UNIVERSITY OF CAPE COAST

INFLUENCE OF SELF-EFFICACY, LOCUS OF CONTROL, AND SELF-ESTEEM ON ACADEMIC ACHIEVEMENT OF COLLEGES OF EDUCATION STUDENTS IN 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 requirements for the award of Doctor of Philosophy degree in Educational Psychology

DECEMBER 2020

DECLARATION

Candidate's Declaration

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

Candidate's Signature: …….. Date: …….

Name: ..……..

Supervisors' Declaration

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

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

Name: ……..

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

Name……...

ABSTRACT

This study examined the influence of self-efficacy, locus of control, and self-esteem on the academic achievement of Colleges of Education students in Ghana. The descriptive cross-sectional survey design was employed. Through a multi-level sampling technique, 692 Level 200 students were sampled. Questionnaire and performance record sheets were used for the data collection. Data were analysed using simultaneous multiple linear regression, independent samples t-test, multivariate analysis of variance, and moderation analysis with Hayes' PROCESS using 5000 bootstrap samples. It emerged that students had a high level of self-efficacy, self-esteem, chance, powerful others, but low on internal locus of control. Self-efficacy and self-esteem were significant predictors of academic achievement. There was no significant difference in self-efficacy, self-esteem and academic achievement with respect to type of college, but there was a significant difference in locus of control with respect to type of college. Gender did not moderate the relationship between self-efficacy and self-esteem and academic achievement, but moderated the relationship between chance locus of control and academic achievement. Type of college significantly moderated the relationship between self-efficacy, locus of control, self-esteem, and academic achievement. It was concluded that students who have so much belief and see themselves in a very positive manner are more likely to perform better academically than those who do not believe in themselves. It was recommended that the Colleges of Education should collaborate with Educational Psychologists to organize regular in-service programmes for Tutors in the Colleges of Education on how to help student-teachers to develop high self-efficacy, locus of control and self-esteem.

KEY WORD

Academic achievement

Locus of control

Self-efficacy

Self-esteem

Student-teachers

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DEDICATION

To my family.

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CHAPTER ONE

INTRODUCTION

Education provides the citizens of a nation with skills and knowledge to be able to critically think, identify problems, and find solutions to them. Every nation must therefore make it a point to develop its human resource for economic development from the early stages of life, and follow with keen interest their students' academic achievements in the process of educating them (Akram & Ghazanfar, 2014). In order to achieve the aims of education, learners' academic progress needs to be assessed to alert educators and curriculum planners of any changes that need to be effected. In view of this, as students go through their studies, their academic achievements are measured from time to time during the formative and summative periods to determine the state of their efforts in learning.

Academic achievement measures Total Continuous Assessment (TCA) which usually includes the students' assignment, projects and attendance on one hand and final examination scores on the other hand (Brackett, Rivers & Salovey, 2011). In the case of the Colleges of Education, the student-teachers are assessed at the end of every semester with continuous assessment scores and a standardized examination to determine their progress.

Background to the Study

Woodfield and Earl-Novell (2006) have indicated that students' academic achievement is important in the teaching and learning process.

According to Woodfield and Earl-Novell, students' academic achievement is influenced by their own efforts, the educational background of their parents, their families' income, students' self-motivation, age, learning preferences, entry qualification, and the nature of their previous schooling. In addition, Considine and Zappala (2002) identified the school social and physical environments on one hand and the expectation of teachers from students on the other hand as being strong contributing factors to the effort students put in to succeed in their academic endeavours.

These notwithstanding, other psychological factors such as self-efficacy (Facey-Shaw & Golding, 2005), self-esteem (Boulter, 2002), locus of control (Ofori & Charlton 2002), and gender (Zeegers, 2004) have also been identified as important constructs that help students excel in their academic pursuits. Self-efficacy for example, is said to relate to academic achievement, motivation and persistence in pursuing academic quests (Lunenburg, 2011). Nevid (2009) has also established that when individuals have low self-esteem, they may not trying their hands on new skills because they do not believe in themselves. On the part of locus of control, Santrock (2003) opined that internally controlled individuals are usually motivated to achieve academically because they are resilient, their level of confidence is high, they feel secured, and do not need any external approval to move on in life.

With my experience as teacher for over 30 years, I have noticed that most times students who do not get the opportunity to pursue their dream careers, or fail in their end of semester examinations, tend to blame the society and the educational institutional structures for their failures. For example, when such student-teachers perform well in examinations they tell others

"they had" Grade A or Grade B+ in such and such a course, but if they score between Grade C and Grade E they report that "they were given" poor grades such as either a Grade D+ or a Grade E. Are these student-teachers behaving in this way because they lack self-efficacy or self-esteem leading to failure to concentrate on their studies? Are they not confident enough, or they are simply not ambitious? Don't they believe in their own abilities?

Students are generally presumed to have high self-efficacy and self-esteem in addition to an internal locus of control because, these three variables and academic achievement have a relationship (Owayed, 2005). In addition, Owayed reported that self-efficacy, locus of control (LoC), and self-esteem, were related. On their part, Maltby, Day, and Macaskill (2007) found that a strong internal LoC focus is linked with personal satisfaction, motivation, academic success, and the ability to cope with pain. However, individuals who possess external locus of control are affected by emotional stress and are prone to depression, exhibit higher levels of anxiety, depend more on others, lack motivation to make behavioural changes, are less likely to cope with pain, and are usually poor in academics (Maltby, Day, & Macaskill, 2007).

Owayed (2005) added that students who report low self-esteem also have external locus of control in most cases. These reports indicate that lower level self-esteem students usually blame their successes and failures on activities outside their control, while students with high self-esteem orientation most likely will hold themselves responsible for failures and successes in their lives. This may be because people who are believed to have high self-esteem, high self-efficacy, and internal locus of control are persevering and would not hesitate to try to do things that challenge them. In addition, they work through

these challenging activities till they achieve their set targets, whereas individuals who have low self-efficacy, low self-esteem and external locus of control orientation can easily neglect trying new experiences hence, the differences in their outputs.

The main task of the educational system is to equip individuals with knowledge, skills and man-power training to promote national development, and high efficacy, and the quality of the educational system greatly contributes to this (Hasanzadeh & Imanifar, 2011; Salmalian & Kazemnejhad, 2014). One major concern of every well-meaning country is its students' academic achievement (Salmalian & Kazemnejhad, 2014). When students succeed academically, it improves the human resources of the society and guarantees the development of that country or society. However, when the educational system fails to succeed in training its citizens, the country may not be able to use its potential human capital and this is likely to make the country lose money, or its development will be endangered (Hasanzadeh & Imanifar, 2011). Therefore, the need to research into issues that are connected with educational achievement in recent decades is of paramount importance.

Intelligence, for some time now, has been regarded as the main factor among the different factors affecting academic achievements, but in recent times it is no more considered as a successful determining factor of students' academic achievement (Mhmoodi, Eisazadegan, Saribeiglo, & Ketabi, 2013). Thus, many studies that this present study sought to contribute to, have examined the relationship of different variables including self-efficacy, self-esteem, and locus of control and academic accomplishment (Hasanzadeh & Imanifar, 2011; Mhmoodi et al., 2013).

Self-efficacy is explained as beliefs an individual has about what he or she can do to accomplish tasks he or she sets out to do (Nevid, 2009). Bandura (1997) reported that individuals use different experiences to determine how efficacious and capable they are in their bid to complete set tasks or projects assigned to them. He stressed that such specific tasks could be mastery experiences, which indicates what the person is capable of doing through experiences, and achieving mastery over a task which one previously feared.

Self-efficacy contributes to assess demands from the environment and helps individuals to adjust to and persist in stressful situations (Hamill, 2003; Schwarzer & Renner, 2000). It also predicts academic achievement of college students (Mathur, 2014). In addition, it increases students' motivation and persistence to master challenging academic tasks (Bandura, 1993).

A strong sense of efficacy contributes to individuals' personal well-being, and their ability to accomplish tasks are enhanced greatly. For example, Chemers, Hu, and Garcia (2001) established that when individuals have high self-efficacy believes, they readily see academic demands as challenges and emphasise on opportunities that they can step on to move ahead to produce desirable goals because they are motivated to do so (Benight & Bandura, 2004). Generally, students who possess high self-efficacy can perform better and achieve high academic successes (Patrick & Zhenxing, 2016). However, students with low self-efficacy are tagged as prospective trouble makers at school (Abu-Tineh, Khasawneh, & Khalaileh, 2011), and also have the potential to avoid trying new experiences (Nevid, 2009). For these reasons, therefore, it will be easier for such people to abandon projects that they find difficult to complete. In view of this, it is essential that individuals, especially

student-teachers, are exposed to situations that will help them build their self-confidence to develop positive self-efficacy to be able to persevere to attain set goals. Self-esteem is also an important variable identified to relate with academic achievement in a classical way.

Self-esteem is explained as how high or low people value themselves or approve of themselves or even respect themselves (Van Dinther, Dochy, & Segers, 2011; McCombs, 2009; Salmalian & Kazemnejhad, 2014). It is an attitude involving how individuals accept, approve of, and respect themselves, and these qualities are manifested by how they recognize their abilities and achievements, and accept their limitations.

One of the most important processes of development is the development of self-esteem (Sirin & Rogers-Sirin, 2004) since it has the tendency of influencing the choices and decisions that people make. Self-esteem affects the individuals' self-confidence, and that can affect their successes and thinking. It motivates and gives people confidence to feel that they can overcome the difficulties of life (Rathus, 2010). When an individual has high self-esteem, the person can show positive outcomes. For example, an individual whose self-esteem is high is usually motivated to persistently strive to achieve personal goals. In contrast, people who have low self-esteem do not think they deserve to be happy or can achieve in life since they are generally less motivated to pursue set goals or even try new experiences (Nevid, 2009). Consequently, this can lead to poor outcomes in their lives (Saadat, Ghasemazadeh, & Soleimani, 2012).

Studies on self-esteem and their consequences such as academic achievement have attracted much attention in recent years (Hasanzadeh &

Imanifar, 2011; Saadat, Ghasemazadeh, & Soleimani, 2012; Naderi et al., 2009). Whereas some of these researches did not show any link between self-esteem and academic achievement, (Hasanzadeh & Imanifar, 2011; Salmalian & Kazemnejhad, 2014), others indicated positive achievement between the two variables (Saadat, Ghasemazadeh, & Soleimani, 2012). Also, Pullman and Allik (2008) stated that even though self-esteem increases academic achievement, just a moderate association has been confirmed between self-esteem and academic achievement. Locus of control is another equally significant variable that is related with academic achievement in a classical way.

Locus of control (LoC) is the beliefs individuals have about the fundamental causes of actions in their lives, and about whether the outcomes of their actions depend on what they do, or on happenings that they have no control over. It deals with how individuals situate the occurrences in their lives and whether they attribute these occurrences to their own engagements or activities outside their jurisdiction (Moorhead & Griffin, 2004). Educational psychologists have developed keen interest in studying locus of control especially in how it is related to how students perform academically. Some studies done in other jurisdictions such as that of McDermott (2002) in the US reported a link between internal locus of control and strong self-efficacy. In Nigeria, Ogunmakin and Akomolafe (2013) reported that locus of control and academic success are related and that this is more pronounced in adolescents than in children and adults. Furthermore, an empirical study has found out that high self-efficacy and internal locus of control are usually linked and they can both be found in an individual (Sagone & DeCaroli, 2014). Sagone and

DeCaroli stressed that such people also tend to achieve high. On the other hand, however, Choi (2013); Dinçyürek, Güneyeli, and Çaglar (2012); and Reynolds and Weigand (2010) failed to report similar results between the two variables (locus of control and self-efficacy). Clearly, studies done on the subject of locus of control has found some kind of links with achievement of adolescents rather than adults or children. What is the case of developing world in relation to studies in the area of locus of control and academic achievement? Would locus of control and academic achievement correlate higher among adults and children also, or it will only be associated in adolescents only?

In Africa, the influence of self-efficacy, self-esteem, and locus of control on academic achievement has been examined in some basic and senior high schools (Kugbey, Mawulikem, & Atefoe 2015; Tanle, 2014; Peperah-Asiase, 2015; Oppong & Twum, 2015; Eshun, 2016). Interestingly, positive relationships have been reported on these studies. Self-efficacy, self-esteem, and locus of control and how they influence students' achievement have been an issue of relevance for most researchers who are interested in education in Ghana. This is because the importance of the aforementioned psychological variables cannot be overlooked due to their positive and negative influences on various outcomes of students' academic achievement (Aryana, 2010), and the capabilities of meeting challenges in life (Reasoner, 2005). For example, it has been reported that self-efficacy strongly predicts academic achievement. In addition, persons with high self-efficacy embrace challenging tasks while those with low self-efficacy stay off situations that are demanding.

Self-efficacy's influence on successful academic duties like teaching among teachers has also been investigated (Boateng & Owusu-Sekyere, 2018; Sarfo, Amankwah, Sam, & Konin, 2015). The above-mentioned studies on self-efficacy's influence on students' achievement remain paucity within the Ghana education context and warrant further investigation. Again, studies done on self-esteem and academic achievement in Ghana have showed sturdy links between academic achievement and self-esteem (Arhin & Amoako, 2019; Laryea, Saani, & Dawson-Brew, 2014; Partey & Yidana, 2018; Wiredu, 2016). In spite of the fact that locus of control has been identified as one of the significant outcome variables that has been linked to academic achievement (Hasanzadeh & Imanifar, 2011), in Ghana, it appears that not so much empirical investigations have been done on it. That notwithstanding, one study done to establish whether a relationship exists between academic achievement and students' locus of control reported a significant association between internal locus of control and academic (Abukari, Mashoud, & Andani, 2020).

Gleaning from the literature, I will say that locus of control, self-esteem, and self-efficacy are important so long as students' lives and educational endeavours are concerned. This is because for students to be successful in their academic pursuits they need to be confident in their abilities to use the skills they have to accomplish set goals, and this calls for the need to ensure that student-teachers develop high self-efficacy. In addition, student-teachers who have high self-esteem will personally recognize their own abilities and achievements and also acknowledge and accept their limitations. This will help them to perform well and succeed in any activity embarked on since they have the confidence to do so. If, however, they are not even aware

that they have the ability to perform certain tasks or do not value themselves as being important, then that is failure in itself. When student-teachers are able to determine whether the outcomes in their lives depend on their own actions or on activities that they cannot control they will exhibit such academic laurels or failures depending on what motivates them.

Internal locus of control, high self-esteem, and high self-efficacy, may help to develop self-confidence in student-teachers and also motivate them to pursue their dreams. Self-esteem and locus of control are significantly related and also influence other variables (Pruessner et al., 2005). For example, individuals who have the predisposition for levels of high self-esteem have been reported to have a strong association with internal locus of control (Pruessner et al., 2005).

In as much as self-efficacy, self-esteem and locus of control have been found to have some association with academic achievement, it is also possible that the effect of the influence of these variables on academic achievement may differ depending on the gender of the student-teacher or the type of college (single-sex or mixed) the student-teacher is enrolled in. Tenaw (2013), for example, reported that females with high self-efficacy performed better academically than their male counterparts who also have high self-efficacy. However, males with higher self-esteem were found to have performed better academically than females with the same level of self-esteem (Abugaroo, 2013). Wuviadzi (2014) also found that females performed academically better than males at about the same level of locus control even though the difference in their academic achievement was not significant.

Single-sex learning environments are those that keep only male or female students. Such environments create enabling aura that makes it possible for both female and male students to interact freely with their teachers without being intimidated by the opposite sex (Salomone, 2003). For example, according to McGruder and James (2002), students who are trained in single-sex schools develop high self-esteem when compared with those in mixed sex schools. However, opponents of single sex institutions argue that such environments do not prepare the students well enough for them to be able to live in and work in real life situations (Guarisco, 2010) because, it is feared that such institutions do not promote future workplace equality interaction between males and females in the classroom. Both single sex schools and mixed sex schools have a relationship with academic achievement of students whether they are females or males. This means that the type of college that a student is enrolled in may have an influence on the person's academic achievement.

Student-teachers in Colleges of Education (CoEs) graduate to become teachers and care-givers to train children who are put under their care. It is therefore the responsibility of graduate teachers, according to Duckworth, Akerman, Macgregor, Salter, and Vorhaus (2009), to guide these children under their care to develop self-regulation skills and strategies to enable them appreciate their childhood, accomplish their capacities, succeed well and become responsible adults who can be employed. The quality of the teachers who are mandated to deliver such quality education to the populace at the various educational levels is determined by their motivational level (Transforming Teacher Education and Learning (T-TEL) Schools Partnership

Programme, 2016). It is for this important reason that student-teachers, while in training, must themselves be helped to develop their own key dispositions that support the development of skills and competences required by children so that these would-be teachers can help their learners. It is therefore essential that teacher educators are conscientised to support the student-teachers to develop high self-efficacy, high self-esteem, and internal locus of control while in training.

However, it appears there is not much research on the influence of self-efficacy, self-esteem, locus of control and academic achievement in Colleges of Education in Ghana in spite of the numerous studies done on this in the basic and secondary schools. Inasmuch as several studies have reported on the belief systems and psychosocial characteristics of learners at various stages of their education, it is also important that the effects of these systems on learners at the Colleges of Education be investigated. The main concern here is that student-teachers in the Colleges of Education are adults in training who will later go and teach in the basic schools where the clientele are children. There is therefore the need to study the influence of self-efficacy, locus of control and self-esteem on academic achievement of College of Education students, to enable teacher educators to ensure that student-teachers develop the necessary levels of self-efficacy, self-esteem, and locus of control to help them build their self-confidence to strive to be self-determined. This is sure to provide an assurance that once they go through their training and graduate, they will be able to manage themselves and their classrooms in the future.

Reasons for studies of this nature are undoubtedly necessary due to the fact that their findings will help countries to provide their learners with

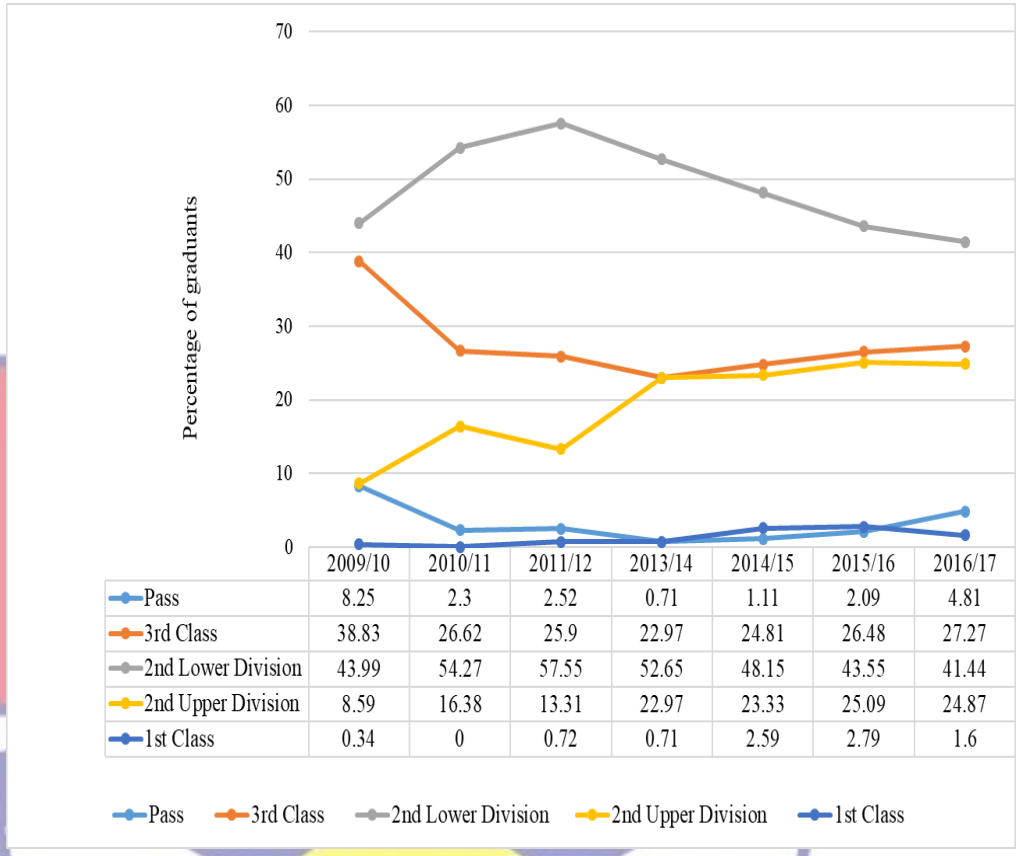
learning and developmental needs. When leaders of countries know the learning and developmental needs of their citizens and provide these needs through a good educational system, the citizens are bound to succeed academically. Successful academic work helps to improve the development of countries because their successful learners will use the skills and knowledge acquired to harness and utilise resources to ensure future development. On the other hand, when the learners are not provided with the developmental needs and the appropriate education system, the learners may not succeed academically and hence the country may not be able to tap and utilise the human resources needed for future development (Hasanzadeh & Imanifar, 2011). Having found out from the literature that characteristics like self-esteem, self-efficacy, and locus of control might influence students' academic achievement, I endeavoured to find out if these constructs could be responsible for the student-teachers overall performance. The goal of this study was to determine the combined impact of self-efficacy, locus of control, and self-esteem on academic achievement of College of Education students in Ghana.

Statement of the Problem

Colleges of Education students are placed in the central point when considering the training of teachers in Ghana. These student-teachers, after their training, are tasked with the responsibility of teaching pupils in the basic schools across the country. Basic schools constitute the majority in terms of students' populace across the country. Also, the basic school education is the foundation stone on which all the other academic levels are built. In view of this, the academic achievement of students in the Colleges of Education is key as far as quality education is concerned (SDG-4, UNESCO, 2017).

Data gathered on College of Education Graduates indicate that even though their performance is good, the number of students who attain 1st Class and 2nd Class Honours (upper division) is not so high. In addition, more males than females have been reported to obtain higher Class Honours. For example, data from Foso College of Education from 2009/2010 academic year to 2016/2017 academic year show that the performance of students continued to show gradual improvement, but this improvement was at a slow pace (see Figure 1 and Appendix A).

Figure 1 indicates that in 2010/2011 academic year, graduates who obtained 2nd class upper division and lower division increased by 18.07% compared with the 2009/2010 academic year, but no 1st class was recorded for the 2010/2011 academic year. In the 2012/2013 academic year, those who had 2nd Class Upper and Lower Divisions increased by 0.21%. The College also recorded an increase of 0.72% for 1st Class Honours from 0.0% in the previous year. With respect to the 2014/2015 academic year group, there was a 4.14% decrease in the category of graduates who had 2nd Class Upper and Lower Divisions. However, an increase of 1.88% over the previous year's percentage of 0.71% was recorded for 1st Class. A critical study of Figure 1 shows that even though there is a gradual increase in the performance of graduates annually, the margin of the increase is relatively small. A cursory look at Figure 1 further indicates that the majority of the graduates had 2nd Class (Lower Division), with still more graduates falling within the 3rd Class. This sets me wondering about what the reason for this small marginal increase in students' performance output over the years could be. This calls for the need to examine the possible factors that may account for these performance trends.

