UNIVERSITY OF CAPE COAST

PERCEIVED EFFECTS OF LARGE CLASS SIZE ON COLLEGE OF EDUCATION TUTORS' EFFECTIVENESS IN THE NORTHERN REGION OF GHANA

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BY

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Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for the award of Master of Philosophy degree in Educational Psychology

SEPTEMBER 2020

DECLARATION

Candidate's Declaration

I hereby declare that this work is the product of my own academic research and that no part of it was submitted at this university or anywhere else for another degree.

Candidate's Signature: ……. Date: …….

Name: ……

Supervisors' Declaration

We hereby declare that the preparation and presentation of the thesis have been supervised in compliance with the thesis supervision guidelines developed by Cape Coast University.

Principal Supervisor's Signature: ……. Date: ……

Name: ……

Co-Supervisor's Signature: ……Date: …….

Name: ……

ABSTRACT

The study assessed the perceived effects of large class size on tutor effectiveness in public colleges of education in the northern region of Ghana. The quantitative descriptive survey design was employed for the study. Questionnaire was used for data collection. The Cronbach's alpha was .79. There census method was used to include 192 tutors for the study. Percentages, means, standard deviation, independent samples t-tests and ANOVA were used to analyse the data. Findings showed that large class size affected tutors' interpersonal relationship with students. Large class size was perceived by tutors to affect instructional methods and assessment of students learning. The study found a significant gender and teaching experience differences in perceived effects of large class size on tutors' effectiveness. It was concluded that large class sizes be scaled down to enhance teaching and learning in public colleges of education in the northern part of Ghana. The study recommended that tutors in the colleges of education in the northern region of Ghana must ensure a conducive learning environment for students to actively partake in the teaching and learning activities. More tutors should be recruited by colleges of education in the northern region of Ghana to reduce large classes.

KEY WORDS

Classroom management

Effect

Instructional methods

Large class

Student assessment

Tutor effectiveness

Tutor morale

Tutor preparation

Tutor-student relationship

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CHAPTER ONE

INTRODUCTION

Background to the Study

Education is recognised as an important priority that can break the shackles of poverty and provide a solid base for the socio-economic development of a nation. Governments around the world put a great deal of relevance on academic growth at all levels in this respect. The United Nations Educational, Scientific and Cultural Organisation **(**UNESCO)'s "World Declaration on Education for All" in 1990 noted that, the quality of education delivered in schools across all levels is a key determinant of the socio-economic development of nations, especially the underdeveloped ones (UNESCO, 1990).

The UNESCO in 2005, therefore, proposed that quality education be made available not only uniformly, but also more important to the socio-economic needs of nations. The 1990 Declaration stated that a requirement for achieving the basic goal of equity should be considered as quality education. The reasoning is that increasing access alone would not be sufficient to make a full commitment to education for the improvement of the individual and society at large (UNESCO, 2005).

In lieu of this, the World Bank (2007) established and maintained that improving the economic growth and success of countries results from equal opportunities to enjoy quality education. Despite UNESCO's declaration in 1990, the attempt to offer quality education to the citizenry in many developing countries continues to be obstructed by a host of challenges including large class

sizes or enrolments. Empirical evidence shows that the size of the class is still the most important aspect of teaching (Mohammed, 2015).

According to Yelkpieri, Namale, Esia-Donkoh and Ofosu-Dwamena (2012), large class size is one of the problems faced by developing nations in the education sector. Ghana, a country under development as it is, has not been spared and has continued to encounter its own proportion of this canker at the pre-tertiary and tertiary levels. May be the size of the class is more of a relative measure than an absolute number factor. There are, for some institutions such as the National Council for Tertiary Education (NCTE), some threshold numbers of students, for example, ranging from 12 to 27 and, depending on the study programme, are set as the maximum to admit into a class. Therefore, with student enrolment beyond these, the class is considered large and, therefore, to handle this greater number of students, teaching and evaluation approaches will have to be adapted to accommodate these high student enrolments (NCTE, 2012).

To Wilson (as cited in Mohammed, 2015), the definition of class size applies to the total number of pupils allocated to the tutor for the whole or sections of his or her teaching schedule. In other words, the size of the class is the number of pupils assigned to the tutor in the class. Conversely, the size of the class is the total number of pupils in the class. Kena, Musu-Gillette, Robinson, Wang, Rathbun, Zhang, Wilkinson-Flicker, Barmer and Dunlop Velez (2015) seem to agree with this opinion when they stated that class size is the number of students facing the instructor during the course of the lesson. In view of this conception, several studies earlier made efforts to determine the optimal count of learners in a small or large class. In the United States of America (USA) for instance, one of the renowned and popular systematic

investigations on matters of class size happened to be the Student-Teacher-Achievement-Ratios (STAR) Project, conducted between 1985 and 1989 in Tennessee (Monks & Schmidt, 2010).

This programme randomly allocated pupils reaching kindergarten to group of 15 – 17 students, 22 – 25 students, or 22 – 25 students with the aid of a teacher. Through the third grade, these students stayed in these class sizes and were then returned to the regular class sizes for the fourth grade (Monks & Schmidt, 2010). This was a large-scale observational study that concluded, based on evidence, that small classes in schools have advantages for young children. Word et al, (as cited in Monks & Schmidt, 2010) and this led to policy changes in the USA, the UK and the Netherlands Bosker (as in Blatchford & Martin, 1998) various researchers analysed the study's results and discovered that students in the smaller classes achieved considerably better in kindergarten on standardized mathematical evaluations and third grade reading (Monks & Schmidt, 2020).

In the opinions of Hayes (1997) and Dalal (2013), there is no statistical decision as to what nature a large class takes as the views of tutors of large classes vary from context to context. Ur (1996) indicated that independent of the number of students in a classroom, teachers' expectations and perceptions of class size in a particular context, along with specific tools and services, make classes small or big. From this point of view, as opined by Dalal (2013), it can be inferred that large classes are those with a particular number of students that tutors find very tasking to manage and that the resources available are not sufficient to adequately facilitate the process of teaching and learning, thereby creating enormous challenges such as crowded in lecture halls during lectures

and quizzes for both tutors and students. Mulryan-Kyne, (2010, p. 176) also subscribed to this view and opined that a large class is "a class that is too large for effective teaching to occur".

Conditions for large class sizes are particularly severe in developing and less developed countries where class sizes sometimes surpass 100 students (Benbow, Mizrachi, Oliver & Said-Moshiro, 2007). These problems have an impact on the quality of teaching, student assessment and the value of university materials. The Ghana Government's White Paper (2002) on the Presidential Committee Report on Education Reforms Review seems to be in agreement with this and stated that high student-teacher ratios (STR) negatively affected the quality of teaching and learning academic research. In Ghana, the current regulation and class size for primary and junior high schools is 35 and 25 respectively (Government of Ghana, 2002). That of the secondary education level is pegged at 40 students in a class, and any class with more students than that number is considered to be a large class.

Optionally, by using the student tutor ratio (or its equivalent inverse tutor-pupil ratio), several researchers and policymakers conducted studies on the effects of class size (Wikipedia, 2015) even though Boozer and Rouse (2001) explained that pupil-teacher ratio provides an inexact impression of the size of the class as teachers can be spread unequally across the classroo m. In furtherance of this argument, Mayer, Mullens, Moore and Ralph (2001) also pointed out that the student-teacher ratios will be particularly imprecise class size indicators in schools in rural and urban districts, where schools enroll higher numbers of students in need of specialised instruction.

Despite the arguments against measuring class size in the school system through student-teacher ratios, Brewer, Gamoran, Ehrenberg and Willms (2001) acknowledged that teacher-pupils ratio stays a global indicator of the human resources brought into play on the learning of children, both directly and indirectly. They explain that the discrepancy between the two, that is, average size of the class and student-tutor ratio, can vary depending on the positions and responsibilities of the teacher and the time spent in the of the tutor and the time spent in the classroom during the school day (Brewer et al, 2001). In view of this, several significant empirical studies used the student-tutor ratio as a metric for the size of the class.

In his study, Hanushek (1986) relied heavily on a literature review of data on student-tutor ratios instead of class size. According to Oriana, Valentino and Imran (2009), in the United Kingdom (UK), in both domestic and international comparisons, the student-staff ratio is a widely used efficiency metric. Amedahe (2010) emphasised that the size of the class is measured by the number of students per tutor, that is, the student-teacher ratio (STR). The STR considered as large or small varied greatly from country to country, and in accordance to the standard of education (basic, secondary or tertiary). One lecturer to 30-40 students could be considered as high in some countries, whereas this could be considered normal or even small in other countries. Accordingly, Amedahe (2010) points out that the size of the class is usually dictated by the complexity of the programme or course, the availability of facilities, and the resources required to manage the class. The assumption here is that the total number of students a tutor is accountable for each day is class size.

There has been a widely reported discussion in several nations around the world about the educational implications of disparities in class size. Opinions differ from those scholars and politicians who claim that reducing the size of the class is not cost-effective to those who believe it should be a prominent feature of education policy (Blatchford, Basset & Brown, 2011). In the United States, regulations for class size reduction (CSR) initiatives have been adopted by over thirty (30) states. The current government framework for pupils aged 4 to 7 years throughout England and Wales is for an overall class size of 30 and greater changes are expected in Scotland (Blatchford et al., 2011). Several countries and cities in Eastern Asia, including Shanghai in China, Hong Kong, Macau, Taiwan, Korea and Japan, have all undergone some form of class reforms (Blatchford et al., 2011).

In many of these institutions in Africa, the growth of enrolment in higher educational institutions with limited resources has resulted in large classes in the region (Obanja, 2005). Therefore, the issue of large classes in higher educational institutions in Africa is increasingly becoming a scare to be faced with. Current indicators point to more large classes in the near future (Obanja, 2005).

Papo (2001) also observed that the increased number of students in South African universities, combined with limited funding, has often led to larger class sizes, facilitating a reversal of conventional delivery models and a corresponding decrease in small group and tutorial interactions, resulting in less engaging teaching and learning. These assertions by Papo appear to agree with the view of Majanga, Nasongo and Sylvia (2011) who carried out a research on class size effects of classroom interaction during mathematics discussions at

public primary schools in Kenya's Nakuru Municipality. The findings of their study revealed that the Free Primary Education (FPE) policy had brought about outrageous increment in class sizes in schools and pupil-teacher ratios, and the increased size of the classes had retrogressive consequences on tutor-pupil and pupil-pupil relationships in the classroom (Majanga et al., 2011). However, these arguments seem to conflict with that of Sid (as cited in Hayfron, 2004) who contended that it is not automatically better for small classes, and that what happens in the classroom counts more than the size of the class.

For its part, the UNESCO Regional Office on Education in Africa (2002) states that large-scale teaching has been found to negatively impact tutors' morale, enthusiasm and self-esteem. The document also noted that while many tutors were able to successfully handle a class of almost any size, this could often be at the cost of the well-being of the teacher and the variety of learning experiences provided to students. Onwu (as cited in Hayfron, 2004) also asserts that Sub-Saharan Africa must recognise that large and under-resourced classes will be the foreseeable future and that teachers may accept that they can do nothing constructive in a situation that has been imposed on them. The reality of large enrolments of students in our classrooms as envisaged by Onwu has fast caught up, already, with not only Sub-Sahara Africa but so many parts of the world.

According to Ayeni and Olowe (2016), class size is very much an administrative decision that teachers have little or no control over. They concluded that there are more problems for classroom management, pupil monitoring, and labeling, preparation, and assessment in large classes. Once faced with large classes, tutors are put under more pressure. For smaller classes,

problem finding and input can be simpler for teachers, recognising specific needs and gear teaching to suit them, and setting individual goals for pupils. Teachers also have better connections and relationships with individual pupils and have more understanding of them (Ayeni & Olowe, 2016).

Ajayi and Adeosun (2004) thought that the class size average could be adjusted upward to monitor the increasing capital cost of education. Such conceptions were also supported by Toth and Montagna (2002), who indicated that the expansion in admissions in many educational institutions that has become a major concern for teachers and students will undoubtedly lead to an escalation in the size of the class. Nevertheless, Commeyras (2000) disagreed with these claims and stated that for tutors with large class sizes of 50, 75, 100 or more, effective teaching appears unworkable. The higher the class-size, the lower the cost of schooling, Nwadiani (as cited in Hayfron, 2004) claimed. However, he argued that majority of classrooms are overpopulated and thinly spread resources, thus affecting the quality of education.

In Ghana, a study conducted by Yelkpieri, Namale, Esia-Donkor and Ofosu-Dwamena (2012) on the effects of large class size on effective teaching and learning at the Winneba campus of University of Education, Winneba (UEW) found that students accept that large class sizes do not provide an incentive for lecturers to render special focus on low performing students, or organise back-up lessons for them. There is relationship between the size of a class and the results of its students, according to the National Association of Graduate Teachers (NAGRAT). An overinflated size of the class impedes quality teaching and learning (Daily Graphic, August 25, 2011).

Regarding class size at the Tertiary Education Level in the Ghanaian context, the National Council for Tertiary Education (NCTE) has the mandate and the prerogative to oversee and regulate the activities of tertiary education institutions. In reviewing the norms for tertiary education institutions in Ghana, the NCTE also adopts the use of student-teacher ratios to recommend different class sizes for various courses or programmes of study in the tertiary education institutions in Ghana (NCTE, 2012). At the tertiary level, the STR, as indicated by the NCTE (2012, p. 3) are 12:1 for Medicine, 15:1 for Pharmacy, 18:1 for Engineering, 18:1 for Applied Science, Technology and Health Science, 18:1 for Science, 27:1 for Business Administration, and 27:1 for the Social Sciences and Humanities. The issue of large class size has since become a major concern to tutors, students, educational policy makers and all stakeholders in the Colleges of Education in Ghana. In recent years, the number of people demanding higher education has risen so much that the state-owned tertiary institutions are not able to cope with the demand (Hayfron, 2004). Colleges of Education are not exempt from this situation. The current student enrolments in the various public Colleges of Education in the Northern Region of Ghana (which is the study area for this study) are presented in Table 1. The colleges include Bagabaga College of Education (BACE), Evangelical Presbyterian College of Education (EPCE), Gambaga College of Education (GACE), St. Vincent College of Education (SVCE) and Tamale College of Education (TACE).

Table 1- *Student Enrolment in the Public Colleges of Education in the Northern Region From 2012/2013 to 2018-2019 Academic Years*

College	Academic Year						
	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Bagabaga College of Education (BACE)	275	296	400	520	570	524	537
Evangelical Presbyterian College of Education (EPCE)	286	286	463	790	483	418	198
Gambaga College of Education (GACE)	-	265	192	344	243	270	262
St. Vincent College of Education (SVCE)	-	-	-	-	182	68	138
Tamale College of Education (TACE	288	285	401	554	574	517	531

Source: Field Data, (2019)

From Table 1, it is observed that both Bagabaga College of Education (BACE) and Tamale College of Education (TACE) have, since after the Colleges of Education Act, Act 847, 2012 was passed, consistently experienced more student enrolments between the 2012/2013 academic year and 2018/2019 academic year, therefore, resulting in large class sizes. Also,

Evangelical Presbyterian College of Education (EPCE) similarly experienced more enrolments since 2012/2013 academic year and, in spite of the slight drops from the 2016/2017 up to the 2018/2019 academic year, these enrolment figures still ensured large class sizes in the college. On its part, Gambaga College of Education (GACE) which was started in 2013 has, however, continuously experienced fluctuating student enrolments over the same period while St. Vincent College of Education (SVCE) which was started in 2016 experienced a sharp drop in its second cohort of students. In the opinion of Glass (2011), effective teachers utilise various resources to prepare and organise learning opportunities; track student development in a formative manner, adjust teaching and training as needed; and assess learning using diverse evidence sources. Glass continued that such tutors are committed to the creation of classrooms and schools that respect diversity and civic mentality, and partnering with other tutors, administrators, parents, and educational professionals to with other teachers, administrators, parents, and educational professionals to maximize student achievement.

According to Pachaiyappan and Ushalaya (2014), an effective tutor can be understood as one who helps students improve basic skills, comprehension, correct behaviours, positive attitudes, and appropriate personal adjustment. Effective tutors also provide the students with the best academic performance and the best all-round progress. To Ryan (as cited in Sharma, 2016), an effective teacher can be said to be one who helps the student improve in essential skills, awareness, proper working habits, desirable conduct, assessment of value and sufficient personal adjustment. In ensuring their positions and duties such as teaching, training, planning, classroom management, subject matter knowledge

and interpersonal relations with students, these tutors gain the necessary skills and competence. These tutors also excel in other aspects of their personality (Sharma, 2016).

Statement of the Problem

Several investigations have been conducted on class size effects on attitudes, behaviours and outcomes of students (Monks & Schmidt, 2010; Grover & Mathew, 2011; & Blatchford et al., 2007). Grover and Mathew (2011) claimed that 80 studies had been documented by a formal review of the literature in 1979. Blatchford et al. (2007) have suggested that the widely reported discussion on the educational implications of class size disparities in the United States has centered on the feasibility and efficiency of programmes concerned with reducing class sizes, while in the United Kingdom the discourse has concentrated much on the bad impacts of large classes.

It was found that most of these researches actually investigated the correlation between class size variability and educational success of students (Grover & Mathew, 2011), and have little to say about classroom processes (for example, tutor effectiveness) that might explain effects found. Also, most of such research concentrated on class size impact on student success at the pre-school level (Monks & Schmidt, 2010). Only a number of researchers reported on the impact that class size may have on higher education outcomes (e.g. Ayeni & Olowe, 2016; Yelkpieri et al, 2012). The educational environment at the tertiary level obviously varies significantly from the classroom and learning environments in the primary and secondary schools (Monks & Schmidt, 2010). While the literature on the effects of class size in primary and secondary schools present a relevant direction, more research is required in the tertiary education

level as the range of class enrolments is significantly larger than at other levels of the education system, the underlying sources of class size variance used for identification differ, and the factors behind the impact of class size are also likely to differ (Oriana et al., 2009).

Besides, literature available indicate that a good amount of empirical investigations has been conducted on tutor effectiveness. However, majority of these studies have only concentrated on teacher effectiveness versus other factors like self-concept; teacher personality and teacher attitude; emotional maturity; occupational stress; teacher value patterns; nonverbal classroom communication and others (Sharma, 2016). There seem to be few studies undertaken on large class size in relation to teacher effectiveness (e.g. Blatchford & Martin, 1998; Gemechu, 2013; Yelkpieri et al., 2012; Ayeni & Olowe, 2016), creating a gap in the literature, especially in Ghana.

The issue of class size at the tertiary education level in Ghana lies under the mandate and control of the National Council for Tertiary Education (NCTE). In reviewing the norms for tertiary education institutions in Ghana, the NCTE adopts the use of student-teacher ratios (STRs) to recommend class sizes for different programmes of study in the tertiary education institutions which include the Colleges of Education (NCTE, 2012). Currently, STRs at the tertiary education level, as indicated by the NCTE, are 12:1 for Medicine, 15:1 for Pharmacy, 18:1 for Engineering, 18:1 for Applied Science, Technology and Health Science, 18:1 for Science, 27:1 for Business Administration, and 27:1 for the Social Sciences and Humanities (NCTE, 2012, p. 3). This implies that the maximum threshold for any class size at the tertiary education level should not exceed twenty-seven (27) students.

However, according to the 2018 edition of the NCTE's Statistical Report on Tertiary Education, the overall student enrolment in all forty-five public Colleges of Education for the 2016 – 2017 academic year, as indicated by the NCTE, was 44,813 while the overall total qualified academic teaching staff (tutors) across all these public Colleges of Education was indicated to be 1,161 tutors (NCTE, 2018, p. 23-25). The implication here is that, by matching the total student enrolment of 44,813 students to the total qualified tutors of 1,161 in the Colleges of Education in the year of review, the STR is found to be 38.6:1. This clearly exceeds and goes against the NCTE's recommendation of 27:1 for any large class size at the tertiary education level in Ghana.

According to Ananga and Tamanja (2017), large class size has some negative effects on teaching and learning processes including teachers' teaching, students' learning, classroom management, timely provision of feedback and effective use of teaching and learning materials. They concluded in their study that majority of both head teachers (81%) and teachers (86%) were not happy with their large class sizes as teaching in such classes was stressful and did not allow for effective delivery of lessons (Ananga & Tamanja, 2017).

