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The Impact of Tutors' Demographic Factors on their Self-Efficacy Beliefs: A Study of the University Colleges of Education in Ghana

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Abstract
Findings of extant research studies have consistently demonstrated that teachers' sense of efficacy is a significant predictor of their performance. While various factors such as mastery experience, vicarious experience, social persuasion and affective states are presented as sources for the development of teachers' sense of efficacy, other variables such as principals' transformational leadership practices, continuous professional development programs have equally been identified as effective means to enhancing teachers' sense of efficacy. However, what is less studied and very much less researched is the impact of teachers' demographic factors on teachers' sense of efficacy. This study examined the relationship between demographic factors such as gender, academic qualification and experience and tutors' sense of efficacy in the University Colleges of Education in Ghana. Using responses from 434 tutors, the study used independent sample test (*t-test*) and analysis of variance (ANOVA) to examine this relationship. Results indicate that demographic factors such as gender and qualification accounted for variations in tutors' sense of efficacies in student engagement, instructional strategies and classroom management.
Keywords: perceived self-efficacy; teachers' sense of efficacy; demographic factors: gender, academic qualification, and length of experience.
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1. Introduction

Teachers' sense of efficacy is often used in relation to beliefs in their ability to organise instructional materials in ways that lead to overall student learning. Bandura (1997) conceived it as a self-regulatory mechanism which determined the levels of people's performance in given situations. Here, a teacher's sense of efficacy influences his or her behaviour through his or her *cognitive processes* (goal setting); *motivational processes* (attribution of success or failure); *affective processes* (mastery over negative feelings); and *selection processes* (decision-making). The centrality of these four domains to the successful execution of tasks have been highlighted in several studies following Bandura (Tschannen-Moran & Woolfolk Hoy, 2001; Goddard & Goddard, 2001; Ross and Bruce, 2007; Ware and Kitsantas, 2007; Versland and Erickson, 2017).

Understood as the teacher's judgement that he or she has the ability to execute the courses of action required to achieve student learning (Gavora, 2010), research studies have shown that teachers' sense of efficacy is a significant predictor of their performance and student learning (Goddard et al., 2004; Ross and Gray, 2006; Ross and Bruce, 2007; Klassen et al., 2011; Demirdag, 2015; Versland et al., 2017). For instance, in their systematic review of empirical research studies on teacher efficacy between 1998-2009, Klassen and colleagues (2011) acknowledged the scholarly consensus on teachers' sense of efficacy as a significant predictor of their performance and student academic achievements (p.22-23). Studies show that it is a significant predictor of teacher performance and commitment

For instance, Ware and Kitsantas (2007) undertook a robust study on the relationship between teachers' sense of efficacy and professional commitment. The study used quantitative methods to ascertain the relationship between teacher efficacy beliefs and teacher professional commitment. Participants involved 26, 257 teachers and 6,711 school principals in the United States of America. Findings indicated that teacher sense of efficacy significantly predicted teacher professional commitment. As Ware and Kitsantas (2007) discovered, 18% of the variance in teacher commitment was explained by three forms of teacher efficacy beliefs – *enlisting administrative direction, influencing decision-making* and *classroom management* (p.307). In consequence, there are volumes of empirical research studies which have consistently shown that teachers' sense of efficacy is significantly related to various elements of the school such as student academic achievements, teacher performance, job satisfaction and professional commitment (Chen, 2003; Chen and Zimmerman, 2007; Caprara et al., 2006; Linnenbrink and Pintrich, 2010.

Other research studies also investigated the sources for the development of teachers sense of efficacy (Bandura, 1997; Tschannen-Moran and McMaster, 2009). Yet, other studies too examined the impact of principals' leadership practices on teachers' sense of efficacy (Ryan, 2007; Shumate, 2011; Espinoza, 2013; Ling et al., 2015; Short, 2016; Versland and Erickson, 2017; Gkolia et al., 2018). While most of these studies demonstrate the statistically significant relationships between teachers' sense of efficacy and influential factors

such as sources of efficacy, principal leadership and teacher professional development (Ross and Bruce, 2007; Ware and Kitsantas, 2007; Tschannen-Moran and McMaster, 2009), what is less studied and very much less researched is the extent to which teacher demographic factors such as age, gender, race, qualification and experience impact on teachers' sense of efficacy. This current study investigates the relationship between tutors' demographic factors such as gender, academic qualification and years of experience their sense of efficacies in the University Colleges of Education in Ghana.

2. Literature Review

2.1. The Theory of Perceived Self-Efficacy

The theory of 'perceived self-efficacy' was first developed by Albert Bandura (1977; 1993; 1997) as a self-regulatory mechanism which determines human performance. According to Bandura (1997), 'social cognitive theory posits multifaceted causal structures that addresses both the development of competence and the regulation of action' (p.34). The development of *competence* comes from the knowledge and skills we acquire. These 'serve as cognitive guides for the construction of complex modes of behaviour' (Bandura, 1997: 34), and determine the appropriateness of the actions required to achieve given outcomes. With continued practice, skills become fully integrated and are executed with ease. This development of skills defines *personal competencies* or *capabilities* (p.34).

It is within the context of *personal competence* that *perceived self-efficacy* plays a pivotal role, in that, it influences 'the courses of action people choose to pursue, how much effort they put forth in given endeavours, how long they will persevere in the face of obstacles and failures, their resilience to adversity… and the level of accomplishment they realised' (Bandura, 1997: 2). In this way, Bandura (1997) defined 'perceived self-efficacy as '*beliefs in one's capabilities to organise and execute the courses of action required to produce given attainments*' (p. 3). So, there is a marked difference between possessing professional knowledge and skills and being able to execute them under given circumstances. That is, without a high sense of self-efficacy beliefs, people may have the knowledge and skills to undertake tasks, and yet fail to successfully do so. Hence, perceived self-efficacy is concerned not with the number of skills one has, but the sense of self-belief which accompanies and regulates these skills in the execution of tasks. Skills can easily be overruled by doubts, such that highly talented individuals make poor use of their capabilities under circumstances that undermine belief in themselves (Bandura, 1997:37).

There is also a marked difference between *perceived self-efficacy* and *self-esteem*. For Bandura (1997), whereas 'perceived self-efficacy is concerned with judgements of personal capabilities, *self-esteem* is concerned with judgements of self-worth' (p.11). While self-worth is a judgement of how much one likes or dislikes oneself, perceived self-efficacy is a judgement of one's capabilities. In this way, Bandura (1997) indicates that there is no fixed relationship between the two because 'individuals may judge themselves to be hopelessly inefficacious in a given activity without suffering any loss of self-esteem whatsoever' (p.11). In the same way, a person may regard himself or herself as highly skilled in an activity but takes no pride in performing it well (Bandura, 1997:11). So, the judgements of self-esteem and perceived self-efficacy are not part-wholes within the same phenomenon but represent judgements of different phenomena in which self-liking does not necessarily begets performance attainments (Bandura, 1997: 12). What then is teacher self-efficacy belief?

2.2. Teachers' Sense of Efficacy

Teachers' sense of efficacy is derived from Bandura's (1997) definition of perceived self-efficacy. Thus, different scholars have variously defined a teacher's sense of efficacy as the teacher's beliefs in his or her ability to plan classroom instructions and accomplish instructional objectives (Gavora, 2010). For Tschannen-Moran and colleagues (1998), it is the 'teacher's belief in his or her capacity to organise and execute courses of action required to successfully accomplish a specific teaching task in a particular context' (p.233). Ross and Gray (2006) also defined it as 'a teacher's expectation that he or she will be able to bring about student leaning' (p.182). In considering the above definitions, one finds that what is common to all of them is the understanding that teachers' self-efficacy beliefs entail the convictions teachers have about their capability to teach and achieve student learning. This sense of *conviction* is not the same as 'teacher effectiveness' or 'teacher competence' but highlights beliefs in their abilities (see, Goddard et al., 2004: 4). In this way, the concept has been variously referred to in the literature as: *teacher sense of efficacy, teacher self-efficacy beliefs, teacher efficacy judgements,* or *teacher perceived efficacy* (Goddard et al., 2004: 4).