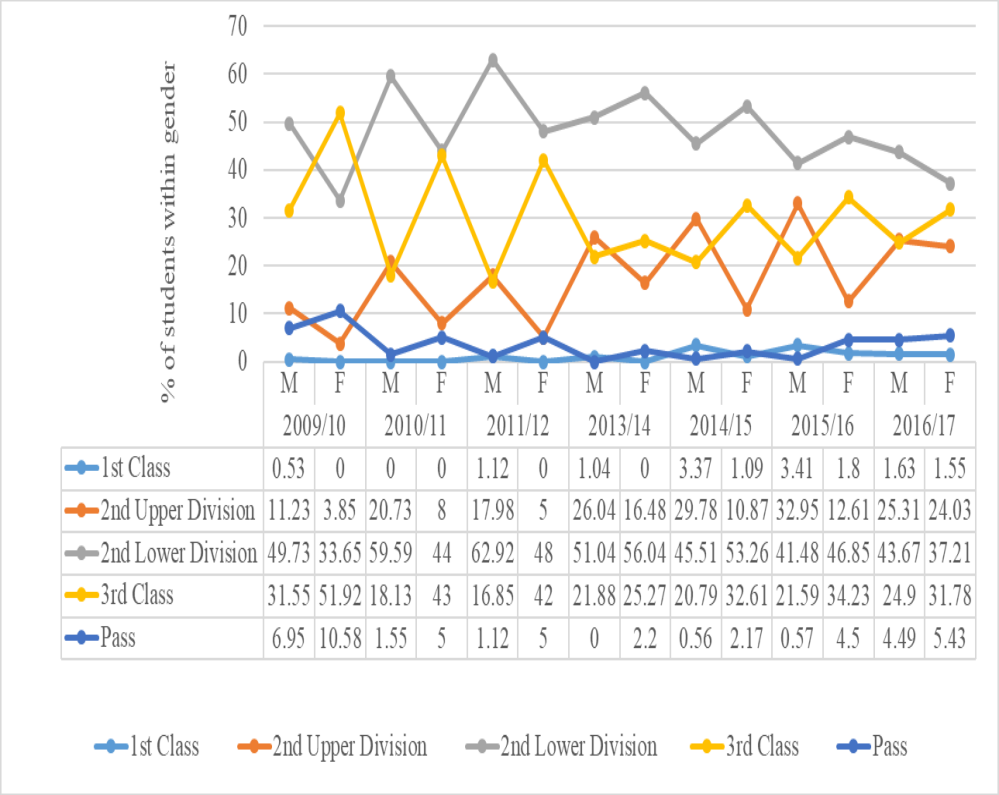


	2009/10	2010/11	2011/12	2013/14	2014/15	2015/16	2016/17
Pass	8.25	2.3	2.52	0.71	1.11	2.09	4.81
3rd Class	38.83	26.62	25.9	22.97	24.81	26.48	27.27
2nd Lower Division	43.99	54.27	57.55	52.65	48.15	43.55	41.44
2nd Upper Division	8.59	16.38	13.31	22.97	23.33	25.09	24.87
1st Class	0.34	0	0.72	0.71	2.59	2.79	1.6

Figure 1- Foso College of Education Graduation Statistics (2009/2010 to 2016/2017)

Source: Foso College of Education

Another area of interest in the statistics of the graduates of Colleges of Education, citing Foso College of Education as an example for the academic years spanning 2009/2010 to 2016/2017 is the gender differences in the final performance of graduates. Figure 2 and Appendix B present the details of the differences based on gender.



	M	F	M	F	M	F	M	F	M	F	M	F	M	F
	2009/10		2010/11		2011/12		2013/14		2014/15		2015/16		2016/17	
1st Class	0.53	0	0	0	1.12	0	1.04	0	3.37	1.09	3.41	1.8	1.63	1.55
2nd Upper Division	11.23	3.85	20.73	8	17.98	5	26.04	16.48	29.78	10.87	32.95	12.61	25.31	24.03
2nd Lower Division	49.73	33.65	59.59	44	62.92	48	51.04	56.04	45.51	53.26	41.48	46.85	43.67	37.21
3rd Class	31.55	51.92	18.13	43	16.85	42	21.88	25.27	20.79	32.61	21.59	34.23	24.9	31.78
Pass	6.95	10.58	1.55	5	1.12	5	0	2.2	0.56	2.17	0.57	4.5	4.49	5.43

Figure 2- Foso College of Education Graduation Statistics based on gender (2009/2010 to 2016/2017)
Source: Foso College of Education

Figure 2 indicates that from 2009/2010 to 2016/2017 academic years, more males than females consistently graduated with 1st Class or 2nd Class Lower Division. No female graduated with a 1st Class from the 2009/2010 to the 2013/2014 academic years. Interestingly, more females than males obtained 2nd Class Upper Division from 2013/2014 to 2015/2016 academic years. However, from 2009/2010 to 2016/2017 academic years, more females than males graduated with either a 3rd Class or a Pass. It can be concluded therefore that generally, more males than females obtain Classes higher than the 3rd Class category. The various classifications are: 1st Class, 2nd Class Upper Division, 2nd Class Lower Division, 3rd Class, Pass, and Fail, with 2nd Class Lower Division being the average category. The outcome of the analyses of Figures 1 and 2 motivated me to find out what factors could

possibly be responsible for this trend of affairs in connection with the graduate output and their corresponding classification over the years.

Even though there are indications of positive influence of self-efficacy, self-esteem, and locus of control on academic achievement, several studies looking into the impact of these constructs (self-efficacy, locus of control, and self-esteem) showed some inconsistencies. For example, Boulter (2002) and Chemers, Hu, and Garcia (2001) discovered that self-esteem had a favourable effect on academic achievement but Aspinwall and Taylor (1992) reported that self-esteem did not show any effect on academic achievement. Aspinwall and Taylor were however, quick to explain that any effect that was shown by self-esteem on academic achievement was mediated by another variable.

With respect to the influence of self-efficacy on academic achievement, similar diverse views were also reported. For example, self-efficacy was reported to have a positive and significant correlation with academic achievement (Ogunmakin & Akomolafe, 2013; Downs, 2005). Contrary to these findings, other researchers including Saunders, Davis, William and Williams (2004) reported that even though self-efficacy was found to have a beneficial effect on academic achievement, the relationship was relatively small. On their part however, Reynolds and Weigand (2010) found no significant relationship between the two variables. Studies have revealed a favourable link between locus of control and academic accomplishment (Slagsvold & Sorenson, 2008; Weymer as cited in Uguak, Elias, Uli, & Suandi, 2007). Uguak et al. however, found slight inconsistencies in the results of over 40 studies that researched into the possible impact that locus of control has on students' academic achievement. They nevertheless

reported that majority of the studies indicated favourable correlation between internal locus of control and academic achievement. These findings together indicate some inconsistencies in the results creating gaps to be addressed. Apart from the lack of clarity in terms of the findings of the previous studies, it was noticed that the studies examined the influence of each of the relevant variables namely, self-efficacy, locus of control, and self-esteem on students' academic achievement; however, it appears that the joint influence that these psychological variables have on academic achievement has not been investigated especially in the Ghanaian context.

In addition to the inconsistencies identified in the literature, there appears to be dearth of literature found on studies conducted on self-efficacy, locus of control, self-esteem and academic achievement in the Colleges of Education in Ghana. The absence of literature on this area of research in the at Ghanaian College of Education suggests that there seems to be minimal study conducted in Colleges of Education. Considering the essential nature of self-efficacy, locus of control and self-esteem as far as the development and academic achievement of learners are concerned, it is worthwhile to investigate the individual and combined influences they have on student academic achievement in Colleges of Education in Ghana. This will help them to develop confidence and believe in themselves to be able to achieve on their academic work.

On the issue of gender and school type, reference is made to studies by Tenaw (2013) who found that students' academic achievement differs depending on their self-efficacy levels. Abugaroo (2013) discovered that male and female students' self-esteem influenced their academic achievement.

These results are not different from that of Wuviadzi (2014) who found that females' performance in academic work was better than that of males at about the same level of locus control even though the difference in their academic achievement was not significant. The aforementioned suggest that the relationships that self-esteem, self-efficacy, and locus of control have with academic achievement can be strengthened or weakened by gender.

Studies by Salomone (2003), Guarisco (2010), and McGruder and James (2002) revealed that students who are trained in single-sex schools develop stronger self-esteem, self-efficacy, and locus of control when compared with those in mixed sex schools. Once these different environments account for varying levels of self-esteem, self-efficacy, and locus of control, then there is the possibility that the relationships of each of the three mentioned and academic achievement could be contingent on school type. This study therefore moderates school type and gender in the association between self-esteem, self-efficacy, and locus of control and academic achievement.

Purpose of the Study

The general purpose of the study was to investigate the influence of self-efficacy, locus of control, and self-esteem on academic achievement of students in Colleges of Education in Ghana. Specifically, the researcher sought to determine:

1. The level of self-efficacy among students in Colleges of Education.
2. The level of locus of control among students in Colleges of Education.
3. The level of self-esteem among students in Colleges of Education.

The study further sought to determine whether:

4. (a) Self-efficacy, (b) locus of control, (c) self-esteem will influence academic achievement of students in Colleges of Education.
5. There are gender differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in Colleges of Education.
6. There are differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in mixed and single sex Colleges of Education.
7. Gender will moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.
8. Gender will moderate the influence of self-esteem on academic achievement of students in Colleges of Education.
9. Gender will moderate the influence of locus of control on academic achievement of students in Colleges of Education.
10. Type of College will moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.
11. Type of College will moderate the influence of self-esteem on academic achievement of students in Colleges of Education.
12. Type of College will moderate the influence of locus of control on academic achievement of students in Colleges of Education

Research Questions

The following research questions guided the study:

1. What is the level of self-efficacy among students in Colleges of Education?
2. What is the locus of control among students in Colleges of Education?

3. What is the level of self-esteem among students in Colleges of Education?
4. What are the influences of (a) self-efficacy, (b) locus of control, (c) self-esteem on the academic achievement among students in Colleges of Education?

Hypotheses

1. H_o: There are no significant gender differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in Colleges of Education.

   H_A: There are significant gender differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in Colleges of Education.

2. H_o: There are no significant differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in mixed and single sex Colleges of Education.

   H_A: There are significant differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in mixed and single sex Colleges of Education.

3. H_o: Gender will not significantly moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

   H_A: Gender will significantly moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

4. H_o: Gender will not significantly moderate the influence of self-esteem on academic achievement of students in Colleges of Education.

H_A: Gender will significantly moderate the influence of self-esteem on academic achievement of students in Colleges of Education.

5. H_o: Gender will not significantly moderate the influence of locus of control on academic achievement of students in Colleges of Education.

   H_A: Gender will significantly moderate the influence of locus of control on academic achievement of students in Colleges of Education.

6. H_o: Type of College will not significantly moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

   H_A: Type of College will significantly moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

7. H_o: Type of College will not significantly moderate the influence of self-esteem on academic achievement of students in Colleges of Education.

   H_A: Type of College will significantly moderate the influence of self-esteem on academic achievement of students in Colleges of Education.

8. H_o: Type of College will not significantly moderate the influence of locus of control on academic achievement of students in Colleges of Education.

   H_A: Type of College will significantly moderate the influence of locus of control on academic achievement of students in Colleges of Education.

Significance of the Study

Findings from this study inform educational psychologists to design learning strategies to help students improve their college work or learning outcomes. Moreover, considering the results obtained from the study, educational psychologists can design appropriate behaviour modification techniques to help student-teachers who have low self-esteem and high self-efficacy, as well as those who have difficulty in taking personal initiatives.

This study is important to Educational psychologists and the management of the Colleges of Education in Ghana because it provides clarity on the influence that self-efficacy, locus of control, and self-esteem have on student-teachers' academic success with respect to the roles that gender and type of college play. With this, the educational psychologists and the management of the colleges would be able to design and employ specific interventions or techniques to use for male and female students, as well as students in mixed sex colleges and those in single-sex colleges.

Findings provide the necessary information needed by the College of Education students on the need to develop confidence in themselves and believe in their abilities so that their academic work can be improved. The findings of this study add to existing literature. While acknowledging that previous studies have not looked at self-esteem, self-efficacy, and locus of control jointly in a single study, findings of this study contributes in that regard. Also, the use of gender and school type as moderators are unique within the context of factors that affect college students' academic achievement.

Delimitation

This research work primarily focused on students in only public Colleges of Education in Ghana. The study was delimited to only Level 200 College of Education student-teachers who were pursuing Diploma in Basic Education programme. The measure of academic achievement was delimited to students' cumulative average in five core courses, namely, English Language, Ghanaian Language, Education Studies, Information and Communication Technology, and HIV AIDS Education. Furthermore, only gender and type of college (single sex or mixed) were examined as variables that could possibly determine the strength, weakness, or direction of the influence of self-efficacy, locus of control, and self-esteem on student-teachers' academic successes but not type of programme that the student-teachers were reading in college and their socio-economic background.

Limitations

The self-report nature of the questionnaire was likely to negatively affect the results because of subjectivity.

Definition of Terms

Academic achievement: performance outcomes that indicate the student-teachers' academic cumulative grade point average (CGPA) based on their first four semester examination results in their core courses. The core courses include English Language, Education Studies, Ghanaian Language, Information and Communication Technology, and HIV AIDS Education.

Gender: the biological state of being a male or a female.

Locus of control refers to where an individual believes the events in his or her life reside.

Internal locus of control: belief that whether individuals fail or succeed in life is dependent on their own actions, abilities and efforts.

Internals: individuals who believe that whether they fail or succeed in life is dependent on their own actions, abilities and efforts

External locus of control: individuals' belief that their successes or failures are determined by others, chance, or fate.

Externals: those who have the perception that they do not have control over successes or failures in their lives.

Self-efficacy: individuals' beliefs about what they are capable of doing and how they can successfully complete set goals.

Self-esteem: the totality of how a person values himself or herself.

Type of College: either single sex type of college or mixed sex type of college.

Single Sex College: colleges where only male or only female students attend or learn within separate schools.

Mixed Sex College: the kind of college environment where both male and female students learn together in the same classroom or learning environment.

Student-teachers: learners who are studying in Colleges of Education to be trained as professional teachers.

Organisation of the Study

The study was organised in five chapters. Chapter one discussed the introduction which comprise the background to the study, statement of the

problem, purpose of the study, research question and hypotheses, significance of the study, delimitation, limitations, and definition of terms. Chapter two looked at the review of related literature. It addressed the theoretical framework, empirical review, and conceptual framework of the study.

Chapter three dealt with research methods. It described the research design, study area, the population, and sample and sampling procedures, data collection instruments, data collection procedure, and data processing and analyses. Chapter four looked at the results and discussions, whereas chapter five dealt with the summary, conclusions and recommendations.

CHAPTER TWO

LITERATURE REVIEW

The review of related literature is organised under, theoretical framework, conceptual review, empirical review and conceptual framework.

Theoretical Framework

Related Literature was reviewed on the following relevant theories;

Self-efficacy Theory (Bandura, 1977)

Self-esteem Theory (Rosenberg, 1990)

Locus of control Theory **(**Rotter, 1966)

Self-efficacy Theory (Bandura, 1977)

Bandura's (1977) self-efficacy theory was born out of his Social cognitive theory. The Self-efficacy theory states that the beliefs people hold about what they are capable of producing affect their lives. The self-efficacy theory asserts that efficacy expectations determine approach behaviours and physiological arousal as numerous other clinically important behaviours. The theory is fundamental to the social cognitive theory. The social cognitive theory stresses that self-efficacy develops from experiences with one's environment (Bandura, 1989). Self-efficacy influences the choices that people make, and this includes the kind of effort they exert to achieve set goals and how much they persist when they encounter difficulties. The theory proposes that when people believe that they can complete a task, they are motivated to work harder at the task, and are rewarded which is worth the effort they put in

(Stephan & Timothy, 2013). According to Bandura self-efficacy is the confidence individuals have in their ability to bring pieces together and implement an activity to solve a problem.

In the theory of self-efficacy, the change that occurs in the individual's behaviour is manifested in efficacy expectations and outcome expectations (Schunk, 2009). Expectations for success are outcome expectations. These are beliefs that some behaviours are sure to end in certain consequences. Efficacy expectations deal with the situation whereby an individual desires to accomplish a task and attain a certain goal. According to Bandura, as cited in Santrock (2003), an important personal factor in learning is the desire to master and achieve a set goal. Bandura further pointed out that researches conducted indicate that for a greater part of the time children who have high self-efficacy demonstrate more competency in many other areas and perform better in school than those who are low on self-efficacy. This assertion is supported by Ormrod (2008), who postulated that when individuals have high self-efficacy in a specific domain they usually set higher goals for themselves. Ormrod stresses that such individuals also have the tendency to put in more effort in the activities they engage in and will surely continue even when they encounter problems.

The fundamental idea that drives the self-efficacy theory is that individuals would rather participate in activities for which they strongly believe they can accomplish than in those that they are not sure of (Ormrod, 2008). When people achieve goals that they value they become satisfied, and they are motivated to continue to work harder for achievement and consequent satisfaction (Bandura, 1977). Thus, once set or valued goals are achieved,

individuals with high self-efficacy may continue to press harder, because they are usually not satisfied with sub-standard performance (Bandura). The kind of self-efficacy that is related to task goal-setting helps to increase the kind of determination the performer has to complete the task ahead no matter how difficult that may be, and this perseverance will consequently increase the possibility that the tasks will surely be accomplished (Barling & Beattie, 1983).

Bandura (1977) has opined that individuals can evaluate their efficacy level and also acquire competences through mastery experiences, vicarious experiences, persuasion, and physiological feedback. Bandura explained further that in order to develop a strong self-efficacy, the process of mastery experiences or performance outcomes (performance accomplishments) should be adopted. Mastery experiences refer to successes or failures experienced in the past. It is believed that if an individual has previously executed a task very well, he or she possibly will feel they are capable of and have the courage and confidence to accomplish other similar tasks well. This is described as a positive experience. If on the other hand individuals were not able to accomplish given tasks, they will experience failures and their self-efficacy will reduce, but if they are able to convince themselves that they can accomplish the tasks, that conviction can increase their self-motivated persistence for them to see the situations as achievable challenges. It can therefore be deduced that individuals' level of self-efficacy strengthens after successfully performing tasks given them but their levels of self-efficacy will be weakened when they are not able to effectively handle a goal they set for themselves.

Vicarious experiences or social modelling occurs when an individual, for example, 'Kofi' watches another, 'Kojo', in a position which is similar to that of his ('Kofi's position), successfully completes a task, and Kofi compares his own competence with Kojo's competence. If Kofi sees Kojo succeeds, it increases his (Kofi's) self-efficacy but if he sees Kojo fails it lowers his (Kofi's) self-efficacy. Consequently, Bandura believes that as individuals see people who are similar to themselves succeed in performing activities through perseverance, they are also encouraged to dwell on the fact that if their mates can do it then they too can do whatever they set out to do hence increasing their self-efficacy (Bandura, 1977). Vicarious experiences or social modelling is experienced as, 'If they can do it, I can do it as well'.

Nevertheless, the concept of vicarious experiences in the Self-Efficacy Theory can be contended on grounds of the principle of exercise, which holds that, when habits are repeated their strengths are increased hence practice makes perfect (Wunpini, 2015). Thus, the more a student or learner continuously studies a subject and also, continuously engages in the practical aspects of a subject, the more likely his or her performance will improve. The principle of exercise is embedded in Thorndike's Theory of Reinforcement. It considers motivation and reinforcement as agents of habit formation. It adds that once a behaviour is reinforced it becomes habitual and positive reinforcement also tends to escalate the likelihood that responses will be repeated (Wambu & Fisher, 2015). In a nutshell, going by the declaration of Wunpini (2015) and Wambu and Fisher (2015), the principle of exercise reminds us that it is good to learn by practicing or repeating things to aid

remembering. The writers however argue that practice leads to improvement only when it is followed by positive feedback.

Bashir and Mattoo (2012) nevertheless argue that the principle of exercise can only thrive under the principle of readiness. Still in line with Thorndike's Theory of Reinforcement, the principle of readiness holds that individuals learn best when they have the appropriate mind set which is an important element in learning. Learners should thus be emotionally, mentally, and physically ready to learn (Bashir & Mattoo) for a smooth take-off. The writers add that it is the teacher or instructor's duty to prepare the student for the learning activity in order to get them ready to learn. The instructor also has to ensure that the learners understand and appreciate the worth of what they are about to learn to make them become interested in the subject matter. In addition, it is the responsibility of the instructor to provide the learners with a continuous mental or physical task for more constructive practice. Thus, when students have a clear objective to accomplish and a positive reason to learn something beneficial to them, they progress rapidly and are encouraged to continuously study and practice a subject, than when they are not motivated (Bashir & Mattoo). Bandura explains in his Social Learning Theory that learners need to be self-efficacious but being efficacious alone is not enough. This is because, though they may believe in their abilities to succeed in their ventures, they must also be polished or enhanced by verbal interactions and observations (Bandura, 1997).

Verbal or social persuasion influences self-efficacy by way of either encouraging or discouraging the individuals concerning their ability to perform. For example, if a student performs abysmally on a class test and the

teacher, rather than insulting the student and making him or her feel useless, tells him 'You can do better. I have confidence in you' the student is very likely to put in much effort which will lead him or her to succeed. If on the other hand the teacher yells at the student continuously describing him as dumb, useless, or good for nothing, it can lead to the learner having doubts about himself or herself, and this can result in reducing the likelihood of the learner to succeed. People could therefore be convinced or encouraged to have confidence in themselves that they have the necessary skills and competences to achieve their goals through verbal encouragement from others. This will help them to get over their insecurity and instead pay more attention to how best they can put in more effort to complete the set objectives.

This notwithstanding, it is worth noting that irrespective of verbal persuasion from another individual, it is always best for an individual or student to perceive himself or herself as being adequate, and also appraise his or her own level of competence in the process of learning (Wheeler & Ladd, 2012). In relation to the Social Learning Theory, this belief will enable an individual to be more confident in his or her abilities to succeed as compared to an individual who dwells on his or her perceived inadequacies and the difficulties of his or her situation (Lent & Hackett, 2017). Thus, in the midst of negative or adverse remarks from an individual 'A', it is very imperative for an individual 'B' to still be self-efficacious, believing that no matter how people may dissuade him or her from executing a task, he or she is well able to undertake and accomplish the task. Such an individual may simply view challenges as an opportunity to work hard and triumph over obstacles and failures, and also as an opportunity to learn from past mistakes and become a

better person. With such mind-set, an individual will succeed in the midst of adversities.

Physiological feedback or emotional arousal refers to the kind of feelings from individuals' bodies and how this excitement is perceived. These experiences, according to Bandura (1977), influence their beliefs of efficacy. The individual's emotional state, what he or she does engage in, and stress levels can influence the way people feel about their personal abilities in specific situations. Some examples of these sensations are what we experience when we find ourselves speaking to a large group of people. Other instances are what you feel when you are being supervised during teaching practice, making presentations at seminars, or even when taking an examination. When the individual is performing these tasks, he or she may be agitated, feel anxious, sweat in the palms, or have a racing heart (Redmond, 2010). This may happen because the individual performing the task may not be at ease with the task to be performed. If, however, the individual is comfortable with the task at hand he or she will feel that he/she has the capability and also has higher beliefs of self-efficacy, and will accomplish the task with no negative emotions.

Individuals will tackle challenges or tasks in a swift manner or lackadaisical manner depending on whether they have high or low self-efficacy. People whose self-efficacy levels are high considered challenging issues as tasks that need to be mastered rather than problems to be avoided (Williams & Williams, 2010). Such individuals, it has been argued, have a profound interest in their activities. They are also strongly committed to their activities and everything that interest them, and in addition they quickly get

over any frustrations or impediments because they know they do not have time to waste but must move on to accomplish set tasks (Santrock, 2003). On the contrarily, people with low self-efficacy try as much as possible to avoid challenging tasks, tend to see difficult tasks as situations above their control and so are not meant for them. They focus on the things or areas that they are not able to perform well in or on outcomes that are relatively negative rather than thinking about what went wrong and what they can do to rectify the situation. In addition, instead of persevering to succeed they tend to lose the confidence they have in their abilities to perform the task ahead of them.

According to Bandura (1993), self-efficacy beliefs contribute to positive academic outcomes. According to him, an increase in students' level of motivation and persistence helps them to master thought-provoking academic activities since they are encouraged to use the knowledge and skills they have acquired efficiently. Teachers are required to teach students both theory and practical aspects, teach them different methods of doing things, and also give them a lot of exercises to practice to build their self-efficacy which will in turn enhance their academic achievement. Self-efficacy reinforces the belief that people have in themselves. If a child is taught how to fish, he is most likely to fish for himself whenever he needs fish, but when he is always provided with fish, he (the child) will always wait for someone to bring him fish when he needs it. Teacher-trainees should therefore be encouraged to constantly remind themselves of their strengths and weaknesses. This will in effect encourage them to keep up their strengths, and also work on their weaknesses to help them build their self-efficacy to help improve on their academic achievement.

Therefore, as educators, if we want our student-teachers to develop the prerequisite skills and confidence to help them to achieve academically then we have to expose them to befitting role models, and encourage them to set achievable goals. We also need to use appropriate rewards and punishments to help the student-teachers to make the right decisions and in addition equip them with theoretical and practical skills that they will need to assist them to perform tasks on their own. Consequently, as they are being trained, student-teachers need to be handled by competent tutors who are capable of providing high quality instruction to enable them grasp the requisite confidence and teaching skills necessary for them in their chosen profession.

In view of the fact that individuals who believe they can perform on difficult tasks see such tasks as challenging activities that have to be mastered, student-teachers who have been helped to develop high self-efficacy will set goals that are thought-provoking and stay committed to achieving them. In the situation where they were not able to accomplish a task, individuals who are high on self-efficacy attribute their failures to deficient determination information and skills that can be acquired (Baard, Deci & Ryan, 2004). It is for this reason that Bandura (1977) suggested that tutors need to help their students to master experiences or performance outcomes, use social models to provide vicarious experiences, verbally persuade learners, and also provide physiological feedback. In the end students will develop skills and competencies from within, which will in turn lead to the development of self-efficacy. Student-teachers with high self-efficacy will try challenging tasks, and also use appropriate teaching strategies to help their pupils, but those with

low self-efficacy will not, that is why this study is important to ensure that tutors will encourage student-teachers to master their experiences.

