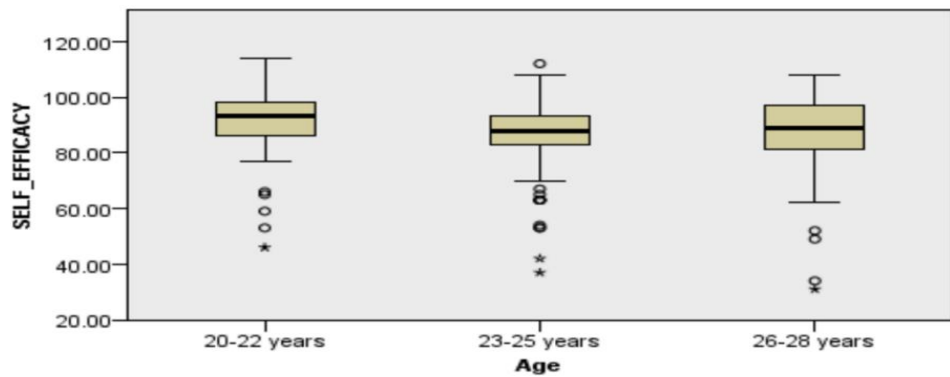


Figure 13: Summary of independent samples h-test