As a self-efficacy belief construct, teachers' sense of efficacy also influences the thoughts, motivations, emotions and decision-making processes of teachers. It therefore contributes to inhibiting or enabling their performance in the classroom. As Ross and Bruce (2007: 50) and others have intimated, teachers with high sense of efficacy always believe that they will be successful. So, they set high goals for themselves and their students, try harder to achieve these goals, and persist through obstacles and difficulties. However, teachers with low sense of efficacy have little belief in their successes, avoid expending efforts since failure is inevitable, and repeated

failure threatens self-esteem (Bandura, 1997; Goddard and Goddard, 2001; Tschannen-Moran and Woolfolk Hoy, 2001; Ross and Gray, 2006; Ware and Kitsantas, 2007; Demirdag, 2015; Versland and Erickson, 2017).

2.3. Sources for the Development of Teachers' Sense of Efficacy

According to Bandura (1997), perceived self-efficacy is a robust predictor of behaviour. It constitutes a major aspect of self-knowledge constructed from four primary sources of information: *enactive mastery experiences, vicarious experiences, verbal persuasion* and *physiological and affective states*.

Mastery experiences centres on the experiences of success in given actions which builds a robust belief in one's personal efficacy (Bandura, 1997:80). Here, Goddard and colleagues (2004) indicate that *perceptions* and *attributions* play significant roles. That is, 'the perception that a performance has been successful tends to raise efficacy beliefs, contributing to the perceptions that performance will be proficient in future' (p. 5). Thus, if success is attributed to one's capabilities, beliefs are enhanced. But if such successes are attributed to external interventions or to sheer luck, self-efficacy belief is left without strength. As Bandura (1997) put it, 'after people become convinced that they have what it takes to succeed, they persevere in the face of adversity and quickly rebound from setbacks' (p.80).

Vicarious experiences relates to the experience of *modelling, mentoring or coaching*. Here, teachers appraise their capabilities in relation to the attainment of others. This involves referential comparisons which take different forms for different activities. In other words, 'when a model with whom the observer identifies performs well, the efficacy beliefs of the observer are most likely to be enhanced. When the model performs poorly, the efficacy beliefs of the observer tend to diminish' (Goddard et al., 2004:5). In the study conducted by Tschannen-Moran and McMaster (2009) on the effects of these sources on teachers' sense of efficacy, results indicated that coaching or modelling produced the strongest effects on teachers' self-efficacy beliefs (p. 240).

Verbal persuasion underscores the degree to which a teacher's self-efficacy belief is boosted by the positive and realistic appraisals others (like principals or colleagues) make about their ability to succeed in given tasks. According to Bandura (1997), 'it is easier to sustain a sense of efficacy, especially when struggling with difficulties, if significant others express faith in one's ability than if they convey doubts' (p.101). In other words, teachers who are verbally persuaded that the possess the ability to succeed in given task, are most likely to mobilise and sustain greater effort than those who harbour and dwell on self-doubts and deficiencies (Bandura, 1997:101). Goddard and colleagues' (2004) study in the area found that this source of efficacy information involves providing encouragement or specific performance feedback from one's superior, colleague or other credible persons (p. 6).

Physiological and affective state involves how teachers react to the somatic information conveyed by their physical and emotional states. In other words, it concerns how teachers cope with stress and tasking situations, especially in domains that involve using complex teaching strategies or embracing new ones. From Bandura's (1997) point of view, people sometimes interpret their 'physiological activation in stressful or taxing situations as signs of vulnerability to dysfunction. Because high arousals can debilitate performance, people are more inclined to expect success when they are not beset by aversive arousals than if they are tensed and viscerally agitated' (Bandura, 1997: 106). That is, the constant thoughts of ineptitude and stress reactions can increase teachers' levels of distress which may lead to the very dysfunction they feared (Bandura, 1997). Hence, the best way to alter a teacher's self-efficacy beliefs in this area is to enhance their physical status, reduce their stress levels and negative emotional proclivity (Bandura, 1997:106).

The above four sources of self-efficacy beliefs demonstrate how a high sense of self-efficacy can be developed or diminished. As Bandura (1997) put it, self-efficacy beliefs determine whether people think productively, pessimistically, or optimistically (cognitive processes). They affect how well they motivate themselves and persevere in the face of difficulties (motivations). Self-efficacy beliefs influence the quality of the emotional well-being people achieve and their vulnerability to stress and depression (affective states). They affect the life choices they make which sets the course of their life paths' (Bandura, 1997:116-16). In other words, self-efficacy beliefs influence performance.

2.4. Demographic Factors and Teachers' Sense of Efficacy

Bandura (1997: 34) indicates that *personal capabilities* are developed through the knowledge and skills one acquires. These capabilities guide, regulate and determine a person's decisions on the appropriateness of the actions required to achieve given outcomes within particular circumstances. This implies that personal capabilities are necessary for the accomplishments of desired task. However, Bandura (1997) also indicates that it is *perceived self-efficacy* which regulates personal capabilities in the accomplishment of defined tasks. It determines the degree to which teachers use their knowledge and skills (personal capabilities) to achieve desired outcomes. Thus, if for instance, teachers' academic qualification and years of experience determine their personal capabilities (defined by the knowledge and skill they acquire through academic learning and years of experience), then to what extent do these demographic factors account for variations in teachers' sense of

efficacy?

2.4.1. Gender and Variations in Teachers' Sense of Efficacy

This review explores findings of research studies on the extent to which gender may influence variations in teachers' sense of efficacy in schools. From the results of the systematic search for literature, it was discovered that few research studies focused on the impact of gender on variations in teachers' sense of efficacy. Even with the few studies in the area, there seem to be no scholarly consensus on the relationship between the two variables.

For instance, in the study conducted by Tschannen-Moran and Woolfolk Hoy (2007) involving 255 novice and career teachers from elementary, middle and high schools, the authors explored several potential sources of self-efficacy beliefs (gender, race, mastery experience, verbal persuasion, teaching settings among others) to see the differences between novice and experienced teachers' levels of self-efficacy beliefs. Results indicated that 'demographic variables such as race and gender were not found to be systematically related to the self-efficacy beliefs of either novice or career teachers' (Tschannen-Moran and Woolfolk Hoy, 2006:952)

Klassen and Chiu (2010) also examined the effects of gender, years of experience and job stress on teachers' self-efficacy and job satisfaction using 1,430 elementary school teachers in North America. Teachers' self-efficacy beliefs consisted of the three dimensions such as student engagement, instructional strategies and classroom management. While the study used various analyses such as factor analysis, item response modelling, systems of equation and structural equation modelling, results indicated that; while there were no gender effects on teachers' self-efficacy in student engagement and instructional strategies, male teachers were found to be 5% more efficacious than female tutors in classroom management (Klassen and Chiu, 2010: 746-747).

Vaudroz and colleagues (2015) also conducted a study on the role of teaching experience and prior education in teachers' self-efficacy beliefs and general pedagogical knowledge. The study was quantitative and involved 240 preservice and in-service secondary school teachers in the French-speaking part of Switzerland. While data was analysed using structural equation modelling, results based on the effect of gender showed that female teachers recorded higher sense of efficacies in *student engagement* and *instructional st*rategies than male teachers (p.176). While findings from earlier studies like Anderson and colleagues (1988) also supported the claim that female teachers generally had higher sense of efficacies than males, Ross (1994) explained that this might be because teaching was essentially perceived as a female occupation.

In consequence, while results of some studies in the area (Tschannen-Moran and Woolfolk Hoy, 2007; Klassen and Chiu, 2010) found that demographic factors such as race and gender are not significant predictors of teachers' sense of efficacy, results of other studies indicated that female teachers were found to be more efficacious than male teachers (Anderson et al.,1988; Klassen and Chiu, 2010; Vaudroz et al., 2015). In this way, the findings of research studies in this area only present a mixed picture on the effects of gender on variations in teachers' self-efficacy beliefs. There was no research study which examined the relationship between these two key variables in tertiary institutions.