The only hindrance for self-efficacious persons or students is limited financial resources. When the financial prowess of a student or person is limited, it will also limit that student's or person's capability to excel. For example, a student can possess and believe in his or her ability to succeed in Mathematics, but may not have the money to buy the books and other necessary study materials, to create an enabling environment for him or her to study and obtain a good grade in the subject. Thus, a combination of financial prowess and self-efficacy are sacrosanct for academic and personal success.

In relation to this study, it can be said that, a greater percent of College of Education (CoE) students who possess and develop high levels of self-efficacy may approach more difficult tasks relating to their academic work with a positive mind set. That is, such student-teachers may see challenging tasks as tasks that need to be mastered rather than problems to be avoided. This could eventually lead to an excellent academic achievement on the part of such students. This is because such students will be willing to exhibit a stronger sense of commitment towards achieving a particular goal that may seem challenging. When student-teachers have high self-efficacy, it implies that they have a positive judgement about their capabilities. With this mind-set, student-teachers are more likely to persevere and succeed in every task that is before them no matter the challenges that may come their way.

Self-Esteem Theory (Rosenberg, 1990)

The theory of self-esteem states that individuals are satisfied and add value to themselves if they set and accomplish goals. It has been explained as

an outcome, motive, and buffer. According to Rosenberg (1990), it is generally conceptualized as a part of the self-concept, and it basically comprises the overall positive self-evaluation of the individual. Self-esteem is equal to behaviour or success divided by our pretentions. Pretensions here refer to the goals we set, the values we uphold, and our beliefs concerning our potentials. For example, in the situation where individuals believe that they have high potentials and goals but end up having low achievements, they see themselves as failures who could not perform creditably as they expected of themselves. However, in the event when individuals realise that their successes exceed their expectations, they become so satisfied and this naturally increases their self-esteem levels.

Self-esteem which is seen as the value or worth that people attach to themselves begins to develop in early childhood (Rathus, 2010). As children grow, they interact with their environment and build an image of themselves through that interaction. As we interact with the people around us and get involved with others during our childhood, we tend to shape our basic self-esteem. As explained by Yaratan and Yucesoylu (2010), as individuals grew up, the successes they chalked, the failures they encountered, and how they were treated by their immediate and external family members and outsiders such as teachers all contributed in one way or the other to the formation of their self-esteem. If a person feels he or she is valued in the family or the school he or she will develop positive self-esteem (Pope, Myers, Kilmartin, Felck, & Kilewer, 1989), hence the need for teachers and care givers to ensure that children and learners are appreciated for their efforts.

Young children who are securely attached to their parents, treated with love, receive unconditional positive regard, and experience parental involvement in their lives usually develop high self-esteem, and they are also encouraged to become competent individuals (Rathus, 2010). If, however, the young child is not heard or even acknowledged as being real, is not shown any affection or supported by the parents, or not helped to set realistic goals for achievement, he or she may have lower self-esteem. Parents and care givers should therefore not impose unreachably high standards on children, or only praise or reward them when they accomplish given tasks. It is therefore not surprising to conclude that the family, school, and socio-economic status are the main contributing elements to the development of self-esteem.

Numale, Ohene, and Addison (2010), in trying to explain Maslow's Hierarchy of needs posited that self-esteem is among the necessary psychological needs to be met otherwise the individual who lacks this need will end up becoming defensive, anxious, depressed, and will find it difficult to maintain a relationship. This situation, according to Numale, Ohene, and Addison, will not urge the individual to strive for self-actualization.

Living consciously requires the individual to be mindful and practice being aware of what he or she is doing in the process of doing it (Branden, 1995). Practising self-acceptance means an individual accepting the self in relation to thoughts, emotions, and behaviours. It also means the individual basically and willingly accepts what he or she does, who he or she is by being kind toward himself or herself, and not being too hard on himself or herself but rather forgiving themselves for their unwanted behaviours. Being self-responsible is a practice of owning authorship of what one does or says,

emotional and intellectual existence, including accepting ownership of what one can do. Here, the individual is responsible for the situation in which he or she finds himself or herself at any given moment.

Self-esteem is an important personality trait in developing a healthy personality. The more negative thoughts and feelings an individual has about himself or herself, the lower the person's self-esteem, hence he or she does not have a strong confidence concerning his or her capabilities. They lack self-confidence to the extent that even if they happen to accomplish some tasks, they still feel that others can perform the same task better than them. If, however, individuals have positive thoughts and feelings about themselves they tend to have high self-esteem, become confident, accept themselves, recognize their limitations, and improve upon it. These qualities are related to good health and physical well-being (Nevid, 2009).

People usually see themselves as having high levels of self-esteem when they see themselves as satisfying certain ideals. On the other hand, when people realise that they have fallen short of some ideals, then they believe their self-esteem is low. The level of self-esteem in an individual is not always constant. It can be high at one moment and low at another moment. This usually happens when an individual who early on perceived himself or herself to have a high self-esteem later compares himself/herself with his or her peers, and upon realising that he or she is not satisfying some ideals his or her friends are satisfying, looks down on himself or herself and his or her self-esteem is lowered.

This notwithstanding, Lent and Hackett (2017) admonish in the Social Learning Theory that when an individual's self-esteem is curtailed in

challenging or trying moments, it is important for that individual to perceive challenges as opportunities for hard work and victory. It is also imperative for the individual to keep believing in his or her abilities to attain success, by simply learning from others who have succeeded (this is where the concept of vicarious experiences can be applicable), instead of demeaning or degrading himself or herself for being unable to achieve his or her goals (Lent & Hackett). In this case, healthy competitions can be encouraged for students to learn from others rather than using comparison, or allowing unhealthily competitions with others. Unhealthy competitions could rather breed envy, animosity and aversion for achievers whom an individual may feel they may have surpassed him or her.

Self-esteem can be enhanced by helping children to develop skills and competencies, adopt or set realist and achievable goals, make self-efficacy expectations better, contest the expectations of perfectionists, and challenge the need for constant endorsement (Nevid, 2009). The competencies should include skills and abilities that allow people to achieve their goals. In order to ensure that people can complete what they start, the goals they set should not be relatively too difficult to achieve.

Teacher educators should also use different teaching methodologies to teach their student-teachers and also teach them different teaching methodologies so that these student-teachers will know that there are different ways of doing things or solving issues. Tutors can help student-teachers for example, to accept themselves, be realistic, not just to settle for what is, believe in themselves, always get involved with worthwhile activities, and be proud of their accomplishment (Numale, Ohene, & Addison, 2010). This will

enable them to try different ways of doing things so that in case they are finding it difficult to accomplish a particular task using one method they will change the method and try new ones and this, I believe, will encourage them to work harder to succeed in their academic endeavours in order to boost their moral.

Self-efficacy is important when it comes to the development of self-worth because, for an individual to be successful in obtaining a desired goal he or she has to believe in what he or she can do to be able to work hard towards that (Bandura, 1989). When success is obtained, an individual is able to develop self-worth that will continuously motivate him or her to travel the road of success. Thus, self-worth becomes a veritable tool that can empower students to continuously study hard and obtain continuous academic success (Bandura, 1989).

This theory is very relevant in the context of this study because a students' self-esteem is very crucial for attaining success in his/her academic pursuit. That is to say, a student who possesses a high self-esteem can, to a large extent, perceive challenges in his/her academic journey as an opportunity to work extra harder in order to succeed. As a result, students with high self-esteem insist on believing in their abilities to attain success, by simply learning from others who have succeeded. Such students are less likely to look down on themselves as a result of their inability to achieve a particular goal. This trait of high self-esteem assists students to develop a healthy competition with their fellow students, with the readiness and willingness to learn from each other in order to achieve academic success. Self-esteem among student-teachers makes them have a strong belief about themselves. Student-teachers

who have high self-esteem see themselves as skilled enough to handle the basic challenges of life and deserve to be happy. Student-teachers must honour their wants, needs, and values and seek appropriate forms of expression in their reality. They must confront challenges of life, rather than avoid them, and also be kind and cooperate with others. Living purposefully requires the individual to set achievable goals and work out action plans to implement and achieve the set goals.

Locus of Control Theory (Rotter, 1966)

The theory of locus of control developed by Rotter (1966) was based on the proposition that individuals perform tasks differently depending on their beliefs that their desired goals will be achieved. The theory of locus of control states that individuals are either in control of everything that happens in their lives including their failures and successes, or these events in their lives are controlled by their environment. That is, whereas some believe that they are in control of failures and successes that they experience, others believe that their failures and successes are controlled by their environment. Locus of control (LoC) is the beliefs individuals' have about the major causes of actions in their lives, and about whether the results of what they do are dependent on what they do, or on events that they do not have any control over (Rotter, 1990). The theory deals with the perceived effect of what individuals themselves do, or influences from the environment such as luck or chance that they cannot do anything about (Moorhead & Griffin, 2004).

Locus of control (LoC), as explained further by Rotter (1990), is an attribution theory which is described as how much control individuals have over what happens in their lives. It is also viewed as those causes that

individuals attribute their successes and failures to. Different people have different attribution styles and that if individual 'A' believes that his or her behaviour in terms of failures and successes are controlled by fate and another individual 'B' believes his or hers are due to working hard for instance, their goal setting behaviours will be different from one another in how much effort they will put in to achieve those goals.

According to this theory, individuals may either attribute what happens to them to what they themselves do or to factors in their environment that they cannot control. An attribution is a personal explanation or inference that individuals make concerning the causes of behaviours or dealings in their lives, (Weiten, 2010; Nevid, 2009). Weiten (2010) as well as Nevid (2009), believe that events are usually explained by attributing causes which can either be internal or external. These causes include internal traits, needs, individual's personal choices, or external causes such as demands from powerful others such as parents, teachers, peers, chance, or luck.

Rotter (1990) alleged that human behaviour is guided by reinforcement. That is people believe that the causes of their actions are influenced by the contingencies of reinforcement. The focus of locus of control is how much individuals believe that internal factors that they have control over, rather than external factors that they have no control over determine what happens in their lives (Kang, Chang, Chen, & Greenberger, 2015). From Rotter's perspective, this degree of control may come from within the individual or from an external source. An individual may perceive that the events of his or her life happen based on his or her own behaviour or his or her own characteristics, or on internal factors such as what they can do,

the skills they have or the amount of effort they put in. Such individuals are said to be in control of themselves, and are referred to as internals.

Individuals with internal locus of control dwell on the belief that their abilities or what they fail to accomplish are the result of their own actions or inactions and so do not blame anyone or anything for their successes or failures. Such internally controlled individuals are able to control their lives which is why they are described as internally controlled (Rotter, 1990). On the contrary, when individuals believe that their successes or failures are the results of external influences such as chance, luck, or fate, such people are labelled as externally controlled and they hold a belief in external locus of control (ELoC) (Rotter, 1990). Such people do not believe that they have control over themselves but rather fate, luck, chance or powerful others are responsible for their consequences. Internally controlled individuals are responsible for their actions and are proud when they succeed. Internally controlled individuals are usually motivated to achieve academically because they are confident, resilient, have a sense of security and a positive outlook, and do not genuinely need support from an authority (Santrock, 2003).

Rotter (1990) in his study suggested that externals have four types of beliefs over where the outcomes of the actions in their lives reside. These are: fate, powerful other, chance, or luck. Such individuals never accept the blame for their failures. People have different goal setting behaviours and in the same way they extend different amount of efforts toward achieving the goals that they set for themselves. This however depends on whether they are internally oriented or externally oriented locus of control individuals. It is therefore important to ensure that the individual develops the appropriate type of locus

of control to be able to set a goal and make the effort to achieve it without blaming others for their successes or failures. Knowing the effect of locus of control on the students' academic achievement will help educators to provide the learners with the conducive environment and the kind of help necessary to motivate them. This is essential because an individual's ability to move on successfully in life greatly depends on what he or she thinks controls his or her successes or failures.

Internally oriented locus of control individuals need to be motivated to prepare well to face any task ahead of them. This is meant to help them to succeed, but if they do not prepare well and they fail their spirits will be dampened. On the other hand, externally oriented individuals need counselling and sensitization to help them cope with the realities of the world.

It is rather appropriate for every individual to regard life's circumstances as being governed by both internal and external locus of control and just not either of the two (Ashton & Webb, 2014). This is because there are some circumstances in the life of every individual that are either internally motivated or externally motivated. The writers for example explain that personal factors, which are examples of internal locus of control, are personal beliefs that govern high achieving students to impact themselves and their behaviour.

Conversely, environmental factors, which are examples of external locus of control indicators, are factors that low achieving students for example, find around themselves that influence them and their behaviour (Ashton & Webb, 2014). For instance, a student might be governed by internal locus of control to sit in and pass an exam because he or she is brilliant and

hardworking. However, the same brilliant and hardworking student might be limited by external locus of control to sit in and pass an exam because he or she is financially handicapped through no fault of his or her, to register for the exam. A student might also be influenced by internal locus of control to pass an exam because he or she is determined and simultaneously, might be influenced by external locus of control to pass an exam because of family expectations. Inferably, Ashton and Webb posit that every individual at least possesses some traits of internal locus of control and some traits of external locus of control, though one form of these controls will dominate or supersede the other in every individual.

The theory is relevant to this research work because it enlightens researchers and readers on locus of control, as a construct. With this understanding, such individuals are able to appreciate why some other individuals behave in the way they do, or why learners should be assisted to improve on their locus of control. Similarly, pupils with high level of internal locus of control are more inclined to accept responsibilities for their actions and inactions, according to this research. That is, students who have strong internal locus of control are less likely to attribute negative events that happen in the lives as students to external factors. Such students will rather accept and analyse such negative events that pop up in their lives as students and also endeavour to find solutions to them. For instance, a student who possesses high level of internal locus of control is more likely to find a solution to his/her poor performance in a mathematics test by studying harder and seeking assistance from friends who are good at mathematics, rather than attributing his/her failure to a mathematics tutor's teaching methodology.

Conceptual Review

Self-Efficacy

Self-efficacy has further been explained as how best people can effectively perform skills to achieve set goals (Ormond, 2008); the beliefs in relation to how individuals can successfully complete tasks or goals (Locke & Latham, 2002); or the belief in an individual's ability to accomplish tasks he or she sets out to do (Nevid, 2009). All these definitions have some common elements - belief in accomplishing set goals.

The belief that people have about what they are capable of doing contributes to how they feel or how they perceive or motivate themselves. With respect to feelings, it has been established that people who generally have low self-efficacy can also be diagnosed with depression, and anxiety, which can mostly cause low self-esteem (Nevid, 2009). Generally, when individuals develop low self-efficacy, they are said to have the tendency of harbouring doubtful thoughts about themselves in terms of what they can accomplish and their personal development. With regards to thinking, having a strong sense of competence can facilitate individuals' thought processes and academic achievement.

Whether we have high self-efficacy or low self-efficacy can boost or impede our motivation to do certain things (Nevid, 2009). If for example, someone has high self-efficacy, the person can set goals that challenge him or her to go the extra mile to ensure completion of the task. But in case they fail in an attempt to accomplish such tasks they quickly recover their senses of efficacy (Nevid, 2009). Basically, people will more often prefer to attempt only the tasks which they are sure that they can accomplish at all cost and

forget about tasks that they do not think they can finish. Self-efficacy is a psychological buffer to stress (Nevid, 2009). People whose self-efficacy levels are high consider stressful situations as tests that need to be taken care of than difficulties that they should overcome. People with high levels of self-efficacy usually are self-confident, and this leads them to tackle stressors such as final exams, unemployment, serious illness, relocation, financial hardships, marital issues, and they persevere hence their ability to lessen their impact on the self (Nevid, 2009).

Self-efficacy differs in strength, generality, and magnitude (Lunenburg, 2011; Zimmerman, 2000). Strength refers to how much individuals are convinced about performing an activity successfully at varied levels of difficulty in spite of difficulties. For example, 'am I confident enough to excel at my tasks?' Or 'am I sure I am capable of being a good leader?' Generality refers to one's ability to transfer perceptions of self-efficacy from one subject matter to the other. It can also be explained as the degree to which what someone is expecting can be generalized throughout other related circumstances. For instance, 'am I certain that I can apply what I have learned to my new responsibilities?' Level or magnitude measures the difficulty level of task. That is whether the task is easy, moderate, or difficult and how much effort an individual requires to perform the said task.

Individuals' self-efficacy can be increased by encouraging them to build upon successful experiences, observing peers' successes, providing them with specific positive feedback, and encouraging them to engage in psychological skills training (Bandura, 1977). Previous performance strongly affects self-efficacy that is why educators are encouraged to create enabling

situations to eventually ensure successful experiences for learners. This can be achieved when difficult and complex skills are broken down into simpler and specific but challenging ones which nevertheless are also not beyond the capability of the learner. Later more complete complex skills and challenging but not overwhelming are introduced. These step-by-step activities allow the learner to have successful experiences which increase self-efficacy. Making prospective learners observe peers' successes can increase self-efficacy but more importantly, the learner also has to believe that he or she has the ability to copy what he or she is observing. For example, if the learners observe friends who have similar abilities like themselves engaging in skills like drawing for instance, they may be confident and believe in their own abilities to copy those techniques.

It is equally important to verbally persuade individuals by giving them specific feedback in relation to their previous performances in order to increase their self-efficacy. This can be done either in combination with the methods mentioned earlier or in isolation. It serves as a source of reminder that the learner has successfully succeeded earlier on a similar task and that with a little more determination, he or she can make it. Another way of helping people to build their self-efficacy is to help them maintain their optimum level of physiological concentration to perform a skill being learned successfully. People can be helped to build their self-efficacy for example, by teaching them basic relaxation techniques and the practice of self-talking. Relaxation techniques help to decrease intensity levels of stress and manages physiological intensity, and self-talk also helps to decrease or increase physiological levels as and when it becomes necessary.

Beck (2008) however sees self-efficacy as not necessarily being a general feeling of self-worth but rather, as a judgment of specific capabilities. By extension, it is possible for a student to have a low self-efficacy for helping a course mate to be able to construct angles in a Mathematics lesson however, this will not lead to eventual undesirable perception of self-respect.

Even though self-efficacy and self-esteem are two different concepts, they are still related in one way or the other. For example, Bandura's Triadic Reciprocal Determination maintains that factors that influence motivation depend on each other, interact with each other, and also influence one another (Bandura, 1997). It is for this reason that it is thought that when learners have high self-efficacy and as a result tend to succeed in majority of the task they embark on, they are likely to develop high self-esteem and vice versa. Teachers should therefore equip learners with the necessary skills and competencies which include learning skills, and examination taking skills.

Self-Esteem

Self-esteem is a personal judgment of the worthiness (Coopersmith, 1967). Coopersmith defined it as a feeling of self-respect, self-regard, and self-admiration. On the other hand, Van Dinther, Dochy, and Segers (2011) referred to self-esteem as the way individuals value themselves, see themselves as being worthy, approve of and like themselves. In short, self-esteem is the total amount of a person's feelings about himself or herself as to whether he or she is good, competent and or decent. This includes how people accept the way they are, how they approve of themselves, and the self-respect they develop towards the self. These are demonstrated by personal recognition

of what individuals can do, what they have achieved and how they acknowledge and accept their limitations.

High self-esteem gives people confidence to feel that they can overcome the difficulties of life (Rathus, 2010), so they keep on trying harder in spite of weaknesses they may encounter. Even though high esteemed individuals are aware of their personal flaws, they, according to Sciangula and Morry (2009) are confident, value their lives and respect themselves, whereas those who are low on self-esteem succumb to their perceived weaknesses, feel inadequate, unworthy, and a deficient. When individuals with high self-esteem are faced with negative life events, they do not experience so much emotional distress as compared to counterparts with low-esteem. Data collected about rural adolescents and young adults by Weber, Puskar, and Ren (2010) reported that depressive symptoms strongly correlate with low self-esteem, while optimism correlates with high self-esteem.

Self-esteem, according to Ramsdal (2008), is composed of social worth which is laced with a feeling of personal efficacy and power. Social worth goes together with a feeling of personal efficacy which individuals carve for themselves. Self-esteem is the ability to distinguish between direct and indirect measures of positive self-image. Direct self-esteem which is also explained as explicit self-esteem is the oldest way by which individuals measure their feelings about themselves. This has however been criticized based on the argument that it considers social awareness too much, besides reports obtained on this measure are usually inaccurate (Lebel, 2010). Indirect self-esteem which is also known as implicit self-esteem (ISE) is seen as a rather effective measure of these inside feelings because it uses self-analysis to

discriminate between the actual and ideal self (Lebel). The feelings of individuals' self-competence increase if they assess their goals and find out that they have achieved relevant goals, however if after assessing their goals individuals realise that they have not achieved their self-competence decreases, and such individuals are likely to be anxious or depressed (Ramsdal, 2008).

Branden (1995) defined self-esteem as how individuals see themselves as skilled enough to handle the basic challenges of life and deserving to be happy. According to him even though self-esteem can be nurtured and supported by parents, teachers, and friends, it also relies upon various internally generated practices which he describes as the six "pillars" of self-esteem. These six pillars, according to Branden, are: the practices of living consciously, accepting the self, being self-responsible, being assertive, practicing purposive living, and practicing personal integrity.

Another pillar of self-esteem is self-assertiveness. It is the process whereby an individual treats his needs and interests with respect and expresses them in an appropriate way. For example, the individual must honour his or her wants, needs, and values and seek appropriate forms of expression in his or her reality. He or she must confront challenges of life, rather than avoid them, and be kind and cooperate with others. Living purposefully requires the individual to set achievable goals and work out action plans to implement and achieve the set goals. Personal integrity, according to (Branden, 1995), is the practice whereby people keep an orientation between their behaviours and convictions. In other words, it is the act of matching one's ideals and standards.

Locus of Control

As indicated by Wallace, Barry, Zeigler-Hill, and Green (2012), some people believe that the results of their actions depend on their personal characteristics as against others' expectations that outcomes of their acts are either dependent on chance, luck, fate, or on powerful others. Individuals attach different meanings to the behaviours they put up or the behaviours of others, and therefore, place themselves on qualitatively different developmental paths (Molden & Dweck, 2006).

The locus of control construct has influenced research and theory related to motivation, expectations, self-esteem, and risk-taking behaviour (McCombs, 1991). From the perspective of Krampen (1998), developing internal locus of control comes about from being consistently disciplined, reinforcement of positive behaviours, and balanced autonomy. Individuals with internal locus of control orientation believe that they themselves control their own activities and abilities, and their outputs are contingent upon their own personal performance. Such people hold themselves responsible for their actions which include what they succeed in doing or even if they fail to accomplish their targets.

Internal locus of control individuals believe that every action has its consequence, and that is why they believe that it is up to them to decide if they want to have control over things that happen or not. They also believe that if they work hard, they would be successful. Internal individuals feel proud when they succeed in achieving a goal but, they feel guilty and ashamed when they fail to accomplish a set goal. Such failures are damaging to the ego.

Externally controlled individuals blame circumstances from the environment for results in their lives. These environmental factors include fate, chance, luck, and powerful others such as teachers, parents, peers. They are usually referred to as externals. Externals think that they cannot do anything about the things that happen in their lives because they think that external factors beyond their control are responsible for these actions.

Empirical Review

The empirical review focused on the following subheadings: influence of self-efficacy, self-esteem, and locus of control on academic achievement; relationship between gender and self-efficacy, self-esteem, locus of control, and academic achievement; relationship between type of college and self-efficacy, self-esteem, locus of control, and academic achievement.

Self-efficacy and Academic Achievement

Several studies have investigated the effect of self-efficacy on, or its associations with academic achievement (Covington, 2000; Zajacova, Lynch & Espenshade, 2005; Adeoye, 2008; Adeoye & Emeke, 2010). Some of these studies have found for example that, self-efficacy is one of the important predictors of academic achievement of college students (Mathur, 2014). Self-efficacy is associated to academic achievement, motivation and persistence in pursuing academic pursuits since people try to work on task that they believe they can successfully accomplish (Lunenburg, 2011).

In addition to academic achievement, self-efficacy predicts outcomes such as social skills, pain tolerance, career choices, assertiveness, coping with feared events, recovery from heart attack (Santrock, 2003). Most research conducted on self-efficacy and academic achievement concluded that self-

efficacy can help predict and influence academic achievement (Klassen, Krawchuk, & Rajani, 2008; Pintrich, 2000; Zajacova, Lynch & Espenshade, 2005; Zimmerman, 2000). Self-efficacy is also deemed important in the life of student-teachers because, according to Akram and Ghazanfar (2014) it influences the activities selected by students, the effort they put forward, how they persevere in difficulties, and the difficulty level of the goals they set.