Since the public Colleges of Education have a mandate to produce quality and effective teachers needed to offer Ghanaian citizens the appropriate education that they require, this research sought to ascertain how large classes impact the effectiveness of tutors in their bid to deliver quality and effective teaching in the Colleges of Education. The study investigated the different aspects or components of tutor effectiveness and how they are impacted by large class size in public colleges of education in the Northern Region of Ghana.

Purpose of the Study

The general purpose of the study was to assess the perceived effects of large class size on tutor effectiveness in public colleges of education in the northern region of Ghana. Specifically, the study intended to find out the following:

1. determine the perceived effects of large class size on tutor interpersonal relationship with students,
2. determine the perceived effects of large class size on tutors' instructional methods,
3. investigate the perceived effects of large class size on tutors' assessment of student learning,
4. investigate the perceived effects of large class size on tutor preparation for teaching,
5. assess the perceived effects of large class size on tutors' morale during lesson delivery,
6. examine the perceived effects of large class size on tutors' management of the classroom environment,
7. examine whether significant gender difference exists in perceived effects of large class size on tutor effectiveness,
8. examine whether significant teaching experience difference exists in perceived effects of large class size on tutor effectiveness, and
9. explore whether significant difference exists in perceived effects of large class size on tutor effectiveness due to colleges of tutors.

Research Questions

1. What are the perceived effects of large class size on tutor interpersonal relationship with students?
2. What are the perceived effects of large class size on tutors' instructional methods?
3. What are the perceived effects of large class size on tutors' assessment of student learning?
4. What are the perceived effects of large class size on tutors' preparation for teaching?
5. What are the perceived effects of large class size on tutors' morale during lesson delivery?
6. What are the perceived effects of large class size on tutors' classroom management?

Research Hypotheses

1. H_0: There is no statistical significant difference between male and female tutors with respect to perceived effects of large class size on tutors' effectiveness.

   H_1: There is statistical significant difference between male and female tutors with respect to perceived effects of large class size on tutors' effectiveness.
2. H_0: There is no statistical significant difference in perceived effects of large class size on tutors' effectiveness due to teaching experience of tutors.

   H_1: There is statistical significant difference in perceived effects of large class size on tutors' effectiveness due to teaching experience of tutors.
3. H_0: There is no statistical significant difference in perceived effects of large class size on tutors' effectiveness due to college of tutors.

H_1: There is statistical significant difference in perceived effects of large class size on tutors' effectiveness due to college of tutors.

Significance of the Study

The need for present-day education as a whole and teacher education, to be specific, requires a thoughtful and planned investigation of tutor effectiveness so that a clear-cut picture can be drawn to grasp the impact of large class size on the effectiveness of college of education tutors. The knowledge of the impact of large class size on the different aspects or components of tutors' effectiveness would help educational policy makers and planners, educational administrators and supervisors to develop healthy academic and organisational environment to induce the teaching-learning process for the harmonious development of students as well as school personnel.

The findings of this study would help colleges of education authorities to know the actual implications of large classes for effective teaching and learning, and what can be done to improve on them. This would inform the managements of the various colleges of education of how to manage the situation. For example, organising occasional workshops and seminars on how to teach effectively in large classes for their tutors. The study will also contribute to knowledge on the issue of large class sizes in schools.

Delimitations

The scope of the study was confined to only the variables of interest to the researcher including large class size and tutor effectiveness (which comprises tutor preparation including planning for teaching, classroom management, tutors' instructional strategies, assessment of student learning, tutor morale during lesson delivery and tutor's interpersonal relationship

with pupils). The scope of this study was also restricted to only public colleges of education in the northern region of Ghana.

Limitations

The approach to this study was limited by a number of factors. It was difficult accessing literature in the form of published textbooks on the chosen topic, effect of large class size on tutor effectiveness, as many of the available published studies on tutor effectiveness focus on tutor effectiveness in relation to other variables such as location and type of school, tutor personality, self-concept, tutor emotions, value patterns and so on rather than class size issues.

Also, the sample for the study consisted of only academic or teaching staff in the colleges of education included in the study. The students who the tutors teach and the supervisors of the tutors such as the Principal, Vice Principal, and the Academic and Quality Assurance officer were excluded from the sample. This may restrict the generalisability of the findings.

More so, the sample for the study who were to respond to my research questionnaire were dispersed and scattered across various corners of the region. I had to embark on several long journeys travelling to Bimbilla, Yendi and Gambaga where Evangelical Presbyterian College of Education, Saint Vincent College of Education and Gambaga College of Education are situated respectively to meet with the tutors during the course of my data collection. This challenge contributed so much in the delay in completing this study within the normal duration.

Again, some of the tutors were reluctant to respond to the questionnaire because, in their view, the items on it were many. The researcher on many

occasions had to plead with some of the tutors to get them respond or complete the questionnaire for him. This reluctance might cause them to rush in their response to some of the items without taking their time to carefully understand them.

Besides, the instrument used to collect the data is a kind of self-report and, as such, some of the tutors might not be objective in responding to some of the items in the questionnaire with the feeling that it might expose their weaknesses and used against them in the future. This might result in the loss of some relevant information for the study.

Operational Definition of Terms

Effect - It refers to the influence that large class size has on the activities of the tutor in his/her effort to offer quality teaching to students.

Large Class Size - This means any group of students pursuing a particular academic programme together in the college of education and whose number exceeds the NCTE recommended threshold of 27 students in a class.

Tutor Effectiveness - This means the ability of the tutor to exhibit standard classroom behaviour, focused instruction, good management of the classroom environment, and use variety of assessment and feedback strategies.

Tutor-Student Relationship - It refers to the tutor's desire to accept himself herself as an integral part of his / her teaching profession to establish friendly relationships with his / her students.

Instructional Methods - This refers to the ability of the tutor in adopting a range of teaching strategies and techniques to engage and keep students on tasks, and provide knowledge to students with a high degree of consistency and enthusiasm

while engaging students in tasks individually and in small group as ways of reinforcing student learning through practiceand reflection.

Student Assessment - This refers to the variety of activities and strategies including marking and recording of students' exercises that the tutor employs on students during lesson delivery to find out and monitor whether the learning objectives or outcomes expected of the students are being achieved.

Tutor Morale - It refers to the emotional make-up/state and general level of confidence/optimism of the person and his/her behavioural manifestations that have their own level of acceptability or unacceptability in the teaching profession, and which affects discipline and motivation.

Tutor Preparation - This refers to the tutor's ability to prepare, schedule and coordinate teaching according to the goals of the course through the use of various source materials.

Classroom Management - This refers to the tutor's ability to communicate effectively, inspire students and assess the activities surrounding teaching and learning and also ensure good student conduct in the classroom as part of a democratic organisation.

Organisation of the Study

The study was organsied under five chapters. Chapter one consists of the study background, the problem statement, the study intent, and the research questions. Also included in the chapter are study delimitation, study restrictions, interpretation of words as well as research organisation. Further elaboration of the aims and objects of the research was carried in chapter two. The chapter here addressed related theoretical, conceptual and empirical literature that influenced the study's design and execution. Chapter three explains the research methods

used. The chapter details the instrument for research design, population, sampling and sampling methods, instrument validity and reliability, instrument for data collection and pre-testing as well as procedure for data analysis. Chapter four of the study focused on analysis and discussion of the data gathered. The research overview, conclusion and recommendations are provided in Chapter Five. Also, a section for suggested areas of further study was carried in this chapter.

CHAPTER TWO

LITERATURE REVIEW

Overview

This aspect of the study is about related literature review, and it is composed of three (3) sub-sections namely theoretical review, conceptual review and empirical review.

Theoreical Review

The theoretical review for this study anchors on a number of theories including the following:

1 Parkinson's Law by Parkinson (1957);

2 Theory of Connectionism (trial and error learning) by Thorndike (1898); and

3 Ecological Systems theory of child development by Bronfenbrenner (1990).

Parkinson's Law

Politicians and taxpayers have assumed, although with some doubts, that a rising total in the number of employees must reflect a growing volume of work to be done (Parkinson, 1957). In questioning this assumption, critics have imagined that the multiplication of officials must have left some of them idling or all of them having to work for fewer hours (Parkinson as cited in Klimek, Lambiotte & Thurner, 2008). However, this is, according to Parkinson, a matter where both faith and skepticism tend to be misguided. The fact is that the number of the officials and the quantum of work to be done are not related to

each other at all. The rise in the total of those employed is governed by *Parkinson's Law*, and would be much the same whether the volume of the work was to increase, diminish or even disappear (Parkinson as cited in Hanel, Klimek & Thurner, 2008). The relevance of Parkinson's Law lies in the fact that it is a principle of growth based upon an analysis of the factors that control such growth (Parkinson as cited in Marin, Drury, Batta & Lin, 2007). The validity of Parkinson's law surely relies on statistical proofs; however, it is not the objective of this study to go into that.

The problem that is of more importance and interest to the general reader is the clarification of the factors that underpin the general propensity to be identified by this law. Burying any technicalities, two 'motive forces' could be distinguished at the beginning (Parkinson as cited in Hanel et al., 2008). For the purpose of this particular study, these are thus presented as follows: Factor (I) "An official wants to multiply subordinates, not rivals" and Factor (II) "Officials make work for each other." (Parkinson, 1957, p.4).

In examining these motive forces for better comprehension, this study considered a scenario espoused by Parkinson himself. To understand Factor (I) which is described as *Law of multiplication of subordinates*, we must imagine a civil servant represented as 'A' who feels himself to have been overtasked. Whether this overtask is actual or perceived is insignificant here. However, we should take note, in passing, that A's feeling or perception of being overworked might be merely resulting from his own diminished energy, a usual characteristic of middle age (Parkinson, 1957). To deal with this overwork of A, there are, generally, three possible remedy options including: (1) 'A' may

resign; (2) 'A' may ask to halve the task with a colleague, B; and (3) 'A' may demand the assistance of two subordinates, C and D.

Obviously and, under normal circumstance, no well-thinking civil servant including 'A' will consider choosing any options apart from the third option. This is because, by choosing to resign, 'A' would lose his end of service entitlements. Again, by choosing to halve the task, which means having B appointed on the same rank in the hierarchy, 'A' would be certainly inviting upon himself a rival for promotion to the next higher position when it becomes vacant eventually, due to retirement. From the analysis so far, 'A' would rather prefer to have C and D appointed as subordinates below him. They will add to his influence; and, by sharing the task into two categories, as between C and D, he would have the merit of being the only officer who comprehensively understands them both. At this point, it is essential to realise that, C and D are, as it were, inseparable. To appoint C alone would have been an impossibility. This is because C would share the task with A and, so, assume almost the equal rank which has been refused to B in the first instance; a rank that would be more emphasised if C is the only possible successor of A (Parkinson, 1957). Therefore, subordinates must number two or more, each being maintained in order by fear of the other's promotion.

When C in turn complains of being overloaded with more work, which he certainly will (Parkinson, 1957), A will, in agreement with C, advise the appointment only by advising the appointment of four more assistants, E, F, G and H – two assistants, E and F, to assist C, and the other two, G and H, to help D, whose rank and workload are much the same as those of C. With the

recruitment of E, F, G and H, the promotion of A is now practically and certainly assured (Parkinson as cited in Klimek, Lambiotte & Thurner, 2008).

It is observed from above that seven employees are now doing the same work which only one worker, A, did before. This is where Factor (II) which is described as *Law of multiplication of work* comes into operation. To Parkinson, these seven employees make so much work for each other that all of them are busy and fully occupied, and A is even working harder now than ever (Klimek et al., 2008). Consider this scenario: An incoming document may well come before each of them in turn. Official E decides that it falls within the responsibilities of F; F then places a draft reply before C, who amends it drastically before consulting D, his co-equal in rank; D also delegates G to deal with it. Around this point in time, G goes on leave and, therefore, hands over the file to H; H drafts a minute and places it before his immediate superior, D, who signs the document and returns it to C; C revises this draft document accordingly and lays the new version before A. Considering the chain of many hands through which the document passed, A would have every excuse for signing it unread, for, probably, he has many other matters on his mind to deal with. For instance, having in his mind the thought and hope to succeed his boss who will be going on retirement the following year, A has to decide whether C or D should succeed his own office. He had to agree to G going on leave, although he might not yet strictly qualify for it, and A is worried whether H should not have been granted the leave instead, for reasons of bad health. Then there is the impending matter of F's special increment of salary for the period he attended a conference, and E's application for release and transfer to a different department. Then A has heard that D is having a nocturnal affair with

a married lady front-desk officer in the office, and that G and F have unnecessarily not been in good speaking terms with one another for some time now and for what reason no one seems to know. So, as a result of all these issues bothering on his mind, A might be tempted to sign C's draft document as quickly as possible and have it done with (Klimek et al., 2008).

But, being a meticulous person as A is, he is not a person to shirk his responsibilities. So, he takes his time to read through C's draft carefully, correcting and editing the irritating errors added by C and H, and restores the draft back to the form preferred in the first instance by the able F. 'A', by himself, corrects the draft and finally produces the same reply he would have composed if officials C to H had never been recruited. Far more officials have taken far longer time to produce the same result. As it can be noted, none of the seven officials has been idle. All have been observed to have done their best (Klimek et al. as cited in Hanel et al., 2008).

From the above, it can be observed that A is now beset with more problems and far more work to do, all due to the fact that he now has many more subordinates to deal with and supervise. In the likely event that this phenomenon persists, A will probably suffer some undesirable health symptoms such as mental and physical exhaustion, burn-out, fatigue, dejection and so on. These conditions, if not checked, will probably render A less effective and productive in his duties, eventually. Here, the current study is related to the Parkinson's Law in the sense that, when tutors in the colleges of education teach in classes with high student enrolment, they are more likely to come face-to-face with a myriad of problems and far more work to do, just like A in the illustration above. For instance, they will have to battle with marking of lots of assignment and

examination scripts, much more student-related disciplinary issues to attend to – both inside and outside the lecture room, the heavy burden of having to maintain continuous cordial relationship with all their students, the challenge of adopting appropriate learner-centred approaches to learning like individual teaching for effective student learning and performance.

Also, Parkinson conjectured on historical evidence that there is a characteristic group size beyond which the ability of the group to ensure efficient decision making, that is, finding of consensus, is considerably diminished (Klimek et al. as cited in Hanel et al., 2008). The empirical findings based on size of governments and their cabinets, found in the 1950s (Parkinson, 1957), are still relevant and applicable today to a large extend (Klimek et al., 2008).

Parkinson concluded that it is perilous for cabinets to have memberships below or above the characteristic size of 21 for efficient decision-making within the council or cabinet. He called this the 'Coefficient of Inefficiency' (Klimek et al., 2008). His explanation for this phenomenon was that as group size increases the influence of individual members decreases. In this case, the decrease in individual member influence is not only because there are simply more of the members, but also because the group is more likely to disintegrate into separate subgroups (Asch, 1952). The less influence members wield in a group, the more easily new members are admitted to the group which in turn decreases their influence further (Asch as cited in Klimek et al., 2008). Meanwhile, according to Parkinson, groups such as cabinets are typically expected to be highly clustered (Watts, 1997).

In their study on Parkinson's Law in relation to bureaucratic inefficiency, Hanel et al. (2008) reported that the United Nations Development Programme in its Human Development Report for 2007 - 2008, indicated a negative correlation between the cabinet size and the human development indicator (HDI). Hanel et al. (2008) concluded that larger cabinets coincided with a more unstable political climate. The authors indicated that Parkinson observed that decision making bodies such as cabinets or boards become highly inefficient once their sizes exceed a critical 'Coefficient of Inefficiency'.

Parkinson suggested to explain this growth by the principle that, at the work place, officials would rather try to magnify subordinates, but not rivals, as already illustrated above. This phenomenon is what has become referred to as Parkinson's Law. That is, if an official gets promoted, this is in real terms carried out by allocating a certain number of subordinates to him (Hanel et al., 2008; Klimek et al., 2008).

Parkinson's Law explains that the expansion of bureaucratic or administrative bodies with more staff usually results in diminished effectiveness of the staff and a drastic decrease in the overall efficiency level of such bodies (Hanel et al., 2008). Here again, the relationship between the current study and the Parkinson's Law is exposed in the sense that, in comparing a class of students to a council of cabinet members as in government, it can be related that, just as cabinets become highly inefficient and less effective when their membership exceeds a certain threshold (e.g. 21) as postulated by Parkinson, same may be said of classes with high student population beyond the NCTE's recommended twenty-seven students per class. That is, in the colleges of education, members of the class, including the tutor and students, whose population exceeds the NCTE's

threshold of 27 students are more likely to be less effective in terms of class activities and academic performance in general. The general influence of the tutor on the students in terms timely spotting of and attending to student disciplinary issues during lectures, objective assessment of students and timely giving of feedbacks will all be affected negatively. When the influence of the tutor on students is diminished, he/she eventually becomes less effective and productive.

Theory of Connectionism

Thorndike as a behaviourist believed that there was a link between stimulus and response to learning (Hergenhahn, 1982). According to him, as learning takes place, a neutral relation is formed within the organism. His theory of learning is called Connectionism Theory (Hergenhahn, 1982). According to Thorndike, trial and error are the fundamental form of learning.

In his puzzle box experiments, the animal (cat), at first, had to display a series of complex behaviours, as trial and error, before it was able to exhibit the appropriate attitude after the main trials. During this stage, a correlation is developed between the stimulus (strange environment in the box) and the cat's response (attempts to open the door and escape) (Catania, 1999). To Thorndike (as cited in Hergenhahn, 1982), learning is gradually taking place while it is not linked for cognitive processes such as perception and contrast. Connectionism theory asserts that learning consists of bond formation, which means that learning reinforces the connection between situations and responses. Thorndike concluded that the same learning principles apply to all mammals, including human beings (Hergenhahn, 1982).

From the several experiments that he conducted on his subject for a period, Thorndike deduced three laws of learning: law of exercise, law of effect and law of readiness (Catania, 1999). There are two parts to the law of exercise. The first part is the rule or law of use, which stipulates that the link between a stimulus and a response is reinforced as it is put to use. The second part of this law is the rule or law of disuse and it states that the connection between a stimulus and a response weakens when it is not put to use (Catania, 1999). Another important aspect of the law of exercise is the rule of timing. The rule of timing also applies here because the longer the time between a stimulus and a response, the weaker or less strong the relation (Hergenhahn, 1982).

Thorndike's second law is called law of effect. The law notes that when a response to a stimulus is adequate, actions will be learned (Catania, 1999). That is, if the outcome of such a relation is a satisfactory state of affairs, a link between stimulus and response will be enhanced. Catania (1999) further clarified that, on the contrary, if a stimulus given to an organism is not sufficient, or it is disturbing, the answer will not be learned, that is, if the outcome of such a connection is a pain or irritating state of affairs, a relation between stimulus and response will be weakened.

The third law of Thorndike's theory is the law of readiness. Thorndike asserted that if a person is ready for an action, he / she will be pleased with knowing it and the relation will be strong, but it will be just like a punishment to perform actions for which a person is not prepared (Catania, 1999; Hergenhahn, 1982). Therefore, the learning will not be effective.

Thorndike's connectionism theory touches on large class size research through the law of exercise which, by implication, bothers on the fact that, for learning to be more effective and consolidating, tutors should provide students with ample opportunities to practise severally the learning material over a period of time. This will result in achievement of set goals and targets by both students and the tutor; hence, the tutor would be rendered an effective one. However, this will be a very difficult task for any tutor to accomplish in a large class situation. Time constraints as well as stress and burnout are going to come hitting hard on the tutor as result of work overload from the marking of students' numerous assignments/quizzes and handling of student disciplinary problems as well as ensuring continuous cordial interpersonal relationship with all students in the class. These may have serious impacts or effects on tutor effectiveness.

Ecological Systems Theory

This theory explores the development of a child in the sense of relationship systems that shape his or her environment (Bronfenbrenner, 1990). Bronfenbrenner's theory discusses sophisticated "layers" of the environment, each possessing an impact on a child's holistic development. In the recent time, this theory was relabeled as Bioecological Systems Theory (Berk, 2000). It was renamed as such to underline the fact that the biological make-up of the child is a primary environment that drives his or her development (Berk, 2000). The interplay of factors in the child's evolving biology, his / her immediate family or community environment, and the nature of culture propel and guide his / her development (Berk, 2000). To Bronfenbrenner (1990), changes or disputes in one layer may replicate in other layers. In order to study the development of an

infant, we need to look not only at the child and its immediate surrounding, but also at the involvement of the larger society (Bronfenbrenner, 1990).