2.4.2. Qualification and Variations in Teachers' Sense of Efficacy

Teacher academic qualification forms part of the professional development process whereby teachers 'learn and acquire appropriate knowledge, skills and values' required for their tasks as leaders of teaching and learning (Bell and Bolam, 2010: 98). So, acquiring the necessary academic qualifications or professional development for effective teaching equips teachers with the necessary competencies for building high self-efficacy beliefs. So, theoretically, this means that teachers with high academic qualifications or professional development are more likely to have high self-efficacy beliefs in their fields of endeavour than those with low qualification or professional development training.

For instance, Ross and Bruce (2007) examined the extent to which a professional development (PD) program impacted on the self-efficacy beliefs of 106 Grade 6 Mathematics teachers in one school district in Canada. The study involved the use of randomised treatment teachers who received the PD program for 4 months and control teachers who received the same program after the study. Results indicated that treatment teachers outperformed the controlled teachers in the three domains of self-efficacy beliefs (Roos and Bruce, 2007: 56). This led Ross and Bruce (2007) to conclude that professional development programs that address the sources of teacher self-efficacy beliefs contribute to creating more confident and efficacious teachers (p.59).

In Avci's (2012) study which also investigated the relationship between the academic fields of Graduate Teaching Assistants (GTAs) and Research Teaching Assistants (RTAs) and their teaching self-efficacy beliefs, while results indicated a lack of statistically significant relationship between the teaching efficacies of GTAs in science and GTAs in non-science subjects, there was found to be statistically significant relationship between RTAs in science and RTAs in non-science subjects. Those in the science field had significantly higher self-efficacy beliefs than their non-science counterparts (Avci, 2012: 161-2). This led Avci (2012) to explained that the lack of differences between the self-efficacies of the science and non-science GTAs may be due to the effective teaching preparations they receive. However, the differences in the self-efficacy beliefs of science and non-science RTAs was due to the comprehensive training offered to doctoral students in the said universities (p.161-162). Here, academic qualifications and training was found to be a significant factor accounting for

efficacy variations of GTAs and RTAs.

In Vaudroz and colleagues' (2015) study which also examined the impact of prior education on teachers' sense of efficacy, results indicated that while prior education or qualification was found to be negatively related to teachers' sense of efficacy, especially in classroom management, it had a positive relationship with efficacy in instructional strategies (Vaudroz et al., 2015: 176). Vaudroz and colleagues (2015) explained that the statistically significant difference was due to the fact that teachers with higher qualifications 'feel confident in their content knowledge but worry about handling students' behaviour' in the classroom (p.179). Teachers with higher academic qualifications are more likely to have content knowledge on how to plan and structure their task as experts than manage a classroom environment.

In consequence, findings from the above reviewed studies all coalesce on the fact that teacher professional development and academic qualification build teachers' confidence in education delivery. When teachers have the competence and confidence in performing given tasks, their self-efficacy beliefs are likely to be high (Tschannen-Moran and Woolfolk Hoy, 2006; Ross and Bruce, 2007; Avci, 2012; Vaudroz et al., 2015). Even though there are varying degrees of findings in this area, various factors such as institutional context, and the differences in academic training and development influence dimensions of teachers' sense of efficacy. However, what is noticeable is the apparent lack of research studies in the area, especially, within tertiary institutions.

2.4.3. Experience and Variations in Teachers' Sense of Efficacy

Research studies on demographic factors which influence variations in teachers' sense of efficacy often identify experience as a significant factor (Tschannen-Moran and Woolfolk Hoy, 1998; 2001; 2007; Wolters and Daugherty, 2007; Horn-Turpin, 2009; Klassen and Chiu, 2010; Vaudroz et al., 2015). In most of the findings of research studies in the area, while novice teachers tend to have a low sense of efficacy, the self-efficacy beliefs of experienced teachers tend to be higher. For instance, in their study of the variations of the self-efficacy beliefs of novice and experienced teachers, Tschannen-Moran and colleagues (1998) indicated that experienced teachers tended to have higher and stable efficacy beliefs than novice teachers (p.238). This understanding found earlier expressions in Huberman's (1989) studies on the professional life cycle of teachers.

According to Huberman (1989: cited in Klassen and Chiu, 2010:784), a teacher's early years of teaching experience is marked by a period of *survival* and *discovery.* 4 to 6 years of experience is marked by a period of *stabilization* defined by commitment to the profession. 7 to 18 years of experience (mid-career years) is marked by a period of *experimentation* or *reassessment.* From 19 to 30 years, teachers experience *serenity* which gradually leads to *loss of energy and enthusiasm,* but these years are compensated by a *greater sense of confidence and self-acceptance*. However, teachers between 31 to 40 years (later career years) experience a period of *disengagement* marked by either serenity or disappointments and bitterness (Huberman 1989).

Studies in the area following Huberman's (1989) also found that teachers self-efficacy increased at the mid-career years (say, between 8-23) and decline from 24 or more years (see, Klassen and Chiu, 2010: 784). While Huberman's (1989) cycle of the professional experience of teachers may be characteristic of the human experience in general (that is, the experience that 'the older you get, the less capable you become), Ross (1994) found in their study of 92 high school teachers that greater teaching experience was significantly related to higher levels of teachers' sense of efficacy.

In the study conducted by Tschannen-Moran and Woolfolk Hoy (2007) involving 255 novice and career teachers, experienced teachers were found to have significantly higher levels of efficacy than novice teachers. Teachers' years of experience ranged between 1-29 with an average of 8.2 years of experience. Career teachers tended to rate themselves higher in their self-efficacy beliefs in instructional strategies and classroom management than novice teachers. However, there was no statistically significant differences between novice and career teachers' sense of efficacy in student engagement (p.950).

Wolters and Daugherty (2007) also conducted a quantitative study which examined the relationship between teaching experience and academic level. The study which involved 1,024 pre-kindergarten through to 12th grade teachers from a large suburban school district of Texas, Data was analysed using exploratory and confirmatory factor analyses. Findings indicated that there were: (1) modest effects between teachers' sense of efficacy in instructional strategies and teachers' years of experience. While first year teachers reported relative lower self-efficacy beliefs in instructional strategies than those with 1-5 years of experience, those with 6-10 and 11+ years reported higher efficacy beliefs than those with 1-5 years of experience. However, there was no difference for teachers with 6-10 years of experience and those with 11 or more years; (2) for efficacy in classroom management, first year teachers reported lower efficacies than those with 10 years, while those with 1-5 years tended to show lower efficacies in classroom management than those with more years of experience (see, Wolters and Daugherty, 2007: 186-187).

Vaudroz and colleagues (2015) also found similar results. Their findings indicated that experienced teachers had higher efficacies in instructional strategies and classroom managements but scored lower levels of efficacy in student engagement (Vaudroz et al., 2015: 176). In this way, one finds that the results of Wolters and Daugherty (2006 and those of Vaudroz and colleagues (2015) suggest a linear relationship between length of

experience and teachers' sense of efficacy.

Yet, contrary to the research findings which supported a linear relationship between experience and teachers' self-efficacy, Klassen and Chiu (2010) indicated that the relationship between the two variables may rather be curvilineal. Citing the work of Woolfolk Hoy and Burke Spero (2005) who found that teachers' self-efficacy belief initially rose and then fell after some years of working experience, Klassen and Chiu (2010) conducted their own study to ascertain the form of relationship which exist between teachers' experience and their sense of efficacy. The study used a sample size of 1,430 from elementary, middle and high schools. Results from their confirmatory factor analyses indicated that 'teachers' self-efficacy showed a nonlinear relationship with years of teaching experience: self-efficacy increased from 0 to about 23 years of experience and then declined as years of experience increased' (p.748). Following Huberman's (1989) theory of the professional life cycle of the teacher, Klassen and Chiu (2010) concluded the relationship between years of experience and teachers' sense of efficacy is more curvilinear than linear.

Thus, even though there were other research studies which do not equally support the clear positive association between teaching experience and teachers' sense of efficacy, it could be said that most of the findings on the relationship between teachers' sense of efficacy and teaching experience were very much limited to elementary, middle and high schools. Though there was consensus among findings on teachers' years of experience as a significant factor which accounts for variations in their sense of efficacy, there were no studies which examined the relationship between these two variables at the tertiary institutional level. This explains why this current study examines the extent to which demographic factors such as *gender, academic qualification* and *years of experience* impact on variations of tutors' sense of efficacy in the University Colleges of Education in Ghana. These colleges are tertiary institutions responsible for teacher education in the country.