Students display different attitudes in learning depending on whether they have low or high level of self-efficacy orientation. For example, study conducted by Abu-Tineh, Khasawneh, and Khalaileh (2011) showed that students with low self-efficacy can easily commit discipline problems at school, and may consequently have minimal time for their studies.

Zajacova, Lynch, and Espenshade (2005) explored the impact of academic self-efficacy on academic performance and found that academic self-efficacy steadily predicts academic success than stress. Salami (2010), explored how emotional intelligence, self-efficacy, and psychological well-being affect students'academic behaviours and attitudes. The study indicated that students with strong self-efficacy and emotional intelligence actively participate in academic pursuits.

In his study on enhancing self-efficacy and learning performance, Jackson (2002), predicted that self-efficacy would be significantly related to exam scores. On their part, Patrick and Zhenxing (2016), explored the relation among self-efficacy, learning approaches, and academic achievement. They concluded that their findings reaffirmed the social cognitive theory concerning the relation among self-efficacy, outcome expectations, and goals which (Bandura, 1977) proposed. Al-Kfaween (2010) also conducted a study on Self-

efficacy among 364 University students (173 females and 191 males) and found a relationship between their self-efficacy and the students' area of specialization.

Research has reported that students who are intellectually gifted have higher self-efficacy than students in the mainstream. Bandura (as cited in Pajares, 1996) stated that, beliefs that students have about abilities to accomplish their set tasks successfully, strongly predicted their capability to complete such tasks. It seems therefore that, children who are intellectually gifted are strongly motivated to confidently accomplish a task. Fenning and May (2013) reported a significant positive correlation between self-efficacy and students' grade point average. When students have such confidence and capability with academic work their self-confidence will increase. They will be intrinsically motivated and be moved to work towards greater achievement. Clickenbeard (2012) has indicated that if students can maintain high levels of self-efficacy, they must be convinced that they have the necessary skills and talent required for any specific task.

As the literature has reported a positive significant relationship between self-efficacy and academic achievement, it is imperative that the school system designs programmes and activities and also implement lessons that will toughen students' confidence in order to help improve their academics. Bandura (2002, p. 270) was emphatic that, "factors that serve as motivators are rooted in the core belief that one has the power to produce desired effects by one's actions, otherwise one has little incentive to act or to persevere in the face of difficulties".

It is likely that students who are above average are confident in their goal determination. Siegle and McCoach (2007) reported that since it is relatively easy to evaluate the development of tasks that deal with specific performance standards, such goals tend to increase self-efficacy than general goals which cannot be measured easily. Tutors and mentors are therefore encouraged to educate learners to set specific goals in order for them to be able to evaluate their achievement and be able to monitor such individual academic achievement. The level of students' self-efficacy influences their academic goals. This is supported by Bandura, Barbaranelli, Caprara, and Pastorelli (1996), who argued that individuals with strong self-efficacy have higher ambitions, and for such people, the stronger their self-efficacy, the more committed they are to the goals they set.

Furthermore, the level of the self-efficacy of individuals determines the future objectives they set for themselves and the nature of the decisions they make. For example, Bandura, Barbaranelli, Caprara, and Pastorelli (2001) opined that individuals, who have higher perceived efficacy to achieve educational desires and occupational roles, consider pursuing wider career options, prepare themselves very well with requisite information to satisfy diverse occupational careers, and pursue more challenging careers.

Downs (2005) conducted a study to determine if self-efficacy influenced Native American high school students' academic progress. The result from the study indicated a significant and favourable link between self-efficacy and academic success. Similarly, Pintrich (2000), Zimmerman (2000), and Asante (2013) each found a significant and favourable link between self-efficacy and academic accomplishment. Asante (2013) for instance reported

that out of 210 students he studied in the Ashanti Mampong municipality of the Ashanti region of Ghana, 186 (88.5%) reported that their self-efficacy had influence on their academic achievement. Adeyemo (2015) also found in the Benin state of Nigeria that self-efficacy was the number one determinant of academic achievement of students. He indicated that poor beliefs about the students themselves which affected their disposition in class, level of concentration, absorption rate and their test taking skills resulted in poor academic achievement.

Bosomah (2014) on his part indicated that a direct relationship exist between students' self-efficacy and their academic achievement. He stated further that the higher the level of the students' self-efficacy the high their academic achievement. He found in the Nkoransah District of the Brong Ahafo region that 134(89%) of 150 students affirmed this position. Bosomah's stance may not hold true for all students to some extent in the sense that, factors other than self-efficacy are likely to affect students' achievement. Research has revealed that some students could have higher self-beliefs yet their academic achievement is poor. A case in point is that of Mieza (2012), who found in Kisumu, Kenya, an inverse relationship between self-efficacy and academic achievement. It is interesting to know that in his study the participants had higher self-efficacy but exhibited low academic achievement.

In spite of the reported relationships established between self-efficacy and academic accomplishment, Saunders, Davis, William and Williams (2004) reported a relatively small positive self-efficacy influence on academic achievement. Self-efficacy, on the other hand, was found to be unrelated t academic success by Reynolds and Weigand (2010). The aforementioned

findings suggest that there is actually a link between self-efficacy and academic accomplishment but this relationship can either be positive or negative.

Self-esteem and academic achievement

Individuals with high self-esteem strive to overcome challenging situations and persevere till they get what they want (Nevid, 2009). Correlating (2018) analysed the impact of students' self-esteem on their academic achievement. Correlating conducted the study using 600 students at Pakistan's University of Swat. The data analysed showed a significant positive association between the students' academic achievement which is measured by their grade point average and their self-esteem score. Thus, students who scored high on the self-esteem scale also had high academic achievement scores. Correlating therefore concluded that students whose self-esteem levels are high had higher academic results.

Research has shown that when children's academic achievement improves their self-esteem rises as well, even though an increase in self-esteem may not always imply the progress in the students' academic achievement (Moeller, 1994) which is possible. For this reason, Moeller thinks that instead of putting in more effort to improve children's self-esteem that effort should rather be directed at improving their academic achievement. This is interesting because it appears to mean that enhancing academic achievement in children is more essential than improving their self-esteem.

Bell (2009) conducted a study to investigate and find out whether self-esteem and identification with academics had any influence on the academic achievement of African American students in North Carolina-America with a

sample of 93. The study was conducted using two groups of participants. These were the experimental group and the control group. At the beginning of the experiment, Bell administered the Rosenberg self-esteem inventory and the school perception questionnaire to measure the participants' self-esteem and identification with academics. In the course of the study, the control group did not receive any intervention but the experimental group was taught the 'Start Something curriculum'.

After the intervention both the control and experimental groups were administered the same instruments, the Rosenberg self-esteem inventory and the school perception questionnaire for the post-test. At the end of the experiment, it was detected that the respondents in the experimental group scored higher on the instruments probably because they were taken through an intervention and so recorded higher grade point average (GPAs) than those in the control group who did not receive any intervention. Both the pre-test and post-test measures the respondents answered did not show any significant differences in their self-esteem and identification with academics for the two groups involved in the study.

Bray (2001) investigated the impact of academic achievement on self-esteem of student to determine whether self-esteem significantly influenced their academic achievement. The researcher sampled from both general students and honours students. The result of the study showed a positive relationship between the two variables, and this suggests that when students' self-esteem increases, their academic achievement will also increases. In another study conducted on African American students to find the relationship between self-esteem and racial identity, self-esteem was identified as a major

factor in determining academic success (Lockett, 2003). From the foregoing instances, it appears self-esteem is the number one predictor among many of the predictors that have competed with it to determine their influence on academic achievement.

Meftah (2002) sought to determine the relationship among shyness and self-esteem and academic achievement. In his study, shyness and self-esteem were the predictor variables while academic achievement was the criterion variable. The study reported that self-esteem rather than shyness was significantly related with academic achievement. Within his study he also tried to ascertain a difference in the relationship between self-esteem and academic achievement of girls and boys but found no significant difference in their relationship. Balouchi (2001), in a study conducted on randomly selected 200 ninth grade students, failed to find a significant difference in the self-esteem and the academic achievement of boys and girls. Yari (2000), sought to determine if a relationship existed in the academic achievement and the self-esteem of students. His work showed that gender and self-esteem and academic achievement were significantly different. Ashtiani (1998) also found that self-concept is associated with self-esteem, and both self-concept and self-esteem have a positive influence on academic achievement.

Self-esteem has a positive relationship with students' academic achievement, Veris (as cited in Mefteh, 2002). From the review it is found that students with higher academic achievement experienced higher self-esteem whereas those who have low scores on academic also recorded low self-esteem scores as well as external locus of control orientation.

Asafo-Agyei (2015) studied lower primary pupils in the Assin-South Municipality and found a link between self-esteem and academic achievement. He explained that higher self-esteem boosts higher academic achievement. His findings indicated that out of 225 sample, 189 representing 84% revealed that the higher an individual's self-esteem is, the higher the person's academic performance. Tanle (2014) also found in the Wa Municipality of the Upper West region of Ghana that self-esteem results in higher academic performance. In a quasi-experimental study conducted, he reported a statistically significant difference between the academic achievement of pupils who recorded high self-esteem scores and their counterpart who recorded low self-esteem scores. Peperah-Asiase (2015) found in the Nkrankwanta in the Dormaa West District that self-esteem was the second most important predictor of senior high school students' academic achievement. His study showed that continuing students had higher self-esteem than fresh students and that affected their performance academically.

The results of most research in the area of the impact of self- esteem on academic achievement revealed that the two factors (self-esteem and academic achievement) affect each other (Bong, 2001). In his study to determine whether self-esteem has a relationship with academic achievement among Pre-University students, Aryana (2010), reported that a significant positive relation existed between the self-esteem and students' academic achievement. Robinson and Tayler (1991) investigated self-esteem and academic achievement of 150 students from France, England, and Japan, and found that students with low self-esteem are those who are underachieving, and also score low on variables that are school related. Self-esteem has been identified

as being positively correlated with academic achievement in different studies (Lockett & Harrell, 2003) and thus making it a significant contributing agent to talent development (Gagne, 2000).

Self-esteem has been continually reported to have a positive relationship with academic achievement. This is supported by the assertion made by Veris (as cited in Meftah, 2002) that students with high self-esteem score high academically and those who scored low on self-esteem equally had low academic achievement. This is evidenced in the work of Burk, Hunt and Bickford (1985) who reported that students with high self-esteem anticipate nothing but good results in their academic work. Such students, according to them, also tend to take credit for performing satisfactorily. Similarly, Pope, Myers, Kilmartin, Felck, and Kilewer, (1998) have also established a positive relationship between self-esteem and academic achievement. On the contrary, Nolan (1996) found in his study that students who scored low on self-esteem also scored low on their examinations, and tended to blame the poor results of their examinations on their inefficiency. Kernis, Kitayama, and Markus, (1989) reported that students who have low scores on academic achievement also have external control orientation.

Coopersmith (1969) reported that children who have high self-esteem and are confident, talented, and creative, are able to express themselves, and are not easily influenced by environmental factors. In order to be successful in life, an individual needs high self-esteem. Self-esteem is valuable because it seems to interact with other areas such as mental health and academic achievement suggesting that it can at the same time be a course of an action

and also a consequence of an action that occurs in other areas of life (Pope, Myers, Kilmartin, Felck, & Kilewer, 1998).

In spite of the fact that self-esteem and academic achievement have been reported to have positive relationship, some studies which investigated these two variables arrived at different conclusions. For example, studies by Alves-Martins and Peixoto (2000), as well as Alves-Martins, Peixoto, Gouveia-Pereira, Amaral, and Pedro (2002) showed no differences between students' self-esteem and their academic success or failures. They however indicated that the seventh-graders who participated in their study and who had poor academic records were low on self-esteem than their counterparts who succeeded academically.

Locus of Control and Academic Achievement

Students are usually concerned with either succeeding or failing in their academic quests. These outcomes are heralded by different causal attributions (Weiner, 2007) such as the students' abilities, strengths, weaknesses, expectations, luck, motivation, or emotions that are likely to influence their achievements. Many researches have reported consistent positive relationships between locus of control and academic achievement (Bodill & Roberts 2013; Grantz, 2012; Fakeye, 2011; Slagsvold & Sorenson 2008; Kirkpatrick, Stant, & Downes, 2008). Findings from these research showed that there are positive relationships between locus of control and academic achievement, task completion and goal attainment, school attendance, and career aspirations. These results however, depended on whether the individuals or respondents attributed their successes or failures to external influences which include difficulty level of task, fate that the individuals have no control over, or the

individuals' ability or the amount of effort he or she puts in. For example, Drago, Rheinheimer, and Detweiler, (2016) investigated the link among locus of control, academic self-efficacy, and students' academic accomplishment and reported a positive significant association between locus of control and academic achievement. Nilson-Whitten, Morder, and Kapakla (2007) also reported a significant relationship between academic success, locus of control, and optimism of students.

Findley and Cooper (as cited in Grant and Mandy, 2002), reviewed literature on locus of control and academic achievement. This was done by compiling 98 studies consisting of 275 testable hypotheses. This study found that 70% of the 275 hypotheses showed internally controlled individuals exhibited significantly higher academic achievement than externally controlled individuals. Bar-On (2002), reviewed 36 different studies which sought to find the relationship between locus of control and academic achievement among adults, adolescents and children, and reported that there was a positive correlation between locus of control and academic achievement. His analyses revealed a positive correlation between locus of control and academic achievement. Additionally, Weymer (2002), and Slagsvold & Sorenson (2008), have also confirmed a significant relationship between locus of control and academic achievement.

Kader (2014) examined the differences that exist in the academic achievement of students in the summer class in the University of Nevada-Maryland-America. This study was done by using the internal and external dimensions of locus of control to split the summer class students into two equal groups of 22 students. The analyses of the data collected showed that

students with internal orientation of locus of control achieved better academic results and were able to score high on mastery approach. They also have the tendency of working for more hours, and are more of white ethnicity than those with eternal locus of control orientation.

The results however showed that the locus of control variable had a negative and significant effect on the exam average. Duyah (2015) on her part found in Banjul in the Gambia that academic achievement is dependent on locus of control. She however established that, though external locus of control has a high predictability of academic success, internal locus of control has proven to have a higher predictability of academic achievement.

Vitulli (2016) sought to find out if a relationship existed between students' self-efficacy, locus of control, and their high school grades in a cyber-course they took which in this case served as academic achievement. The researcher analysed the data in both qualitative and quantitative terms. In both types of analyses Vitulli did not find significant relationship between the students' locus of control and the grades they had in the cyber course they took. Findings from the qualitative analysis indicated that there was a complex process of student migration from brick-and-mortar schools to virtual schools.

Kupkova (2017) sought to find out whether locus of control, self-perceived masculinity and femininity and gender affect academic achievement. In addition, the study was to determine whether profiles of the human personality such as femininity and masculinity predicted academic achievement. It was hypothesised that all the independent variables predicted academic achievement. However, the hypothesis further suggested that locus of control was the best predictor of academic achievement among the three

variables, with self-perceived masculinity and femininity being a better predictor of academic achievement than gender. Kupkova reported from his findings that locus of control had the strongest relationship with the students' grade point average among the others. Gender also predicted academic achievement but self-perceived masculinity and femininity did not have significant relationship with academic achievement in Kupkova's study.

In his study, Mensah (2015) also found that locus of control was seen as the highest influence of academic achievement. Out of 185 Junior High School (JHS) students he studied in Elmina, 176 representing 95% respondents rated locus of control as the number one factor that influenced academic achievement. In Ajumako in the central region of Ghana, Eshun (2016) reported that locus of control predicted higher academic achievement in males than in females. He found 89% out of 115 males being responsively higher in academic performance as against 48% of 115 females. He explained that from a social perspective males were motivated to learn than females.

Frimpong (2013) reported a positive high correlation between locus of control and academic achievement. He stressed further that the data analysed showed that an increase in the participants' locus of control led to a corresponding increase in their academic achievement. He found in the Atebubu District that, 103 parents confirmed the position of the children that once they were able to instil in the wards a high level of locus of control, it brought about high academic achievement.

By virtue of the results of the report aforementioned, it can be said that internal locus of control is established as correlating with higher personal satisfaction, motivation, achievement of positive personal outcomes such as

academic success, and ability to cope with pain (Maltby, Day, & Macaskill, 2007). However, individuals who possess external locus of control are affected by emotional stress and are prone to depression (Maltby, Day, & Macaskill). Such individuals who possess external locus of control, it has been argued, are generally not motivated, have higher levels of anxiety, depend mostly on others, are not motivated to make behavioural changes, and are less likely to cope with pain (Zaidi & Mohsin, 2013; Rastegar, Heidari, & Akbarzadeh, 2012; Lee, 2012). Additionally, they are not confident enough, get excited easily, are usually nervous, and feel insecure (Santrock, 2003).

When individuals who have internal locus of control orientation successfully accomplish specific behaviours they expect to be given a reward for their success for performing such specific behaviours. Since they are expecting something in return for their performance, such individuals work harder to succeed academically, and are usually proud for the work they have done. Since they are expecting something in return for their performance, such individuals work harder to succeed academically, and are usually proud for the work they have done. Conversely, people who are externally controlled are not motivated to complete specific behaviours, because they have not established any link between successful behaviour output and rewards. They do not expect to be rewarded for accomplishing a task because they do not even believe that the successful completion of task or behaviour was a result of their own efforts. The perception that different individuals have of who or what controls them explains the different emotional responses they exhibit (Ray, 1980) hence, the reason to believe that the influence that emotional responses have

on motivation, whether intrinsic or extrinsic, is indispensable to the theory of locus of control and its association with students' academic achievement.

Research in the area of the relationship between locus of control and academic achievement show that those who perceive themselves to be internally controlled always attained better academic feats than those who are externally oriented (Stipek & Weisz, 1981; Prociuk & Breen, 1974). According to the theory of locus of control, individuals who hold internal locus of control orientation believe that whether they succeed in achieving a task or fail to perform is completely dependent on them. They do not blame anyone or anything in their environment for that failure or success. That is why they feel proud when they succeed on achieving a task and guilty and ashamed when they fail on an activity.

The literature on the whole, is consistent with the fact that how individuals perceive locus of control is an important personality variable which predicts academic achievement patterns in students, since it has a systematic relationship with behaviours which increased the likelihood of academic achievement. Internal locus of control orientation is significantly related to greater academic achievement and high self-esteem, (Grantz, 2012) hence, the increasing interest developed by psychologists to probe into this area of research.

Research has linked internal locus of control (ILoC) with high self-esteem, job satisfaction, high self-efficacy, and high educational aspirations (Muhonen & Torkelson, 2004), whereas external locus of control (ELoC) is associated with higher levels of stress, psychological distress, and relationship dissatisfaction (Muhonen & Torkelson 2004; Wu, Tang & Kwok, 2004).

However, Duyah (2015) found in Banjul in the Gambia that, external locus of control had a high predictability of academic success, even though internal locus of control had a higher predictability of academic achievement.

According to Bernstein, Kovenklioglu and Greenhaus, (as cited in Kirkpatrick, Stant, & Downes, 2008) students who scored high on academic achievement identified the effort they put in and their ability to perform as causes of being successful, while those who did not perform well were expected to attribute their performance to test difficulty and bad luck. Thus, when students attribute their success to factors which include what they are able to do or effort that they perceive to have control over, they were likely to chalk more successes in future because they usually felt they had the ability and capability to succeed, and would work the extra mile to achieve their goals.

Besides, such students know they are responsible for their failures and successes so they will always try to find out what went wrong, or what they did not do right and make the necessary corrections. In the same manner, students who always attributed their inability to succeed to external factors may expect future failures because they may already have conscientised themselves that they cannot perform. The behaviour, future successes or failures of internals can be predicted but those of externals cannot be easily predicted because the students in this situation do not technically have direct control over these external forces that they (external students) presume determined whether they should pass or fail.

Relationship between Gender and Self-Efficacy, Self-Esteem, Locus of Control, and Academic Achievement

Gender, according to Pan, Sheng and Xie (2011) connotes the social characteristics of women and men. Conventional characteristics of being masculine or feminine arise from socially accepted norms, roles and responsibilities, and relationships that exist between groups of men and women. Gender can also be explained as how an individual sees himself or herself, and this, Pakseresht (2010), describes as our senses of being a man or a woman.

Gender Differences in Self-efficacy

Self-efficacy deals with what people believe they can do to produce designated level of performance that exercise influences over events that affect their lives (Bandura 1977). Self-efficacy is a significant aspect of students' lives. Therefore, it is believed that when self-efficacy is improved it will contribute towards their feats in life.

Considering the interface among gender, self-efficacy and locus of control, Elliott and Lopez Del Puerto (2014) discovered that in domains like construction management, females had less self-efficacy than their male colleagues. However, the females could attain more internal locus of control in such domains with a lower level of motivation compared to their male counterparts who could have a higher level of motivation. Thus, female students are likely to record a low confidence level in relation to their abilities when it comes to construction education, but can express an internal locus of control. Similarly, Elliott and Lopez Del Puerto (2014) argued that in subjects like Science, Technology, Engineering and Mathematics, females had low

self-efficacy compared to their male colleagues. Thus, the writers recommended that it was imperative for educators to take into cognisance and include strategies to boost construction education-specific self-efficacy with respect to female construction management students. Some researchers have concluded that females are not encouraged to study mathematics and science courses because the custom of their societies frowned on it. It is argued it was more acceptable for males rather than females to pursue degrees in mathematics and science (Rice, Barth, Guadango, Smith, & McCallum, 2012).

Self-efficacy which is believed to work to regulate the attention of the human discipline is centred in the mind (Ashley & Rittmayer, 2003). This proclamation was reinforced by Sanders and Wooley (2005), who reported after their investigation, that self-efficacy was the predictor of problems that deal with discipline. Per their submission, students with high self-efficacy have the tendency of being more conscious when it comes to their learning activities, and they also avoid engaging in discipline problems. This could mean that self-efficacy is a potential key aspect and basis of discipline related issues.

McKenzie (1999) in a related study established that females with higher self-efficacy performed slightly higher than males. The differences in students' academic achievement found in the data analysed in McKenzie's study however was not significant compared with that of their male counterparts. Abdullah (2006) did a descriptive-correlational study to determine the relationship between students' self- efficacy and their achievements in their English language. The study which was conducted using a sample size of 1,146 students revealed that females rather than males had

statistically significant higher self-efficacy. Furthermore Tenaw (2013), in agreement with McKenzie also analysed data gathered using Pearson correlation to check for similarities or differences in self-efficacy between males and females. He reported that the difference between males and females was significant in his study, which puts females in a better stead in terms of academic achievement than males when they both have high self-efficacy.

However, Shikullaku (2013), found no significant difference in the levels of self-efficacy in gender in a study he conducted to establish a relationship between self-efficacy and academic achievement in the context of gender. On his part, Al-Kfaween (2010) also did not find any significant difference in the level of self-efficacy with respect to gender when he researched into the self-efficacy among 364 (173 female and 191 males) University students their area of specialization.

In addition, Abd-Elmotaleb and Saha (2013), wanted to know if the students' level of self-efficacy was influenced by their gender type. Their study revealed that self-efficacy had a negative significant correlation with respect to sexes. It further revealed that males with low self-efficacy performed poorly than females at the same level of self-efficacy. Sawari and Mansor (2013) also found no significant difference in the level of general self-efficacy between male and female students however, most of the respondents had an intermediate level of general self-efficacy which could not be treated as significantly high. Manso (2014) also found among senior high school students in Kumasi, Ghana that no significant difference exists between males and females in terms of their self-efficacy and academic achievement. He indicated further that though the differences were not significant as males who

scored high on self-efficacy performed better in relation to their female counterparts who also scored on high self-efficacy.

Research conflicts as far as studies concerning gender disparities in levels of self-efficacy and courses of study are concerned. For example, females are not encouraged to study courses such as mathematics and science or engineering generally perceived by the society as male dominated courses, and for that matter regarded as being against the acceptable conventions of the society (Rice, Barth, Guadango, Smith, & McCallum, 2012). That is, it was normal for males to study mathematics and science courses but socially unacceptable for females to study them. This means that per the appropriate gender roles that happen to be the norm of most societies, there are certain things that are prescribed for men only, and others seen as being for women only. For this reason, individuals, by virtue of their gender, are restricted from engaging in certain activities such as a woman driving a tanker or a tipper truck, or a man carrying a baby at the back. If for any reason one of these two crosses the carpet to do what is meant for the other sex, the society frowns on it.