Bronfenbrenner conceptualised four ecological systems that a person interacts with, each nesting within the other. The ecological systems, identified from the closest to the farthest, are microsystems, mesosystems, exosystems, and macrosystems. The microsystem is the nearest layer to the infant and includes the mechanisms that have direct contact with the child.

The microsystem involves a child's relationships and experiences with his / her immediate environment (Berk, 2000). Microsystem structures provide surroundings for the home, school, community, or childcare. Relationships at this point have two-way impacts - both away from the child and towards the child (Berk, 2000). For instance, parents of a child can impact his / her belief systems and behaviours while the child also impacts the parents' behaviour and their belief systems. Such bi-directional effects were named by Bronfenbrenner. Such bi-directional factors are most important and greatly impact the development of the child (Berk, 2000). The interplay of structures within a layer and interplays of structures across layers are critical to this theory.

The mesosystem contains the different interactions between the microsystem characters (Berk, 2000). The interaction between the home of the child and the tutors or administrators of the child's school, for instance. To be considered part of the mesosystem as an interaction, it has to be a direct interaction between two structures of the microsystem that influence the person's growth (Bronfenbrenner as cited in Berk, 2000).

The third layer is labelled the exosystem and includes elements of the microsystem that do not directly affect, but may indirectly affect, the organism (Berk, 2000). At this point, although the child may be indirectly involved, he senses from these experiences positive or negative effects. For instance, if a father were to suffer a job loss or a cut in his work hours, it would indirectly affect his ward, such as parental financial burden or heightened parental distress.

The macrosystem may be considered the outermost layer in the child's environment. It comprises of cultural values, customs, and laws (Bronfenbrenner as cited in Berk, 2000). To Bronfenbrenner, the implications of broader macrosystem values have rippling effects throughout all other levels of interactions. For instance, if the culture presumes parents should be principally responsible for raising their children, the society is less likely to support parents with resources to care for their family needs. This, in effect, influences the parents' systems, including the microsystem (Berk, 2000).

The bioecological systems theory has some implications. According to the theory, if the relationships break down in the immediate microsystem, the child will not have the resources in the form of knowledge and experiences to discover certain aspects of his world (Berk, 2000). Children seeking the affirmations that should be present in the relationship between the child and parents (or child and other important adults) seek attention from undesirable sources. Symptoms of such deficiencies manifest in the individual, especially in adolescence as the individual may acquire anti-social behaviour, loss of personal-discipline and self-management (Addison, 1992). The educational system is supposed to compensate for these shortcomings with the awareness of

the deterioration occurring in children's homes. Schools and educators now need to develop secure, lengthy-term relationships with students (Addison, 1992).

To Bronfenbrenner (as cited in Addison, 1992), such primary relationship shall be fostered within the immediate zone of influence of the child by a person or persons. Schools and facilitators must work to feed the primary relationship and foster an environment where students and their families are accepted and nurtured. In the current circumstances of large class sizes in our schools including the colleges of education, tutors have been overburdened with enormous tasks in their attempt to establish the complexity of interactions that otherwise should have been promoted by primary adults as expected to happen in the microsystem of Bronfenbrenner's ecological model. The challenges that tutors will face will definitely have an effect on their interpersonal relations with students. Consequently, the general effectiveness of the tutor will be affected due to the large numbers of students in the classrooms.

Considering the review of the theories above, it is important to note that all these theories relate to and explain the effect of large class size on tutor effectiveness in different perspectives. For instance, both the Parkinson's Law and Thorndike's Connectionism theory relate to this study from the perspectives of tutors' interpersonal relationship with students, student assessment as well as classroom management which includes student control. However, Parkinson's law further touches on how work overload (i.e. large class size) can affect negatively tutors' morale whereas Bronfenbrenner's ecological systems theory relates to this study in terms of the tutors' interpersonal relationship with students.

The clarifications in the preceding paragraph illustrate the challenge, as it were, embedded in adopting and emphasising one theory in one's attempt to understand the phenomenon of large class size and how it affects tutor effectiveness. Therefore, there is no one particular comprehensive and dominant theory that explains the issue completely. A single solitary-theory approach is not enough to grasp the interpretation of the multifaceted tutor effectiveness and how it is affected by large class size as required for educational context.

Conceptual Review

This aspect of the study presents a review of key concepts that are relevant to it. The review is conducted on the following concepts:

1. Class size;
2. Large class size; and
3. Teacherr effectiveness.

Class Size

Class size is one of the few educational variables that are both considered to affect student learning and subject to legislative action (Chingos & Whitehurst, 2011). There is a wide range of studies on the relationship between class size and student learning, according to Chingos and Whitehurst (2011). According to Grover and Mathew (2011), a randomised review of the literature in 1979 reported 80 class size studies in the U.S. The bulk of these research actually explored the correlation between class size variability and student achievement. The primary challenge in understanding these studies is that it is possible that schools with different class sizes will vary in many other ways that are difficult to observe. For instance, more wealthy schools are far

more likely to have the required resources to manage smaller classes, creating the illusion that smaller classes are better when the real reason was actually family factors. Alternatively, it may be safer for a school that has multiple students with behavioural problems to handle these students in smaller classes.

According to Schanzenbach (2014), over the past thirty (30) years, public education has experienced significant changes with the introduction of high-stakes testing, accountability, and charter schools, as well as the latest transition to common core standards. The emergence of new datasets that track large numbers of students into the workplace has allowed researchers to predict the lifetime effect of teaching by tutors that will improve standardised test scores for students. The emphasis is on the scale of the class in the midst of these new changes and policy issues. Class size is one of the most researched education policies, and a highly rigorous research body shows the importance of class size in shaping student achievement positively. Dozens of class-size studies show its impact on learner outcomes, although some of those studies tend to register some doubts on the correlation between class size and learner achievement (Schanzenbach, 2014).

To the Glossary of Education Reform (2014), class size represents the number of pupils in a particular programme or classroom, particularly either the number of pupils in a course or classroom or the overall proportion of learners in a school, county or educational system. The concept may also apply to the number of students involved in learning activities that may not occur in a traditional classroom environment, or it may also refer to the total number of students at a specific grade level or "class" in a school (even though this usage is less popular in public schools). To Ronald (as cited in Omwirhiren &

Anderson, 2016), class size refers to the exact number of pupils taught at a specific time by a teacher.

On his part, Michael (as cited in Omwirhiren & Anderson, 2016) described the size of the class as the population of learners who are exclusively entrusted under the care and guidance of a teacher during a school year. Many researchers and policymakers used student-teacher ratio or its associated reverse teacher-pupil ratio to study the effects of class size, but class is not adequately measured by this statistic (Michael as cited in Omwirhiren & Anderson, 2016). Boozer and Rouse (2001) noted that student-teacher ratio provides an inexact view of the size of the class as teachers can be spread unevenly across the classroom. Some teachers are required to spend most or all of their time advising other teachers as they have light course loads.

To Ehrenberg, Brewer, Gamoran and Wilms (2017), the size of the class is not the same as the pupil-teacher ratio. It is actually quite different. A pupil-teacher ratio typically includes teachers who spend the entire or portion of their day as administrators, librarians, special educational support workers, itinerant tutors, or other non-classroom jobs. Thus, pupil-teacher ratio is a common indicator of the human resources directly and indirectly brought to bear on the learning of children. The size of the class relates to the exact number of pupils instructed at a given point in time by a teacher. As such, pupil-teacher ratio is always lower than the average class size, and the difference between the two will vary depending on the position and responsibilities of the teacher and the length of time the teacher spends in the classroom on school days (Ehrenberg et al., 2017). Pupil-teacher ratio is administratively or economically very important because it is directly related to the amount of money spent per child.

Nevertheless, from a psychological point of view, this counts the number of students who are physically present engaging with each other and with the instructor (Ehrenberg et al., 2017).

According to Ehrenberg et al. (2017), the amount of learning acquired by students can be, in various different ways, affected by the amount of student enrolment in the class. For example, it could affect the level of interpersonal interaction or engagement, how students communicate with each other. This could lead to more or less noise and inappropriate behavior, which then in turn affects the sorts of activity which might be encouraged by an educator. It could influence how long the instructor will focus on individual students and their unique needs, rather than on the entire team. (Ehrenberg et al., 2017). Because it is easier to concentrate on one person in a smaller group, the smaller the size of the class, the more probable it is for the instructor to focus more on student learning, or offer more input on the written work of the students, or use open-ended assessments, or promote more debate, and all the things that may be more possible with fewer students (Ehrenberg et al., 2017). Prominence to a specific classroom condition may influence performance over the exposure span, or it can have long-term or deferred effects (increasing self-esteem or cognitive advances with lasting effects).

Changes in class size are considered, for these reasons, a possible way of improving the amount of student learning and performance (Ehrenberg et al., 2017). Apart from being theoretically one of the main variables in learning or information 'output', class size is one of the easiest variables to be exploited by policymakers. Nonetheless, there are many different factors that depend on the amount of student learning. Others refer to the classroom and school setting in

which the class is held (e. g. size of the class), but others are linked to the experience and motivation of the student and wider community factors (Ehrenberg et al., 2017).

Large Class Size

For Rhalmi (2016), teachers sometimes lament about teaching in large classes not without reason. Some unfortunate teachers suffer not only from the pedagogical shortcomings of large classes, but also from the tension created by such classes. Rhalmi (2016) finds it difficult to explain what a big class in some countries is like; a class of 30 students is not considered problematic at all. But such a class would be difficult for tutors in other countries. Many tutors face even more than 40 (a class can include 50 students in some Moroccan schools). Sparks (as cited in Rhalmi, 2016) nevertheless, noted that if the student number is more than 25, a class can be said to be large It is shown that performance gains generally occur when pupil population in the class is reduced to less than 20 students and above this acquisition and classroom management problems emanate (Rhalmi, 2016).

Teacher Effectiveness

According to Campbell, Kyriakidis, Muijs & Robinson (2004) teacher effectiveness is the influence that classroom influences including instructional techniques and strategies, teacher aspirations, classroom arrangement and utilisation of classroom assets have on student success. From a goal-oriented viewpoint, the productivity of tutors is seen as the degree to which certain set instructional objectives and goals have been accomplished (Lipowsky, 2003). In their opinion, Prasad and Prasad (2005) assert that teacher effectiveness is

teachers' characteristics that have the power or propensity to have a beneficial effect on learning, actions and attitudes of the student.

In the view of Anderson (2004), teacher effectiveness relates to the ability of the teacher to achieve goals or targets set by himself /herself and those set for him/her by other stakeholders such as education ministries and other government functionaries, legislators, school administrators and so on. Flowing from this definition, an effective tutor, consequently, must have the essential knowledge and experience to achieve such goals and must also be able to use such knowledge and skills professionally in order to achieve those set goals.

Flowchart on large class size and tutor effectiveness

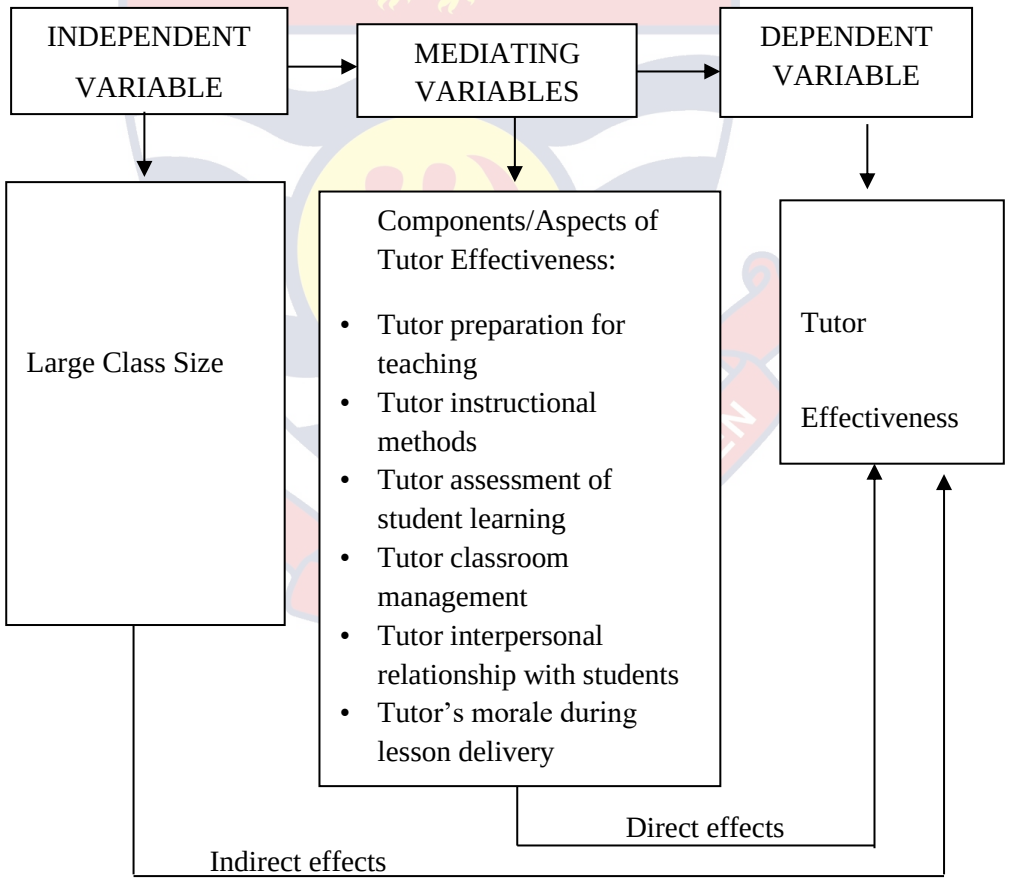

Figure 1- Flowchart on how large class size affects tutor effectiveness

In Figure 1, large class size affects tutor effectiveness indirectly through the components or aspects of tutor effectiveness which include tutor preparation

for teaching, tutor instructional methods, tutor assessment of student learning, tutor classroom management, tutor interpersonal relationship with students, and tutor's morale during lesson delivery. This suggests that in determining how effective a tutor is, we need to determine how well or otherwise he or she is doing in all of these important component areas of teaching. Thus, the aggregate performance level of the tutor in respect of all of these components indicates his/her effectiveness as a tutor.

Thus, this study conceptualises that, in order to determine how the independent variable (Large Class Size) affects or influences the dependent variable (Tutor Effectiveness), then we can do so by determining how large class size affects all of these mediating or intervening variables (Components of Tutor Effectiveness) identified in this particular study. This means that, by determining the effect of large class size on the components all together, we are on the way to determining the effect of large class size on tutor effectiveness.

Empirical Review

How Large Class Size Affects Tutors' Relationship with Students

According to Blatchford et al. (2011), the consequences suffered by teachers and classroom processes due to large class sizes tend to fall into two major groups. Initially, we have those interested in teacher-student experiences and this school of thought postulates that the amount of time that can be spent on teaching and working with individual students seems more likely to reduce in larger classes. Blatchford et al. (2011) stated that the decrease in contact hours in classes with high enrolments between facilitators and learners is compatible with the views of instructors.

The second set of variables concerning disparities in class size involves the participation of students in classroom activities. Finn, Pannozzo and Achilles (as cited in Blatchford et al., 2011) contended that class size influences on student engagement in the classroom are more significant than those on teaching. Blatchford et al. (2011) observed that the balance of the effects of class size on teacher-student interactions and the classroom participation of students is problematic. To these authors, a key element of positive school transition for students is the probability of involving their constructive involvement in the classroom, as demonstrated in the nature of their work-related experiences with tutors, other pupils and working alone. Numerous researches agree with the view that the key aspects necessary for success in school include engagement, active learning time, time on task (Creemers,1994).

Reason and logic indicate that there would be more disruption opportunities with more children in the classroom, and more opportunity to be off-task. In contrast, there will be more possibilities in small classes to engage kids and keep them working on assigned tasks (Blatchford et al., 2011).

Finn et al. (as cited in Blatchford et al., 2011) developed a hypothetical and scientific argument illustrating why student engagement in classrooms is the principal mechanism that helps explain why smaller classes result in improved achievement than larger classes. They conclude that students in small classrooms in schools are often actively involved in learning behaviours and show less disruptive behavior than students in larger classrooms. A contrary argument emerges from Bourke (as cited in Blatchford et al., 2011) who, in an Australian study, argued that class size did not have any noticeable impact on student engagement in the classroom. To Blatchford et al. (2011), most

conceptualisations of on-and off-task actions have limitations in that the generic terms may associate different behavioural types. There are three key ways through which the on-and off-task conduct of students is expressed: when working with tutors, when working with other students, and when working alone by themselves. It is beneficial to know if these have relationship with class size disparity in similar or different ways.

It is probable that the number of kids in a class is likely to determine the length of time that could be expended on teaching, and interacting with kids individually (Blatchford et al., 2011). However, for most teacher practices, Shapson et al. (as cited in Blatchford et al., 2011) found no substantial disparities between class sizes, and teachers changed not the amount of time spent engaging with the entire class, groups or individuals. This was in contrast with the observations of teachers themselves and therefore there was a discrepancy between the results of professional judgment and observational study.

Maybe the clearest finding regarding class size impact on classroom processes is that decreased class size is correlated with individualisation of teaching (Betts & Shkolnik, 1999). Evidence from longitudinal research studies of class size and pupil adult ratios (CSPAR) (Blatchford, 2003) found that while there was a strong reliance on adoption of whole class strategies of teaching and individual work in schools, small-class students stood more chance of receiving one-on-one instruction and were more likely to attach more of the teacher's attention.

In much the same way, a multi-method study conducted by the Early Child Care Research Network (2004) of the National Institute of Child Health

and Human Development (NICHD) summarised its evidence suggesting that similar first grade classrooms are more child-centered than larger classes, and that larger classes are more formal. Smaller classes allowed a more tailored and suitable curriculum for individual pupils, argued Anderson (2000).

Varity of studies in the United States (e.g. Finn and Achilles, 1999) and the United Kingdom (e. g. Blatchford, Kutnick, Baines and Galton, 2003) show that CSR appears to help less attainable and poor students, and more individual assistance in smaller classes could be assumed to be towards the lowest attainable students. Nevertheless, it can be predicted that as students advance through the academic continuum and the more organized and standardized the curriculum become, preparing for public examinations would lessen the impact of smaller classes on individualized learning (Blatchford et al (2011).

It is believed by Blatchford et al. (2011) that larger classes could contribute to a passive role for pupils in the classroom. Studies in the United Kingdom found that children in large primary classes were less likely to participate actively in classroom activities and less attentive to their tutors. On the contrary, pupils were far more likely to interact with tutors in smaller classes on a positive, sustained basis (Blatchford et al., 1999, as cited in Blatchford et al., 2011). In Australia, Bourke (as cited in Blatchford et al., 2011) Bourke noticed that teachers in large classes had more student concerns by way of questions, but these were often requests for clarification or other support sought by the learners. The research aimed to test whether, through primary and secondary education, there was more active pupil involvement with the tutor and whether this differed by level of pupil achievement.

In a study by the Institute of Education, University of London, teachers perceived that their capacity in smaller classes to socialise or 'nurture' children into life in school was much simpler as compared to performing this important activity in large classes because in the former, there were fewer kids to get to realise and recognize, and kids could get the attention of the teacher more regularly than in the latter (Blatchford & Martin, 1998). Clarke (as cited in Blatchford & Martin, 1998) had also claimed that tutors are more with and kind to pupils in smaller classes than they do in larger classes, and that there is less incentive for pupils to trust tutors individually in classes with larger student enrolments.

Effects of Large Class Size on Tutor Instructional Methods

A contentious 1995 study by the London Office for Education Standards (OFSTED) directly addressed questions about the potential influences of large classes on effective teaching and efficient learning. During tutor delivery of classes, inspectors monitored and assessed the quality of teaching and learning. The number of lessons scored 'good or better' was the key metric used (Blatchford & Martin, 1998). At key stage 1, the quality of teaching and that of learning large classes were rated as "less than sound" as compared to classes with fewer enrolments and, as far as it could be observed, these results were statistically significant (Blatchford & Martin, 1998).