3. Purpose of the study and Research Question

The study examines the extent to which demographic factors such as gender, academic qualification and years of experience impact on variations in tutors' sense of efficacies in student engagement, instructional strategies and classroom management in the University Colleges of Education in Ghana. It seeks to first of all, ascertain tutors' assessments of their own self-efficacy beliefs, and secondly, to examine the extent to which these efficacy beliefs are influenced by gender, qualification and experience. Consequently, the study is guided by the following research questions (RQ) and hypothesis (Ho):

RQ1: What are tutors' assessments of their self-efficacy beliefs in the University Colleges of Education in Ghana?

RQ2: To what extent does gender account for the variances in tutors' sense of efficacies in student engagement, instructional strategies and classroom management?

Ho1: The gender of tutors does not account for variances in their sense of efficacies in student engagement, instructional strategies and classroom management.

RQ3: How much of tutors' academic qualifications influence their sense of efficacies in student engagement, instructional strategies and classroom management?

Ho2: Tutors' academic qualifications do not account for variations in their sense of efficacies in student engagement, instructional strategies and classroom management.

RQ4: Is there a statistically significant relationship between tutors' years of experience and their sense of efficacies in student engagement, instructional strategies and classroom management?

Ho3: There is no statistically significant relationship between tutors' years of experience and their sense of efficacies in student engagement, instructional strategies and classroom management.

4. Research Design and Methods

The study is a descriptive survey. Cohen and colleagues (2016) asserted that descriptive surveys 'set out to describe, compare, contrast, classify and interpret entities and events that constitute their various fields of inquiry' (p.257). These surveys also deal with determining the nature of prevailing conditions, practices, attitudes, perceptions and opinions that are held, processes that are on-going or trends that are developed.

While descriptive surveys simply describe data on variables of interest, Cohen and colleagues (2016) also intimate that analytic surveys 'operate with hypothesised predictor or explanatory variables that are tested for their influence on dependent variables' (p.257). These tests are conducted to ascertain the extent to which the independent variable accounts for variations in the dependent.

In this current study, demographic factors such as gender, academic qualification and years of experience were tested to see their influence on variations of tutors' sense of efficacy in the colleges of education in Ghana. In this way, the research design is descriptive and analytical, involving the use of quantitative research methods such as means and standard deviations, independent sample test and analysis of variance.

4.1. Research Population and Sampling

The study was conducted in Ghana and focused on tutors' assessments of their sense of efficacies in student engagement, instructional strategies and classroom management. Thus, its target population was all tutors in the 43 public Colleges of Education in Ghana. It is estimated that the total number of tutors in these colleges is about 1,700. A representative sample of the target population was selected using appropriate sampling procedures.

Denscombe (2014) indicates that 'a representative sample involves a cross-section of the population. It matches the population in terms of its mix of ingredients [by] using a selection procedure that: (1) includes all relevant factors; (2) matches the proportions in the overall population' (p.32). To ensure that the sample was representative and generalizable, the study used cluster sampling methods and procedures. Cluster sampling is normally useful when the population is large and widely dispersed (Cohen et al., 2016).

As at the time the study was conducted, there are 43 public colleges of education in the country. These colleges are located in 10 administrative regions, with each region having at least two or more colleges. Thus, to save time and resources, 4 clusters (regions) were selected for the study using random sampling procedures. Consequently, an estimated representative sample size of 629 tutors from 15 selected colleges in the four regions was anticipated for the study.

4.2. Instrument and Data Collection Procedures

The Teacher Sense of Efficacy Scale (TSES) was used to garner data for analysis. The instrument was developed by Tschannen-Moran and Hoy (2001) to three efficacy subscales: efficacy in student engagement, instructional strategies and classroom management. The Alpha reliabilities for each subscale were: 0.90 for *efficacy in student engagement*; 0.91 for *efficacy in instructional strategies*; and 0.87 for *efficacy in classroom management* (see, Tschannen-Moran and Woolfolk Hoy, 2001:799). The instrument has a 9-point Likert scale ranging from: (1) *Nothing*; (3) *Very Little*; (5) *Some Influence*; (7) *Quite a Bit;* and (9) *A Great Deal* was used in this study. Table 1 shows the items distribution of the TSES following its three efficacy subscales.

While *efficacy in student engagement* underscores the sort of relationship that exist between teachers and students. Here, many studies have demonstrated that positive teacher-student interaction creates the conditions for teachers to motivate students to learn and develop higher levels of expectations and self-belief (Tschannen-Moran, Woolfolk Hoy and Hoy, 2001:797; Tucker et al., 2002; Linnenbrink and Pintrich, 2010). *Teacher Efficacy in Instructional Strategies* concerns teachers' beliefs in their ability to organise instructional materials and achieve desired instructional outcomes (see, Tschannen-Moran, Woolfolk Hoy and Hoy, 2001: 800). *However, efficacy in Classroom Management* focuses on how teachers are able to create the conducive classroom environment which support student learning. (Tschannen-Moran, Woolfolk Hoy and Hoy, 2001:800). These three subscales were examined in the study.

Thus, paper-pencil questionnaire were personally distributed to about 629 tutors from the 15 colleges of education in the 4 selected regions/clusters (that is, Central, Eastern, Northern and Upper East Regions). In each of the colleges visited, personal contacts were made to principals who were very supportive. In every college visited, a tutor was chosen as the contact person for both the researcher and for tutor participants to facilitate the easy distribution and collection of the survey responses.

However, in seven (7) colleges, the researcher met most of the tutors after their staff meetings and explained both the purpose of the research and how the questionnaire were to be answered. The tutors then responded to the survey items and returned their responses to the researcher the same day. This form of data collection procedure yielded a high response rate in contrast to using the contact person. Thus, out of the 629 questionnaire that were distributed, 444 were completed and returned representing a response rate of 70.5%. However, about 10 responses were rejected due to their incompletion of some items (6 different respondents) and incorrect responses involving the provision of two answers in response to the same item (4 different respondents).

Raw survey data which consisted of item-by-item responses by tutors in the TSES instruments were first entered into Excel spreadsheet and then exported to SPSS version MAC 24 to establish descriptive and inferential statistics. SPSS was used to analyse survey response in order to establish the reliability of the instrument. Descriptive statistics were generated and organised according to survey instrument, survey constructs and for each college. Univariate and bivariate analyses were conducted to establish the descriptive statistics, analysis of variance and *t-test* in response to the stated research questions and hypotheses of the study.

Table 1: TSES subscales and item distribution

TSES factors or subscales	Items distribution
Efficacy in Student Engagement (SE)	1, 2, 4, 6, 9, 12, 14, 22
Efficacy in Instructional Strategies (IS)	7, 10, 11, 17, 18, 20, 23, 24
Efficacy in Classroom Management (CM)	3, 5, 8, 13, 15, 16, 19, 21

5. Analyses in Response to Research Questions

5.1. Descriptive Statistics

As the table 3 indicates, a total of 434 tutors participated in the survey. Out of this number, 318 (73.3%) were male and 116 (26.7%) were females. This implied that more males participated in the survey as compared to females. In table 6 which shows the qualifications of tutors, while 3 tutors (0.7%) obtained diploma degrees, 29 (6.7%) obtained first degrees. However, a considerable number of 399 (91.9%) tutors obtained masters or MPhil degrees, the recommended minimum level of qualification for teaching in these colleges. 3 (0.7%) obtained PhDs. Table 10 shows the descriptive statistics of tutors' years of experience. From the results of table 2, it is known that while the minimum number of years of experience is 1, the maximum is 35 years, with 9 years as the average years of experience of tutors. 279 (64.3%) tutors have 1 to 10 years of working experience as tutors.