Gender Differences in Self-esteem

As earlier discussed, self-esteem refers to how much people value themselves by personally liking, accepting and respecting himself or herself as a person. Akturk, Kesici and Sahin (2009) commented that most studies that assessed differences in gender in terms of self-esteem, found some significant differences showing that adolescent females obtained low scores on self-esteem than males adolescents. Balbag, Cemrek and Mutlu (2010) also remarked that often times during the period of middle and late adolescence,

more females score low on self-efficacy than males, but it is not so between the ages of 8 and 11 years. Akin (2011) also found similar differences in the male and female self-esteem scores with females having statistically significant lower self-esteem than males. The writer commented that this could be probably by virtue of the fact that males, especially in the African context, are always expected to compliment females. When females are not complimented by their male counterparts, there is often that tendency for them to feel unwanted and have a low self-esteem (Akin, 2011).

Relatively, females who desired high esteem subjects, often sought for external locus control, which affected them adversely (Akin, 2011). Elliott and Lopez Del Puerto (2014) also noted that males assumed a high self-esteem form of attribution style while females espoused a low self-esteem. Elliott and Lopez Del Puerto commented that by virtue of the fact that males identify with masculine sex roles, they are apt to more self-esteem than their female colleagues who are often considered subordinates in every sphere of life. Thus, this masculine attribution style as observed by Elliott and Lopez Del Puerto is included in the sex role identification pattern used to raise male children.

Saadat, Ghasemzadeh, and Soleimani, (2011) conducted a survey to determine whether self-esteem and academic achievement were related. The study which was conducted using 370 Iranian university students was also to determine if there was a gender difference in the self-esteem of the participants. The data analysed showed a significant gender difference in the self-esteem of the students. Similarly, Abugaroo (2013) reported a significant gender difference in participants' self-esteem and academic achievements in a

senior high school. He however added that between the males and females, males who scored high on self-esteem had better academic results than females in the same category. Interestingly, Watkins, Dong, and Xia (1997) found that females scored high on self-esteem than males, whereas (Knox, Funk, Elliot, & Bush) reported that males had higher self-esteem scores than females.

Even though Aryana (2010) found a significant gender difference in students' academic achievement, he did not find any significant difference in their self-esteem. Kugbey, Mawulikem, and Atefoe (2015), examined the influence that parenting styles have on adolescents' self-esteem and academic achievement using 120 basic school students in the Volta region of Ghana. Their study sought to find out if significant sex differences exist in self-esteem and academic achievement. The findings of the study showed that parenting styles significantly influence the self-esteem of the adolescents and their academic achievement but did not report any significant gender differences in their self-esteem and academic achievement.

A few studies have however not found significant differences in the self-esteem with respect to gender. Piasah (2015) for example found no significant difference in the self-esteem and academic achievement with respect to the gender of the participants in the study. His study however concluded that boys of single parents had better levels of self-esteem and academic achievement than females who live with single parents in Juabeng in the Western region of Ghana. Eighty three percent out of 195 pupils affirmed this position. Balouchi (2001) in a study conducted on 200 ninth grade

students in relation to self-esteem and gender found no significant gender difference in the participants' self-esteem.

Gender Differences in Locus of Control

Zaidi and Mohsin (2013) explored the direction of locus of control, in addition to gender differences on locus of control in Pakistan with a sample of 200 made up of 100 men and 100 women. The researchers reported a significant gender difference on locus of Control with men scoring high on internal locus of control and women scoring high on external locus of control. Furthermore, Ghasemzadeh and Saadat (2011) found that young boys take ownership of the events in their lives by ascribing their successes in academic work to their own ability more often than young girls will do, whereas females attributed success in their academic work more to hard work or effort than males. The writer adds that females explained their academic success as a result of being lucky than males will do. Akin (2011) also realized that often times, males liked high self-esteem subjects, which increased their internal locus of control, culminating in positive happenings in their lives.

Interestingly however, Bowling, Eschleman and Wang (2010) discovered different levels of gender differences in connection to locus of control. In their study Bowling, Eschleman and Wang (2010) noted that females recorded significant increase in internal locus of control for negative activities including losing a game, not being promoted to the next grade, unusually performing poorly in a subject at school from their early years or ages of schooling, than their male counterparts will do. The writers posit that at a later stage of schooling or when girls and boys become adults, females rather than males assume that they are responsible for negative events.

Strickland and Haley (2010) studied the gender difference in students' locus of control using 200 men and 200 women. Respondents answered the Rotter Internal-External measuring scale as being either 'super male' which embodies the characteristics of an extreme male gender or 'super female' which embodies the characteristics of extreme femaleness. Respondents who answered the questionnaire in the 'super male' direction of "super male" criteria scored high on the internal scale, whereas respondents who answered in the direction of "super female" criteria scored high on the external. The researchers felt that there were biases in the respondents' responses because of gender role expectations for males and females, and based on their position on appropriate gender roles, male respondents scored higher internal locus of control than females.

Findley and Cooper (1983) also found that males were more internally controlled than females, but Stipek and Weisz (1981) have always thought that the differences were as a result of social desirability as enshrined in traditional gender roles. Females generally believe that appropriate gender roles do not conform to internal locus of control viewpoint, and this belief influences their responses on Locus of Control (Stipek &Weisz, 1981).

Wuviadzi (2014) found statistically significant difference in male and female students' self- esteem and academic achievement of in the North Daye district of the Volta region of Ghana. He found that females performed academically better than males at about the same level of locus control even though the difference was not significant.

Oppong and Twum (2015) found statistically significant gender difference in locus of control of students and their academic achievements. In

the Kade district in the Eastern region of Ghana, Oppong and Twum found that males had higher levels of locus of control. In addition, the males scored higher on the achievement scale than their female counterparts. Schultz and Shultz (2005) did not find significant gender differences in adults' locus of control in the United States. They however believed that some gender differences could be found in certain specific categories of the items used for the survey. The study for example, had it that men may have higher internal locus of control with academic achievement related questions than women.

Gender Differences in Academic Achievement

Brebels, De Cremer, Van Dijke and Van Hiel (2011) noted that studying gender in higher education for example, can help researchers to learn that gender is related to an individual's educational fulfilment, which has been found to be highly related to income. Brebels et al. (2011) explained that there is a difference in the college experiences of men and women, and they face different college outcomes. They reported for example, that even though the ethical standards of females are higher than males, both male and female college students can cheat in an examination. Hui et al. (2011) noted further that an individual's gender is also likely to inspire the type of student groups a male or female is affiliated with. Women, according to Hui et al., display a high level of determination in academic activities while males tend to be more athletic. Students labelled as grinds (nickname for women who put more effort in academic work) exhibit behaviours just like those who possess academic ethics (Katz et al., 2011). In this regard, it can be said that both men and women are seen to succeed academically, but the achievement of women

notwithstanding, they don't receive much rewards or motivation for their efforts in achieving successfully (Berings & Adriaenssens, 2012).

Asha (2008) assed the gender differences in self-efficacy, interest and academic achievement of 316 high school students from India. Findings from the study indicated gender differences in academic achievement, and interest in various academic disciplines. Asha's study further revealed that the confidence level of the female participants was higher than the male participants. Besides the female students performed better in all academic disciplines that the students were examined in than their male counterparts.

Ghazvini and Khajepour (2011) investigated the gender differences in students' locus of control, academic self-concept, and use of learning strategies and academic achievement in Mathematics and Literature. The study involved 363 participants sampled in Tehran-Iran. The researchers found and reported a gender difference in internal locus of control but did not find gender difference in external locus of control of the participants. They indicated a strong level of internal locus of control for the females than the males. In the case of concentration, information processing and selecting main ideas strategies, and Mathematics, males scored higher than the females. On the other hand, females scored high on internal locus of control. This revelation does not surprise me much because these areas of study have widely been described as male dominated learning areas.

Hughes-Isley (2015) explored the differences in gender between college students' mathematics achievement and their behaviour concerning remedial mathematics in South Eastern United States. The researcher reported a significant gender difference in the students' remedial mathematics

achievement with males scoring higher than the females. These findings continually give the impression that females are not too good in Mathematics but here again it appears it is because females have been made to feel that Mathematics is a male dominated academic subject reserved for men that is why females probably fail to perform better in it than males.

Sparks-Wallace (2007) analysed differences in academic achievement of males and females in Northeast Tennessee in America. He gathered data by reviewing transcripts for three-year groups of five years interval. The students' cumulative grade point average in Mathematics, Science, and English were used. The study also compiled and compared the results of students' enrolment in English, Science, and Mathematics on gender basis. It was reported that females achieved higher than males in all the subjects that were compiled and analysed. For example, in 1993, there was a slight gender difference in the number of specific genders that took the courses in that academic year. However, in 1998 and 2003 the differences that were recorded were significant. In 1993 for example, a little more male than females took the courses under study. Eventually, by 2003 the number of females who took these courses increased a little more. The reasons for the differences which were displayed by men dominating in some masculine stereotyped courses noted in this study were largely due to sociological factors.

Oloko, 2012 explains that men and women are both lumped into a dichotomous gender category where men are destined for agentic purposes and women for expressive and communion functions, but this practice simply deepens gender stereotyping and polarization (Park, Lee & Kim, 2014). The writers propel that the way the nature and degree of gender differences is

overestimated by stereotypes rather encourages socially accepted gender categorizing or relationships and contributes to substantiate work-related stratification and separation, gender inequality, and the art of situating women in predominately lower status positions.

This reason can be linked to the idea of Gibb, Fergusson, and Horwood (2008) who predicted that the more children are exposed to gender knowledge the more likely they are to display preferences that are connected to gender and its associated ideologies. Gibb et al., add that once an individual's or a child's gender identity is established, their schema knowledge increases to embrace knowledge concerning activities and interests, behaviour and social features including all the gender linked characteristics. On the other hand, however, Wally-Dima and Mbekomize (2013) debunk Gibb et al. (2008) by saying that even though adults for example, know almost everything about gender stereotypes they do not increasingly predict gender-linked comportment.

Abdu-Raheem (2010) who observed that the gender schema is formed from interactions with the environment posits that as soon as the gender schema is established, individuals or children have to conduct themselves in ways to portray gender roles. Abdu-Raheem further explains that this is why in cultures where males are regarded as the head and are expected to dominate in all spheres of influence, females are relegated to the background. In such cultures, when females dominate and override their male counterparts in any domain or perform activities at the same level with them, they are considered to be weird and perhaps disrespectful. In these cultures, or societies, females are expected to be confined to child rearing, wife building, and home making

and building. They are not expected to be like or behave like their male counterparts who are ambitious to go to school, pursue a career, strive for greater academic excellence and possess property. Invariably, females from such cultures eventually become timid and cannot maximize their innate potentials (Abdu-Raheem, 2012).

Duriez, Meeuws, and Vansteenkiste (2012) noted that it appears the differences that exist in gender can be found in students' ethical standards, levels of academic engagement, peer groups and motivation for academic endeavours. There is usually a gender difference in students' ethical and behavioural approaches to how they engage in academic activities, interact with their social environment, and more or less traditional gender ideologies. Severiens and Ten Dam (2012) therefore cautioned that it is essential to find out how academic approaches and social contexts are related to academic achievement for men as opposed to women, while considering the role gender ideology plays in individual decision-making and socialization.

Vansteenkiste et al. (2009) argued that although general cognitive ability is widely recognized as explaining individual differences in academic achievement, the gender effect on academic achievement can be attributed to non-intellectual rather than to general cognitive ability differences. Grebennikov and Skaines (2009) for example, explained that females work more conscientiously than males, combined with a higher level of work ethics. Female students also surpassed male students in language abilities like writing skills, vocabulary and verbal fluency. Other possible explanations for gender-related scholastic performances could also lie in differences in course taking and classroom behaviour, study skills, learning attitudes and strategies like

time management skills, levels of discipline and regard for authority, differences in goals and aspirations. In a nutshell, women work harder and more consistently than men (Grebennikov & Skaines, 2009).

Haws, Dholakia and Bearden (2010) reported that for us to better understand the reason why female students outperformed their male colleagues in higher education, it was useful to focus on gender differences in non-intellectual predictors such as personality and academic performance. Nishimura et al. (2011) posited that characteristic differences are possibly embedded in individuals' personalities. Individual personalities can be defined as stable behaviour patterns or characteristics that distinguish individuals from one another.

Karau and Schmeck (2009) postulated that the gender effect on academic results can partly be explained by personality differences between men and women. The writers observed that females normally have higher scores than males on agreeableness and neuroticism. Furnham and Monson (2009) also observed gender differences for facets of neuroticism and agreeableness (anxiety and tender-mindedness), in addition to orderliness as a facet of conscientiousness. Concerning conscientiousness, De Feyter, Caers, Vigna, and Berings (2012) observed that female students always obtained higher scores on concentration, perseverance and orderliness than their male student colleagues. In South East America, Chee, Pino and Smith (2010) determined to examine the gender differences of university students' academic achievement. Findings from their study indicated that female students were more likely to possess academic ethics than their male colleagues. They also

disclosed that females tend to have higher Grade Point Average (GPA) than their male counterparts.

Another bulk of literature shows that personality components can explain a certain amount of variance in academic achievement. With regards to conscientiousness for instance, Grebennikov and Skaines (2009) discovered a positive relationship between conscientiousness and academic outcomes. The writers reported that conscientiousness is often times, more predominant in female students than male students. The facets of conscientiousness are hard work, self-discipline, persistence and order, which are all expectations in higher education (Grebennikov & Skaines, 2009). In contrast to conscientiousness, Furnham and Monson (2009) discovered a negative correlation between neuroticism and academic achievement. The writers added that neurotic individuals could be hindered in their performance because of their high levels of anxiety and restlessness, especially in the context of exams. However, Rosander, Bäckström and Stenberg (2011) remarked that anxiety to fail can also induce a higher level of effort during preparation for the exams. With this argument in mind, it is not surprising that some researchers have rather reported a positive instead of negative impact of neuroticism on academic performance (Rosander et al., 2011). De Feyter et al. (2012) also argued that neuroticism can directly influence students' academic achievement negatively, especially in stressful situations like exams or in decision making. This notwithstanding, the negative effect may not always hold or be permanent because, the tendency of it being neutralised or reversed through the process of motivation is very high.

Poropat (2009) explained that extraversion relates to people who are very sociable and seek excitement. As a result, extrovert students may prefer a variety of social activities to hard study efforts. Secondly, extraversion is related to enthusiasm, a high energy level and desire to learn. These personality attributes are associated with a motivational surplus, especially in educational settings where students learn by social interaction during lectures. Thus, extrovert students can obtain higher academic heights, when learning is exciting or involves a lot of social activities than when learning involves a lot of hard study (Poropat, 2009). Rosander et al. (2011) posit that anyone can be an extravert. Therefore, gender in no way determines one's level of extraversion.

Generally, Adams, Faseur, and Geuens (2011) observed that there is no impact of the agreeableness personality trait on academic motivation and performance. Nonetheless, Brebels et al. (2011) discovered a positive relationship between agreeableness and a student's achievement, which can be explained by the fit between personality characteristic and learning environment. Cooperative and trusting students, for example, can, to a large extent learn in a learning environment where team work and group work are important. Conversely, Romera et al. (2012) however observes that sometimes, females can be lazier, slower and more uncooperative when it comes to contributing to the success of team work and group projects than their male counterparts. The writers add that sometimes, female students tend to free ride on others' efforts in a team project and even an individual project, than their male colleagues will do.

Hui et al. (2011) expounded intellectual curiosity to study is openness. This personality trait has been found to be positively correlated with academic achievement. Nishimura et al. (2011) comment that such a positive correlation seems obvious knowing that the drive to learn and explore things, the tendency to be creative, the hunger for knowledge, insight and open-mindedness are all elements of openness and expectations formulated towards students in higher education. Adams et al. (2011), remarked that openness can apply to any individual, irrespective of their gender.

Relationship between Type of College (single sex or mixed) and Self-efficacy, Self-esteem, Locus of Control and Academic Achievement

The type of college that an individual attends, be it mixed or single sex is likely to have either negative or positive impact on students' self-efficacy, self-esteem, locus of control, general academic achievement and, scholarly expectation and success. Single sex colleges are described as colleges that admit only one sex as in only male or only female students, whereas mixed colleges refer to colleges that admit both male and female students.

Jackson (2017) presented a model in which he explained that single-sex schooling was neither always good nor always bad for both males and females. According to him the positive or negative influence of single sex institutions on the individual depends on the type of mechanism and structures used. Results from his study portrayed that when the twenty co-educational schools were converted to single-sex schools, students enrolled there scored higher on national exams and were more likely to complete secondary school than when they were co-educational students.

There are several reasons why an individual will choose one type of college over the other. For example in single sex schools the students, whether boys or girls feel free to overcome certain social pressures from the society or peers of the opposite sex. These social pressures from the society or peers of the opposite sex compel students to study certain courses, or prevent them from studying some other courses which they wished to study. This is evident in the sociocultural theorist point of view that gender roles may be cultural adaptations that have helped societies adapt to the demands of their environment (Santrock, 2003).

Those who support mixed schools maintain that for a social environment to be termed as a normal one it must contain people of both sexes because men alone cannot form a normal social environment neither can women alone make up that normal social environment (Schneider & Coutts, 1982). They believe that ideally, school settings where there are both males and females in the same environment, effectively prepare students to imbibe gender roles and culturally accepted norms to enable both males and females to take up their appropriate responsibilities in the society than do single-sex schools (Schneider & Coutts). It is assumed that in such a mixed society, the male and female students will get the opportunity to learn first-hand appropriate gender roles through observation, imitation and practice.

On the other hand, people who argue in favour of single sex school settings contend that the type of environment that is termed "normal social", for that matter a mixed environment, socializes young men and women to take up their roles in the society. But unfortunately, these men and women are socialised into a society that is segregated by gender thereby leading to an

uneven social and professional role (Hansot & Tyack, 1988). In whichever type of school individuals enrol, they are most likely to conform to, or adjust their behaviours to satisfy the actual or perceived pressures of that environment.

Social pressure which calls for the society to stick to gender stereotype courses and leadership opportunities exists in the high school and runs through college levels (Hyde, 2007). Hyde stresses that this social pressure further still extends to the working environment which by implication promote sex-based division in workforce, and as a matter of fact leads to wage gap between males and females. Lawrie and Brown (1992) indicated that boys from single sex schools in the United Kingdom and Australia were very much likely to go into gender neutral courses or subjects than those in mixed schools. My own 17 years of teaching experience in the college of education has shown me that only about 2% of the male students offer sewing or catering as their elective courses in the second year in my school. Anytime I other males why they were not interested in studying these courses they reply that even though they are also interested in such courses they are afraid that their friends would tease them that such courses were meant for females.

Single sex schools create enabling environment for males and females to operate freely without being bothered about what the opposite sex will think. In a study of single sex classes conducted by Salomone (2003), it was detected that adolescent girls felt more comfortable, interacted more with teachers and developed more favourable attitudes towards maths and science. This, it is believed, could develop greater self-confidence and broader interests among the students.

Females in single-sex schools have been attain higher academic achievement, are self-confident, possess leadership skills, and are able to enter male-dominated fields (Smyth, 2010) and have higher self-esteem (Thompson, 2000) than their counterparts in mixed schools. In a study by Kristen (2010), he reported that females who attend single-sex schools, do not worry so much about gender roles because they have to play dual roles since there are usually no male students to perform activities that would otherwise have been performed by males if they were around. In addition, Kristern insinuated that these females have more positive self-concept, and are more concerned with their academic and career success than females who attend mixed schools. Eisenkopf, Hessami, Fischbacher and Ursprung (2015) for instance, found that single-sex schools improve the performance of female students in mathematics in Switzerland. Students' self-esteem varies depending on the school type. Studies have shown that students who are enrolled in single sex schools have high self-esteem than those in mixed schools (Alexa, 2011).

Lee and Marks (1992) submitted that single-sex school environment helps females to overcome gender discrimination and stratification. The views of Lee and Marks suggest that single sex schools are in a way very good in helping adolescents to find their ego identity. Just as girls go through these positive experiences, it is very likely that single sex schooling also encourages boys to develop interest in humanities courses such as nursing, catering, and fashion without feeling much pressure from society as male in that field. For example, males in single-sex secondary schools feel free to be themselves, explore new fields and their academic achievement is better than those in co-education schools. In his study to determine the effect of single sex schools on

students' academic achievement, Jackson (2012) did not find any significant difference in single sex and mixed institutions students' academic.

Mael, Alonso, Gibson, Rogers, and Smith (2005) conducted six studies on self-esteem and school type, and found mixed results. One of the findings indicated higher self-esteem in single-sex schools, whereas it was found to be higher in two in mixed schools. In the remaining three studies however, no differences were found. Considering that out of the six studies, no differences were found in respondents' level of self-esteem and the school type in three of the studies, it can be said that no significant differences in the self-esteem of students in single sex and mixed institutions. This notwithstanding, McGruder and James (2002) also found a significant difference in single sex school and mixed school students' self-esteem. Their findings revealed that the self-esteem of single sex school students was higher than the self-esteem of students in mixed schools.

A mixed institution is a type of education setting where both male and female students are put together in the same classroom or learning environment to study. Mixed high school provides natural social environment to ensure that adolescents are adequately prepared to do what is expected of them as males and females in the larger societies than do single-sex schools, (Dale, 1974). In their study which was to find the effect of students' academic motivation in single-sex and mixed schools, Roch, Vezeau, and Bouffard (2008), found that in spite of the fact that mathematics is traditionally stereotyped to be a male dominated field of study, the results of the study did not show a significant difference. This is probably an indication that the females' motivation was improved as a result of the segregated learning

environment. Both male and female students taught in mixed classes scored relatively higher in mathematics examination than those taught in single sex schools. This probably happened because both sexes are motivated to beat the other in mathematics and because of that each of them tried to raise their academic performance higher. This also contributes to conflicting views as far as the type of school that the individual attends in terms of single sex or mixed and its effect on their self-efficacy, self-esteem, locus of control and academic achievement are concerned.

Some researchers have conceptualized that with respect to type of school, concentration levels and academic achievements are normally high for single sex schools that mixed schools. The reason for this assertion is that when males and females are lumped together in a classroom, there is a relatively higher level of distraction as compared to when they study in separate classrooms. Billger (2009) for example noted that the marked difference between single-sex schools and mixed educational schools is the dominant presence of boys in the classroom who can cause distractions to further affect females' academic achievement negatively. Jackson (2010) also reported that distraction can come from peer groups, to negatively affect achievement.

Additionally, Sullivan, Joshi and Leonard (2010) have reported that some mixed schools are seen as construction sites for maleness and femaleness because some school subjects such as mathematics and physics may be fashioned out as belonging to males, and this could develop and mount pressures for females students who desire to select these subjects and perform well in them (Sullivan, Joshi & Leonard). However, even though co-

educational institutions may serve as distraction sites for both sexes, the conditions there may also motivate female students to compete favourably with their male counterparts since the females may not want to be looked down upon.

Hakimi, Hejazi and Lavasani (2011) elaborated that in mixed and single sex schools, gender-stereotyped subject attitudes and choices have been observed more, which has adversely affected the academic achievements of students especially for girls. By extension, females in mixed institutions have fewer encouraging attitude to so called male dominated subject sauch as mathematics and Physics Sciences (Hakimi, Hejazi & Lavasani, 2011). Conversely, Rosander et al. (2011), postulated that variance in the attitudes explains the greater participation in male dominated subjects among females in single-sex institutions of girls in these subjects.

In some developed countries, Eagle (2011) discovered that there was no difference in achievement between students in single-sex and mixed mission institutions with respect to courses that the students took in Mathematics, Science and Vocational. Similarly, Ghasemzadeh, Karami, Saadat and Soleimani (2012) declared that on an equal platform where the conditions in mixed and single sex institutions are almost the same and the students are given equal opportunities, there are no significant differences between single sex and mixed schools in course taken in Physical Sciences or Biology. This makes the academic achievements of both sexes to vibrate at the same wavelength, with very limited or no competition.

Additionally, Tsui (2009), from the analysis of data collected concluded that in mixed school environments, peer pressures force some

female students to prioritise male-female relationships at the expense of their academic work. Conversely, Marra, Rodgers, Shen and Bogue (2009) realized that when the background, prior academic activities and other factors such as facilities are controlled the difference between single-sex and coeducational institutions in student performance reduces. Eagle (2011) notwithstanding, observed some differences in achievement in particular subject areas. For example, the writer observed that those students who perform high in Mathematics were more often than not students from single-sex schools.

Rosander et al. (2011) argued that boys and girls have better academic performance when exposed to more same-sex classmates. Hakimi et al. (2011) noted that both sexes react differently to the same environments. It is by virtue of this reason, the writer explained that some advocate for single-sex education have suggested that males and females should be educated in separate classrooms or schools but, Poropat (2014) debunked that by suggesting that if the males and females are educated in different or separate classrooms or schools they will be deprived of opposite-sex peers, which will in turn promote poor socialization, and rather lead to negative social interactions, and reinforce sex stereotypes.