Mawutor (as cited in Mintah, 2014) indicated that, among the consequences of large-scale classes on teaching and learning are minimal student participation in classroom academic interactions; students occasionally seem to be less attentive; supervision appears to be a primary challenge; feedback from assignments and assessments is not successful and useful since

marking student activities is typically on the fringes; inadequate furniture nurtures into a problem; and misconduct in assignments and class exercises becomes a gnawing problem, making assessment very challenging.

On their part, Newble and Cannon (as cited in Mintah, 2014) said that large classes are predominantly characterised by the lecture mode of teaching. The authors further asserted that as activity modes and learner-centered instructional techniques are not employed, large classrooms are correlated with disallowance of critical thinking and stifling the imagination of children.

To Ornestein and Lasley II (2000), opponents of the large class lecture approach contend that the needs and desires of individual students are not addressed. Ornestein and Lasley II further claim teachers using this approach conceive to see the students as a homogeneous group with similar skills, preferences, learning styles, and motivation. Teaching is for a hypothetical average student and it is assumed that all students will learn and succeed with narrow limits. Eventually, fast-achieving students are bored while it is frustrating with low-achieving students. Students' individuality is often lost in the big class (Ornestein & Lasley II, 2000). Extroverted students are observed to hijack the teacher's time and focus, and the dull, introverted students do not usually receive the requisite attention from the facilitator or are not heard from. Ultimately, students often exhibit their behavioural deficits in tutor-focused whole class learning settings (Ornestein & Lasley II, 2000).

Farrant (2002) also opined that large classes are characterised by an approach to teaching that is quite incapable of allowing for any discrepancies and variations between students that may occur. He acknowledged that one notable drawback of the big-class paradigm is that it facilitates a lot of inactive

learning. The instructor is the unit's active member and the students have only one opportunity in forty in a normal class to get a chance at any moment to contribute positively to the lesson. This is far from an acceptable instructional method, Farrant (2002) indicated.

Large class sizes are associated with adverse influences on classroom instructional and learning processes, according to Mintah (2014). Some of the negative impacts that arose during the research on teaching and learning include: the creativity of pupils is stifled; the evaluation system becomes less important and accurate; the shortcomings and achievements of both teachers and students are not revealed; school and curriculum goals and objectives generally end up on the rocks (Mintah, 2014).

In sharing their views on the effect of large class size on instruction and learning, Earthman (2002), Yaman and Uygulamada, (2009) and Burnett (1995) reported that overpopulated conditions in the classroom inhibit the attention of tutors to pupils individually and also impedes learning progress of students. As Earthman (2002) stated, teachers had time only for covering the basic lessons and were unable to spend extra time with low achievers. Teachers hardly got the needed time to attend to the needs and demands of low achievers and had to neglect them to keep up with the amount of time allocated for each learning discipline. Yaman and Uygulamada (2009) found that teachers could be forced to give up student-centered learning due to large class sizes, and rather adopt more use of tutor-centered lessons so that this teaching strategy became the culture of instruction in such a school. They also mentioned that large class size clout learners to demonstrate learning behaviour patterns such as failing to answer the teacher's questions and even waiting for answers to assessment items

on student worksheets and assignments to be supplied for them by the teacher. Ultimately, this deflates achievement of class sizes clout learners to demonstrate learning behaviour patterns such as failing to answer the tutor's questions and even teaching and learning outcomes and curtail successful accomplishment of assigned learning tasks (Yaman and Uygulamada, 2009).

In a similar finding, Obanja (as cited in Hayfron, 2004) indicated that if there was one thing that made tutors anxious when faced with large class sizes in higher institutions, then it was how to perform realistic or practical sessions with the similar zeal as they do for smaller classes. Obanja concluded that it is pathetic to observe that many teachers give up and do either of two things – fully miss the practicals or run what is commonly called 'practical theory' sessions. During these sessions, students learn in "dry labs" and they learn only the theories behind practical work. In furtherance of this argument, he mentioned that these two 'approaches' kill the spirit of enquiry of science and, therefore, fail to promise Africa the development of a crop of high quality, Nobel Prize winning scientists. In conclusion, he observed that, in one instance, we desire swift technological and scientific advancement and, in another instance, we force our tutors in our institutions of higher education to teach science and other practical subjects to high numbers of students in laboratories that have not been designed and prepared to house such high numbers of students (Hayfron, 2004).

In the view of Leahy (2006), class size is a never-ending topic in education and, in many schools, it is constantly escalating. The one-time regular twenty-nine classroom is now pulling on the edges with a highly visible thirty-six students. Researchers and teachers, according to Leahy (2006), opined that

large classes could have detrimental effects on the accomplishment of the pupil. It consists of a decline in learner performance of those learners studying in classes with high enrolment figures and an improvement in academic performance of those students who study in classes with small enrolments. The contention is that pupils in larger classes have much less one-on-one time of experience with the tutor, resulting in less classroom time and lower test scores in turn. It is also suggested that consistency becomes more of a concern in larger classes because several more students are waiting to be attended to. On the opposite, students benefit from far more contact time of instruction in a smaller class and are able to pay more attention on the subject being learned rather than on good conduct and other problems that exist around them. Researchers conceive that large class sizes bring about decrease in student achievement as compared with that in smaller classes. Leahy (2006) further noted that tutors are constantly looking for ways to improve student learning. Various teaching models and strategies are included in several cases. Educators are under constant pressure from supervisors and policymakers to increase test scores. Nonetheless, students could be presented with an opportune atmosphere to improve their school achievement if they were to decrease in number in the class (Leahy, 2006).

According to Stecher, Bohrnstedt, McRobbie and William (as cited in Leahy, 2006), students in California's class size reduction programs were regularly tested and their grades contrasted with other classes that were not part of the class size reduction programs. The overall scores and performance of students who sat in classes of a maximum of 20 students continued to improve. Stecher and co-authors (as cited in Leahy, 2006) revealed that in the

Standard Achievement Test (SAT-9), students enrolled in class with diminished enrolments performed better than those students enrolled in regular -size classes. The report concluded that these cuts not only benefited students academically, but that teachers may spend more quality time educating individual students. Teachers could now afford more quality time educating learners in small groups and collaborating with them on individual basis during mathematics and language arts activities than the other tutors whose classes had not been downsized.

With respect to the California class reduction initiative, Murphy (1998) also noted that teachers were now more attentive and focused on average and poor readers than they could earlier, and could focus on skill development of individual students. Results remained to be reached even after the third year of introduction of the class size reduction initiatives, which is that those students' grades continued to rise steadily in state tests as they progressed from one grade to the next in school.

Furthermore, Hopkins (as cited in Leahy, 2006) indicated that the class size reduction programmes benefit parents and teachers alike. Equally, there was now more time for teachers to teach students individually and, as well, reserve some time for linking up with parents. Irrespective of family income, English fluency, or minority status, pupils in classes with low enrolments had enjoyed higher academic achievement than their colleagues in larger classrooms.

According to Kezar (2006), there has always been an ongoing discussion about the importance of reducing the size of the class and the student-teacher ratio compared to the cost of education. By considering all sides of this issue,

educators will make better choices by terms of design and style of teaching. To Wang (2014), when it comes to teaching, class size influences a number of variables. As an example, class size can have a quantitative and qualitative impact on tutor-student interactions. It is highly unrealistic that one professor would be able to spend a lot of time interacting directly with each learner in a class of 200 students. In fact, consistency will be low in these teacher-student interactions (Wang, 2014). Therefore, class size is a variable in the learning environment that teachers must take into account when assessing instructional strategies and when making instructional design decisions (Taft, Perkowski & Martin, 2011). A teacher's approach to a large class should be different from that of a small class.

To Slavin (1990), advocates of higher student-tutor ratios argue that there is a lack of solid evidence about the advantages of smaller classes, especially in settings for undergraduate and graduate education. One meta-analysis indicated that the success of the student was independent of class size. The study's main finding was that it focuses on post-secondary education. Class size may not be that important in terms of student performance in classes where students already have higher-level thinking skills (Slavin, 1990). Yes, there may be some advantages for larger class sizes such as increased competition, more innovations, more money, and more resource efficiency, added Wang (2014).

Wang (2014) posited that size of class will impact how the instructor chooses and approaches the design of instruction. The instructor must adapt his or her teaching style and create an effective learning environment. The educator still has control over how students are educated, whether the class is large or small. Multiple factors influence student performance: context awareness,

experiences, involvement, attitude, learning content, and size of class (Wang, 2014). Success is multi-factorial and cannot be achieved simply by focusing on one element. Although class size has some impact, the student's performance and progress is not decided by that only variable. And eventually, well-planned educational designs may be essential than the size of the class and the student-teacher ratio.

Interactions among facilitators and individual pupils in smaller classes are more regular and sustaining (Galton, Hargreaves, Comber, Wall & Pell, 1999). The authors reported that pupils in smaller classes were found to receive more teacher focus than pupils in larger classes as concluded in a large-scale observational study in Britain. In another small-scale study commissioned by the National Union of Teachers, Galton et al (1999) looked at how professional teachers acted when faced with a large class and then a small class. It was established that small class tutors are more likely to engage in activities that define effective teaching, i.e., more difficult problems, more job input, more feedback and more prolonged engagement.

Effects of Large Class Size on Tutor's Assessment of Student Learning

On assessment of students, Geske (1992) noted that other investigations point to another special issue associated with large classes as being testing. He admits that while writing across the curriculum is a worthy goal, it is difficult to correct 250 essay assignment or review papers. And teaching classes of up to 250 students, with very few teaching assistants in particular, almost gives room to relying on objective style assessments. Buchanan and Rogers (as cited in Hayfron, 2004) found that crafting and creating adequate test to stay ahead of

the test files of students is a difficulty, and there is always the challenge of how to deal with students who skip the examinations they are expected to take.

Negash (as cited in Gemechu, 2013) indicated teachers have the impression that teaching large class sizes takes a lot of time for class work. In fact, class assignments and exercises are not carried to completion during the specified number of minutes allotted to lesson evaluation, making class work difficult for one instructor to manage in a class. Indeed, in marking pupils' exercises and class regulation, there is tension and frustration and exhaustion. Because of these challenges, many good tutors become irritated and resort to resigning (Gemechu, 2013).

Epri (2016) claimed that classes with high enrolment figures also had an impact on the length of time consumed in crafting assessment items and assignments, scoring as well as giving students feedback. When dealing with plenty students who are expected to be tested, tutors generally use objective-type questions for evaluation purposes because such questions are easier to score. Brief responses and essay form of questions are normally neglected since they require more time to mark and, therefore, cause delays in the distribution of tests. Furthermore, Epri (2016) indicated that teachers could not provide input on the learning of their students since they could not immediately mark all the tasks assigned to the students or do informal evaluation to determine students' understanding of the material taught.

Conclusively, Gemechu (2013) indicated that teaching large classes by tutors leads to a dramatic decline in the quality of education that has an overall adverse effect on all facilities, supplies, tools, infrastructure, human capital, library services and other support services of students that are likely to lead to

a quality disability situation. According to a World Bank report, overcrowded classrooms are considered unproductive and very challenging for teachers and students alike when it comes to the issue of continuous evaluation, marking and the ability to give differentiated attention to students in need of additional assistance (World Bank, 2005).

Teachers' assessment of their students, for most of the times, involves conducting tests for students, marking students' works and recording the scores for decision-making about the students, and as predicted, this was overwhelmingly proportional to the number of learners in a class (Atkins, Carter & Nichol, 2002). Teachers offered their opinions on the psychological variation between picking up 24 books and picking up 30 for marking. To Atkins et al. (2002), it was more unlikely to be possible in large classes than in a small class to expend some hours reviewing pupils' assignments while they are around, which is more effective for facilitators and the concerned pupils as well. It depreciates the quantum of "marking-workload" that is to be overseen later. Atkins et al. (2002) concluded that "Clearly class size impacts on the numbers of reports that tutors have to write, and most heavily on the small subject areas" (p. 8).

Alternatively, studies have looked carefully at the assessment of students on a course and it has been widely found that the size of the class has a negative impact on student course assessments, with courses with higher enrolments earning statistically significantly lower scores than less enrolled courses (Monks & Schmidt, 2010). For instance, from 1997 to 2004, Bedard and Kuhn (2008) examined student evaluations of economics courses at Santa Barbara University of California. They found a hugely significant and nonlinear

detrimental impact of class size on instructor efficacy student evaluations. Likewise, at Kansas State University, Walia (2008) used 19 semesters of student evaluations in economics courses. Yet again, it was revealed that large class size has a harmful and statistically significant effect on student assessment of courses. In illustrating that this outcome was not limited to either economics students or the U.S. alone, Westerlund (2008) stated that changes in student enrolment numbers in mathematics courses at Lund University in Sweden had resulted in considerably decreased student course evaluations.

Effects of Large Class Size on Tutor Preparation for Teaching

Preparing for teaching encompasses, among other things, planning. Planning could be considered an "all-class" pursuit (Atkins et al., 2002). Preparing for an instructional session, such as organising a lecture, seems to be autonomous of the proportion of students in the class on the face value. In a fieldwork for their study on teachers' workload in relation to class size, Atkins et al. (2002) noted in a discussion with their teacher-respondents that, the latter agreed that instructional planning was greatly independent of whether the class was with a large or small student enrolment, evaluation was highly dependent on the size of the class, with training somewhere in between. The teachers stated that the time taken to prepare a lesson, or collection of lessons, differed greatly not by the size of the class, but by the variety of the pupil's skill and achievement in the class, and therefore the distinction required. It induces a counter-intuitive reaction at first (Atkins et al, 2002). Most schools that have the means to do this, plan for smaller classes to be taught in the most diverse groups of pupils: usually these may be the less skilled pupils. From the above, it can be deduced that if there is any connection between planning to teach and

large class size at all, empirically, tutors usually spend more time planning for their smaller classes' work (Atkins et al, 2002).

Atkins et al (2002) noticed that when stimulated, it was challenging for some of the teachers in the fieldwork schools (and for the authors as well) to conceive a sharp discrimination regarding preparation and planning. In their conclusion, Atkins et al (2002) maintained that as these two groups could finally draw one together, planning seems to relate to the general aims and goals of a set of lessons, whereas preparation includes putting together the real tangible tools and materials required to deliver the session to be held. The authors asserted that for most of the study areas as well as most age groups, the allocation of resources for a lesson was not found to differ in particular by class size. Identifying the appropriate ones from the resources available and getting them prepared for use by pupils was a task of finiteness, and how many pupils had to be prepared for did not matter much. However, there were three specific exceptions to this general tenet. These included:

- preparing materials or equipment for individual pupils or for groups to hold practical lessons was, as might be predicted, commensurate to the number of pupils or groups involved. As an example, preparing and getting the materials ready for a practical experiment for science lessons could consume a bigger chunk of the preparation time for the whole lesson (Atkins et al, 2002);
- in this context, lots of lessons for younger pupils are "practical" in nature and include the organisation and arrangement of teaching and learning materials for pupils individually. To the extent that in instances where teaching and learning sessions are more of abstract than "practical",

individual learning tools may still be required and can be quite time-consuming in preparing work cards, for example, for lamination. Preparation time varies in these situations with regard to whether the class is large or small in size (Atkins et al, 2002); and

- in situations that had the class partitioned into groups with independent learning targets, proportionately more preparation might be required. Also, this might empirically result to more time spent organising the classroom for a smaller but more differentiated class rather than a large class (Atkins et al, 2002).

Effects of Large Class Size on Tutor's Morale during Lesson Delivery

Negash (as cited in Gemechu (2013), reported that teachers believed that instructional activities consume a great deal of time when teaching in class with large numbers of students. Gemechu (2013) found that some teachers expressed their frustration at the fact that class exercises are not finished during the within the number of minutes or hours allocated for teaching and, thereby, rendering teaching and learning activities in large classes to be tasking and huge to handle by teachers who happen to be alone in the class. Moreover, teachers cited stress, dissatisfaction and exhaustion in marking and dealing with class control. Gemechu (2013) hinted that in overcrowded classrooms, most tutors work under stress, and without the necessary learning resources. Owing to these problems, many effective teachers become frustrated, lose their enthusiasm and have decided to leave the job (Gemechu, 2013). Some tutors fall victims of irregular attendance to their lessons in school because of the frustration, Gemechu (2013) added.

According to Epri (2016), tutors are stressed with work overload due to class size increases. They spend much of school time making photocopies of students' worksheets, and this causes some kind of frustration and emotional imbalance in such tutors, hence, killing their sense of motivation entirely in teaching such classes. Zhang (2002) looked at the effects of classes with high student enrolments among college students and suggested some three problems or, at least, one of them. First, the questions of discipline. Second, the weariness of students and tutors. Third, learning effectively. In a related result, Harmer's (2000) study concluded that for experienced teachers, large classes are alarming, and highly overwhelming for the new teachers.

In the opinion of Hruz (2000), class size reductions will minimise classroom concerns, improve morale for tutors and students as well, and increase focus and engagement in class activities. Tolman and Rose (as cited in Tajmal, 2015) are of the view that work stress includes physiological and psychological responses for harmful events. They clarified that it is 'a hypothetical condition' shaped by an environmental force and evidenced by reactions at different levels of physiology, psychology, and interpersonal relationships. In his study, Thompson (as cited in Tajmal, 2015) alluded to psychological consequences as depression, fear, helplessness, anger, panic, and hopelessness. Teaching in large classes can be liked to work overload (Atkins et al., 2002), and one of the most popular investigated measures of stress was work overload (Tolman as cited in Tajmal, 2015). Workers often suffer from anxiety, stress and, most seriously, poor work performance because of work overloads. This in turn culminates into lowered job satisfaction, and diminishing profits (Altaf as cited in Tajmal, 2015). Further, Thompson (as cited in Tajmal,

2015) clarified that symptoms such as decreased self-esteem and life dissatisfaction can be felt by those with high stress levels.

Vanishree (as cited in Iroegbu, 2014) conducted an inquiry into the influence of work stressors on the work stress of small and medium-sized enterprises (SMEs) and came out with findings that work overload, among others, causes work stress among employees leading to poor concentration, cognitive blockage and underperformance or decision-making skills. In the observation of Blatchford and Martin (1998), class size studies did not always reveal noticeable effects of disparities in class size. They also contend that some have argued that teaching quality is the most important factor, and that variations in class size are not significant (e.g. Burstall, 1979; OFSTED, 1995). But, according to Blatchford and Martin (1998), such an opinion is likely to miss an important consequence of class size, if it is easily overlooked. The truth may be that in certain schools, for example, the number of pupils might not be significant as far as its effects on children are concerned, but this could be because the teachers in these classes had to account for the potentially negative effects (Blatchford & Martin, 1998). This could be at the expense of the teachers themselves. It could be observed in terms of sacrificing their lunch breaks to listen to children read, working on students' assignments at length in the nights after school hours and during weekends, visiting and interacting with students' parents outside of school hours, as well as the resultant exhaustion emerging from such efforts. Consequentially, all these efforts may adversely affect tutors' morale, enthusiasm, stress and well-being (Blatchford & Martin, 1998).

A relation between class size and teacher self-perception is supported by research (Blatchford & Martin, 1998). In their meta-analysis of 30 comparisons between smaller and larger classes, Glass and Smith (as cited in Cooper, 1989) observed that 25 preferred smaller classes, suggesting higher morale among tutors, better attitudes towards students, and grateful performance satisfaction.

A review by Day et al. (as cited in Blatchford & Martin, 1998) identified several empirical studies reporting that large class sizes are positively related to heightened cases of tutor stress which ultimately culminate into tutor burn-out. In their conclusion, Day et al (as in Blatchford & Martin, 1998) maintained that stress is costly in human terms (e.g. health deficits), instructional quality terms (poor instructional strategies adopted), and also in economic terms (absenteeism and staff turnover). Therefore, any reduction in personnel costs arising from larger classes must be counterbalanced by increased human educational / teaching and financial costs (Day et al. as in Blatchford & Martin, 1998).