Table 2: Minimum and Maximum Years of Experience as Tutors

Experience	N	Minimum	Maximum	Mean	Std. Deviation
As Tutor	434	1	35	9.27	6.338
Valid N (listwise)	434				

5.2. Research Question One (RQ1)

What are tutors' assessments of their self-efficacy beliefs in the University Colleges of Education in Ghana?

In terms of tutors' assessments of their sense of efficacies, tutors rated their sense of efficacies using the 24 items of the TSES developed by Tschannen-Moran and colleagues (2001). These items measured tutor self-efficacy beliefs in three areas: *efficacies in student engagement, instructional strategies* and *classroom management.* Tutors responded to each of the 24 items on a 9-point Likert scale ranging from *1(nothing) to 9(a great deal)*. In this way, the higher the ratings, the greater the self-efficacy beliefs of tutors.

While ratings from 1 to 5 ('nothing' to 'very little') demonstrated lower self-efficacy belief, ratings from 6 to 9 ('quite a bit' to 'a great deal') show higher tutor scores in their self-efficacy beliefs. Their overall mean score was ($M = 7.21$, $SD = 1.13$), an indication that tutors in the 15 colleges of education in Ghana have a higher sense of efficacies. Table 5 shows that each of the three factors of self-efficacy beliefs equally recorded higher mean scores.

Table 3: Mean scores of Tutors' Perceptions of their Sense of Efficacy in three factors.

	N	Minimum	Maximum	Mean	Std. Deviation
TSES				**7.21**	**1.13**
Student Engagement (SE)	434	3.25	9.00	7.07	1.07
Instructional Strategy (IS)	434	2.25	9.00	7.37	1.18
Classroom Management (CM)	434	2.75	9.00	7.19	1.14
Valid N (listwise)	434				

TSES = Tutors' Sense of Efficacy Scale.

5.3. Research Question Two (RQ2) and Hypothesis (Ho2)

To what extent does gender account for the variances in tutors' sense of efficacies in student engagement, instructional strategies and classroom management?

Ho1*: The gender of does not account for variances in their sense of efficacies in student engagement, instructional strategies and classroom management.*

In response to the null hypothesis, an independent sample test (*t-test*) was undertaken to determine whether or not there is a statistically significant difference between the mean scores of male and female tutors' self-efficacy beliefs in *student engagement, instructional strategies and classroom management*. In interpreting the output of the *t-test* (independent sample test), Cohen and colleagues (2016) indicates that when the *p-value* for the Levene test for the equality of variance is statistically significant ($p < 0.05$), then variances are *unequal*, and so the row on 'equal variances not assumed' I used. However, if the *p-value* is not significant ($p > 0.05$), then the first row is used because equal variances are assumed (see, Cohen et al., 2016: 342).

In the independent sample test conducted between male and female tutors' sense of efficacies in *student engagement, instructional strategies and classroom management* (N = 434), the probability value for tutors' sense of efficacy was not significant ($p = 0.203$). So, equal variance was assumed. The mean scores of male and female tutors' senses of efficacy in *student engagement* (SE), *instructional strategies* (IS) and *classroom management* (CM) are shown in table 4 below.

Table 4: Mean Scores of Male and Females Tutors' Sense of Efficacies.

TSES	Gender	N	Mean	Std. Deviation	Std. Error Mean
SE	Male	318	7.00	1.10	0.06
	Female	116	7.26	0.96	0.08
IS	Male	318	7.33	1.22	0.06
	Female	116	7.48	1.06	0.09
CM	Male	318	7.11	1.18	0.06
	Female	116	7.41	0.99	0.09

In terms of tutors' sense of efficacy in *student engagement*, the mean score for female tutors (M = 7.26, SD = 0.96) was statistically significantly higher (t = -2.294, df = 432), two-tailed (p = 0.022) than the self-efficacy beliefs of male tutors (M = 7.00, SD = 1.10). Hence, the null hypothesis (Ho1) that 'there is no statistically significant difference between male and female tutors' sense of efficacy in student engagement was not supported at the significant level of p = 0.022.

In respect of tutors' sense of efficacy in *instructional strategies*, there was no statistically significant difference (t =-1.252, df = 233.630), (p = 0.212) between the mean scores of both male and female tutors (M = 7.33, SD = 1.22 and M = 7.49, SD = 1.06) respectively. In this way, the null hypothesis for tutors' sense of efficacy in instructional strategies was confirmed.

For efficacy in *classroom management*, the mean score for female tutors (M = 7.41, SD = 0.99) was statistically significantly higher (t = -2.660, df = 240.481), two-tailed (p = 0.008) than male tutors' sense of efficacy (M = 7.11, SD = 1.18). Thus, the null hypothesis for efficacy in classroom management was not supported in the analysis (see table 5). These results have implications for male and female tutor recruitments in these colleges.

Table 5: T-Test for Male and Female Tutors' Sense of Efficacies in Student Engagement, Instructional Strategies and Classroom Management.

		Levene's Test for Equality of Variances				
TSES		F	Sig.	t	df	Sig. (2-tailed)
SE	Equal variances assumed	2.764	.097	-2.294	432	.022
	Equal variances not assumed			-2.440	231.413	.015
IS	Equal variances assumed	5.229	.023	-1.172	432	.242
	Equal variances not assumed			-1.252	233.630	.212
CM	Equal variances assumed	4.717	.030	-2.457	432	.014
	Equal variances not assumed			-2.660	240.481	.008

5.4. Research Question Three (RQ3) and Hypothesis (Ho3)

To what extent do tutors' academic qualifications account for variations in their sense of efficacies in student engagement, instructional strategies and classroom management?

***Ho2**: Tutors' academic qualifications do not account for variations in their sense of efficacies in student engagement, instructional strategies and classroom management.*

In this second research question, one-way analysis of variance (ANOVA) was used to determine whether or not there are statistically significant differences between the mean scores of tutors' sense of efficacy in *student engagement, instructional strategies* and *classroom management* following their academic qualifications (diploma, first degree, masters and PhD) where (α = 0.050). The Tukey hsd test helped with the identification of the exact locus of possible differences. It 'places the means into homogeneous subgroups so that one can see which means are close together but different from other group of means (Cohen and colleagues, 2016: 648).

Table 6: Mean Scores of Tutors' Sense of Efficacies following their Academic Qualifications.

		N	Mean	Std. Deviation	Std. Error
SE	Diploma	3	7.67	0.19	0.11
	First degree	29	6.43	1.39	0.25
	Masters	399	7.11	1.03	0.05
	PhD	3	7.00	0.45	0.26
	Total	434	7.07	1.07	0.05
IS	Diploma	3	8.00	0.90	0.52
	First degree	29	7.04	1.58	0.29
	Masters	399	7.39	1.15	0.05
	PhD	3	7.54	0.81	0.46
	Total	434	7.37	1.18	0.05
CM	Diploma	3	8.16	0.73	0.42
	First degree	29	6.68	1.25	0.23
	Masters	399	7.22	1.13	0.05
	PhD	3	7.12	0.33	0.19
	Total	434	7.19	1.14	0.05

The mean scores of tutors' sense of efficacy in *student engagement, instructional strategies and classroom management* following their academic qualifications are displayed in table 6 above. The assumption of homogeneity of variance was evaluated and found unacceptable using Levene's test, $F(3, 430) = 4.243$, $p = 0.006$. So, the Welch's robust test of the equality of means was used $F(3,590) = 8.109$, $p = .016$. The ANOVA was found to be statistically significant $F(3, 430) = 3.995$, $p = 0.008$, $\eta = 0.027$. Thus, the null hypothesis (Ho2) was not supported (see, table 7).

Table 7: ANOVA of Means of Tutors' Sense of Efficacy in Student Engagement following their Qualifications.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	13.525	3	4.508	3.995	*.008*
Within Groups	485.260	430	1.129		
Total	498.786	433			

Table 8: Games-Howell Multiple Comparison Table of Tutors' Sense of Efficacy in Student Engagement following their Academic Qualifications.