Conceptual Framework

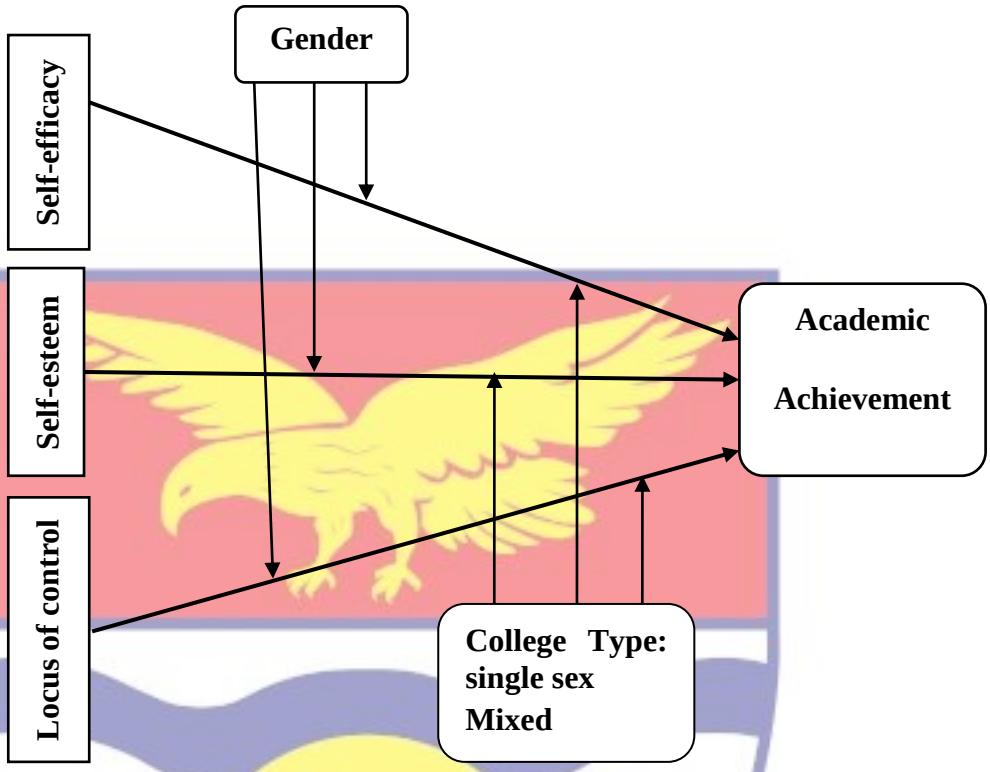


Figure 3- Conceptual Framework depicting the influence of self-efficacy, locus of control, and self-esteem, on College of Education Students' Academic Achievement

Figure 3 depicts the conceptual link between self-efficacy and academic achievement, self-esteem and academic achievement, and locus of control and academic achievement. This conceptual framework was designed based on the argument that self-efficacy, self-esteem, and locus of control have the tendency of influencing efforts, persistence, and perseverance for the attainment of set goals.

Self-efficacy can directly influence students' academic achievement either positively or negatively. From Bandura's perspective, and the social cognitive theory, students who have high self-efficacy also have a higher motivation to study and subsequently accomplish high academic outcomes (Bandura, 1994). It is therefore expected that student-teachers who have high

self-efficacy can achieve high academic successes but those who are low on self-efficacy may not perform well academically. Self- esteem can also have a direct or indirect influence on academic achievement. Self-esteem has been defined as how an individual appraises himself or herself, or how he or she approves, values or respects him/herself. From the standpoint of Rosenberg (1990), high self-esteem basically leads to constructive results whereas low self-esteem results in negative consequences during life processes. This presupposes that student-teachers with high self-esteem will work hard to succeed academically while those with low self-esteem will not perform well, hence the belief that self-esteem can influence academic achievement.

As indicated in Figure 3, locus of control has a significant influence on academic achievement attainment. The idea behind this assertion is that there is the possibility that some student-teachers in the Colleges of Education may be doing well academically as a result of reinforcement from outside as against their own effort. In Rotter's (1966) perspective internally oriented locus of control individuals are responsible for their actions and are proud anytime they succeed in performing an activity so such persons are usually motivated to strive hard and are likely to exhibit better academic successes, but eternally controlled individuals who lack confidence, resilience, security and a positive outlook, do not fight to succeed because they always believe that luck or chance is responsible for their actions. It is therefore possible that there are some internally controlled student-teachers in the College of Education who are very good in executing tasks, and they likely going to succeed on given tasks as against their counterparts who are externally controlled. All these explanations notwithstanding, the focus is also to find out

whether gender and type of college will be able to moderate how self-efficacy, locus of control, and self-esteem, would influence academic achievement.

Chapter Summary

Self-efficacy was defined as the confidence that an individual has in his or her ability to use the skills and knowledge they have to solve a problem or accomplish a task. The focus of self-efficacy theory is on expectations for success and efficacy expectations. Children who have developed high self-efficacy may do well in school courses, and have the expertise to do a lot of things which require the performer to be very competent in that area than those who have low self-efficacy because they like to engage in challenging tasks and ensure they work through till they arrive at a conclusion. Self-esteem deals with the totality of how an individual feels about himself or herself. That is whether they are good, competent and or decent. When people see themselves as having high levels of self-esteem, they see themselves as satisfying certain ideals but when they realise that they fall short of some ideals, then they believe their self-esteem is low.

Locus of control was explained as how much individuals believe they are able to control their lives circumstances or their life circumstances are controlled by external factors. Internally controlled individuals tend to perform better and are able to control their lives situations better but those with external locus of control orientation who usually blame whatever happens to them to external factors don't strive hard to succeed.

Self-efficacy, self-esteem, and locus of control have all been found to have either positive or negative links with academic performance. It is worth knowing that sometimes the students may have high levels of self-efficacy,

self-esteem, and or internal LoC but that will not lead to any improvement in his or her academic achievement.

Self-efficacy, self-esteem, and locus of control were found to have some relationships with gender. For example, some significant differences have been found between self-efficacy and gender with females scoring higher. In some instances, males scored higher on self-esteem whereas in others females scored higher on it. Some studies however did not find any differences at all between self-esteem and gender. In terms of locus of control and gender it was realised that, to a greater extent, males were found to be more internal than females, and this could be attributed to appropriate gender roles.

Studies on the effect that type of college has on students' self-efficacy, self-esteem, and locus of control indicated that the type of college students enrol in can affect the self-efficacy, self-esteem, locus of control and academic achievement of that student in a positive way or in a negative way. Other studies however there was no significant difference on the influence that the type of college has on the students' self-efficacy, self-esteem, locus of control and academic achievement.

CHAPTER THREE

RESEARCH METHODS

The chapter describes the research paradigm, research design, study area, population, sample and sampling technique, the data collection instrument, data collection procedure, and data processing and analyses.

Research Paradigm

The positivist paradigm underpinned this study because, it interprets observation from a study by considering facts or entities that are measurable (Graziano & Raulin, 2007). Positivist paradigm-based research relies on the hypotheses testing and on deductive logic formulation (Graziano & Raulin). According to the positivist researchers, the world is an objective reality and that observers in research work are independent and separated (Alise & Teddlie, 2010). Kothari (2008) also supports Alison and Teddlie as they posited that human beings are able to make meaning from situations when they apply reasoning, whereby the investigator and investigated exists as independent entities. The axiology of positivism suggests that the aim of research is to avoid or minimise any mistake that can damage the image or emotions of the participants in the study. It adds that research should be value free (Hesse-Biber, 2012).

Positivist investigators and researchers employ confirmatory analysis, homothetic experiments, quantitative analysis, laboratory experiments and

deduction (Scotland, 2012). Quantitative sampling approach is used and as such the sample can then be generalized (Scotland, 2012).

Positivist paradigm has been criticised because of the fact that there are values, experiences, and politics in social research that cannot be separated from the data that is produced by the research. In addition people have been questioning the existence of the 'real' reality or facts that can be objectively assessed or known as is being portrayed by the positivist.

The Positivist Paradigm was applied to this study because it entailed exclusively, the formulation and testing of hypotheses. Quantitative sampling was adopted, and the investigator and investigated were also separated since data for the study was collected using a questionnaire.

Research Design

The descriptive cross-sectional survey design was used for the study. Descriptive cross sectional survey studies specify the nature of a given phenomenon a one point in time. The design makes use of logical methods of inductive and deductive reasoning to arrive at generalisations. Furthermore, the design allows researchers to describe variables and procedures as accurately as possible so that the study can be replicated by other researchers. Particularly, the cross-sectional survey was used for the study because, a body of quantitative and quantifiable data was collected in connection with two or more variables from more than one area and at a single point in time and examined to find out how they are associated (Charmaz, 2000).

According to Creswell (2002), the cross-sectional survey design helps to identify different facts connected with the nature and status of a problem or condition as it is at the time of conducting the study. It was seen to be apt for

this study because the influence of self-efficacy, self-esteem and locus of control on students' academic achievement were examined using a cross-section of Colleges of Education in Ghana. That is to say, data on self-efficacy, self-esteem and locus of control on students' academic achievement were collected at a particular point in time, but not in a longitudinal form. This, therefore, provided a snapshot of information at a particular point in time.

Study Area

The study area includes nine out of the 16 regions in Ghana. These were the Ashanti, Bono East, Central, Eastern, Greater Accra, Northern, Volta, Western, and Upper West (See Figure 4). These regions are significant in their own ways by their rich culture and various tourist sites.

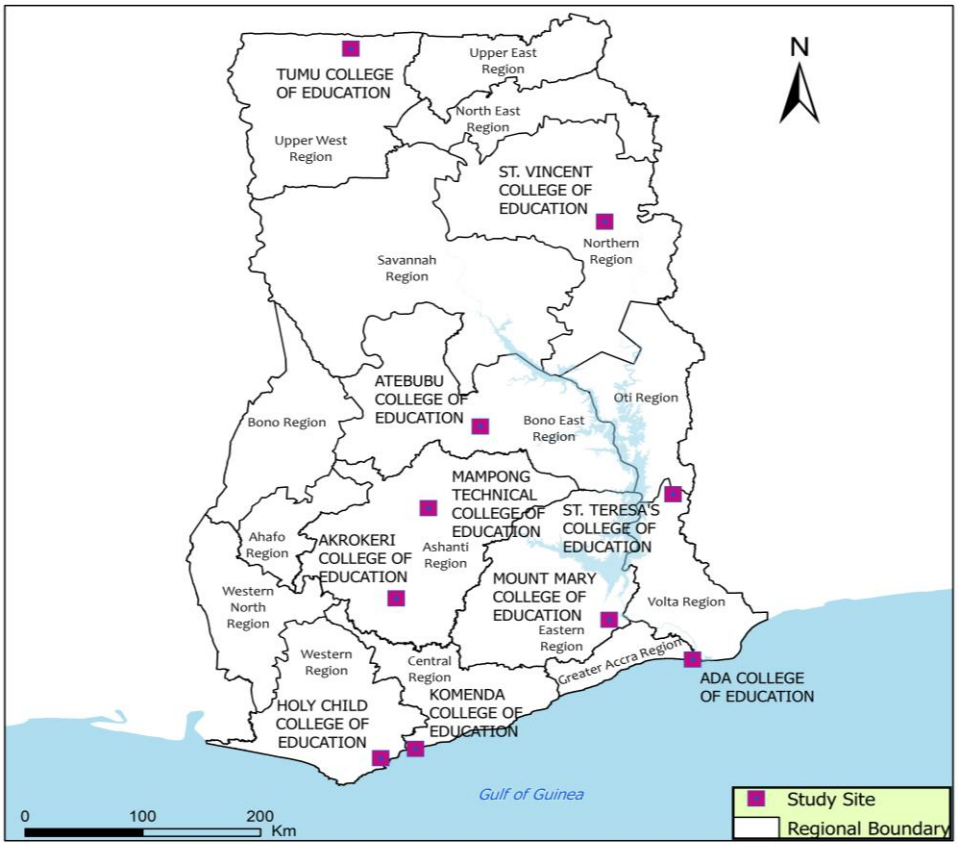


Figure 4: Map of Ghana showing the study areas

The Ashanti region is a core area of Ghana. Its boundary stretches southwards towards the Atlantic Ocean and northwards towards the Gonja and Dagomba lands. It shares boundaries with Brong-Ahafo region in the northern part, Eastern region in the east, Central region in the south, and Western region in the South west (Ghana Statistical Service [GSS], 2012). Its capital town is Kumasi, the second largest city in Ghana. The region's population totalled 4,780,380 by 26th September, 2010, with a total land surface area of 24,389km (9,417 square metres). The region has one Metropolitan, six Municipal and 20 District Assemblies. The major economic activities in the Ashanti region include farming, hunting, and mining (GSS, 2012).

The region twice as much rainfall as the rest of the country annually, with peaks in May/June and October. The average yearly rainfall is between 1100 and 1899 millimeters. The average annual temperature in the region varies from 25.50ºC in the southern areas to 320 ºC in the northern districts. Humidity is high with an average of 85 percent and 65 percent in the southern and northern districts respectively. The region is interspersed with Pra, Offin, Afram, Oda, rivers and and Lake Bosomtwe covering an area of 47.68 square kilometers and are around 10 kilometers wide at their widest point. The region is the beating centre of Ghana's tourism industry. The Manhyia museum, Barekese water processing, among other tourist sites, are found in Kumasi, the regional capital. Mineral resources such as gold, diamonds, bauxite, manganese, silica, sand, limestone, clay and stone formation abound in the region. Obuasi Municipalility, Amansie West, Asante Akim North, Amansie Central and Atwima Mponua districts all have gold bearing rocks.

The Ashanti region has 149 Senior high schools (105 Public and 44 Private), and 18 tertiary institutions eight of which are Colleges of Education. The Colleges of Education in the Ashanti region include Akrokeri and Mampong Technical. The Ashanti region has the largest population among the Akan ethnic groups and that includes Asante, Akwamu, Guan, Fante, Denkyira, Brong, Akyem, Kwahu, Sefwi. Wasa, Akwapim and Assin (GSS, 2012).

The Bono East region is a new region carved out of the existing Brong Ahafo Region. The capital of the new region is Techiman. The region has a total land area of 11,481 km^2 (4433 square metres). The Bono East region shares borders with the Savannah region to the north, the Bono region to the west, the Ashanti region to the south and the Volta Lake to the east.

The Bono East region is in Ghana's vegetal belt of Ghana and has a temperate climate. Forest and fertile soils make up the majority of the vegetation. The dry season last from December to April. The rainy season lasts from July to November with annual rainfall ranging from 750 to 1050 mm (30 to 40 inches). The hottest days in the region are the later part of the dry season, with the coldest period being December and January. The major economic activity in the region include farming and fishing. In Techiman, Yeji, Nkoranza, Kintampo, Kwame Danso, Prang, and other woodland Savanah zones, yam production is very high. Beans, maize, cassava, cocoyam, rice, plantains, and other crops are grown in this region, as well as fishing along the shores of Lake Volta.

The region also boasts of tourist attraction sites such as Boabeng Fiema Monkey Sanctuary, Buoyem Caves and bats colony, Kintampo

waterfalls, Bono Manso slave market, Kristo Boase Monastery, Tano River Sacred Fish, Nchiraa waterfalls, Forikrom Boten Caves and shrines, Tanoboase Sacred Grove and Shrine, Digya National Park and Fuller falls. The population density of the Bono East region is low, and majority of residents speak the Bono dialect. The region's primary religions are Bono ancestral worship and spirituality as well as Christianity. The region also has a number of SHS, and Colleges of Education such as Atebubu College. Atebubu-Amanten Municipa, Kintampo North Municipal, Kintampo South District, Nkoranza North District, Pru East District, Pru West District, Sene East District, Sene West District, Techiman Municipal and Techiman North District are the 11 districts that make up Ghana's Bono East region.

The Central region which shares boundary with Western region on the west, Ashanti and eastern regions on the north, Greater Accra region on the east, and to the south by the Gulf of Guinea, is the third smallest of the regions in Ghana. The Central region was the former administrative centre of the Gold Coast. Cape Coast, also known as 'Oguaa' in the locality, was the capital of the Gold Coast until 1877, when the capital was moved to Accra (GSS, 2012). The region's major economic activities include services followed by mining and fishing. It has three public universities, three Colleges of Education including Komenda College, three Nursing training colleges, and 56 senior high schools (GSS, 2012).

The Central region is divided into two: the coast and the hinterland. The coast consists of undulating plains with isolated hills and occasional cliffs. This part is characterized by sandy beaches and marsh in certain areas. The hinterland, which rises between 250 metres and 300 meters above sea level.

The area is located between the dry equatorial and moist semi-equatorial zones. The annual rainfall varies from 1,000 mm along the shore to 2000 mm in the interior. May-June and September-October are the wettest months while December-February and a brief period in August are the driest. The average monthly temperature varies between 24°C in the coolest month (August) and around 30°C in the hottest months (March-April).

The region is rich in natural resources including beryl, bauxite and gold in the Upper Denkyira District, petroleum and natural gas at Saltpond, diamond at Nwomaso, *Enikokow*, Kokoso all in the Asikuma-Odoben-Brakwa District and kaolin in the Mfantsiman district. Pigment clay can also be found in all the districts; tantalite and columbite in Nyanyano in the Awutu-Effutu-Senya District, quartz, muscovite, and other minerals like mica, granite, feldspar as well as timber in all the forest areas, good fishing grounds along the coast, forests and fertile agricultural land.

The region is decorated with forts and castles which, together with the Kakum National Park draw visitors and other travelers interested in learning about the historical connections that existed between Africa, the Americas, and Europe as a result of the trans-Atlantic slave trade. With its abundance of beaches, forts and castles and festivals the central region plays a critical role in the growth of tourism in the country. Kenkey or "dorkunu" with fish and tomato source, is a popular dish along the Central region's coast.

The Eastern region is the sixth largest region, and it shares boundaries with Greater Accra, Volta, Brong Ahafo, Ashanti and Central regions. Its capital is Koforidua (GSS, 2012). The Eastern region is the location of the Akosombo dam, and the economy of the Eastern region is dominated by its

high-capacity electricity generation. Eastern region covers an area of 19,323 square kilometres, which is about 8.1% of Ghana's total landform. The dominant population and natives of the Eastern region are Akans, and the main spoken languages are Akan, Ewe, Krobo, and Hausa, however a lot of the inhabitants also speak English language. The main economic activities include agriculture activities, industrial activities and provision of services. The major agricultural activities in the region are cultivation of several food crops and cocoa and rearing of animals.

The Eastern region is endowed with several tourist attractions. Notable among these include the Aburi Botanical Garden, Boti Waterfalls, Akosombo Dam, Shai Hills Resource Reserve, Umbrella Rock, Atewa Range Forest Reserve, Lake Volta. Other equally important sites in the Eastern region are The Big Tree at Ada, Tetteh Quarshie Cocoa Farm, Bead Factory, Dodi Island, Adomi Bridge, Akaa Waterfalls, Ghana Bike and Hike Tours, Kwahu plateau, and Akwawa Mountain Peak. Eastern region has over 54 senior high schools and 11 tertiary institutions including Mount Mary College of Education.

Greater Accra region, created on 23rd July 1982, is bordered by the Central region, Volta region, Eastern region, and the Gulf of Guinea (GSS, 2012). It occupies a 3,245 square kilometres area of the total land area of Ghana. Ga Adangme is the indigenous ethnic group (GSS). According to GSS, it is the second most populated region, after the Ashanti region, with a population of 4,010,054 in 2010, accounting for 16.3% of Ghana's total population. The Greater Accra region is the most urbanized region in the country with 87.4% of its total population living in urban centres. The capital

city of Greater Accra region is Accra which is at the same time the capital city of Ghana.

Some notable parks and recreational centres are Shai Reserve, Kwame Nkrumah Memorial Park, Efua Sutherland Children's Park, Osu Castle, National Museum, La Pleasure Beach, Ada Paradise Beach, Ningo-Prampram Beach, Titanic Beach, and Bojo Beach. National monuments and historic sites that are located in the region include National Theater, Independence Square, Accra International Conference Centre, Centre for National Culture, Kwame Nkrumah Mausoleum, and Osu Castle.

The main occupations are basically sales activities and general workers in the Accra Metropolitan Assembly, Tema and Ga. A lot other indigenous members in the Dangme West and Dangme East engage in farming activities such as fishing, animal husbandry, hunting, and agriculture. These commercial activities notwithstanding, most of the dwellers in the Greater Accra region engage in industrial and manufacturing activities. It has 91 SHS (39 Public and 52 Private) and 14 tertiary institutions including two Nursing Training Colleges, and two Colleges of Education including Ada College (GSS).

The Northern region, located in the north of the country, was the largest of the 16 regions. It encompasses 70,384 square kilometers or 31% of Ghana’s land area (GSS, 2012) until December 2018, when the Savannah and North East regions were created from it. The region’s capital is Tamale. The Northern region is bordered on the north by the North East region, on the east by the eastern Ghana-Togo international border, on the south by the Oti region, and on the west by the Savannah region. The Northern region is

divided into 14 districts including Gushegu, Karaga, Kpandai, Kumbungu and many others.

Due to the proximity to the Sahel and the Sahara, Ghana's northern region is substantially drier than the country's southern regions. Grassland dominates the landscape, particularly savana with clusters of drought-resistant plants like baobabs and acacias. The dry season lasts from January through March whereas the rainy season spans roughly from July to December with annual rainfall ranging from 750 to 1,050 mm (30 to 40 inches). The hottest days are at the tail end of the dry season, and the coldest are in December and January. Between December and the beginning of February however, the scorching Harmattan wind from the Sahara blows frequently. Temperatures can range from 14 °C (59 °F) at night to 40 °C (104 °F) during the day.

Agriculturalists account for more than 75% of the economically active population. Emigration, as well as geography and climate, contribute to the low population density. Some tourist attraction sites in the region include Buntaga Irrigation Dam, Naa Gbewaa Palace, Yendi, Saakpoli Slaves wells, Naa Binbegu Boabab Tree, Yendi, Diarre Napagaduungbanani, Sabali (River Oti) and Nawuni River (White Volta). Most of the inhabitants are with the Islamic religion. Regarding education, the region has the University for Development Studies (UDS), many SHS including Tamale SHS, and Colleges of Education including St. Vincent College of Education.

The Upper West region lies in Ghana's north-western corner, bounded to the east by the Upper East region to the south by the Northern region, and to the west and north by Burkina Faso. Wa is the regional centre and largest settlement in the Upper West.

Upper West is Ghana's youngest region, established in 1983 under the Provisional National Defense Council (PNDC) by the country's then President, Flight-Lieutenant Jerry John Rawlings. The old Upper region, which is now the Upper East region, was created out of the former Upper region. The major economic activity of the Upper West region is agriculture. Crops grown include corn, millet, peanuts, okra, Shea tree, and rice. Sheep, goats, chickens, pigs and guinea fowl are raised for meat and eggs. Because the region's dry season is long, extending roughly from October to May, many people leave the region to work in the southern part of Ghana for at least part of the year.

With a total size of 18,476 km2 [7,134 sq mi] and a population of 849,123, (GSS, 2012) the Upper West region is the seventh largest region in Ghana, and it has 11 districts. In addition to its potential for international and inter-regional trade due to its location, the Upper West region has other bi-lateral relations. In spite of these positive attributes, the excess criminal activities and disaster, such as bush fires, diseases and pestilence, armed robbery from the region's neighbours serve as threats for the dwellers. The region can boast of a well patronized tourist site known as the Wechiau Hippopotamus Sanctuary located southwest of Wa, along the Black Volta River in the Wa West District. It is interesting to know that Dr. Hilla Limann, one of Ghana's past president, also hails from the Upper West region and the Gwollu Wall in the Sissala district serves as his hometown. Some of the Colleges of Education (CoE) located in this region are Nusrat Jahan Ahmadiyya CoE and Tumu CoE.

The Volta region derives its name from the Volta River. The region is located at the west of Greater Accra, Eastern and Brong Ahafo Regions, to the north with the Northern Region, and to the south with the Gulf of Guinea (GSS, 2012). It covers a total land area of 20,570 square kilometres, (GSS). Eight major ethnic groups speaking different languages occupy the region but the major one is the Ewe, followed by the Guan, the Akan and Gurma. The area consisted of five municipalities and 20 districts until the regional demarcations in December 2018 (GSS, 2012). The region's original number of administrative districts were reduced to 18 after the Oti region was created out of it.

There are four universities, three Nursing training Colleges, and seven Colleges of Education (CoE) including St. Theresa's College. Abutia Senior High School, Mawuli Senior High School, St. Paul's Senior High School (SPACO), Bishop Herman College (BIHECO), Kpando Senior High School, and Keta Senior High Technical School are among the region's notable senior high schools.