Effects of Large Class Size on Tutor's Classroom Management

Several scientific inquiries have indicated that student discipline appears to be tougher in large classes and more of an interruption into the process of teaching and learning (Blatchford & Mortimore, 1994). Smaller classes, by comparison, tend to be healthier and easier to manage. Bourke (as stated in Blatchford et al., 2011) found that larger classes required more non-academic procedural arrangements. Critical comments from teachers in smaller classes were predicted to be less required, suggesting less challenges in classroom management. Generally speaking, it could be hypothesised that students with lower accomplishments would be more off-task and thus more extra efforts

could be expected from the teacher, but it was not apparent whether this would be influenced by class size (Blatchford, Bassett & Brown, 2011).

Adding to the discussion above, Atkins et al (2002) argued that, the need to be successful in controlling the actions of pupils rises for quite matured pupils and is also seen as higher for pupils with a lower capacity. The more pupils a tutor teaches in his or her course area, the higher the possibility for one of them to engage in a misbehaviour. And as both variables appear being similar, more time is therefore taken to control student habits (Atkins et al, 2002). The authors further explained in their study report that the style of teaching necessarily changed (particularly in primary schools) as the size of the class grew. There was more drifting away from the small group interactions towards a more whole-class teaching. This is due to the fact that the latter might take longer to prepare; more time may also need to be spent on planning and preparation to properly 'under control' the class and reduce the risk of pupil misconduct (Atkins et al, 2002).

Furthermore, Chingos and Whitehurst (2011) argued that class size, especially large class size, results to a lot of ruckus and disordered, uncontrolled student conduct which, in one way or another, hinders the kinds of learning activities that the tutor intended to foster in the classroom. Thus, bigger class sizes affect the tutor in terms of time manipulation when focusing on individual students rather concentrating on specific needs of the group as a whole. This has been proved by the research done in Tennessee which discovered that, after four years, students who were organised into smaller classes at random performed far better than their classmates who were assigned to regular classes by approximately 0.22 standard deviation (Chingos & Whitehurst, 2011).

In some cases, concerns regarding student behaviour tops the list among tutors of large classes (Carbone, 1999). According to Carbone (1999), some departments found that large classes had worse attendance, with louder book packing few minutes before the end of lecture session. She noted that some students had developed astounding variety of inventive disruptive activities during classroom discussions including talking on mobile phones, watching digital television on their phones, sitting through the lecture with headphones on and, in some cases, having pizza delivered to them in the middle of lecture sessions.

For Carbone (1999), the question of how much control to exert on the on the student in large classes does not lend itself to a single-barreled answer. She proposed that each member of the faculty determines what sort of behaviours are deemed appropriate in their classrooms and what kind of behaviours are unacceptable. She further noted that students should be made aware of what the teachers expect from them before the first day of their class, so that they can express these expectations confidently and clearly on that first day (Carbone, 1999).

In the opinion of Ozerk (2001), the conclusion that can be drawn from the available literature on small and large classes is that smaller classes appear rather far more effective not simply due to their smaller enrolments, but because they offer an educational climate that provides fertile grounds for academic activities and achievement.

To Rawat, Thomas and Quazi (2012), smaller class size and lower student-teacher ratios advocates claim that many more carefully predetermined student-teacher engagements contribute to improved learning, especially in

terms of guiding students improve their high-level thinking and abstract reasoning skills. The teacher has less impact on teaching and learning when the size of the class is greater and therefore puts more pressure on students to learn (Radders, 2012). For larger classes, getting control over the classroom atmosphere is more challenging for the instructor. It is noted that size of the class will have a role to play in the attitude and dedication of the tutor. The teacher is much more likely to be devoted to the success of each student in smaller classes, while the emphasis may not always be on teaching in large class settings (Savage, Rogan, Updike & Chesterfield, 2014).

Blatchford and Martin (1998) also asserted that teachers were with the conviction that classroom management is easier in smaller classes than in in classes with large student populations. They clarified that it is easier to manage a smaller class of children than a larger class, which means that the teaching is more effective in smaller classes and less time is given to control, discipline and settlement of the children (Blatchford & Martin, 1998).

Though not all that clear, a number of studies support the correlation between class size and social aspects of class-based adaptation and student behaviour (Blatchford & Martin, 1998). A major theme of several studies is that the management of classroom in large class settings is somewhat more complicated and the conduct of children is not as good as that of children in smaller classes (Cooper, 1989). In their meta-analysis, Glass et al (1982) found that less misconducts occurred in smaller classes. Finn (as stated in Blatchford et al., 2011) argued that less time is spent in the management of classrooms in smaller classes.

Finn, Pannozzo and Voelkl (1995) in a follow-up study of the STAR sample who were then in fourth grade, Finn et al observed that pupils in smaller classes had more academic initiative and less non-participatory or disruptive behaviour and the same thing could not be said of pupils who found themselves in large classes. But Nye et al (2001b) noted that in the STAR research itself, classroom discipline levels did not appear to be impacted by smaller classes.

Chatper Summary

Available literature on human psychology dealing with teaching and learning environment appear to suggest that large classes, particularly when it comes to higher-level learning and interpersonal communication, are not successful as smaller classes, although the evidence shows that large classes are not as poor and inefficient as is often believed. Most academics and researchers believe that large classes can be very successful in terms of encouraging and empowering both learners and tutors.

Literature indicate that class size matters, as it impacts tutors and students. Large classes are often, rather than pedagogical, the solution to management and organizational problems. Any correlation between class size and educational standards, however, is not an easy one to make as contextual factors have different impacts on classes and individuals. Class size also has an effect on tutors' teaching styles and strategies, and teaching methods and modes of classroom management have a significant impact on the quality of education provided in large classrooms. Additional support for teaching and learning is of considerable benefit.

Again, literature reviewed indicate that, evidence on the effect of increased class sizes on student learning experiences shows that the quality of teaching and evaluation offered is more important than the size of the class.

Nonetheless, rising class sizes eventually lead to additional problems as it increases the teaching difficulty. Academics must contend with a more diverse student population.

On the effect of large class size on classroom management, the literature available support the connection between class size and social aspects of class-based adjustment and student behaviour. Most studies maintained that management of the classroom in large classes is somewhat more complicated, and the performance and behavior of children during the lesson is not as strong as that of children in smaller classes. It is asserted large classes do not offer an educational climate that provides fertile grounds for academic activities and achievement. It is believed that student compliance or discipline becomes more of a challenge in larger classes because there are more students to pay attention to.

Regarding effect of large class size on tutors' morale during lesson delivery, literature available indicated that large class sizes are positively related to raised levels in tutor stress which ultimately leads to tutor burn-out. It is implicated that large class size negatively affects tutors' morale, enthusiasm, stress and well-being. The reviewed literature on the effect of large class size on tutors' interpersonal relationship with students also portrayed that many researchers suggest that students in large classes are less interested in learning activities and exhibit more disruptive behaviour than their peers in smaller classes.

On the impact of large class size with respect to tutor instructional methods, previous studies indicate that large classes are generally dominated by reliance on the lecture method by teachers. Conclusion from a number of past

studies is that large classes are positively correlated with stifling of critical thinking and creativity in students since activity-based and child-centred teaching strategies are often unused. Teachers are also said to only have time to cover the basic lessons and are unable to spend some time with slow achievers.

Also, literature was reviewed on the effect of large class size on tutor assessment of student learning, and most of them maintained that in large classes, feedback from assignments and tests is not effective in the sense that marking of students' exercises is usually on the periphery. In a bid to manage with the many more students they have to assess, tutors generally use objective type assessment questions since they are marked and scored easily. A report from the World Bank concluded that overcrowded classrooms are found to be unfriendly and very difficult for both tutors and students when it comes to the issue of continuous review, marking and the ability to give individualised attention to students in need of extra assistance (World Bank 2005).

It is worthwhile to conclude that the literature on the issue of large class size that has been reviewed formed an important aspect of this study as they would give the researcher insights into what went into the questionnaire that was employed in collecting the data for the report. The information gathered helped in drafting some of the questionnaire items for the tutors in the colleges of education. Some of the research questions were also formulated based on the literature reviewed on the issue.

CHAPTER THREE

RESEARCH METHODS

Overview

Research Design

This research work is designed to examine the effect of large class size on tutor effectiveness of public Colleges of Education in the Northern Region of Ghana. This chapter describes the methodology that the researcher adopted to conduct the study. The chapter addresses the issues of research design, population, sample and sampling procedure, data collection instrument, data collection and analysis procedures.

In respect of this study, the descriptive survey was used. The researcher adopted a quantitative descriptive method to make inferences on tutor effectiveness. The descriptive survey helped to determine the perceived effects of large class size on tutors' interpersonal relationship with students, instructional methods and assessment of student learning. It also assisted to investigate the perceived effects of large class size on tutor preparation for teaching. Leedy and Ormrod (2010) described quantitative descriptive method as the approach that provides quantitative information that can be summarised by statistical analysis. Using the survey approach, a researcher may identify an actual or previous circumstance, occurrence or phenomenon in their current situations and conditions (Balci, 2001; Karasar, 2012). The object of using the quantitative approach was to develop and make use of mathematical models

and, or hypotheses pertaining to the phenomena of large class size and tutor effectiveness in public colleges of education in the northern region of Ghana.

According to Aggarwal (2008), a descriptive survey concerns gathering information regarding prevailing conditions or situations for definition or description and interpretation purposes. In the opinion of Best and Khan (1995), descriptive research is concerned with existing conditions or relationships, such as evaluating the essence of prevailing conditions, behaviors and attitudes; views held; ongoing processes or patterns being formed. Descriptive research, to Gay (1992), determines and reports how things are. Hence, it includes collecting data for the purpose of testing theories or hypotheses, or answering questions about the current status of a study.

Amedahe (2002) also posited that the goal in a descriptive study is to accurately describe events, objects, processes and individuals. The concise study design allows results from a sample to be generalised to the larger population. This deals not only with an individual's characteristics, but with the characteristics of the entire sample. This provides useful knowledge to solve local problems.

The researcher found the descriptive survey approach the most appropriate method to explore and describe the effect of large class size on tutor effectiveness in public colleges of education in the northern region of Ghana. This is in the sense that it allowed him the usage of large sample size and, again, it permitted generalisation of results from the sample to the larger population of colleges of education tutors in the northern region of Ghana. Since the data collection instrument used in the study was bulky in content, descriptive research became appropriate as it allows for the collection of large amounts of

data within a relatively short period of time. When used, the descriptive design also gives clear meaning to events. It was therefore considered the best approach in finding answers to the diverse ways that large class size affects the various aspects of tutor effectiveness in public Colleges of Education in the northern region.

Population

Mugenda and Mugenda (2003) defined population as a whole group of persons, events or objects with certain observable traits. Best and Khan (1995) referred similarly to population as a community of people or individuals with one or more common characteristics and who are of interest to the researcher.

The target population for the study comprised of all tutors who taught in the public colleges of education in the northern region of Ghana. The total number of tutors in the five public colleges of education in the Northern Region as at the time of collecting the data for this study stood at 203. Out of this, 176 (86.7%) were males while 27 (13.3%) were females.

Sample and Sampling Procedure

The quality of any study, apart from the suitability of research method and instrumentation, also depends on the aptness of the adopted technique of sampling (Cohen, Manion & Morrison, 2011). The sample is picked from the study population mostly termed the accessible population (Burns & Grove, 2003). This study took the form of a census study. A census represents a study in which all elements, or everyone, in a population are studied (Australian Bureau of Statistics, 2013). It is also referred to as complete enumeration, which means each and every unit of the population is included in the study. This suggests that each of the collages of education tutors in the target population as

a whole was expected to be approached throughout the investigation.

The census method of gathering information is more exhaustive and covers the entire economy (Seidu, 2015), or population. The census sampling was considered appropriate for this study because it made the generalisability of the study findings easily possible since it yields reliable and accurate results. Again, it yields a true measure of the population, that is, there is nothing like sampling error in the sampling process (Australian Bureau of Statistics, 2013) which can affect the findings of a study. Census and sample surveys are not necessarily alternative methods of collecting data but, rather, they often complement and draw on each other in some ways (Seidu, 2015).

One noticeable challenge of census method of data collection is that it is relatively costly both in staff and monetary terms as compared to the sampling methods. Besides, it generally takes a longer period to collect and process data and to release study findings (Australian Bureau of Statistics, 2013). However, the researcher addressed these challenges by recruiting and training one assistant in each college of education to assist in the administration and retrieval of most of the questionnaire from tutors.

Eventually, tutors who were present and consented at the time of the researcher's visitations to the various colleges of education understudy were used for the study. Therefore, out of a target population of 203 colleges of education tutors, the sample size for this study consisted of 192 tutors who taught in the colleges of education in the northern region and consented to participate in the study as at the time the researcher collected his data. They

consisted of 165 (85.9%) males and 27 (14.1%) females. Table 2 presents the sample from the respective colleges of education understudy.

Table 2- *The sample from the respective colleges of education understudy*

College	Tutors		Total (%)
	Male	Female	
Bagabaga College of Education	54	8	62 (32.3)
E. P. Bimbilla College of Education	38	3	41 (21.4)
Gambaga College of Education	18	3	21 (10.9)
Saint Vincent College of Education	18	5	23 (12. 0)
Tamale College of Education	37	8	45 (23.4)
Total	165	27	192 (100)

Source: Field Data (2019)

From Table 2, it is observed that majority of the sample for the study were drawn from Bagabaga College of Education and Tamale College of Education with 32.3% and 23.4% representations respectively while the least percentage of them (10.9%) were drawn from Gambaga College of Education.

Data Collection Instrument

The study adapted and used a standardised questionnaire as its main data collection instrument. The questionnaire was adapted from the Kulsum Teacher Effectiveness Scale (KTES) which was developed and standardised by Kulsum (2000). The KTES is a self-scoring schedule. The teacher effectiveness scale measures the various functions of the teacher which are related to his/her teaching. The original scale by Kulsum (2000) claims to measure five aspects or areas of tutor effectiveness namely Preparation and planning for teaching, Classroom management, Knowledge of subject matter,

Personality characteristics, and Interpersonal relations with students and colleagues. However, the adapted tutor effectiveness questionnaire for this study is organised into seven different sectional areas, and has a total of sixty-nine (69) items on it (see Appendix A). Section A concerns tutor demographic data, and consists of six (6) items with multiple responses for tutors to choose one. Section B of the questionnaire consists of eleven (11) items and seeks to elicit from tutors the effects of large class size on their preparation for teaching. Section C carries fourteen (14) items which dwell on effects of large class size on tutor instructional methods while Section D consists of seven (7) items and deals with responses concerning effects of large class size on tutor assessment of student learning. Section E also contains seven (7) response items on the effects of large class size on tutor's classroom management. Section F is on the effects of large class size on tutor's morale during lesson delivery. This section consists of twelve (12) items. Section G deals with the effects of large class size on tutor interpersonal relationship with students, and consists of thirteen (13) items.

Validity of the Instrument

Validity is the consistency and accuracy of the research-based deductions (Mugenda & Mugenda, 2003). During the pre-testing, the instrument was validated to check the accuracy of the data collection instrument. Wiersma (1995) stressed that preceding the main study with pre-testing of the study instrument (s) promotes and establishes criterion and construct validity. Validation of criterion and construct was developed by pre-testing the data collection instrument employed in the research. This checked the suitability of the instrument for information gathering.

The questionnaire was presented to my supervisors and some faculty members at the Department of Education and Psychology for expert review. This helped improve content and construct related evidence of the items on the questionnaire. The validity of the content of instrument was maintained by indicating the study's priorities effectively (Fraenkel & Wallen, 2002). To find it appropriate, views were expressed on the vocabulary, consistency and aptness of the specific questions in the instrument. As well, the style, layout and content of the research tool were constructively criticised and modified. Rephrasing and addition of questions, and removing other redundant ones were suggested. Therefore, the format of the questionnaire and the content in general were modified. Items found to be unclear were rephrased. This was done to ensure that the items in the questionnaire concentrated on the information required by a specified objective. The tool was also analysed to ensure that the design, arrangement and form of the items within the tool were sufficient. Therefore, face and construct validity of the instrument was established for the report.

Reliability of the Instrument

This was ensured through pre-testing of the instrument. A pre-test constitutes a critical examination of the research instrument to help determine whether the research instrument "will function properly as a valid and reliable" research tool, especially in the social sciences (Converse & Presser, 1986, p.101). The original Teacher Effectiveness Scale by Kulsum (2000) had a Split-half reliability coefficient of .82 and a validity coefficient of .85 (Kothari, 2004). A pre-test of the questionnaire was carried out on St. John Bosco's College of Education tutors in Navrongo in the Upper East Region of Ghana. The aim of the pre-testing was to improve the reliability of the instrument.

Thirty (30) tutors were sampled for the pre-testing of the adapted questionnaire. This sample size for the pre-test was informed by the fact that it is acceptable to test survey instrument on, at least, 12 to 50 respondents before administering it on full-scale (Sheatsley, 1983; Sudman, 1983). St. John Bosco's College of Education was chosen for the pre-testing of the instrument because it has similar characteristics as those selected for the study. The pre-testing was conducted in the Upper East Region to avoid contamination.

The tutors were given draft copies of the questionnaire. The tutors discussed verbally and frankly with me any ambiguities, incoherence or incomprehension that they experienced about any aspect of the draft questionnaire. The necessary corrections were effected after the trial testing. Using the Cronbach's Alpha measure of internal consistency, the results of the pre-test was used to determine the reliability of the sections (Sections B - G) in the instrument which carried the various aspects of tutor effectiveness. The Statistical Package for Social Sciences software (Version 23.0) was used for the computations. Table 3 presents the results of the pretest.

Table 3-*Reliability coefficient for each of the sections*

Variables	Reliability Coefficient (α)
Tutor Preparation for Teaching	.731
Tutor Instructional Methods	.834
Tutor Assessment of Student Learning	.795
Tutor Classroom Management	.821
Tutor's Morale During Lesson Delivery	.719
Tutor Interpersonal Relations with students	.872
Total	.795

Source: Field Data (2019)

From Table 3, it is observed that the reliability coefficients of the various sections (Aspects of tutor effectiveness) of the instrument is good since the values are all above .70 which is considered the minimum Cronbach's alpha for an instrument with good reliability. Section B (Tutor Preparation for Teaching) has a Cronbach's alpha value of .731; Section C (Tutor Instructional Methods) has a reliability coefficient of .834 while Section D (Tutor Assessment of Student Learning) has a reliability coefficient of .795. Section E (Tutor Classroom Management) and Section F (Tutor's Morale during Lesson Delivery) equally have high internal consistency with Cronbach's alpha values of .821 and .719 respectively. Section G (Tutor Interpersonal Relations) has the highest reliability coefficient of .872. With these Cronbach's alpha values of the sections, the overall reliability coefficient of the questionnaire used to collect data for the study was found to be .795. This implies, therefore, that, in general, the data collection instrument used for the study is deemed to have high reliability.

Ethical Consideration

Permission was sought from the administrative authorities of the sampled colleges where the data was collected for the study. By way of doing this, ethical clearance was obtained from the Institutional Review Board in the University of Cape Coast. The document clarified the study's purpose, the relevance for voluntary participation, anonymity as well as confidentially of tutors' responses. Informed consent was sought from participants by explaining the study's object to them.

During the administration of the questionnaire for the collection of data for the report, tutors' anonymity was strongly regarded. It gave the participants

the chance to hide their identity. No names or identifiable information were required from the tutors. On the confidentiality issue, the researcher ensured measures to maintain as confidential participants' responses. Participants were assured their inputs by way of their answers to the questionnaire would be maintained highly confidential and access to the information provided would not be available to anyone known to them.

Data Collection Procedures

The Department of Education and Psychology at the University of Cape Coast, Faculty of Educaitonal Foundations issued an introductory letter to the reserahcer. This enabled the researcher to seek approval for data collection from principals of colleges of education involved in the study. The researcher identified and trained one person as assistant in each of the five colleges of education where the study was conducted to assist in the data collection. These assistants were coached on how to approach tutors to see the need for their participation in the study and on the explanations to certain concepts and portions in the questionnaire. Administering the questionnaire personally and with the researhc assistnats gave the reseracher the opporutnity to explain in depth how to answer the quesditons.