(I) Qualification	(J) Qualification	Mean Difference (I-J)	Std. Error	*Sig.*
Diploma	First degree	1.23*	0.28	*.001*
	Masters	0.55	0.12	*.059*
	PhD	0.67	0.28	*.279*
First degree	Diploma	-1.23*	0.28	*.001*
	Masters	-0.68	0.27	*.070*
	PhD	-0.57	0.37	*.464*
Masters	Diploma	-0.55	0.12	*.059*
	First degree	0.68	0.27	*.070*
	PhD	0.11	0.27	*.968*
PhD	Diploma	-0.67	0.28	*.279*
	First degree	0.57	0.37	*.464*
	Masters	-0.11	0.27	*.968*

The Games-Howell test was used in the post hoc test because of the unequal nature of group sizes. The multiple comparison table found that the means for tutors with *first degree* ($M = 6.43$, $SD = 1.39$) were statistically significantly different (lower mean score) from the mean scores of tutors with *diplomas* ($M = 7.67$, $SD = 0.19$). However, there were no statistically significant pairwise difference among the rest of tutor academic qualifications (see, table 8). In respect of the mean scores of tutors' sense of *efficacy in instructional strategies* following their different academic qualifications, the mean scores are displayed in table 7. The Levene's test for the homogeneity of variance was tested and found to be tenable $F(3, 430) = 2.241$, $p = 0.081$.

The ANOVA found no statistically significant differences between them $F(3, 430) = 1.094$, $p = 0.354$.

Hence the null hypothesis was supported (p >0.050). The post hoc test equally revealed no statistically significant differences between them. For the analysis of the mean scores of tutors' sense of efficacy in *classroom management*, the Levene's test for the homogeneity of variance was found to be tenable $F(3, 430) = 1.093$, $p = 0.352$. The ANOVA was found to be statistically significant $F(3, 430) = 2.718$, $p = 0.044$, $\eta = 0.019$ (see table 11 below). Thus, the null hypothesis (Ho2) was not supported in the analysis. However, the results of the Post hoc test found no statistically significant differences between groups.

Table 9: ANOVA of Means of Tutors' Sense of Efficacy in Instructional Strategies following their Qualifications.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	4.609	3	1.536	1.094	*.351*
Within Groups	603.984	430	1.405		
Total	608.592	433			

Table 10: ANOVA of Means of Tutors' Sense of Efficacy in Classroom Management Following their Qualifications.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	10.596	3	3.532	2.718	*.044*
Within Groups	558.673	430	1.299		
Total	569.268	433			

Table 11: Games-Howell Multiple Comparison Table of Tutors' Sense of Efficacy in Classroom Management following their Academic Qualifications.

(I) Qualification	(J) Qualification	Mean Difference (I-J)	Std. Error	*Sig.*
Diploma	First degree	1.48	0.48	*.138*
	Masters	0.94	0.43	*.350*
	PhD	1.04	0.46	*.299*
First degree	Diploma	-1.48	0.48	*.138*
	Masters	-0.54	0.24	*.138*
	PhD	-0.44	0.30	*.501*
Masters	Diploma	-0.94	0.43	*.350*
	First degree	0.54	0.24	*.138*
	PhD	0.10	0.20	*.953*
PhD	Diploma	-1.04	0.46	*.299*
	First degree	0.44	0.30	*.501*
	Masters	-0.10	0.20	*.953*

5.5. Research Question Four (RQ4) and Hypothesis (Ho4)

Is there a statistically significant relationship between tutors' years of experience and their sense of efficacies in student engagement, instructional strategies and classroom management?

***Ho4**: There is no statistically significant differences between tutors' years of experience and their sense of efficacies in student engagement, instructional strategies and classroom management*

In response to the above question and null hypothesis, a one-way analysis of variance (ANOVA) was conducted to determine whether or not there are statistically significant differences in tutors' sense of efficacy in *student engagement, instructional strategies* and *classroom management* following their *years of experience* as tutors. The mean scores of tutors' sense of efficacy in student engagement following their years of experience are shown in table 12. The assumption of homogeneity of variance was also evaluated and found tenable using Levene's test, $F(6, 427) = 0.371$, $p = 0.897$. The ANOVA was found to be statistically nonsignificant. Hence the null hypothesis was not supported (see table 13).

Table 12: Mean Scores of tutors' Sense of Efficacy in Student Engagement Following their Years of Experience.

Years of Experience	N	Mean	Std. Deviation	Std. Error
1-5	147	7.10	1.11	0.09
6-10	132	7.10	1.09	0.09
11-15	92	7.12	1.05	0.11
16-20	40	7.10	1.04	0.16
21-25	11	6.78	1.01	0.30
26-30	7	7.16	0.88	0.34
31-35	5	7.47	0.60	0.26
Total	434	7.07	1.07	0.05

Table 13: ANOVA of Tutors' Sense of Efficacy in Student Engagement Following their Years of Experience.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	2.044	6	.341	.293	*.940*
Within Groups	496.742	427	1.163		
Total	498.786	433			

In respect of tutors' *sense of efficacy in instructional strategies*, the mean scores are displayed in table 14 below. The Levene's test for the homogeneity of variance was conducted and found to be tenable $F(6,427) = 1.160$, $p = 0.912$. The ANOVA was conducted and found to be statistically nonsignificant. Consequently, the null hypothesis was supported (see table 15).

Table 14: Mean Scores of Tutors' Sense of Efficacy in Instructional Strategies following their Years of Experience.

Years	N	Mean	Std. Deviation	Std. Error
1-5	147	7.37	1.22	0.10
6-10	132	7.34	1.11	0.09
11-15	92	7.44	1.22	0.13
16-20	40	7.52	0.88	0.14
21-25	11	7.10	1.76	0.53
26-30	7	7.04	2.11	0.79
31-35	5	7.40	0.57	0.25
Total	434	7.37	1.18	0.05

Table 15: ANOVA of Tutors' Sense of Efficacy in Student Engagement Following their Years of Experience.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	2.951	6	.492	.347	*.912*
Within Groups	605.642	427	1.418		
Total	608.592	433			

For the analysis on tutors' sense of *efficacy in classroom management*, while the mean scores of tutors' sense of efficacy in this area are shown in table 16 below, the assumption for the homogeneity of variance was equally evaluated found to be acceptable using the Levene's test for the homogeneity of variance $F(6, 427) = 0.738$, $p = 0.926$. When the ANOVA was found to be statistically nonsignificant (see table 17 above). This confirmed the null hypothesis that 'there is no statistically significant differences in tutors' sense of efficacies in classroom management following their years of experience'.

Table 16: Mean Scores of Tutors' Sense of Efficacy in Classroom Management Following their Years of Experience.

Years	N	Mean	Std. Deviation	Std. Error
1-5	147	7.22	1.18	0.09
6-10	132	7.22	1.14	0.09
11-15	92	7.19	1.09	0.11
16-20	40	7.18	1.11	0.17
21-25	11	6.86	1.53	0.46
26-30	7	6.77	1.59	0.60
31-35	5	7.27	0.49	0.22
Total	434	7.19	1.15	0.06

Table 17: ANOVA of Tutors' Sense of Efficacy in Classroom Management Following their Years of Experience.

	Sum of Squares	df	Mean Square	F	*Sig.*
Between Groups	2.550	6	.425	.320	*.926*
Within Groups	566.718	427	1.327		
Total	569.268	433			

In consequence, the ANOVA for tutors' sense of efficacy in *student engagement, instructional strategies and classroom management* following their years of experience found no statistically significant differences between groups. These results implied that despite their differences in experience, tutors of the studied colleges displayed relatively similar mean scores in their sense of efficacies.

6. Discussion of Findings

Extant research studies on teachers' sense of efficacy have consistently identified this construct as a significant predictor of teacher performance (Goddard et al., 2004; Ross and Gray, 2006; Ross and Bruce, 2007; Gavora, 2010; Demirdag, 2015; Versland and Erickson, 2017). Bandura (1997) described it as the self-regulatory mechanism which determines teachers' performance. As a significant predictor of teacher performance, many empirical studies have explored the extent to which factors such as principals' leadership practices, professional development programs, gender, qualification and experience among others impact this efficacy variable (Ross and Bruce, 2007; Ryan, 2007; Tschannen-Moran and Woolfolk Hoy, 2007; Wolters and Daugherty, 2007; Horn-Turpin, 2009; Klassen and Chiu, 2010; Biggerstaff, 2012; Espinoza, 2013; Vaudroz et al., 2015).