The Volta region also boasts of numerous tourist centres. Notable among them are Wli Waterfalls, Tagbo falls, Amedzofe Falls, Biakpa falls and Caves, Kpoeta waterfalls, Akpom falls, Mount Gemi, and waterfalls like Tafi Agome Caves. There are also other sites such as Mount Afadja, Mount Adaklu, Tafi Atome Monkey Sanctuary, limestone cave, Logba Tota, Snake Village, and Adidime waterfalls, Klefe (at Ho Municipal).

Western region is located in southern Ghana. It shares boundaries with Central region on the east and La Cote d'Ivoire to the west. Its capital town is Sekondi-Takoradi. Western region covers a total land area of 23,921sq.km,

with a population of 2,376,021 as at the 2010 Census but the latest official projected population by the end of 2019 was 3,093,201 (GSS, 2012). Crude oil was discovered in commercial quantities at Cape Three Points in June, 2007. The main occupations in the Western region are mining, fishing and farming (GSS). It has the highest rainfall in Ghana, lush green hills, and fertile soils.

The Ankobra, Bia, and Pra rivers are the largest rivers in the east. The Tano river forms part of the western national border. The UNESCO World Heritage Site and Nzulezo settlement exclusively built on stilts and platforms over water, and the Ankasa Protected vicinity are both located in the Western region. From the period 1512 until the present day a series of towering Portuguese, Dutch, British, and Brandenburgian forts have dotted the shores.

The original Western region of Ghana contained 23 districts but following a reorganization of regions in 2018, nine districts including Sefwi-Wiawso, Suaman, Juabeso and others were taken away to form a new region. Presently, the present Western region has one Metropolitan, eight Municipals and five District Assemblies.

The majority of the inhabitants of the Western region are Akans, and the dominating languages spoken there are Nzema, Akan, and Ahanta. The Western region has 65 SHS (48 Public and 17 Private) and many post-secondary institutions, including three universities, nursing training institutions, and one College of Education which is Holy Child College (GSS, 2012).

Population

The target population for this study was all 15,013 Level 200 students in public Colleges of Education pursuing Diploma in Basic Education. The

accessible population was 3,305 students from 10 Colleges of Education (see Table 1). This represents 21% of the total number of colleges. Amedahe and Asamoah-Gyimah (2015) indicate that between 5% and 20% of the population is sufficient for generalisations in a survey. Level 200 students were used for the study because at the time of collecting data for the investigation they had recorded a minimum of two semester's Cumulative Grade Point Average (CGPA).

Sample and Sampling Procedures

The sample for the study were Level 200 students selected from the 10 Colleges of Education (accessible population). The 10 colleges included 2 single sex female, 1 single sex male, and 7 mixed Colleges of Education. The sample size for the study was 692 Level 200 students. This number was used based on Krejcie and Morgan (1970)'s table for sample size determination and Glen (1992)'s suggestion.

Krejcie and Morgan (1970), suggest that for a population size of 3500, a minimum sample size of 346 could be used in a descriptive survey. Glenn (1992), however, asserted that it is necessary for adjustment to be made in sample sizes in cases where comparative analysis of subgroups would be conducted. Since this study aimed at comparing subgroups in the sample, the sample size was increased to 692, thus, 100% increment. This was to enhance the credibility, dependability, and generalizability of the study. Table 1 presents details of the sample.

Table 1- *Sample Distribution by College and Gender*

College of Education	Population			Sample		
	Male	Female	Total	Male	Female	Total
Ada	204	144	348	43	30	73
Akrokeri	275	183	458	58	38	96
Atebubu	251	144	395	53	30	83
Holy Child	-	310	310	-	65	65
Komenda	308	117	425	64	25	89
Mampong Technical	360	00	360	75	00	75
Mount Mary	154	159	313	32	34	66
St Teresa	-	236	236	-	50	50
St Vincent	97	55	152	20	10	30
Tumu	193	115	308	41	24	65
Total	1,842	1,463	3,305	386	306	692

Source: Field survey (2019)

Multilevel sampling was used to select the sample for the study to ensure a fair representation of all the groups of the accessible population needed in the sample. With multilevel sampling, larger clusters are subdivided into smaller and more targeted groupings from which the researcher randomly selects the required sample at various levels.

The stratified random sampling was used to put the 10 public Colleges of Education in Ghana into three strata based on the type of college as to whether it is mixed, single sex male or single sex female. The stratification identified 7 mixed colleges, one male single sex college, and two female single sex colleges. The proportionate stratified random sampling was used to determine the number of students to be selected from each of the 10 selected colleges since the total population sizes of students differed in the selected Colleges. This was necessary to ensure a fair and equitable distribution of the elements to the various strata. The proportionate stratified random sampling

technique was further used to determine the sample size of respondents based on gender in the selected Colleges. The simple random sampling technique was finally used to select the required number of respondents to represent each College. Table 2 presents the multilevel sampling process.

Table 2- *Multilevel Sampling Process*

Level	Sampling process	Reasons
1.	Stratified Random Sampling	To proportionately determine the number of participants to be selected from each College in terms of whether it is mixed, single sex male or single sex female
2.	Stratified Random Sampling	To proportionately determine the sample size of respondents based on gender in selected Colleges
3.	Simple Random Sampling	For the selection of the required number of participants from each College

Source: Author's construct

Data Collection Instruments

Questionnaire and students' academic achievement records sheet were used to collect data for the study. The questionnaire included: Self-efficacy Scale (Schwarzer, & Jerusalem, 1995), Self-esteem Scale (Rosenberg, 1965), and Locus of control Scale (Levenson, 1981) (See Appendix C). The participants also provided demographic data to facilitate the retrieval of their academic achievement records from the Institute of Education, University of Cape Coast.

Generalized Self-Efficacy Scale (Schwarzer, & Jerusalem, 1995) was adapted to measure the level of students' self-efficacy. The Generalized Self-Efficacy Scale (GSE) was designed to measure self-efficacy in adaptation,

optimism and coping with regards to facing adversity or everyday problems (Appendix C). The purpose of using the GSE was to measure participants' confidence in goal setting, effort, and persistence (Schwarzer and Jerusalem). It was a 10-item one-dimensional questionnaire with items answered on a four-point Likert kind of scale ranging from; - Not at all true (NAT) =1, Hardly true (HT) = 2, Moderately true (MT) = 3, and Exactly true (ET) = 4. Each of the items on the scale sought to find out if participants had successful coping abilities. The self-efficacy scale has a reliability that ranges between .76 and .90 (Schwarzer & Jerusalem, 1995). For the sake of this study scores below 25 were termed low whereas scores from 25 and above were termed high.

The Rosenberg Self-Esteem Scale (RSES) (1965) was adapted to measure the individual's global and one-dimensional self-esteem (Appendix C). It was basically designed to measure what people thought of or how they valued themselves. It was a 10 item Likert scale, and the items are answered on a four-point scale - from Strongly Agree = 3, Agree = 2, Disagree = 1, Strongly Disagree = 0. The original reliability of this scale ranges from .67 and .88 (Rosenberg, 1965; Rosenberg, 1979). For the sake of this study scores on the RSES below 15 were deemed low self-esteem whereas scores from 15 and above were deemed high self-esteem.

The Internality, Powerful Others, and Chance locus of control Scales (IPC) developed by Levenson (1981) was also adapted to measure participants' internal or external locus of control (Appendix C). The Internality, Powerful others, and Chance scale was a multidimensional instrument consisting of 24 items. All the 24 items were scored on a six-point

Likert-type scale. The scoring ranges from -3 (Strongly Disagree) to +3 (Strongly Agree) the scale was divided into three factors expectancy. These are Internal (I-Subscale), Powerful others (P-Subscale), and Chance (C-Subscale) with each factor consisting of eight items. The Internal or I-Sub-scale addresses the degree at which an individual feels that he or she controls his or her own life events. The P-Sub Scale measures the extent to which an individual feels that other people control the events in his or her life, whereas the C-Sub-scale deals with the degree to which an individual believes that chance affects or controls what happens to him or her. The scale has a reliability of .70 and above (Levenson, 1981). For the sake of this study, scores from 25 and below are deemed low on the dimension and scores above 25 are deemed high. When a respondent rates high on the powerful others scale or the chance scale it indicates that the person is an externally oriented locus of control individual. If, however, an individual rates high on the internality scale it indicates that the person is an internally oriented locus of control individual.

The students' academic achievement scores recorded between February, 2018 and August, 2019 were obtained from the Institute of Education (2019), UCC. Data on students' achievement were collected using a students' academic performance records sheet designed to record the students' academic record (see Appendix D). The students' academic achievement scores were calculated using their existing Grade Point Average (GPA) scores on the core courses taken in the first four semesters. The courses were Education Studies, English Language, Ghanaian Language Studies, Information and Communication Technology, and HIV AIDS Education.

These courses were used because all the respondents studied the same course outline and took the same set of standardized examinations. Mathematics was exempted from the core courses for the study because the Maths and Science students studied a different content in mathematics and answered different set of questions. In addition, the Mathematics examination that the Maths and Science students wrote carried a different weighting from what the Generalist students studied. Grade Point Average (CGPA) is a measure used as an index to predict students' general intelligence (Ridgell & Lounsbury, 2004). Averagely, every student in the College of Education takes eight courses of three or two credit hours or one credit hour in a semester. The students' academic achievements scores are interpreted from 'first class or excellent' to 'fail or unsatisfactory'. The academic achievement scores are measured on a six-point scale and interpreted as follows:

1	3.6 – 4.0	First class or excellent.
2	3.0-3.5	Second class upper or very good
3	2.5-2.9	Second class lower or good
4	2.0-2.4	third class or satisfactory
5	1.0 – 1.9	pass or fair
6	< 1	fail or unsatisfactory

For the sake of this study, grades from 2.5 upwards were deemed high while grades below 2.5 were termed low.

Pilot-testing of the Instrument

Pilot-testing allows researchers to check whether the data collection instrument is appropriate and practical to use. It helps to increase the reliability, validity and practicability of the instrument to be used for the study.

The rationale for the pilot-testing therefore was to check the instrument and to improve item format and the scales for the main study. For example, it helped to detect if the items themselves and the instructions accompanying them were devoid of ambiguity and would help the respondents understand and answer the questionnaire as accurately as possible.

The questionnaire was pilot-tested on 150 level 200 College of Education students, from Foso College of Education (FOSCO) in the Central region. It was necessary to use a relatively large number for the pilot- testing to allow for the running of a confirmatory factor analysis. This college was selected for the pilot-testing basically because the student-teachers there have the same characteristics as those in the other Colleges of Education. In addition, FOSCO was selected for proximity's sake. Reliability estimates for the pilot-testing and the main data collection are presented in Table 3.

Table 3- *Reliability Estimates*

Name of scale	Pilot-testing (150 respondents)	Main data (631 respondents)
Generalized Self-Efficacy Scale	.77	.79
Rosenberg Self-Esteem Scale	.69	.71
Locus of Control Scale		
Internality	.71	.75
Powerful Others	.73	.76
Chance	.70	.73

Before the final use of the questionnaire, a confirmatory factor analysis was conducted using a sample of 150 from Foso College of Education. This was done to validate the questionnaires to ensure that all the items loaded on five factors as originally designed by the authors, so that if some of the items were found to have factor loadings below .50 they would be discarded.

Based on the outcome of the pilot-test, the three instruments were slightly modified. Item 5 of the Generalized Self-Efficacy Scale was amended. Item 5 which originally read (thanks to my creativity, I know how to handle unexpected situations) was amended to read (Because I am creative, I know how to handle unexpected situations). Item 7 of the Rosenberg Self-Esteem Scale was slightly modified. The item which initially read "I feel that I'm a person of worth, at least on an equal plane with others" was amended to read "I feel that I'm valuable, when I put myself on an equal platform with others". Items 8 and 24 of the Locus of control Scales were amended. Item 8 which initially read "Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power", was amended to read "Although I might have good ability, I will not be given leadership responsibility if I don't please those in positions of power". Additionally, item 24 which originally read "it's mainly a matter of fate whether or not I have a few friends or many friends" was revised to read "Whether or not I have a few friends or many friends is mainly a matter of fate/luck/chance".

Construct validity was determined by checking for both discriminant and convergent validity. An Average variance extracted (AVE) value of 0.50 and above shows that, averagely, the construct explains more than half of the variance of its indicators. On the other hand, when the Average variance extracted (AVE) is less than 0.50 it means that, averagely, there are a lot of errors in the items than the variance explained by the construct. The AVEs were all above .50, which implied that the instrument had evidence of convergent validity (Fornell & Larcker, 1981). In determining discriminant

validity, the Fornell and Larcker's criteria was used. The square roots of the AVEs were compared with the inter-construct correlation. It emerged that all the scales, apart from locus of control, met the criteria. This confirmed that locus of control should be used as a multidimensional scale. The fit indices of the various scales acceptable. In terms self-esteem: RMSEA = .07; GFI = .91; CFI = .92; and chisq/df = 2.9. In terms of self-efficacy, the following were the indices: RMSEA = .05; GFI = .88; CFI = .94; and chisq/df = 3.2. Finally, the locus of control had the following: RMSEA = .08; GFI = .93; CFI = .90; and chisq/df = 3.0. From the indices, the models for self-esteem, self-efficacy, and locus of control fit the data, and they support the validity evidence.

Aside evidence from the pilot, some studies in Ghana have reported good reliability of the scales used. For example, Partey and Yidana (2018) and Odame-Mensah (2019) reported internal reliabilities of .80 and .82, respectively, using Cronbach alpha. Nyarko, Addai, and Amissah (2014) also reported test-retest reliability ranging from .82 to .95 for the Rosenberg self-esteem scale. In terms of Generalised self-efficacy, Kenin (2018) reported internal reliability of .80, Mensah and Asamani (2013) also reported internal reliability of .80 - .90. For locus of control, study by Amorin and Aboagye (2020) reported internal consistency ranging from .55 to .75 for the dimensions using Cronbach's alpha. These confirm that data obtained from the instruments are highly reliable. Therefore, the instruments can be used in this study.

Ethical issues considered in the Study

Ethical clearance was obtained from the Ethical Review Board of the College of Education Studies, University of Cape Coast, with an application

letter (see Appendices E and F). Participants were made to understand that they were not compelled to participate in the study and that participation was voluntary. They were also told that they could drop out of the study whenever they wished to without any adverse consequence. Out of their own will, the selected students signed a letter of consent (see Appendix G). They were also assured of the confidentiality of the material and the responses they would provide. Works and writings of other researchers used were duly acknowledged in the in-text referencing and reference list at the end.

Data Collection Procedures

I took an introductory letter from the Head of Department, of Education and Psychology, University of Cape Coast to the respective Colleges (see Appendix H). A preliminary visit was made to the Colleges for familiarisation and also to seek permission from the heads of the institutions. A meeting was held with participants at the Colleges' Assembly Halls, where I explained the purpose of the study to them, and also sought their consent to participate in the study. They were made to understand that participation in the study was voluntary. The respondents were also assured of confidentiality of the material. The questionnaires were finally administered to the participants in each College. The modalities for answering the questionnaire were explained to the participants by the researcher, and they were given time to respond to the questionnaires.

In all there were a total of 44 items. This was made up of the Generalised Self-Efficacy Scale which had 10, the Self-Esteem Scale which had 10, and the Locus of Control Scale which had 24. The participants answered the questionnaire at their own pace but majority of them used about

55 minutes to answer the items. A total of 692 questionnaires were administered. Out this number, 631 presenting 91.2% (return rate) of the questionnaires were deemed valid and used for the analyses. Amedahe and Asamoah-Gyimah (2015) indicate that between 5% and 20% of the population is sufficient for generalisations in a survey.

In order to have access to students' grade point average (GPA), I entreated the participants to write their index numbers on their respective questionnaires, to enable retrieval of their results from the Institute of Education (IoE), UCC, for the study. An introductory letter from my Head of Department (UCC) (see Appendix I), and my application letter (see Appendix J) were submitted to the Director of the Institute of Education, UCC, to seek official permission to extract the required data, which in this case was the students' Cumulative Grade Point Average (CGPA) for four semesters to undertake the study.

Data Processing and Analyses

The data were collected were cross checked for complete responses, coded and analysed using mean, standard deviation, frequency, percentage, simultaneous multiple linear regression analysis, independent samples t-test, one-way multivariate analysis of variance (MANOVA), and moderation analysis with Hayes' PROCESS, with 5000 bootstrap samples. The inferential analyses were done using .05 level of significance.

Data gathered on Research Question 1 were analysed using mean, frequencies and percentages. The responses were scored as Not at all true (NAT) =1, Hardly true (HT) = 2, Moderately true (MT) = 3, and Exactly true (ET) = 4. Students' score on self-efficacy ranged from 10 – 40. These scores

were categorised into three depicting low, moderate, and high levels of self-efficacy, using the following score ranges 10 – 19, 20 – 29, and 30 – 40, respectively.

Data gathered on Research Question 2 were analysed using mean, frequencies and percentages. The Internality, Powerful others, and Chance scale was a multidimensional instrument consisting of 24 items. All the 24 items were scored on a six-point Likert-type scale. The scoring ranges from -3 (Strongly Disagree) to +3 (Strongly Agree) the scale was divided into three factors expectancy. These are Internal (I-Subscale), Powerful others (P-Subscale), and Chance (C-Subscale) with each factor consisting of eight items. A score of 24 was added to each dimension to take care of the negatives. The final scores for each of the dimensions ranged from 0 – 48. The following score ranges 0 – 15, 16 – 31, and 32 – 48, were used as low, moderate, and high, respectively.

Data gathered on Research Question 3 were analysed using mean, frequencies and percentages. The responses of the scale were rated as Strongly Agree = 3, Agree = 2, Disagree = 1, Strongly Disagree = 0. The self-esteem scores ranged from 0 – 30, scores ranging from 0 – 14, 15 – 25, and 26 – 30 were considered as low, normal, and high, respectively.

Data collected on Research Question 4 were analysed using simultaneous multiple linear regression analysis because it sought to determine the predictive ability of three predictor variables on one criterion variable. Self-efficacy, self-esteem, and locus of control were the predictor variables, and academic achievement was the criterion variable was. The use of multiple regression was appropriate for this research question because the

criterion variable (academic achievement) was measured on a continuous scale. While self-esteem, self-efficacy, and locus of control are used as predictors in the same model, their confounding effects are controlled for.

For Hypothesis 1, independent samples t-test was used to compare male and female respondents on self-efficacy, self-esteem, and academic achievement, while one-way multivariate analysis of variance (MANOVA) was used to compare male and female students on the three dimensions of locus of control which are internality, powerful others and chance.

Hypothesis 2 sought to determine differences in self-efficacy, self-esteem, and academic achievement, with respect to type of college, thus, mixed and single sex. Independent samples t-test was used to compare mixed and single sex colleges on self-efficacy, self-esteem, and academic achievement, while one-way multivariate analysis of variance (MANOVA) was used to compare mixed sex and single sex colleges on the three dimensions of locus of control.

Hypothesis 3 was tested using Hayes' moderation analysis. The moderation analysis was conducted in order to know whether the effect of self-efficacy on academic achievement of College of Education students was dependent on gender.

Hypothesis 4 was tested using Hayes' moderation analysis. The moderation analysis was conducted in order to find out whether the effect of self-esteem on academic achievement of College of Education students was dependent on gender.

Hypothesis 5 was tested using Hayes' moderation analysis. The moderation analysis was conducted to determine whether the effect of locus of

control on academic achievement of College of Education students was dependent on gender.

Hypothesis 6 was tested using Hayes' moderation analysis. The moderation analysis was conducted in order to know whether the effect of self-efficacy on academic achievement of College of Education students was dependent on the type of college student-teachers attend.

Hypothesis 7 was tested using Hayes' moderation analysis. The moderation analysis was conducted to find out whether the effect of self-esteem on academic achievement of College of Education students was dependent on the type of college student-teachers attend.

Hypothesis 8 was tested using Hayes' moderation analysis. The moderation analysis was conducted in order to determine whether the effect of locus of control on academic achievement of College of Education students was dependent on the type of college student-teachers attend.

PROCESS, a contemporary way of performing moderation analysis, is a regression-based model that is used in estimating model parameters using an ordinary least squares (OLS) regression. Linear regression model using the OLS criterion generates many possible pairs. The pair of values for the regression constant and the coefficient that an OLS regression produces minimizes the residual sum of squares (Hayes, 2018). Prior to the use of PROCESS and other second generational statistical procedures, moderation analyses were based on hierarchical regression. The advantage of using Hayes' PROCESS is that, with the use of bootstrap, it helps to better estimate the standard errors. In addition, it simultaneously, estimates the interaction effect and the probes for the interactions, if any.

CHAPTER FOUR

RESULTS AND DISCUSSION

The chapter presents results of the analyses of data collected from the field, and the discussion of the results. The purpose of the study was to investigate the influence of self-efficacy, locus of control, and self-esteem, on academic achievement of students in Colleges of Education in Ghana. Using the multistage sampling procedure, 692 Level 200 students pursuing Diploma in Basic Education were engaged for the study. However, 631 representing 91.2% of the questionnaires were deemed valid and used for the analyses. This chapter was organised into two sections. The first section presents the results of the study, while the second part discusses the results.

Results

This section was organised under the research question and hypotheses. However, the presentation was preceded by demographic information about the respondents.

Demographic Characteristics

The demographic information covered included gender and type of college. Details of the demographic information are presented in Table 4. From Table 4, more than half 330 (52.3%) of the respondents were males. While 395 (62.6%) of the respondents were in mixed sex colleges, 236 (37.4%) were in single sex colleges. This implies that males dominate among college of education students.

Table 4- *Distribution of Respondents' Demographic Characteristics*

Variable	Frequency	Percentage (%)
Gender		
Female	301	47.7
Male	330	52.3
Type of college		
Mixed	395	62.6
Single sex	236	37.4

N = 631
Source: Field survey (2019)

Preliminary analyses

This part presents descriptive statistics on self-efficacy, self-esteem, locus of control, and academic achievement. These were further followed up with assumptions for the inferential statistics. Details of the descriptive statistics are presented in Table 5.

Table 5- *Descriptive Statistics on Self-Efficacy, Self-Esteem, Locus of Control, and Academic Achievement*

Variable	M	SD	Mdn	5% Trim. M.	Skew	Kurt
Self-efficacy	33.35	4.12	34.0	33.59	-0.93	1.30
Self-esteem	21.11	4.11	21.0	21.12	-0.31	-0.43
Locus of control						
Internality	21.13	6.17	21.0	21.0	0.68	2.71
Chance	26.14	4.95	26.0	26.32	-0.47	0.69
Powerful others	25.89	5.34	26.0	25.98	-0.25	0.24
Academic Achievement (GPA)	2.77	.56	2.87	2.79	-0.54	-0.17

N = 631; 5% Trim. M. – 5% Trimmed Mean; Mdn – Median; Kurt - kurtosis
Source: Field survey (2019)

Table 5 indicates that respondents had a high level of self-efficacy (*M* = 33.35, *SD* = 4.12). This implied that respondents somewhat believed they

could manage and solve difficult problems. They were also confident that they could deal efficiently with unexpected events. In all, respondents had an above average believe that they have the capabilities to deal with problems that confront them considering the expected mean of 25 and the observed mean (M=33.35). The self-esteem of respondents was within the high range (*M* = 21.11, *SD* = 4.11). From this, it can be said that respondents had personal judgment of value or worth about themselves, even though, it was not so high considering the expected mean of 15. In terms of locus of control, respondents had low level of internality (*M* = 21.13, *SD* = 6.17). This indicated that respondents had low level of internal locus of control since their mean score of M=21.13 was less than the expected score of 24, and this suggests that they perceived that the events of their lives are not contingent upon their own behaviour or on internal factors which include abilities, skills, effort, and capabilities. Respondents, however, scored a little high on the chance (*M* = 26.14, *SD* = 4.95) and powerful others scales (*M* = 25.89, *SD* = 5.34).

This implied that respondents attributed events of their life to chance or luck, and sometimes other powerful individuals within their environment. In all, it can be said that respondents had higher external locus of control than internal locus of control. With respect to academic achievement, as measured by the CGPA, respondents' scores were good (*M* = 2.77, *SD* = .56). This could be described to be in the Second Class Honours (Upper Division) given the following classification (1st Class - 3.6 - 4.0; 2nd Class (Upper Division) - 3.0 – 3.5; 2nd Class Lower Division) – 2.5 – 2.9; 3rd Class – 2.0 - 2.4; Pass – 1.0 – 1.9; and Fail < 1.0).

Results in Table 5 were further used to determine the normality of the data. As evident in Table 5, the mean, median, and 5% trimmed mean for all the variables were approximately the same. This implies that the data were normally distributed for all the variables. The normality was further confirmed using the normal Q-Q plots as shown in Appendix K. This suggested that parametric tests could be performed.