The researcher sought to gather data from tutors who were present in the participating colleges of education. Thus, tutors who were present in the Colleges and were prepared to take part in the research were given the questionnaire. Some concepts and aspects of the study were explained to the tutors and each respondent given approximately thirty (30) minutes to finish responding to the questionnaire. Some of the questionnaire were left with the assistants who were resident tutors on the colleges' campuses to be distributed

later to those tutors who were not around at the times the researcher visited the colleges for the data collection. The researcher made a number of follow-up visits to the colleges' campuses to retrieve those questionnaires. The researcher moved from one college to the other, in most cases, to collect all the data for the study.

Data Processing and Analysis

The filled questionnaires were numbered serially and coded into the SPSS (version 23.0). The analysis included the coding, organising, describing, explanation, cross tabulation and conclusions drawing. The analysis was carried out in two stages. The first level of the analysis focused on descriptive statistics including computation of frequencies, means, and standard deviations. Data on all research questions were analysed with means and standard deviations.

Research hypotheses one and two were tested using the independent samples t-test. The analysis was performed to investigate the differences in the perceived effects of large class size on tutor effectiveness due to gender and teaching experience. For research hypothesis three, between groups one-way-analysis of variance (ANOVA) was used to test whether differences existed in the perceived effects of large class size on tutor effectiveness in terms of college. Test was performed at 0.05 level of significance.

Chapter Summary

Quantitative descriptive survey design was employed for the study. The study involved college of education tutors in the northern region. Census technique was used. The research instrument used in the study was questionnaire. A pre-testing of the data collection instrument was conducted on St. John Bosco's College of Education tutors in Navrongo in the Upper East

Region. This ensured the validity and reliability of the instrument for the study. By means of Cronbach's alpha method, the reliability coefficient of the instrument was .795.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter deals with the presentation and analysis of the data collected. The study sought to assess the perceived effect of large class size on tutor effectiveness in public colleges of education in the northern region of Ghana. The analysis and interpretation of data were based on the results of six (6) research questions and three (3) hypotheses set for the study. Data were analysed descriptively (frequencies, percentages, means and standard deviations) and inferentially (independent samples t-test and one-way analysis of variance). Test were conducted at 0.05 level of significance. The first section of this chapter describes the demographic characteristics of tutors. The second section presents the analysis, interpretations and discussion of research findings.

Demographic Characteristics of Tutors

The study was conducted in public colleges of education in the northern region of Ghana with a sample size of 192. The demographic characteristics of tutors included: tutors' college's name, gender, highest educational qualification, affiliate academic department in the college and years of teaching experience. Table 4 presents the demographic characteristics of tutors in the study.

Table 4- *Demographic characteristics of the tutors (n=192)*

Variable	Freq.	Percent %
College		
Bagabaga College of Education	62	32.3
E. P. Bimbilla College of Education	41	21.4
Gambaga College of Education	21	10.9
Tamale College of Education	45	23.4
Saint Vincent College of Education	23	12. 0
Total	192	100.0
Gender		
Male	165	85.9
Female	27	14.1
Total	192	100.0
Highest Educational Qualification		
Master of Education	95	49.5
Master of Philosophy	67	34.9
Master of Technology	05	2.6
Master of Science	19	9.9
Master of Art	06	3.7
Doctor of Philosophy	00	0.00
Total	192	100.0
Academic/Teaching Department		
Education and Professional Studies	65	33.9
Languages (including English Language, Ghanaian Language and French)	56	29.2
Mathematics and ICT	24	12.5
Science (including Agricultural Studies and Physical Education	29	15.1
Technical and Vocational Education	18	9.3
Total	192	100.0
Years of Teaching Experience in College		
Less than 5 years	64	33.3
5 and above years	128	66.7
Total	192	100.0

Source: Field Data, (2019)

Table 4 shows that majority of the tutors were from Bagabaga College of Education (n=62, 32.2%). Those from Gambaga College of Education were the least (n=21, 10.9%). With respect to the gender of the tutors, the results show that the majority of them were males (n=165, 85.9%). The

females were the least (n=27, 14.1%). With respect to the Highest Educational Qualification of the tutors, it was revealed that most of the tutors were Master of Education degree holders (n=95, 49.5%). Those with Master of Technology degree were the least (n=05, 2.6%). With respect to Academic/Teaching Department, it was evident that the Education and Professional Studies department had more tutors (n=65, 35.9%) than the other teaching departments in the colleges of education in the northern region of Ghana. Lastly on years of teaching experience in college, it was found that most had taught for 5 and above years (n=128, 66.7%).

Analysis of Main Data

Research Question One: What are the perceived effects of large class size on tutor interpersonal relationship with students?

The purpose of research question one was to find out the perceived effects of large class size on tutor interpersonal relationship with students. Tutors were requested to provide responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales (4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed disagree. The results of data analysis are presented in Table 5.

Table 5- *Analysis of results of perceived effects of large class size on tutor interpersonal relationship with students (n=192)*

Statement	M	SD
1. Large class size affects my cooperation in the work of my college	3.76	.653
2. Large class size affects my ability in maintaining cordial human relations with all my students	3.65	.345
3. Large class size affects my ability in recognizing all my students all the time	3.63	.379
4. Large class size affects my obedience to my Head of Department, or Principal	2.40	.287
5. Large class size affects my interest in parent-tutor association deliberations	2.14	.598
6. Large class size affects my friendliness with my colleagues	3.42	.654
7. Large class size affects my ability in helping my students who face personal and educational problems	3.41	.550
8. Large class size affects my contribution to ensuring a good name for my college	2.67	.566
9. Large class size affects my ability to invite my students for discussion outside class hours	2.51	.631
10. Large class size affects my support for the genuine causes of teaching community	2.50	.541
11. Large class size makes me discriminate among students for personal reasons.	2.12	.561
Overall mean	2.92	.524

Source: Field Data (2019) *M=Mean* *SD=Standard Deviation*

The results in Table 5 generally showed that tutors in the study agreed that large class size affected their interpersonal relationship with their students (M=2.92, SD=.524). Dwelling on some of the items on the effects of large class

size on tutor interpersonal relationship with students, it was evident that large class size affects their cooperation in the work of their colleges (M=3.76, SD=.653) and this elucidates how, generally, large class size affects tutor interpersonal relationship with students. In another evidence, it was found that large class size affects tutors' ability in maintaining cordial human relations with all their students (M=3.65, SD=.345), and this also explains how, in general terms, large class size affects tutors' interpersonal relationship with students. Another evidence points to the fact that large class size affects tutors' ability in recognising all their students all the time (M=3.63 SD=.379) and explains how, generally, large class size affects tutors' interpersonal relationship with students in the colleges of education in the northern region of Ghana.

Another crucial result was that most tutors in colleges of education in the northern region of Ghana share the idea that large class size affects their ability in helping their students who face personal and educational problems (M=3.41, SD=.550). This explains how, largely, the effect large class size has on tutors' interpersonal relationship with students in the colleges of education in the northern region of Ghana is manifested. However, tutors did not indicate that large class size has effect on their interest in deliberations with students' parents (M=2.14, SD=.598) neither did they indicate that large class size makes them discriminate among their students for personal reasons (M=2.12 SD=.561)

Research Question Two: What are the perceived effects of large class size on tutors' instructional methods?

Research question two sough to find out the perceived effects of large class size on tutor instructional methods. Tutors were requested to provide

responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales (4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed disagree. The results of data analysis are presented in Table 6.

Table 6- *Analysis of results of perceived effects of large class size on tutor instructional strategies*

Statement	M	SD
1. Large class size affects my ability of involving all my students in my lessons	3.94	.665
2. Large class size affects my ability to use a variety of activities/learning methods in my lessons	3.75	.385
3. Large class size affects my ability to adopt teaching methods that are appropriate to the course's objectives	3.72	.211
4. Large class size affects my ability to engage my students to use a variety of problem-solving techniques	3.65	.765
5. Large class size affects my ability to use audio-visual aids to make my teaching more effective	3.54	.765
6. Large class size affects my ability to give clear instructions and explanations of concepts during lessons	2.43	.756
7. Large class size affects my ability to engage my students in practical activities that have a clear purpose in improving their understanding/achievement	3.50	.655
8. Large class size affects my ability to listen and respond to all my students' concerns during my lessons	3.45	.336
9. Large class size affects my ability to give attention to each student individually during my lessons	3.43	.454
10. Large class size affects my ability in ensuring that every student understands what I teach during my lessons	3.29	.308
11. Large class size affects my ability to set clear objectives and parameters for performance to hold my students accountable	2.99	.234
12. Large class size affects my provision of opportunities for students to take responsibility for their own learning	2.82	.512
13. Large class size affects clarity of my teaching	2.71	.823
14. Large class size affects my habit of summarising lessons I teach, in the end	2.67	.565
Overall mean	3.27	.531

Source: Field Data (2019) *M=Mean* *SD=Standard Deviation*

As evidenced in Table 6, the results show that tutors in colleges of education agreed that large class size affected their instructional methods (M=3.27, SD=.531). For example, it was found that large class size affects tutors' ability of involving all their studnets in their lesson (M=3.94, SD=.665). In a related result, it had been indicated that large class size affects tutors' ability to use a variety of activities/learning methods in their lessons (M=3.75, SD=.385) and this suggests that large class size has substantial effects on tutor instructional strategies.

Similarly, it was found that large class size affects most of the tutors in their ability to adopt teaching methods that are appropriate to a course's objectives (M=3.72, SD=.211). Most of the tutors asserted that large class size affects their ability to engage their students to use a variety of problem-solving techniques (M=3.65, SD=.767). More related results suggest that most of the tutors have experienced that large class size effects their ability to use audio-visual aids to make their teaching more effective, and clearly explains how large class size has significant effects on instructional methods (M=3.54, SD=.765). The tutors further pointed out that large class size affects their ability to engage their students in concrete teaching and learning activities that possess the potent of enhancing and promoting their grasp and achievement during lessons (M=3.50, SD=.655). However, large class size was observed not to have any effect on tuotors' ability to give clear instructions and explanation of concepts (M=2.43, SD=.756)

Research Question Three: What are the perceived effects of large class size on tutors' assessment of student learning?

The objective of research question three was to determine the perceived effects of large class size on tutor assessment of student learning. Tutors were requested to provide responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales (4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed disagree. The results of data analysis are presented in Table 7.

Table 7- *Analysis of results of perceived effects of large class size on assessment of student learning*

Statement	M	SD
1. Large class size affects how often I conduct class tests to evaluate my teaching.	3.92	.533
2. Large class size affects my ability to ask more thought-provoking questions than fact-finding questions while teaching.	3.84	.354
3. Large class size does not enable me to guide my students to complete their class assignments in time.	3.83	.630
4. Large class affects objective evaluation of my students.	3.63	.422
5. Large class size affects my discussion of students' performance in tests with them.	3.45	.376
6. Large class size makes it very cumbersome to check all homework notebooks of my students regularly.	3.36	.232
7. Large class size affects my ability to use a variety of questioning techniques to probe students' knowledge and understanding.	3.29	.387
Overall mean	3.62	.419

Source: Field Data, (2019) *M=Mean SD=Standard Deviation*

Table 7 shows that in sum, tutors involved in the study generally agreed that large class size affected assessment of their students learning (M=3.62, SD=.419). It was found that tutors agreed that large class size affected how often they conduct class tests to evaluate their teaching (M=3.92, SD=.533). The results again indicated that most tutors were of the view that large class size affected their ability to ask more thought-provoking questions than fact-finding questions while teaching (M=3.84, SD=.354) and this gave practical reasons why one could conclude that large class size affected assessment of student learning.

Majority of the tutors were of the idea that large class size did not enable them to guide their students to complete their class assignments in time (M=3.83 SD=.630) and this response gave ample reasons to believe that large class size affected tutors' assessment of student learning. Tutors posited that large class size affected objective evaluation of their students (M=3.63 SD=.422). Similar result was recounted when most of the tutors indicated that large class size affected their discussion of students' performance in tests they organised for the students (M=3.45 SD=.376).

Research Question Four: What are the perceived effects of large class size on tutors' preparation for teaching?

Question four sought to explore the perceived effects of large class size on tutor prepartation for teaching. Tutors were requested to provide responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales (4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed

disagree. The results of data analysis are presented in Table 8.

Table 8- *Analysis of results of perceived effects of large class size on tutor preparation for teaching (n=192)*

Statement	M	SD
1. Large class size affects how I make my teaching interesting through giving of examples and situations that are familiar to students.	2.47	.235
2. Large class size affects how I plan my lessons having in mind the individual differences among my students.	3.82	.454
3. Large class size affects my consultation of colleagues in the planning of my lessons whenever necessary.	2.40	.485
4. Large class size affects how I organise the subject matter I teach to be in agreement with the course's objectives.	2.72	.675
5. Large class size affects my attendance to class on time and leaving it on time	1.65	.291
6. Large class size affects how well I plan my lessons in advance.	3.55	.665
7. Large class size affects how conversant I am with the instructional objectives of the lessons I teach	1.54	.672
8. Large class size affects the planning of my lessons based on teaching techniques that are found suitable for the course.	3.49	.434
9. Large class size affects the systematic preparation of my lessons.	2.46	.336
10. Large class size affects the reviewing and improvement of the tests I intend administering to my students.	2.63	.336
11. Large class size affects the judicious use of my teaching time.	2.75	.385
Overall mean	2.82	.451

Source: Field Data (2019) *M=Mean* *SD=Standard Deviation*

Results from Table 8 showed that tutors agreed that large class size affected their preparation for teaching (M=2.82, SD=.451). For instance, it was agreed by most tutors that large class size affected how they plan their lessons having in mind the individual differences among their students (M=3.82, SD=.454). This does indicate that large class size has effect on the preparation

for teaching among tutors of colleges of education in the northern region of Ghana. It was evident also that large class size affected how well tutors plan their lessons in advance (M=3.82, SD=.454) and this gave an indication that large class size affected tutor preparation for teaching. Evidentially, it was found that large class size affected how they plan their lessons based on teaching techniques that are found suitable for a course or courses that they teach (M=3.49, SD=.434).

On the other hand, tutors disagreed that large class size affected how they make their teaching interesting to students through giving of familiar examples (M=2.47, SD=.235). They also disagreed that large class size affected their consultation with colleagues on planning their lessons (M=2.40, SD=.485). Again, as tutors disagreed that large class size affected their attendance to class on time (M=1.65, SD=.291), so they disagreed that large class size affected how conversant they were with the instructional objectives of the lessons that they teach (M=1.54, SD=.672). Tutors further disagreed that large class size affected the systematic preparation of their lessons (M=2.46, SD=.336).

Research Question Five: What are the perceived effects of large class size on tutors' morale during lesson delivery?

The focus of research question five was to examine the perceived effects of large class size on tutors' morale during lesson delivery. Tutors were requested to provide responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales (4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed disagree. The results of data analysis is presented in

Table 9.

Table 9- *Analysis of results of how large class size affect tutors' morale during lesson delivery (n=192)*

Statement	M	SD	
1. Large class size renders me reasonably inactive	3.82	.724	
2. Large class size affects my possession of supportive behaviour	3.73	.632	
3. Large class size affects my ability to show understanding and sympathy in working with my students	3.68	.336	
4. Large class size renders me emotionally imbalanced	3.63	.024	
5. Large class size affects my possession of fairly good memory	2.32	.655	
6. Large class size affects my ability to provide my students with a laudable example of my personal and social living	3.30	.605	
7. Large class size affects my confidence level during my lessons with students	2.58	.336	
8. Large class size affects my sense of duty and responsibility	3.18	.376	
9. Large class size affects my possession of pleasing manners	3. 05	.756	
10. Large class size affects my ability to exhibit in the classroom gestures that are pleasant and approvable	2.41	.765	
11. Large class size affects my readiness in accepting criticisms from others as a feedback for my own self-improvement	2.32	.454	
12. Large class size affects my love for my students	3.36	.655	
Overall mean	3.11	.526	A

Source: Field Data (2019) *M=Mean* *SD=Standard Deviation*

Table 9 indicated that tutors agreed that large class size affected their morale during lesson delivery (M=3.11, SD=.526). It is evident that tutors agreed that large class size made them reasonably inactive (M=3.82 SD=.724). Due to the large amounts of checking and marking students' responses to tasks

given them during teaching and learning processes, tutors who teach large classes often end up very exhausted and worn-out. It was found that tutors agreed that large class size affected their sense of duty and responsibility (M=3.18, SD=.376). Again, it was evident that large class size affects most tutors of colleges of education in the northern region in terms of their possession of supportive behaviour towards their students (M=3.73 SD=.632). It was also recounted from the results of the current study that large class size renders majority of the tutors emotionally imbalanced (M=3.63 SD=.024).

Similarly, the results of the study recounted that large class size affected majority of the tutors with respect to their ability to provide their students with a laudable example of their personal and social living (M=3.30, SD=.605) and with respect to showing their understanding and sympathy in working with their students (M=3.68, SD=.336).

Meanwhile, tutors disagreed that large class size affected their possession of fairly good memory (M=2.32, S=.655D), their ability to exhibit in the classroom gestures that are pleasant (M=2.41, SD=.765), and their readiness in accepting criticisms from others as feedback for their self-improvement (M=2.32, SD=.454).

Research Question Six: What are the perceived effects of large class size on tutors' classroom management?

Research question six sought to determine the perceived effects of large class size on tutors' classroom management. Tutors were requested to provide responses to statements on the questionnaire using strongly agree=4, agree =3, disagree= 2 and strongly disagree =1. The criterion value of 2.50 was obtained by summing responses to the scale and divided by the number of scales

(4+3+2+1=10/4=2.50). All statements with responses above 2.50 indicated agree whilst below 2.50 showed disagree. The results of data analysis are presented in Table 10.

Table 10- *Analysis of results of how large class size affect tutor classroom management (n=192)*

Statement	M	SD
1. Large class size affects my detection and correction of students' inappropriate behaviour immediately	3.85	.336
2. Large class size does not offer me the opportunity to motivate my students for learning during lessons	3.81	.343
3. Large class size affects the kind of interaction/activities I engage my students in during teaching-learning process	3.72	.434
4. Large class size affects my offering of remedial teaching whenever necessary	3.62	.234
5. Large class size affects my stimulation of the intellectual curiosity of my students during lessons	3.60	.124
6. Large class size affects helping all my students in their reference works	3.54	.864
7. Large class size affects my maintenance of discipline in the classroom within the framework of democratic atmosphere	3.43	.223
Overall mean	3.65	.365

Source: Field Data (2019)

Tabel 10 revealed that tutors agreed that large class size affected their classroom management (M=3.65, SD=.365). It was found that large class size affected majority of the tutors with respect to their detection and correction of students' inappropriate behaviour immediately (M=3.85 SD=.336). The results showed a common agreement among majority of the tutors that large class size

does not offer them the opportunity to motivate their students for learning during lessons (M=3.81, SD=.343). It was also evident among the tutors that large class size affected the kind of interactions/activities they engage their students in during teaching-learning process (M=3.72, SD=.434). Relatedly, it was revealed that tutors agreed that large class size affected their offering of remedial teaching whenever necessary (M=3.62 SD=.234). More evidence pointed to the fact that large classes affected tutors' stimulation of the intellectual curiosity of their students during lessons (M=3.60, SD=.124). Besides, tutors agreed that large class size affected their maintenance of discipline in the classroom within the framework of democratic atmosphere (M=3.43, SD=.223)

Research Hypothesis One

H_0: There is no statistical significant difference between male and female tutors with respect to perceived effects of large class size on tutors' effectiveness.

H_1: There is statistical significant difference between male and female tutors with respect to perceived effects of large class size on tutors' effectiveness.

The purpose of hypothesis one was to find out whether significant differences existed between male and female tutors with respect to perceived effects of large class size on tutors' effectiveness. Test of homogeneity of variance was conducted to satisfy the assumption underlying independent samples t-test.

Table 11- *Homogeneity of Variances Test*

Levene Statistic	df1	t-value	Sig. value
2.734	190	5.29	.323*

Source: Field Data (2019) *Significant at p>.05

From Table 11, the sig. value is greater than 0.05, therefore, variances are assumed equal.