While the findings from most of the above studies continue to contribute to knowledge and practice in the area, very few research studies have explored the extent to which demographic factors influence the self-efficacy beliefs of teachers/tutors in tertiary institutions. This current study examined the extent to which demographic factors such as gender, qualification and experience impact on tutors' sense of efficacies in *student engagement, instructional strategies and classroom management* in the University Colleges of Education in Ghana.

6.1. Tutors' Assessment of their Self-Efficacies Beliefs

Results of the analysis on tutors' assessments of their sense of efficacies as shown in table 3 indicates that tutors rated themselves to have high sense of efficacies in general (M = 7.21, SD = 1.13). This is very significant for the accomplishment of college goals since extant studies in the area consistently indicate that teachers with a high sense of efficacy are likely to be effective in their teaching task (Tschannen-Moran and Woolfolk Hoy, 2001; Ross and Gray, 2006; Ross and Bruce, 2007). Thus, tutors' overall mean score of *M = 7.21, SD = 1.13* implies that tutors of the studied colleges belief in the capability to organise and execute courses of action required to successfully accomplish their teaching task (Tschannen-Moran and Hoy, 1998; Ross and Gray, 2006). In this way, one could say that these tutors are successful in their task performance.

In considering the mean scores of each of the three factors of tutors' sense of efficacy (*efficacy in student engagement, instructional strategies and classroom management*) as displayed in table 3, while each factor recorded a high mean score (7.07, SD =1.07; 7.37, SD = 1.18; and 7.19, SD = 1.14 respectively), tutors rated themselves to have higher sense of efficacy in *instructional strategies*. This implied that as leaders of teaching and learning, tutors in the studied university colleges belief in their capability to undertake the following: respond to difficult questions posed by students; assess students' comprehension of taught courses; craft good questions for students; adjust lessons to suit diverse student levels of comprehension; provide alternative explanations to aid student understanding; and use varieties of instructional strategies and assessment methods in teaching and learning (Tschannen-Moran and Hoy, 2001).

6.2. Gender and Tutors' Self-Efficacy Beliefs

The descriptive statistics indicated that more male tutors (N = 318) participated in the study than female tutors (N = 116). This gender disparity was found to reflect a nationwide phenomenon in the male-to-female tutor ratio in these colleges. For instance, Dankwa's (2014) study of 254 tutors in some of these colleges in Ghana reflects the same gender disparity. While 156 male tutors participated in her study, only 96 were females (Dankwa, 2014). Yet, results of the *t-test* in this study revealed that the mean scores of female tutors' efficacy in *student engagement* and *classroom management* were higher than those of male tutors (see table 4). While there was no statistically significant differences between male and female tutors' sense of efficacy in *instructional strategies*, the observed mean scores demonstrated that female tutors displayed relatively higher sense of efficacy in *instructional strategies* than male tutors (female: M = 7.49, *SD* = 1.06 and male: *M* = 7.33, *SD* = 1.22).

Whereas the above findings are consistent with results of earlier studies in the area (Tschannen-Moran and Woolfolk Hoy, 2007; Klassen and Chiu, 2010; Avci, 2012; and Vaudroz et al. (2015), most of these studies were conducted in either elementary, middle and/or high schools. Only Avci's (2012) study was conducted in a tertiary institution. Results indicated that female Research Teaching Assistants had higher self-efficacy beliefs than their

male counterparts (p.123). In Vaudroz and colleagues' (2015) study, results also indicated that female teachers had higher sense of efficacy in student engagement and instructional strategies than male teachers (p.176).

The above result contributes to changing the sometimes culturally reinforced negative perceptions about the performance efficacies of female tutors or women teachers. African cultural practices, beliefs, attitudes, and values sometimes influence the way people perceive the role of women leaders in schools and society in general (Dixion et al., 2016). Yet, empirical research studies continuously demonstrate the significant impact of female leadership of schools (Lee et al., 1992; Avci, 2012; Vaudroz et al., 2015). The findings of this study contribute to changing these negative perceptions. It is known that a teacher with high sense of efficacy in student engagement and classroom management better able to create conditions that attract and motivate students learning and create the classroom environment that supports effective teaching and learning (Tschannen-Moran and Hoy, 2001). So, to find that female tutors in the studied university colleges outperformed their male counterparts in these areas despite their fewer numbers is a game-changer for tutor recruitments.

6.3. Academic Qualification and Tutors' Self-Efficacy Beliefs

Results of the analyses on the impact of tutors' academic qualification on variations in their self-efficacy beliefs in *student engagement, instructional strategies and classroom management* displayed the following: The ANOVA for *student engagement* was found to be statistically significant $F(3, 430) = 3.995$, $p = 0.008$ with an effect size of ($\eta = 0.027$). The Post hoc multiple comparison test revealed a statistically significant pairwise difference between tutors with *diplomas* ($M = 7.67$, $SD = 0.19$) and those with *master's degree* qualifications ($M = 6.43$, $SD = 1.39$) at ($p = 0.001$). The finding was very surprising because master's degree is the recommended minimum qualification for teaching in these colleges. Since their transition from Teacher Training Colleges (TTC) to University Colleges, attempts have been made to help tutors with diplomas and first degrees to upgrade. This was motivated by the fact that tutors with at least master's degrees will be more efficacious in their task delivery (Newman, 2013; Osei and Adu, 2016; Odoom et al., 2016). Since the results of this study seems to proof otherwise, could tutors' years of experience be the reason for the statistically significant differences? This is because many of the tutors with diplomas have longer years of experience as tutors in these colleges.

In terms of the other efficacy subscales, while the ANOVA for *instructional strategies* found no statistically significant differences among groups (see, table 9), the ANOVA for efficacy in *classroom management* was statistically significant $F(3, 430) = 2.718$, $p = 0.044$, with an effect size of ($\eta = 0.019$). However, the multiple comparison test found no statistically significant pairwise differences between groups (see table 11). In contrasting these findings with extant research studies in the area, it is observed that very few studies conducted this form of analyses (i.e. Ross and Bruce, 2007 and Vaudroz et al., 2015). For instance, in the study conducted by Ross and Bruce (2007) on the impact of a professional development program on teachers sense of efficacy in elementary schools, findings indicated that treatment teachers outperformed controlled teachers in the three factors of self-efficacy beliefs (p. 56). However, in the study conducted by Vaudroz and colleagues (2015), while prior education (qualification) was found to be statistically significantly related to teachers' sense of efficacy in instructional strategies, it had a negative relationship with classroom management. Vaudroz and colleagues (2015) explained that the reason for the difference is attributable to the fact that teachers with higher academic qualifications are more likely to have learnt how to plan and execute their instructional program than control students in the classroom.

Teacher academic qualification is always considered significant to teacher performance. Bandura (1997) indicates that while personal competencies define the knowledge and skills a person acquires through learning, self-efficacy beliefs regulate these skills to achieved desired outcomes. This explains why some studies assert that there is linearity between academic qualification and teachers' sense of efficacy (Ross and Bruce, 2007; Bell and Bolam, 2010; Avci, 2012; Vaudroz et al., 2015. Yet, despite the differences in tutors' academic qualifications, the study found no statistically significant relationship between qualifications and efficacy in instructional strategies. Although Cohen and colleagues (2016) indicate that the lack of statistically significant differences among groups is as important as finding one (p.648), could the differences in tutors' years of experience explain for the variations in tutors' sense of efficacy in all three efficacy subscales?

6.4. Years of Experience and Tutors' Self-Efficacy Beliefs

Many research studies consistently indicate that teachers' years of experience impact significantly on their self-efficacy beliefs (see, Tschannen-Moran and Woolfolk Hoy, 2007; Wolters and Daugherty, 2007; Horn-Turpin, 2009; Klassen and Chiu, 2010; Vaudroz et al., 2015). For instance, in the study conducted by Tschannen-Moran and Woolfolk Hoy (2007) involving 255 novice and career teachers, experienced teachers were found to have significantly higher levels of efficacy than novice teachers. Experienced teachers tended to rate themselves higher in their self-efficacy beliefs in instructional strategies and classroom management than novice teachers. However, Tschannen-Moran and Woolfolk Hoy (2007) also found no statistically significant difference between novice and career teachers' sense of efficacy in student engagement (Tschannen-Moran and Woolfolk Hoy, 2007:

950).

In a similar way, Wolters and Daugherty (2007) also found that, while first year teachers reported relative lower self-efficacy beliefs in instructional strategies, teachers with 6-10 and 11+ years reported higher efficacy beliefs in instructional strategies than those with 1-5 years of experience. In terms of classroom management, they found that first year teachers reported lower efficacies in classroom management than those with 10 years, while those with 1-5 years tended to show lower efficacies in classroom management than those with more years of experience. They however found no statistically significant differences between teacher's experience and efficacy in student engagement (see, Wolters and Daugherty, 2007: 186-7).

Contrasting the above findings of results of this study, the analyses of variance (ANOVA) on the relationship between tutors' years of experience and their sense of efficacies in *student engagement, instructional strategies and classroom management* found no statistically significant relationship with all three efficacy subscales. Even though Cohen and colleagues (2016) indicate that the absence of statistically significant differences between groups is as important as findings significant differences because the introduction of an intervention is likely to produce common effects on tutors despite their years of experience. Yet, the results of this study are still surprising, especially with the hypothesised understanding that tutors with diplomas outperformed those with master's degrees because of their years of experience. The lack of statistically significant relationship between experience and efficacy is therefore dilemmatic. Could this be explained for by the high average number of years of experience of tutors in the studied colleges? Or does the relationship between a teacher's years of experience and their efficacy necessarily imply linearity?

Huberman's (1989) study on the professional life cycle of the teacher seem to throw light on this dilemma. According to Huberman (1989: cited in Klassen and Chiu, 2010:784), a teacher's early years of teaching experience is a period of *survival* and *discovery.* 4 to 6 years of experience is marked by a period of *stabilization* defined by commitment to the profession. 7 to 18 years of experience (mid-career years) is marked by a period of *experimentation* or *reassessment.* From 19 to 30 years, teachers experience *serenity* which gradually leads to *loss of energy and enthusiasm* but are compensated by a *greater sense of confidence and self-acceptance*. However, teachers between 31 to 40 years (later career years) experience a period of *disengagement* marked by either serenity or disappointments and bitterness. Studies in this area following Huberman's (1989) found that teachers self-efficacy increased at the mid-career years (say, between 8-23) and declined from 24 years onward (see, Day and Gu, 2007; Klassen and Chiu, 2010: 784).

For instance, in the study conducted by Klassen and Chiu (2010), a curvilinear relationship was found. Using a sample size of 1,430 teachers from elementary, middle and high schools, Klassen and Chiu (2010) indicate that 'self-efficacy increased from 0 to about 23 years of experience and then declined as years of experience increased' (p.748). This led them to conclude that teachers at their mid-career years are more likely to have higher self-efficacy beliefs than those in their early and later career years. Following the results of these extant research studies, one finds that the average tutor years of experience in the studied colleges was 9 (see table 2). Thus, following the results of Wolters and Daugherty's (2007) study on the one hand, and Klassen and Chiu's (2010), could average 9 years of tutors' working experience explain for the lack of statistically significant differences in their experience and sense of efficacy? Tutors' 9 years of working experience is sufficient for gaining the requisite knowledge and skills that are required for accomplishing their tasks as leaders in teaching and learning.

7. Conclusion and Implications

Compelling evidence in empirical research studies consistently show that teachers' sense of efficacy is a significant predictor of their performance (Goddard and Goddard, 2001; Goddard, 2002; Goddard et al., 2004; Tschannen-Moran and Woolfolk Hoy, 2007; Ross and Bruce, 2007; Klassen and Chiu, 2010; Versland and Erickson, 2017). Many of these studies affirm Bandura's (1997) theory that teachers' sense of efficacy is related to the goals they set, the efforts they invest in teaching, their persistence and resilience in the face of setbacks. While mastery experience, vicarious experience, social persuasion and affective states have been identified as the sources for the development of this efficacy construct, other factors such as teacher professional development and principals' transformational leadership practices among other have also been identified as accounting for variations in teachers' sense of efficacy.

However, the influence of demographic factors (such as race, age, gender, academic qualification and years of experience) on teachers' sense of efficacy have been given less attention in the literature. This is because some scholars consider demographic factors as nonsignificant predictors of teachers' sense of efficacy (Tschannen-Moran and Woolfolk Hoy, 2007: 952). With so much limited research studies which examine the relationships between demographic factors and teachers' sense of efficacy in tertiary institutions, this current study examined the relationship between these two key variables in the university colleges of education in Ghana. It focused specifically on the relationship between gender, qualification and experience and tutors' sense of efficacy in three efficacy subscales.

Results indicated that while female tutors demonstrated higher self-efficacy beliefs in student engagement and classroom management, there was no statistically significant differences in male and female tutors' sense of efficacy in instructional strategies. Yet, male tutors represented more than 70% of tutors in all the colleges of education in the country. This outcome therefore implies that the recruitment of more female tutors in these colleges would lead to increase in tutor performance efficacies in the colleges than male tutors. This is because a teacher's ability to creatively engage with students and motivate them to learn (student engagement) and create the conducive environment that support student learning (classroom management) are as important as their ability to execute their lesson plans (instructional strategies). Here, female tutors outperformed their male counterparts. There is therefore the need to support and encourage greater female tutor recruitments in these colleges.

In respect of tutors' academic qualification, it was observed that there were pairwise differences in the mean scores of tutors with diplomas and master's degrees. While fewer tutors had PhDs (3 tutors) and diplomas (3 tutors), majority of tutors had master's degree which represented the minimum qualification for teaching in these colleges. Yet, tutors with diplomas obtained higher mean scores in their self-efficacy beliefs than those with master's degrees. While tutors' qualifications explained the variations in their sense of efficacy in student engagement, the effect size was small ($\eta = 2.7$). There was no statistically significant difference in tutors' sense of efficacy in instructional strategies following their academic qualifications. However, tutors' academic qualification equally impacted on their sense of efficacy in classroom management with a small effect size of ($\eta = 1.9$). While tutors with diplomas were successful because of their years of experience as tutors, what was also noticeable in the analysis was the observed lower mean scores of first-degree holders in all three dimensions of efficacy. This implies that the National Council for Tertiary Education (NCTE) may need to initiate continuous professional development programs to help build the confidences of first-degree holders in these colleges to upgrade.

In terms of tutors' years of experience, while the minimum and maximum tutors' years of experience ranged from 1 to 35, the average years of experience was 9. It was therefore observed in the analysis of variance that years of experience did not account for differences in tutors' sense of efficacy in all three dimensions. From the observed mean scores in tables 12, 14 and 16, each category of the years of experience recorded relatively higher scores. While some research studies indicated that experience has a linear relationship with teachers' sense of efficacy, others found a curvilinear one. Yet, results in this current study showed statistically nonsignificant relationship between the variables. While scholars like Wolters and Daugherty (2007); Klassen and Chiu (2010) and Walker and Slear (2011) found that teachers with between 1 to 23 years of experience had higher sense of efficacy, the average 9 years of tutors' experience may explain for their high mean scores in all three dimensions of self-efficacy beliefs. It is significant that tutors are not allowed to work for more than 18 years in the same college because of the curvilinear implications of their performance.

8. Limitations of the Study

Many research studies culminate with identified and well-defined limitations which open new vistas for further research. This study is therefore no exception. First of all, this study was a descriptive survey and therefore used quantitative methods which involved the use of self-administered questionnaire for data collection and analyses. Even though appropriate and well-constructed questionnaires are reliable for data collection, they could also impose a structure on answers and shape the nature of the responses (Denscombe, 2014: 181). It was therefore difficult to ascertain whether or not tutors' assessments of their self-efficacy beliefs were ubiquitous or limited. A qualitative study using interviews or focus groups may provide explanatory power to the findings of this current study.

9. References

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