Table 12- *Independent samples t-test of gender in terms of perceived effects of large class size on tutor effectiveness*

Variable	N	M	SD	t	df	Sig. value
Male	165	78.8	8.80	2.623	190	.000
Female	27	54.5	5.60			

Source: Field Data (2019) *Significant difference exists at P<.05

The results showed that male tutors (M= 78.8, SD= 8.80) were different from female tutors (M= 54.5, SD=5.60), $t(190) = 2.623$, p= .000, in terms of perceived effects of large class size on tutor effectiveness.

Research Hypothesis Two

H_0: There is no statistical significant difference in perceived effects of large class size on tutors' effectiveness due to teaching experience of tutors.

H_1: There is statistical significant difference in perceived effects of large class size on tutors' effectiveness due to teaching experience of tutors.

The focus of hypothesis two was to determine whether significant difference existed in perceived effects of large class on tutors' effectiveness due to teaching experience of tutors. The independent variables were: tutors who taught for less than 5 years, and tutors who taught for 5 and above years whilst the dependent variable was tutor effectiveness.

Table 13- *Homogeneity of Variances Test*

Levene Statistic	df1	t-value	Sig. value
3.334	190	6.34	.521*

Source: Field Data (2019) *Significant at P>.05

From Table 13, the sig. value is greater than 0.05, therefore, variances are assumed equal.

Table 14- *Independent samples t-test of tutor effectiveness due teaching experience*

Variable	N	M	SD	t	df	Sig. value
Less 5 years	72	45.8	5.60	3.223	190	.001
5 and above years	120	69.5	11.10			

Source: Field Data (2019) *Significant difference exists at P<.05

The results showed that tutors who taught for 5 and above years (M= 69.5, SD= 11.10) were different from tutors who taught for less than 5 years (M= 45.8, SD=5.60), *t* (190) = 3.223, p= .001, in terms of perceived effects of large class size on tutor effectiveness.

Research Hypothesis Three

H_0: There is no statistical significant difference in perceived effects of large class size on tutors' effectiveness due to college of tutors.

H_1: There is statistical significant difference in perceived effects of large class size on tutors' effectiveness due to college of tutors.

Hypothesis three sought to determine whether significant difference existed in perceived effects of large class size on tutors' effectiveness with respect to colleges of tutors.

Table 15- *Normality Test*

		Shapiro-Wilk		
	Colleges	Statistic	df	Sig.
Tutor effectiveness	Bagabaga CoE	.865	62	.245
	E. P. Bimbilla CoE	.295	41	.353
	Gambaga CoE	.143	21	.542
	Tamale CoE	.191	45	.045
	Saint Vincent CoE	.595	23	.153

Source: Field Data (2019) Significant at p>.05

From Table 15, the result for the "Bagabaga CoE", "E. P. Bimbilla CoE", "Gambaga CoE" and "Saint Vincent CoE" group on the dependent variable, "Tutor effectiveness" was normally distributed. This is because the Sig. value of the Shapiro-Wilk Test is greater than 0.05. However, for "Tamale CoE" group the dependent variable "Tutor effectiveness", was not normally distributed. This is because the Sig. value of the Shapiro-Wilk Test is lesser than 0.05.

Table 16- *Homogeneity of Variances Test*

Levene Statistic	df1	df2	Sig.
.140	4	188	.967

Source: Field Data (2019) Significant at p>.05

From Table 16, the sig. value is greater than 0.05, therefore, variances are assumed equal.

Table 17- *ANOVA of colleges in terms of perceived effects of large class size on tutor effectiveness*

Sources	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	583.146	4	145.786	.643	.633
Within Groups	40582.849	188	226.720		
Total	41165.995	192			

Source: Field Data (2019) Significant at p<.05

From the one-way ANOVA, F (4, 188) = .643, p = .643. The result shows that there is no significant difference within the categories of colleges in terms of perceived effects of large class size on tutors' effectiveness.

Discussion

Perceived Effects of Class Large on Tutor Interpersonal Relationship with Students

The findings showed that tutors agreed that large class size affected their interpersonal relationship with their students. Dwelling on some of the items on how large class size affected tutor interpersonal relationship with students, it was evident that large class size affected tutors' cooperation in the work of their colleges and this elucidates how, generally, large class size affected tutors' interpersonal relationship with students. In another evidence, it was found that large class size affected tutors' ability to maintain cordial human relations with all their students and this also explains how, in general terms, large class size affected tutors' interpersonal relationship with students. Another evidence pointed out to the fact that large class size affected tutors' ability to recognise all their students all the time and, thereby, explains how, generally, large class size affected tutors' interpersonal relationship with students.

The findings corroborate with those of Blatchford et al. (2011) who opined that the number of students in a class is likely to determine the length of time that could be expended on teaching, and interacting with students. This finding however, contradicts with the findings of Shapson et al. (as cited in Blatchford et al., 2011) who found no substantial disparities between class sizes, and teachers changed not the amount of time spent engaging with the entire class, groups or individuals.

Another crucial result was that most tutors shared the idea that large class size affected their ability in helping their students who face personal and educational problems. This explains how, largely, the effect large class size has on tutors' interpersonal relationship with students in the colleges of education in the northern region of Ghana is manifested. Finn and Achilles (1999) and Blatchford, Kutnick, Baines and Galton (2003) asserted that large class size does not help teachers to address educational and academic problems of students. Blatchford et al. (2011) added that larger classes could contribute to a passive role for pupils in the classroom. Studies in the United Kingdom found that children in large primary classes were less likely to participate actively in classroom activities, and less attentive to their teachers. On the contrary, pupils were far more likely to interact with teachers in smaller classes on a positive, sustained basis (Blatchford et al., 1999 as cited in Blatchford et al., 2011).

Perceived Effects of Large Class Size on Tutor Instructional Methods

The findings revealed that tutors perceived large class size to affect their instructional methods. For example, it was found that large class size affected tutors' ability of involving all their studnets in their lessons. In a related result, it was indicated that large class size affected tutors' ability to use a variety of activities or varied learning methods in their lessons; this suggests that large class size has substantial effects on tutor instructional strategies.

Similarly, it was found that large class size affected most of the tutors in their ability to adopt teaching methods that are appropriate to a course's objectives. Most of the tutors asserted that large class size affected their ability to engage their students to use a variety of problem-solving techniques. More related results suggest that most of the tutors have experienced that large class size

has effects on their ability to use audio-visual aids to make their teaching more effective. This clearly explains how large class size has significant effects on instructional methods adopted by tutors in colleges of education in Ghana's northern region. The tutors further pointed out that large class size affected their ability to engage their students in concrete teaching and learning activities that possess the potent of enhancing and promoting their grasp and achievement during lessons.

The results are in line with the findings of Farrant (2002) who stated that large classes are associated with teaching methods that are not able to accommodate any individual differences among students. He indicated that one significant drawback of the large-class paradigm is that it encourages a lot of passive learning. The tutor is an active member of the unit and the students have only one in forty chances in a normal class to get a chance at any time to contribute positively to the lesson. This is far from an ideal educational practice for Farrant.

In another evidence, the results backed the idea that large class sizes have a retrogressive impact on teaching and learning. Such retrogressive impacts of large classes on teaching and learning that arose during the study include: the creativity of the learners is stifled; the appraisal method becomes less relevant and accurate shortcomings and abilities of both tutors and students are not revealed; the goals and objectives of the school and education in general end up on the rocks (Mintah, 2014).

Contributing to the discourse on the effect of large class size on instruction and learning, Earthman (2002), Yaman and Uygulamada, (2009) and Burnett (1995) found that overpopulated conditions in the classroom impede the

attention of tutors to students on individual basis, and slows down students' learning progress. Earthman (2002) stated that available time could only enable tutors to complete the basis, but teachers were unable to find more time to be with low performers. Tutors hardly found time to assist low performers meet their academic and other needs, and were obliged to ignore them in order to make judicious use the allocated time prescribed for the various learning disciplines.

Yaman and Uygulamada (2009) realised that classes with high enrolments could cause tutors to give up learner-centered approaches to learning and rather concentrate more on tutor-centered approaches that would assume the teaching culture. They also noted that large class size sways students to showcase learning behaviours like not answering the tutor's questions and even expecting teachers to answer for them assessment tasks assigned them. Further support for this finding is drawn from the work of Leahy (2006) who opined that class size is a persisting issue in education, and it continues to grow in many cities, towns and communities. A regular classroom that was once pegged at twenty-nine is now driving at the extreme with visibly high student enrolments. Leahy (2006) stated that many scholars believe that large classes would adversely affect student achievement. This effect takes the form of a diminished overall school achievement of students in larger classes and an improved school achievement of those in smaller classes (Leahy, 2006).

Perceived Effects of Large Class Size on Tutor Assessment of Student Learning

The results showed that in sum, tutors involved in the study generally perceived large class size to affect assessment of their students' learning. It was

found that tutors agreed that large class size affected how often they conducted class tests to evaluate their teaching. The results showed that most tutors were of the view that large class size affected their ability to ask more thought-provoking questions as against fact-finding questions while teaching and this gives practical reasons why one could conclude that large class size affects assessment of student learning.

Majority of the tutors were with the idea that large class size did not enable them to guide their students to complete their class assignments in time and this response gives an ample reason to believe that large class size affects assessment of student learning. Tutors posited that large class size affected the objective evaluation of their students. Similar result was unearthed when most of the tutors indicated that large class size affected their discussion of students' performance in tests they organised for the students. The results are in line with assertions regarding assessment of students whereby Geske (1992) noted that, other studies found testing as another big class-related special problem. He admitted that while writing throughout the curriculum is a worthy goal, it is challenging to review as many as above 200 essay examination papers. Teaching such large classes, with very few teaching assistants in particular, almost creates the situation where tutors in tertiary institutions rely on objective style of assessments to evaluate their teaching.

Buchanan and Rogers (as cited in Hayfron, 2004) found that writing and designing enough test questions to stay ahead of the test files of students is a challenge in a largely-populated class, and there is always the issue of how to deal with students who, due to some genuine causes, miss the examinations required. Similarly, Negash (As cited in Gemechu, 2013) noted that teachers

have the perception that the work to be done in the classroom takes so much time in the teaching of large classes. Class exercises conducted on students during teaching and learning sessions are left unaccomplished during the stipulated number of minutes allocated for a lesson and, therefore, rendering work in the class to be quite huge and tasking to handle by one tutor in a class, especially with respect to the general courses of study in the colleges of education such as Education studies courses, Mathematics, English Language and others. Moreover, stress, boredom and general tiredness in the body are experienced by the tutor in marking students' class exercises and ensuring class control in large classes. Owing to such difficulties, many fine teachers feel frustrated and sometimes resort to resigning (Gemechu, 2013).

More evidence from the literature suggest that the results are not in isolation as they are supported by the claims of Epri (2016) who indicated that teachers are unable to provide input on the learning of their students because they are unable to mark and score and process all the assigned tasks of the students; and they are also unable to do informal assessment to determine the students' understanding of the content taught. Conclusively, Gemechu (2013) noted that teaching large classes leads to a dramatic decline in the quality of education that has an overall effect on all facilities, materials, equipment, infrastructure, human resources, library services and staff services of other students that are likely to lead to a situation of quality deficits or impairment.

Alternatively, studies have examined students' assessment of courses and it has been widely found that large class sizes have a negative impact on student course assessments, as demonstrated by courses with greater enrolments that earn statistically significant lower scores than reduced enrolment courses

(Monks & Schmidt, 2010). As an illustration, from 1997 to 2004, Bedard and Kuhn (2008) examined student assessments of economics courses at Santa Barbara University of California and found a very substantial and non-linear negative impact of large size on the efficacy of students' assessment of their tutors. Similarly, Walia (2008), at the Kansas State University, also reported that large class sizes were observed to be associated with a pessimistic and, from a statistical standpoint, consequential impact on student course evaluations.

Perceived Effects of Large Class Size on Tutor Preparation for Teaching

The findings showed that tutors agreed that large class size affected their preparation for teaching. For instance, it was agreed by most tutors that large class size affected how they plan their lessons having in mind the individual differences among their students. This does indicate that large class size has effect on the preparation for teaching among tutors of colleges of education in the northern region of Ghana. It was evident that large class size affected how well tutors planned their lessons in advance and this gives an indication that large class size affects tutor preparation for teaching. Evidentially, it was found that large class size affected how they plan their lessons based on teaching techniques that are found suitable for a course or courses that teach. This did indicate that large class size affected preparation for teaching among tutors.

These results are in conformity with the assertion that preparing for teaching encompasses, among other things, planning (Atkins, Carter & Nichol, 2002). Getting oneself prepared for a teaching session, for example, planning a lecture, seems, on the surface, to be disassociated from the number of students in the class. The results reached in this study are in agreement with Atkins et al. (2002) who, in a fieldwork for their study on teachers' workload in relation to

class size, noted in a discussion with their teacher-respondents that the latter agreed that preparation to teach was largely unrelated to whether the class is large or small in terms of student enrolment, but assessment was highly dependent on class size.

The findings herein can also partly be explained in a sense whereby preparation or planning for teaching, in most instances, probably involves activities or actions that are carried out before and outside the actual teaching session. As such, it is perceived not to be influenced by the number of students a tutor teaches in the classroom. Atkins et al. (2002) in furtherance of this explanation reported that in most areas of their study, their teacher-respondents indicated that getting the materials or equipment prepared for a lesson was not conceived to deviate particularly by the size of the class. To the teachers, according to Atkins et al. (2002), identifying and picking appropriate ones from the materials available and getting them ready for use by pupils, was rather a task of finiteness and did not actually border much on the number of pupils to prepare for.

In any case, the results of this study did indicate that class size does matter and affects tutors' preparation of materials and equipment for practical lessons where learners are to go through individual interactions, or group activities, and this is evidenced in tutors' strong agreement with the fact that large class size affects how they plan their lessons having in mind the individual differences among their students. This coincides with the claim by Atkins et al. (2002) that preparing materials and tools for groups of pupils or individual pupils for lessons of practical nature was commensurate with the number of pupils in the class, or number of groups involved.

Again, the study found that large class size affects tutor preparation for teaching especially where the class constitutes differentiated student-groups with differentiated learning needs and objectives. This will probably require a proportionately greater preparation to do and more time required to prepare for teaching, especially in a class with large student enrolment as the differentiated groups could also be many. Inference for this could be taken from tutors' indication that large class size affects how well they plan their lessons in advance.

Perceived Effects of Large Class on Tutors' Morale During Lesson Delivery

It was found that tutors agreed that large class size affected their morale during lesson delivery. It is evident that tutors agreed that large class size made them reasonably inactive. Due to the large amounts of checking and marking students' responses to tasks given them during the teaching and learning process, tutors who teach large classes often end up very exhausted and worn-out. This finding relates to that of Gemechu (2013) who found that some teachers expressed their frustration at the fact that they were not able to finish checking class exercises of all their learners within the number of minutes allocated for teaching and, thereby, making class work in large classes to be cumbersome to handle by those of them who happened to be alone in the class. Also, tutors mentioned stress, frustration and fatigue in the marking of pupils' assignments, and class control in large classes. According to Thompson (as cited in Tajmal, 2014), depression, anxiety, helplessness, frustration, fear, and despair are all psychological consequences that can be suffered due to work overload, for example, teaching in densely-populated classes. Teaching in large classes

can be likened to work overload (Atkins et al., 2002), and this was found to be one of the vastly researched symptoms of stress Tolman (as cited in Tajmal, 2014). As a result of work overload, the workers (or tutors as in this case) would probably suffer from anxiety, stress and, most seriously, poor work performance which in turn can lead to dissatisfaction on the job and diminishing returns.

The effect of large class size on the sense of duty and responsibility of the tutors of colleges of education in the northern region was also found to be significant and this gives an indication that classes with large numbers affect the tutor's morale during lesson delivery. The result here attests to the hint by Gemechu (2013) that, in overcrowded classrooms, most teachers serve under stress, and without the needed learning materials and resources. As a result of these problems, many good tutors become frustrated, lose their enthusiasm, do not attend to their classes regularly; some even end up deciding to resign. Adding to the effect of large class size on tutor morale during lesson delivery, Day et al (as in Blatchford & Martin, 1998) concluded that stress due to work overload in large classes can be costly in human terms such as ailments; teaching quality terms such as adoption of poor instructional methods and strategies; and in economic terms such as engaging in frequent staff absenteeism and turnover.

Again, it was evident that large class size affected most tutors of colleges of education in the northern region in terms of their possession of supportive behaviour towards their students and, therefore, giving reason to the fact that large class size has an effect on tutor morale during lesson delivery. This finding probably suggests that teaching in classes with large enrolment figures does not present the opportunity for tutors to be more caring toward their students as can

be observed with teaching in smaller classes and, also, there is less opportunity for the students to personally confide in the tutors on certain and confidential and pertinent issues that might be bothering them. According to Blatchford and Martin (1998), some research findings support a connection between class size and tutor self-perceptions. Glass and Smith (as cited in Cooper, 1989), in their meta-analysis of comparisons between smaller and larger classes, reported that in smaller classes, they observed higher tutor morale, better tutor attitude towards students, and greater satisfaction regarding their performance.

In furtherance of support for this finding, Blatchford and Martin (1998) rerpoted in their study that teachers were of the feeling that socialising or 'nurturing' newly enrolled pupils into school life seemed much less a burden in classes with less pupils as compared to performing this important activity in classes with large numbers of pupils. This could have been so because in the former, there would be far less number of children to acquint with and children would be able to get the attention of the tutor more often than in the large-sized classes.

It was again recounted from the results of the current study that large class size renders majority of the tutors emotionally imbalanced. This finding probably stems from the fact that owing to the work overloads and frustrations of experiencing frequent student disruptive behaviour which is characteristic of overcrowded classes, tutors sometimes get burn-outs and become emotionally destabilised. According to Epri (2016), in classes with increased enrolments, tutors are overloaded as they spend a lot of time photocopying so many worksheets, and going through same after pupils have worked on them, and these cause some kind of frustration and

emotional imbalance in such tutors, hence, killing their sense of motivation entirely in teaching such classes.

Furthermore, the results of the study revealed that large class size affected majority of the tutors with respect to their ability to provide their students with a laudable example of their personal and social living, and with respect to showing their understanding and sympathy in working with their students. It is speculated that all these, generally, establish the fact that large class size affects tutor morale during lesson delivery.

Perceived Effects of Large Class Size on Tutor Classroom Management

The findings showed that tutors agreed that large class size affected their classroom management. It was found that large class size affected majority of the tutors with respect to their detection and correction of students' inappropriate behaviour immediately. This finding probably seeks to imply that because of the many students in the lecture room and coupled with the fact that tutors mostly adopt whole class interactions whereby the tutor often positions himself or herself in front of the class during lectures, tutors do not find it easy noticing and identifying student disruptions and misbehaviours. In line with this finding of the current study, Carbone (1999) reported that many academic departments have found and noticed that large classes suffer poorer student attendance, louder noises resulting from packing up of books few minutes before the close of lectures. She further noted that in such classes with large student enrolment, some of the students had developed a host of startling innovative disruptive behaviours during lessons and behind the realisation of the lecturers. These, according to Carbone (1999), included talking on cellphones, watching movies on their tablets and portable television, sitting

through the lecture with headphones on and, in some instances, ordering and having food and snacks delivered during the course of the lectures.

Again, the results showed a common agreement among majority of the tutors that large class size does not offer them the opportunity to motivate their students for learning during lessons. This finding appears a probable affirmation of the assertion of Ozerk (2001) who concluded that available literature on small and large classes pointed to the fact that smaller classes are more effective than larger classes as the former offer an educational climate that provides fertile grounds for academic activities and achievement than the latter.

It was also evident among the tutors that large class size affected the kind of interactions or activities they engage their students in during the teaching-learning process. The interpretation here could be that, in a large class, it becomes extremely difficult if not impossible, for the tutors to adopt any form class interaction during lectures. For example, in a large class, individual as well as small group interactions as teaching strategies or activities become quite challenging to adopt as these might lead to non-completion of instructional schedule or course outlines. The tutor is therefore restricted to the use of other forms of class interaction such as whole class interaction.

This finding of the current study also falls in tone with Chingos and Whitehurst (2011) when they argued that large class size results to so much noisy disturbance, unproductive and uncontrolled student conduct which, in a way, affect the forms of teaching and learning interactions that the teacher had intended to foster in the classroom. Thus, Chingos and Whitehurst (2011) continued, larger class sizes affect the tutor in terms of time manipulation when

focusing on individual students rather than concentrating on specific needs of the group as a whole.

Still in respect of how large class size affected the kind of class interactions or activities tutors could adopt in their lessons, Atkins et al. (2002) explained in their study report that the teaching strategy naturally deviates from, probably, individual and small group activities towards a more whole-class teaching strategy as the class size shoots up. In some cases, as opined by Carbone (1999), concerns over student behaviour are at the top of the interactions in large classes.

Relatedly, it was revealed that tutors agreed that large class size affected their offering of remedial teaching whenever necessary. In the view of Atkins et al (2002), all other factors held equal, as there are more learners in a class for the tutor to attend to, the higher the possibility of one of them, from a statistical standpoint, to engage in a misconduct and, hence, more time would be consumed in dealing with management of student behaviour in such a class. It might be crucial to have some more time to plan and prepare so as to keep the class better "under control" and bring down the possibilities of student misbehaviour (Atkins et al, 2002). Due to these other time-consuming activities associated with large classes, tutors who teach in such classes would inescapably find it tough offering remedial lessons to students when necessary.

More evidence pointed to the fact that large class affected tutors' stimulation of the intellectual curiosity of their students during lessons. Regarding this finding, Rawat, Thomas & Quazi (2012) earlier asserted that advocates of small class sizes and lower student-teacher ratios claim that more goal-oriented and helpful interactions between students and teachers aid in

improved learning, especially when it comes to supporting students to improve their high-order thinking and abstract reasoning abilities.

It is reported by Radders (2012) that, in a large class, the teacher has less impact on teaching and learning and therefore has much of the responsibility for learning shifted onto learners. For larger classes, getting full control over the teaching and learning environment is challenging for the instructor. It is known that somehow class size has a role to play in the attitude and actions of the instructor (Savage et al., 2014). Tutors in larger classes are likely not to be more dedicated to the achievement or progress of each pupil, but may always put their emphasis on whole-class teaching activities.

Gender Difference in Perceived Effects of Large Class Size on Tutor Effectiveness

Results of the current study showed that male tutors were different from female tutors in terms of perceived effects of large class size on tutor effectiveness. The finding reached by the current study is in line with those of Singh (2011), Goyal and Duggal (2012) and Goel (2013) who also found significant difference to exist in teacher effectiveness among secondary school male and female teachers. The current finding is speculated to be due to the fact that female tutors are probably more emotional and so they are often overwhelmed and frustrated by the pressures and troubles from students in large classes, hence, leading to large class size having a toll on their effectiveness as tutors. On the other side, male tutors appear to be less emotional and, therefore, are probably able to cope with the pressures and troubles emanating from students in large classes. In line with this finding, previous studies such as Fabes and Martin (as cited in Roisin, 2012) had shown that women are perceived to

explicitly express emotions more than their men counterparts. Roisin (2012) indicated that an appreciable number of studies have reported that women are more emotionally expressive in the sphere of face-to-face interaction.

Teaching Experience Difference in Terms of Perceived Effects of Large Class Size on Tutor Effectiveness

The findings of the current study showed that tutors who taught for 5 and above years were different from tutors who taught for less than 5 years in terms of perceived effects of large class size on tutor effectiveness. This finding might have been so, probably, due to the fact that as a result of their many years of teaching experience in the colleges of education where the issue of large class sizes have become a "norm" for some years now, those tutors who have taught for 5 and above years have become more used to teaching in large class environments in the colleges of education and, therefore, have adapted themselves and their modes of teaching in manners that still render them to be more effective during their lessons in such classes. On the other hand, these adaptations might not have occurred properly yet with those tutors who have taught for less than 5 years in the colleges of education in the northern region of Ghana.

Difference in Perceived Effects of Large Class Size on Tutors' Effectiveness due to College of Tutors

The current study's findings showed that there was no significant difference within the categories of colleges in terms of perceived effects of large class size on tutors' effectiveness. This finding probably might have been so owing to the fact that all the colleges of education in the northern region of Ghana have similar characteristics when it comes to the caliber of students they

all admit. This is to say that all the colleges admit their students on the same platform, that is, they all admit their students with same entry requirements and same educational backgrounds. So, the ways by which they attempt to teach and implement the initial teacher-training curriculum to their students are often similar.

More so, the finding of non-difference among the colleges of education in the northern region of Ghana with respect to perceived effects of large class size on the effectiveness of their tutors was, probably, as a result of the fact that the tutors appear to possess and exhibit similar educational and classroom experiences regarding the way they manage and handle their students. For example, they all go through the same pedagogic training and capacity building activities and sessions which are being implemented in all the colleges of education in Ghana including those in the Northern Region, by a project called Transformed Teacher Education and Learning (T-TEL) in collaboration with the Government of Ghana. These training and capacity building sessions, popularly known as Professional Development Sessions (PDS) in the colleges of education, are fused into their teaching schedules for at least once a week. So, expectedly, the tutors in the colleges of education seem to be on the same level grounds when it comes to the methods and strategies they adopt in teaching and interacting with their students during lessons.

Chapter Summary

This chapter dealt with the presentation and analysis of the data collected. The results, in general, showed that tutors in the study agreed that large class size affected their interpersonal relationship with their students. It was evidenced that tutors in colleges of education in the northern region of

Ghana agreed that large class size affected their instructional methods. For example, it was found that large class size affects tutors' ability of involving all their students in their lessons. The results also showed tutors' agreement with the fact that large class size affected assessment of their students' learning. It was found that tutors agreed that large class size affected how often they conduct class tests to evaluate their teaching. Again, tutors agreed that large class size affected their morale during lesson delivery. More so, it was found that tutors agreed that large class size sometimes makes them reasonably inactive.

The findings showed that tutors who taught for 5 and above years were different from tutors who taught for less than 5 years in terms of how large class size affected tutor effectiveness. The results again showed that there was no significant difference within the categories of colleges in terms of how large class size affected tutors' effectiveness.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The study assessed perceived effects of large class size on tutor effectiveness in public colleges of education in the northern region of Ghana. The study was descriptive and specifically sought to determine the perceived effect of large class size on tutors' interpersonal relationship with students, instructional methods, assessment of student learning, preparation for teaching, morale during lesson delivery and management of the classroom environment. The study also determined whether differences existed in the perceived effect of large class size on tutor effectiveness with respect to gender, teaching experience and college of tutors.

The study was conducted among tutors in the public colleges of education in the Northern Region of Ghana. The census method was used to include 192 tutors of colleges of education. Questionnaire was employed to collect data for the study. Data were analysed descriptively (frequencies, percentages, means and standard deviations) and inferentially (independent samples t-test and one-way analysis of variance). Tests were conducted at 0.05 level of significance.

Summary of Key Findings

1. The results showed that tutors perceived large class size to affect their interpersonal relationship with students. For example, it was found that large class size was perceived by tutors to affect their cooperation

in the work of their colleges and their ability to maintain cordial human relations with all their students.

2. Tutors perceived large class size to have effect on their instructional methods. For example, tutors agreed that large class size affected their ability to involve all their students during lessons and to adopt multiple activities or learning methods in their lessons.
3. Tutors perceived large class size to affect assessment of student learning. It was found that large class size affected tutors' ability to ask more thought-provoking than fact-finding questions while teaching, and also their ability to use a variety of questioning techniques to probe students' knowledge and understanding.
4. It was shown that tutors perceived large class size to affect their preparation for teaching. Tutors agreed that large class size affected how well they planned their lessons in advance and how they planned their lessons having in mind the individual differences among their students.
5. Tutors perceived that large class size affect their morale during lesson delivery. This happens in several ways including the assertion that large class size rendered tutors reasonably inactive and affected their possession of supportive behaviour.
6. Tutors perceived large class size to affect their classroom management. In respect of this, the study found that large class size affected their detection and correction of students' inappropriate behaviour immediately during lessons and the opportunity to motivate their students for learning during lessons.

7. It was found that significant gender difference existed in perceived effect of large class size on tutor effectiveness. Also, significant teaching experience difference was found to exist in perceived effect of large class size on tutor effectiveness. However, no significant difference within the categories of college in terms of perceived effect of large class size on tutor effectiveness was found.

Conclusions

The study assessed the perceived effects of large class size on tutors' effectiveness in public colleges of education in the northern region of Ghana. Tutors generally perceived large class size to affect their interpersonal relationship with students, instructional methods, assessment of student learning, preparation for teaching, morale during lesson delivery and management of the classroom environment. Tutors, to a great extent, reported that large class size affected their effectiveness in teaching and learning. To enhance teaching and learning in public colleges of education in the northern part of Ghana, it is essential for large class sizes to be scaled down.

Recommendations

Upon the findings reached in this study, the following have been recommended:

1. To help reduce the effects of large classes, tutors in colleges of education in the northern region of Ghana should ensure an atmosphere of learning that motivates learners to actively partake in teaching and learning activities in the classroom despite the challenges they are experiencing with large classes.

2. To maximise learning, tutors of colleges of education in the northern region of Ghana should emphasise process of learning as their focus rather than the product of learning during instructional sessions.
3. The monitoring divisions of the National Council for Tertiary Education (NCTE), National Accreditation Board (NAB) as well affiliate universities of these colleges of education should ensure that the colleges of education in Ghana's Northern Region conduct their admission of students in a manner that commensurates what their facilities can accommodate.
4. The colleges of education in Ghana's Northern Region should also take steps to recruit more tutors, especially in the general courses, to reduce the use of large classes. To this end, a deliberate staff development plan should be pursued by the colleges' managements, and in collaboration with their affiliate universities, to ensure that as many young people as possible who wish to pursue higher education are given the assistance required to do so.
5. The colleges of education in the northern region of Ghana must set their priorities right to ensure that resources are channeled to more important areas such as providing more lecture halls, places of study or study pavilions within their campuses, more teaching and learning equipment, and other infrastructural facilities to ensure smooth teaching and learning.
6. Government must expand and resource the existing colleges of education in the northern region of Ghana with more infrastructure and teaching and learning resources to ensure quality delivery of their

mandate instead of concentrating on the administrative and curriculum restructuring alone in these institutions.

7. Tutors in the colleges of education in the northern region of Ghana should be given refresher courses on managing large classes from time to time, by their college managements and their mentor universities, to help them effectively manage their students productively in the large classes.

Suggestions for Further Research

The following are suggested for further studies.

1. This study is limited in scope since it was conducted solely on colleges of education Ghana's Northern Region. Hence, it is necessary to embark on similar research among other institutions using larger geographic areas to make the study more representative and the outcomes generalisable for the entire country.
2. The study used questionnaire as the only tool for information gathering and could therefore add observation and interviews to provide more practical and realistic evidence.

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APPENDICES

APPENDIX A

QUESTIONNAIRE FOR COLLEGES OF EDUCATION TUTORS

COLLEGE OF EDUCATION STUDIES

FACULTY OF EDUCATIONAL FOUNDATIONS

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

QUESTIONNAIRE FOR TUTORS ON THE EFFECT OF LARGE CLASS SIZE ON TUTOR EFFECTIVENESS

The purpose of this study is to examine the effect of large class size on tutor effectiveness in public colleges of education in the Northern Region of Ghana. The study is important in the sense that it will help find out the instructional strategies/methods tutors use during teaching and learning process in classes with large student enrolment. Please answer the questions as frankly as you can. Whatever you say will be treated as confidential and used for academic purposes only. Your name or identity will not be associated with the responses you will give. Thank you in advance for your time and cooperation.

DIRECTIONS: Please, respond to the following statements by ticking [√] in the appropriate curly bracket that follow the statement.

SECTION A: TUTOR DEMOGRAPHIC DATA

1. Name of College: (i) BACE [ ] (ii) EPCE [ ] (iii) GACE [ ] (iv) TACE [ ] (v) SVCE [ ]
2. Gender: (i) Male [ ] (ii) Female [ ]

3. Highest Educational Qualification: (i) First Degree [ ]

(ii) M. Ed [ ]

(iii) MPhil [ ]

(iv) M. Tech [ ]

(v) M.Sc. [ ]

(vi) M.A [ ]

(vii) PhD [ ]

4. Academic/Teaching Department - please, tick one:

(i) Education and Professional Studies [ ]

(ii) Languages (including English Language, Ghanaian Language and French) [ ]

(iii) Mathematics and ICT [ ]

(iv) Science (including Agricultural Studies and Physical Education [ ]

(v) Social Sciences (including Social Studies, Music & Dance, RME [ ]

(vi) Technical and Vocational Education [ ]

5. Years of Teaching Experience in ollege

(i) less than 5yrs. [ ]

(ii) 5 and above yrs. [ ]

INSTRUCTION: Please, read carefully the following statements about the effect of large class size on the components/aspects of tutor effectiveness and indicate after each statement whether you Strongly Agree (SA) =4, Agree (A) =3, Disagree (D) =2 or Strongly Disagree (SD) =1 with the statement with respect to your effectiveness as a tutor.

SECTION B: TUTOR PREPARATION FOR TEACHING

This concerns the ability of the tutor in preparing, planning and organising for teaching in accordance with the course objectives by using different source materials.

S/N	STATEMENT	SA	A	D	SD
7	Large class size affects how well I plan my				
8	Large class size affects the judicious use of				
9	Large class size affects my attendance to class				
10	Large class size affects how I make my teaching interesting through giving of				
11	Large class size affects the systematic preparation				
12	Large class size affects how I organise the subject matter I teach				
13	Large class size affects the reviewing and improvement of the tests I intend				
14	Large class size affects how I plan my lessons having in mind				
15	Large class size affects how conversant I am with				
16	Large class size affects my consultation of colleagues in the planning of my lessons				
17	Large class size affects the planning of my lessons based on				

SECTION C: TUTOR INSTRUCTIONAL METHODS

This concerns the ability of the tutor to employ a variety of teaching strategies and techniques to engage pupils and to keep them on task. It includes ability to present information to pupils with a high degree of clarity and enthusiasm, and engaging students in individual work and small group activities as ways of reinforcing student learning through practice and reflection. Please respond to the following statements in the same manner as you did above.

S/N	STATEMENTS	SA	A	D	SD
18	Large class size affects my ability of involving all my students in my lessons				
19	Large class size affects my ability to use a variety of activities/learning methods in my lessons				
20	Large class size affects my ability to adopt teaching methods that are appropriate to the course‟s objectives				
21	Large class size affects my ability to engage my students to use a variety of problem-solving techniques				
22	Large class size affects my ability to use audio-visual aids to make my teaching more effective				
23	Large class size affects my ability to give clear instructions and explanations of concepts during lessons				
24	Large class size affects my ability to engage my students in practical activities that have a clear purpose in improving their understanding/achievement				
25	Large class size affects my ability to listen and respond to all my students‟ concerns during my lessons				
26	Large class size affects my ability to give attention to each student individually during my lessons				
27	Large class size affects my ability in ensuring that every student understands what I teach during my lessons				

28	Large class size affects my ability to set clear objectives and parameters for performance to hold my students				
29	Large class size affects my provision of opportunities for students to take responsibility for their own learning				
30	Large class size affects clarity of my teaching				
31	Large class size affects my habit of summarising the lessons I teach, in the end				

SECTION D: TUTOR ASSESSMENT OF STUDENT LEARNING

This is about the ability of the tutor to evaluate the teaching-learning process as well as students" performance and their attainment of the learning outcomes anticipated for the lesson.

S/N	STATEMENTS	SA	A	D	SD
32	Large class size affects my ability to ask more thought-				
33	Large class size affects my ability to use a variety of questioning techniques to				
34	Large class affects objective evaluation of				
35	Large class size affects how often I conduct class tests to				
36	Large class size makes it very cumbersome to check all homework notebooks				
37	Large class size does not enable me to guide my students to				
38	Large class size affects my discussion				

SECTION E: TUTOR CLASSROOM MANAGEMENT

This concerns the ability of the tutor to successfully communicate to and motivate students, and also to maintain discipline in the classroom within the framework of a democratic organisation. Please respond to the following statements in the same manner as you did above.

S/N	STATEMENTS	SA	A	D	SD
39	Large class size does not offer me the opportunity to motivate my students for				
40	Large class size affects my offering of				
41	Large class size affects the kind of interaction/activities I engage my students in				
42	Large class size affects my stimulation of the intellectual				
43	Large class size affects my maintenance of discipline in the				
44	Large class size affects helping all my students in their				
45	Large class size affects my detection and correction of students"				

SECTION F: TUTOR'S MORALE DURING LESSON DELIVERY

This concerns the personality and emotional make-up/state of the person and their bahavioural manifestations that have their own level of acceptability or unacceptability in the teaching profession. Please respond to the following statements in the same manner as you did above.

S/N	STATEMENTS	SA	A	D	SD
46	Large class size affects my				
47	Large class size renders me				
48	Large class size renders me				
49	Large class size affects my				
50	Large class size affects my ability to exhibit in the classroom gestures that				
51	Large class size affects my				
52	Large class size affects my sense of				
53	Large class size affects my ability to provide my students with a laudable				
54	Large class size affects my ability to show understanding and sympathy in				
55	Large class size affects my readiness in accepting criticisms from others				
56	Large class size affects my love				
57	Large class size affects my confidence				

SECTION G: TUTOR INTERPERSONAL RELATIONS

This is the ability of the tutor to adopt himself/herself to maintain cordial relations with his/her colleagues, pupils, their parents and other persons in the community with whom he/she is to interact as an integral part of his/her profession. Please respond to the following statements in the same manner as you did above.

S/N	STATEMENTS	SA	A	D	SD
58	Large class size affects my cooperation in the work				
59	Large class size affects my friendliness				
60	Large class size affects my ability to invite my students for discussion outside class				
61	Large class size affects my ability in maintaining cordial human relations with all				
62	Large class size makes me				
63	Large class size affects my interest in parent- tutor				
64	Large class size affects my ability in				
65	Large class size affects my ability in helping my students who face personal				
66	Large class size affects my obedience to my Head of				
67	Large class size affects my support for				
68	Large class size affects my contribution				
69	In general, large class size affects my				

THANK YOU VERY MUCH FOR SPARING PART OF YOUR TIME TO HONESTLY RESPOND TO THIS QUESTIONNAIRE.

GOD BLESS YOU!!!

APPENDIX B

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor Preparation for Teaching

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.731	13

APPENDIX C

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor Instructional Methods

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.834	15

APPENIX D

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor Assessment of Student Learning

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.795	07

APPENDIX E

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor Classroom Management

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.821	07

APPENDIX F

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor's Morale during Lesson Delivery

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.719	12

APPENDIX G

RELIABILITY TEST RESULTS OF THE INSTRUMENT

Tutor Interpersonal Relations

Case Processing Summary

		N	%
Cases	Valid	30	100.0
	Excluded[a]	0	.0
	Total	30	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.872	12

APPENDIX H

LETTER OF INTRODUCTION

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 233-3321-32440/4 & 32480/3
Direct: 033 20 91697
Fax: 03321-30184
Telex: 2552, UCC, GH.
Telegram & Cables: University, Cape Coast
Email: edufound@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

5th March, 2018

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION: MR. MOHAMMED ANASS

We introduce to you Mr. Anass, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing Master of Philosophy degree in Educational Psychology and is currently at the thesis stage.

Mr. Anass is researching on the topic:

"Effect of large Class Size on Teacher Effectiveness in Colleges of Education in Northern Region of Ghana".

We would be grateful if he is given all the needed assistance toward this necessary academic exercise. Please, any information provided will be treated as strictly confidential.

Thank you.

Yours faithfully,

Theophilus Amuzu Fiadzomor (Mr.)
Senior Administrative Assistant
For: **HEAD**

APPENDIX I

ETHICAL CLEARANCE

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES/ERB/ucc.edu/u2/18-47
Your Ref: .....
Date: Jan 21, 2018

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Mohammed Anass,..., Reg. No. ED/PPE/16/0008 is an M.Phil. / ~~Ph.D.~~ student in the Department of Education and Psychology..... in the College of Education Studies, University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Effect of large class-size on teacher effectiveness in public Colleges of Education in the Northern Region of Ghana

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given approval to commence his/~~her~~ study. The ERB would be grateful if you would give him/~~her~~ the necessary assistance to facilitate the conduct of the said research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

Chairman, CES-ERB
Prof. J. A. Omotosho
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Secretary, CES-ERB
Prof. Linda Dzama Forde
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