Research Question 1

What is the level of self-efficacy among students in Colleges of Education?

This research question sought to determine students' level of self-efficacy. Students' score on self-efficacy ranged from 10 – 40. These scores were categorised into three depicting low, moderate, and high levels of self-efficacy. Details of the results are presented in Table 6.

Table 6- *Level of Self-efficacy*

Level	Score	Frequency	Percentage (%)
Low	10 – 19	3	0.5
Normal	20 – 29	94	14.9
High	30 – 40	534	84.6
Total		631	100.0

Source: Field survey (2019)

From Table 6, majority of the respondents had high level of self-efficacy (84.6%), whereas 0.5% had low level of self-efficacy.

Research Question 2

What is the level of locus of control among students in Colleges of Education?

The aim of this research question was to determine students' level of locus of control. The scores of locus of control ranged from 0 – 48 for each of

the three dimensions. The following score ranges 0 – 15, 16 – 31, and 32 – 48, were used as low, moderate, and high, respectively. Table 7 presents results on locus of control.

Table 7- *Level of Locus of Control*

Level	Low		Moderate		High		Total	
Dimension	n	%	n	%	n	%	n	%
Internality	90	14.3	522	82.7	19	3.0	631	100.0
Chance	22	3.5	525	83.2	84	13.3	631	100.0
Powerful others	14	2.2	511	81.0	106	16.8	631	100.0

Source: Field survey (2019)

As shown in Table 7, the majority of the respondents, thus, 82.7%, 83.2%, 81%, had moderate levels of internality, chance, and powerful others dimensions of locus of control, respectively.

Research Question 3

What is the level of self-esteem among students in Colleges of Education?

The focus of this research question was to determine students' level of self-esteem. Details of the results are presented in Table 8.

Table 8- *Level of Self-esteem*

Level	Score	Frequency	Percentage (%)
Low	0 – 14	43	6.8
Normal	15 – 25	489	77.5
High	26 – 30	99	15.7
Total		631	100.0

Source: Field survey (2019)

The self-esteem scores ranged from 0 – 30, scores ranging from 0 – 14, 15 – 25, and 26 – 30 were considered as low, normal, and high, respectively.

From Table 8, the majority of the respondents (77.5%) were within the normal range of self-esteem.

Research Question 4

What is the influence of self-efficacy, self-esteem, and locus of control on the academic achievement among students in CoE?

This research question sought to determine how much self-efficacy, self-esteem, and locus of control predict the academic achievement among CoE students. Data collected on this research question were analysed using simultaneous multiple linear regression analysis. The predictor variables were self-efficacy, self-esteem, and locus of control, which all measured on continuous basis. The locus of control scale which was multidimensional had three dimensions: internality, chance, and powerful others. The criterion variable was academic achievement, which was measured using grade point average (GPA), and this was on continuous basis. Tables 9 and 10 present the results of the analysis.

Table 9- *Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error	Durbin-Watson
1	.201	.040	.033	.55	1.95

$F(5, 625) = 5.27$, $p < .001$

As presented in Table 9, the model containing self-efficacy, self-esteem, locus of control, and academic achievement was statistically significant, $F(5, 625) = 5.27$, $p < .001$. From the model, self-efficacy, self-esteem, and locus of control jointly explained 3.3% of the variations in academic achievement (Adjusted R Square = .033). Further examination of the model indicated no autocorrelation since the Durbin-Watson's value of 1.95

was within the ranges of 1.5 and 2.4. Table 10 presents the regression coefficients of each of the predictor variables.

Table 10- *Regression Coefficients for self-efficacy, self-esteem, and locus of control*

	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model	B	Std. Error	Beta (β)	*t*	Sig.	Tolerance	VIF
(Constant)	2.621	.254		10.327	<.001		
Self-efficacy	-.015*	.006	-.113	-2.685	.007	.866	1.154
Self-esteem	.028*	.006	.208	4.921	<.001	.862	1.160
Internality	.003	.004	.037	.951	.342	.991	1.009
Chance	-.002	.004	-.020	-.515	.607	.977	1.024
Powerful others	.002	.004	.020	.503	.615	.980	1.020

*Significant, $p < .05$

Results in Table 10 show that there was no multicollinearity since all the Variance Inflation Factor (VIF) were below 10. In addition, normality, linearity, homoscedasticity, and independence of residuals were not violated as shown in the normal P-P plot of the regression standardised residuals and scatterplot (see Appendix L).

As shown in Table 10, among all the predictors, self-efficacy (B = -.02, t = -2.69, p = .007) and self-esteem (B = .03, t = 4.92, p < .001) were the only significant predictors of academic achievement, while controlling for the other variables in the model. The results imply that a unit increase in generalised self-efficacy would lead to .02 units decrease in respondents' academic achievement while controlling for other variables in the model. On the other hand, a unit increase in self-esteem would lead to .03 units increase

in respondents' academic achievement. Thus, while self-efficacy was a negative predictor, self-esteem was a positive predictor of academic achievement. Comparatively, self-esteem (β = .21) predicted more of academic achievement than self-efficacy (β = -.11). Locus of control was, however, not a significant predictor of academic achievement while controlling for self-efficacy and self-esteem.

Discussion

The research question sought to determine the influence of self-efficacy, self-esteem, and locus of control on academic achievement among students. It was revealed that self-efficacy, self-esteem, and locus of control, as a whole, explained 3.3% of the variances in academic achievement. Even though the aforementioned, to some extent, jointly explained academic achievement, the variations they each contributed to academic achievement was small as indicated by the Adjusted R Square of .033 (Cohen, 1988). This finding agrees with Ogunmakin and Akomolafe's (2013) report that there is a significant influence of self-efficacy and locus of control on academic achievement of secondary school students in Ondo State, Nigeria. The two predictor variables jointly contributed to academic achievement of secondary school students and this showed that the two independent variables jointly and significantly predicted academic achievement of the respondents.

This study, like that of Mieza (2012), found that self-efficacy is a negative predictor of academic achievement. Mieza found in Kisumu, Kenya that there was an inverse relationship between self-efficacy and academic achievement. In his study, he found that the participants had higher self-efficacy but exhibited low academic achievement. The implication of this is

that, students could have higher self-beliefs yet have poor academic achievement, especially if they set unrealistic targets for themselves.

The finding was, however, in contrast with a number of studies (Abu-Tineh, Khasawneh, & Khalaileh, 2011; Patrick, & Zhenxing, 2016; Salami, 2010; Jackson, 2002; Fenning & May, 2013). Patrick and Zhenxing examined the relationship of self-efficacy and grade point average (GPA) and found a positive relationship. In addition, Fenning and May (2013), found a positive correlation between general self-efficacy and GPA. Clickenbeard (2012) indicated that the self-confidence of gifted students usually increases because they have positive experiences in academic work. Students need to maintain a high level of self-efficacy but for that to happen, they must be helped to believe in what they have and can do. They must be encouraged to believe that they have the necessary skills and talents to be able to complete a set task. It must be noted however that respondents in this study did not focus on gifted students.

In this current study, while self-esteem positively predicted academic achievement, self-efficacy was a negative predictor of academic achievement. The result implies that as students' self-efficacy increases, their academic achievement decreases. This result could mean that students were not able to generalise their competencies and expectations from other situations, hence its adverse impact on their academic achievement. If this argument holds, then students would require special attention so that they can manage their expectations, and also transfer it from one situation to another. Self-efficacy in this study was measured using the generalised self-efficacy scale, and this borders on students' ability to transfer self-efficacy perceptions from one area

of study to another, or the degree to which an expectation is generalized across situations. An individual's self-efficacy plays a major role in how he or she approaches goals, tasks, and challenges. Students with high self-efficacy view challenging issues as tasks to be mastered rather than problems or threats to be avoided (Williams & Williams, 2010).

It was further revealed in the current study that self-esteem is a significant positive predictor of academic achievement. This result implies that, the more students see themselves as people with value, and have the belief that they can succeed, the better their academic achievement. This finding agrees with some authors (Lockett, 2003; Bray, 2001; Mefteh, 2002). Locket found that, among African American students, a high level of self-esteem was a major factor in determining academic success. Bray, equally found that self-esteem proportionally increases with academic achievement of students. The finding of this study is obvious because students with high self-esteem are confident, talented, creative are able to express themselves well, and are not easily influenced by environmental factors. They are more goal-directed and they focus primarily on their academic work.

In terms of locus of control, this present study did not find any significant effect of locus of control on students' academic achievement. The finding in this study contrasts findings of previous studies. Bar-On (2002) reported from his study that locus of control has a positive and significant relationship with academic achievement among students. Slagsvold and Sorenson (2008) have also confirmed from their study that a relationship exist between locus of control and academic achievement. Slagsvold and Sorenson stressed that internal Locus of Control focus has been found to repeatedly

associate with higher levels of personal satisfaction, and academic success, and is able to cope with pain, but individuals who possess external locus of control are affected by emotional stress and are prone to depression (Maltby, Day, & Macaskill, 2007). They are generally not motivated to make behavioural changes, are often anxious, depend mostly on others for support, and are less likely to cope with their academic work.

Hypothesis One

H_0: There are no significant gender differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in Colleges of Education.

H_A: There are significant gender differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in Colleges of Education.

The aim of this hypothesis was to determine differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students with respect to gender. Independent samples t-test was used to compare male and female respondents on (a) self-efficacy, (c) self-esteem, and (d) academic achievement of students, while one-way multivariate analysis of variance (MANOVA) was used to compare male and female students on the three dimensions of (b) locus of control (Internality, Powerful Others, and Chance).

As shown in Table 11, the Levene's test for equality of variances for self-efficacy (p = .936), self-esteem (p = .133), and academic achievement (p = .423) did not violate the homogeneity of variance assumption. With this,

independent sample t-test was conducted. The results of the independent samples t-test are presented in Table 11.

Table 11- *Gender differences in Self-efficacy, Self-esteem, and Academic Achievement*

Hypothesis					Levene's Test for Equality of Variances		t-test for Equality of Means			
		Gen	*M*	*SD*	*F*	Sig.	*t*	df	Sig.	Mean Diff.
1(a)	Self-efficacy	F	33.31	4.08	.006	.936	-.21	629	.833	-.07
		M	33.38	4.17						
1(c)	Self-esteem	F	20.92	4.24	2.26	.133	-1.10	629	.270	-.36
		M	21.28	3.99						
1(d)	Academic	F	2.70	.56	.642	.423	-2.95	629	.003	-.13*
	achievement	M	2.83	.55						

*Significant, $p < .05$; F – Female; M – Male

Hypothesis 1(a)

This hypothesis sought to test whether male and female students differ on their level of self-efficacy. The results in Table 11 show no statistically significant difference between males (M = 33.38, SD = 4.17) and females (M = 33.31, SD = 4.08) in terms of self-efficacy, $t(629) = -.21$, $p = .833$, eta squared < .001. In other words, male and female students had similar levels of self-efficacy. Hence, the null hypothesis which states that "there is no significant gender difference in self-efficacy of students in the Colleges of Education" was not rejected.

Hypothesis 1(c)

This hypothesis tested whether there is a significant gender difference in the levels of self-esteem of students in Colleges of Education. The results,

as presented in Table 8, showed that there is no statistically significant difference between males (M = 21.28, SD = 3.99) and females (M = 20.92, SD = 4.24) in terms of self-esteem, $t(629) = -1.10$, $p = .270$, eta squared = .002. Practically, the effect as indicated by the eta squared is very small. Based on this, I failed to reject the null hypothesis which states that "there is no significant gender difference in self-esteem of students in the Colleges of Education".

Hypothesis 1(d)

This hypothesis sought to test whether male and female students differ on their level of academic achievement. The results in Table 11 revealed a statistically significant difference in the academic achievement between males (M = 2.83, SD = .55) and female (M = 2.70, SD = .56) students, $t(629) = -2.95$, $p = .003$, eta squared = .01. Comparatively, it can be said that male students performed better academically than female students. In view of this result, the null hypothesis which states that "There is no significant gender difference in academic achievement of students in Colleges of Education" was rejected.

Hypothesis 1(b)

This hypothesis sought to test whether there is a significant difference in the locus of control of male and female students. One-way MANOVA was used to compare the locus of control for male and female students on the three dimensions of locus of control which are internality, chance, and powerful others. The Box's M test for homogeneity of covariance variance matrices assumption was violated, Box's (M = 76.59, $F(6, 2802462.10) = 12.70$, $p < .001$. The results on the multivariate tests are presented in Table 12.

Table 12- *Multivariate Tests for Gender Difference in Locus of Control*

Effect	Value	*F*	df1	df2	Sig.	Partial Eta Squared
Pillai's Trace	.027	5.798*	3	627	.001	.027
Wilk's Lambda	.973	5.798	3	627	.001	.027
Hotellings Trace	.028	5.798	3	627	.001	.027
Roy's Largest Root	.028	5.798	3	627	.001	.027

*Significant, $p < .05$

Table 12 indicates a statistically significant gender difference in the combined locus of control, Pillai's Trace V = .03, $F(3, 627) = 5.80$, $p = .001$, partial eta squared = .03. Gender explained 3% of the variations in the combined locus of control. Table 13 presents the univariate results using Bonferroni's alpha of .017.

Table 13- *Univariate Tests for Gender Difference in Locus of Control*

Source	Dependent Variable	df	Mean Square	*F*	Sig.	Partial Eta Squared
Intercept	Internality	1	282116.713	7502.247	.000	.923
	Chance	1	430954.816	17732.385	.000	.966
	Powerful others	1	422325.649	14817.799	.000	.959
Gender	Internality	1	341.715	9.087*	.003	.014
	Chance	1	142.975	5.883*	.016	.009
	Powerful others	1	33.731	1.183	.277	.002
Error	Internality	629	37.604			
	Chance	629	24.303			
	Powerful others	629	28.501			
Total	Internality	631				
	Chance	631				
	Powerful others	631				

* Significant, $p < .017$ (Bonferroni's alpha)

As indicated in Table 13, there is a significant difference between males and females in terms of internality dimension of locus of control, $F(1, 629) = 9.09$, $p = .003$, partial eta squared = .01. Similarly, a significant difference exists between male and female in terms of chance dimension of locus of control, $F(1, 629) = 5.88$, $p = .016$, partial eta squared = .01. Practically, the magnitude of the effects was small, as indicated by the partial eta squared of .01 (Cohen, 1988). In terms of powerful others, there is no statistically significant difference between male and females, $F(1, 629) = 1.18$, $p = .277$, partial eta squared < .01. It is evident from the results that in terms of internality, females ($M = 21.90$, $SD = 6.60$) perceived that events happening to them were as a result of their own behaviour than males do ($M = 20.43$, $SD = 5.67$, see Appendix M). With respect to chance, females in addition ($M = 26.64$, $SD = 4.72$), felt more that things in their lives happen as a result of chance than males do ($M = 25.68$, $SD = 5.11$, see Appendix M). Summing up from the results, the null hypothesis which states that "There are no significant gender differences in locus of control of students in Colleges of Education" was rejected in favour of the alternate hypothesis.

Discussion

The results of this hypothesis revealed that both males and females have equal levels of self-efficacy and self-esteem. These are in line with Shikullaku (2013) and Al-Kfaween (2010) who reported that there was no significant gender difference in the levels of self-efficacy, and Balouchi (2001) who also did not find any significant gender difference in students' self-esteem and their academic achievement. Manso (2014) also did not find

any significant gender difference in terms of self-esteem and academic achievement among senior high school students in Kumasi, Ghana.

Nevertheless, contrarily, Akturk, Kesici, and Sahin (2009) explained that adolescent females scored low on the self-esteem scale than the males. Balbag, Cemrek and Mutlu (2010) also remarked that often times, more females reported lower self-esteem than did males during the middle and late adolescence. Akin (2011) also found that females had statistically lower self-esteem than did males. The writer comments that this could probably be so by virtue of the fact that males especially in the African context were always expected to compliment females. When females are not complimented by their male counterparts, there is often that tendency for them to feel unwanted and have a low self-esteem (Akin, 2011). This therefore contradicts the current study's findings which reported that gender played no role in students' self-esteem.

It is presupposed that owing to gender differences and stereotypes, often times, males tend to have higher self-esteem than females. This is the position of (Gibb, Fergusson, & Horwood, 2008) which holds that gender stereotyping or knowledge in children or students predict their gender linked preferences and conduct. In the view of Gibb et. al., a male child who has a lower self-esteem than his female counterpart may not be considered man enough, as his low self-esteem could contribute to bruising his maleness or male ego. It is thus, presumed that, a female who has higher self-esteem than her male colleague is weird and non-traditional (Abdu-Raheem, 2012). By virtue of this study's discovery that gender does not influence students' self-esteem, it invariably disagrees with the view of Gibb et al. (2008).

In recent times, women are capable of doing everything that a man can do (Raman, Lim & Nair, 2012). Most women these days are the bread winners of their homes which indirectly makes them the heads of their homes. Rather, Oloko (2012) has seen that the main sources of gender differentiation is social and institutional practices than merely being a male or a female. Park, Lee and Kim (2014), argue that these differences, rather deepen gender stereotyping and polarization in societies.

Again, the findings are also in contravention with some previous studies. Tenaw (2013) also found in his study that there is a significant difference in self-efficacy between sexes. This significant difference indicated that females are in a better stead in terms of academic achievement than males. Thus, it is recommend that it is imperative for educators to take into cognisance and include strategies that can boost science education-specific self-efficacy among female science students.

Sawari and Mansor (2013) found no significant difference in the level of general self-efficacy between male and female students however, most of the respondents had an intermediate level of general self-efficacy which could not be treated as significantly high. In addition, Yari (2000), in his research found that academic achievement and self-esteem were significantly related. In the same study, Yari further found a significant difference between gender and self-esteem with academic achievement. Abugaroo (2013) found among senior high school students at Winneba that there is significant difference between males and females in terms of their self-esteem and academic achievement. He, however, added that males with higher self-esteem performed better than females in the same category.

However, in terms of locus of control, females had more internal locus of control than males. Paradoxically, females attributed more of events happening to them to chance than males did. The findings of this study disagrees with that of Strickland and Haley (2010) who found that males have higher internal locus of control than females, and females have higher external locus of control than males. Stipek and Weisz (1981) asserted that it is possible that females' scores on locus of control does not accurately depict their actual beliefs and that they were probably influenced by their beliefs of appropriate gender roles.

Similarly, Bowling, Eschleman and Wang (2010) discovered that in the case of locus of control females scored higher than males for negative happenings such as losing a game, or not being promoted to the next grade. The writers explain that when girls become adults, they assume a level of responsibility for negative events which is slightly higher than adult boys.

Conversely, Ghasemzadeh and Saadat (2011) found that young boys take ownership of the events in their lives by ascribing their successes in academic to their own ability more often than young girls will do, whereas females attributed successes in their academic work to effort or hard work more than males. The writer adds further that more females explained their academic successes were due to being lucky than males did. Akin (2011) also realized that often times, males liked high self-esteem subjects, which increased their internal locus of control, and thus, culminating in positive happenings in their lives. Relatively, females who desired high esteem subjects, often sought for external locus of control, which affected them adversely (Akin, 2011).

Hypothesis Two

H_o: There are no significant differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in mixed and single sex colleges.

H_A: There are significant differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students in mixed and single sex colleges.

This hypothesis sought to determine differences in (a) self-efficacy, (b) locus of control, (c) self-esteem, and (d) academic achievement of students with respect to type of college (mixed and single sex). Independent samples t-test was used to compare mixed and single sex colleges on (a) self-efficacy, (c) self-esteem, and (d) academic achievement of students, while one-way multivariate analysis of variance (MANOVA) was used to compare mixed and single sex colleges on the three dimensions of (b) locus of control. The results of the independent samples t-test are presented in Table 14.

The results on self-efficacy (p = .349) and self-esteem (p = .110) as presented in Table 14, did not violate the homogeneity of variance assumption, however, that of academic achievement did violate the assumption (p = .001).

Table 14- *Differences in Self-efficacy, Self-esteem, and Academic Achievement in terms of Type of College*

				Leven's Test for Equality of Variances		t-test for Equality of Means			
	Col	*M*	*SD*	*F*	Sig.	*t*	df	Sig.	Mean Diff.
Self-efficacy	M	33.16	4.15	.878	.349	-1.49	629	.136	-.51
	S	33.67	4.06						
Self-esteem	M	21.22	4.21	2.555	.110	.90	629	.370	.30
	S	20.92	3.93						
Academic	M	2.799	.53	12.14*	.001	1.55	444.29	.123	.07
achievement	S	2.726	.60						

*Significant, $p < .05$; S – Single sex; M - Mixed

Hypothesis 2 (a)

This hypothesis sought to test whether students in mixed colleges and those from single sex colleges differ with regards to their level of self-efficacy. The results on the test of equality of means indicated no statistically significant difference between students from mixed colleges and those from single sex colleges in terms of self-efficacy, $t(629) = -1.49$, $p = .136$. Therefore, I failed to reject the null hypothesis which states that "there is no significant difference in self-efficacy of students with regards to type of college".

Hypothesis 2 (c)

This hypothesis tested whether there is a difference in the levels of self-esteem of students in terms of the type of college. The results on the test of equality of means indicated no statistically significant difference between students from mixed colleges and those from single sex colleges in terms of self-esteem, $t(629) = .90$, $p = .370$. Therefore, I failed to reject the null

hypothesis which states that "there is no difference in self-esteem of students with regards to type of college".

Hypothesis 2 (d)

This hypothesis sought to test whether students mixed colleges and those from single sex colleges differ with regards to their level of academic achievement. The results on the test of equality of means indicated no statistically significant difference between students from mixed colleges and those from single sex colleges in terms of academic achievement, $t(444.29) = 1.55$, $p = .123$. Therefore, I failed to reject the null hypothesis which states that "there is no difference in academic achievement of students with regards to type of college".

Hypothesis 2 (b)

This hypothesis sought to test whether there is a difference in the locus of control of students in mixed colleges and those from single sex colleges. The difference in locus of control was determined using one-way MANOVA. The results on homogeneity of variance-covariance assumption were violated, Box's M = 49.89, $F(6, 1624245.72) = 8.27$, $p < .001$. Details of the multivariate test are presented in Table 15.

Table 15- *Multivariate Tests for Difference in Locus of Control in terms of Type of College*

Effect	Value	*F*	df1	df2	Sig.	Partial Eta Squared
Pillai's Trace	.024	5.075*	3	627	.002	.024
Wilk's Lambda	.976	5.075	3	627	.002	.024
Hotellings Trace	.024	5.075	3	627	.002	.024
Roy's Largest Root	.024	5.075	3	627	.002	.024

*Significant, $p < .05$

The results in Table 15 show that there is a statistically significant multivariate difference in locus of control in terms of type of college, $F(3, 627) = 5.08$, $p = .002$, partial eta squared = .02. The separate univariate tests, with Bonferroni's alpha of .017 are presented in Table 16.

Table 16- *Univariate Tests for Difference in Locus of Control in terms of Type of College*

Source	Dependent Variable	df	Mean Square	F	Sig.	Partial Eta Squared
Intercept	Internality	1	267820.265	7087.289	.000	.918
	Chance	1	407547.677	16764.445	.000	.964
	Powerful others	1	398885.705	14032.570	.000	.957
Type of college	Internality	1	225.653	5.971*	.015	.009
	Chance	1	138.587	5.701*	.017	.009
	Powerful others	1	81.242	2.858	.091	.005
Error	Internality	629	37.789			
	Chance	629	24.310			
	Powerful others	629	28.426			
Total	Internality	631				
	Chance	631				
	Powerful others	631				

* Significant, $p \leq .017$ (Bonferroni's alpha)

As shown in Table 16, there is a statistically significant difference between students in mixed college and those in single sex colleges in terms of internality, $F(1, 629) = 5.97$, $p = .015$, partial eta squared = .01; and chance dimensions of locus of control, $F(1, 629) = 5.70$, $p = .017$, partial eta squared = .01. However, there is no significant difference with regard to the powerful others dimension, $F(1, 629) = 2.86$, $p = .091$, partial eta squared = .01.

The results showed that students in mixed colleges had lower levels of internality ($M = 20.67$, $SD = 6.53$) than those in single sex colleges ($M =$

21.91, *SD* = 5.45). Similarly, students in mixed colleges had lower level of chance (*M* = 25.78, *SD* = 5.30) compared with students in single sex colleges (*M* = 26.75, *SD* = 4.24, see Appendix N). Based on the results, the null hypothesis that "there are significant differences between students in mixed and single sex colleges' locus of control" was rejected in favour of the alternative hypothesis.

Discussion

The results of Hypothesis Two revealed no significant difference in self-efficacy, self-esteem, and academic achievement with respect to type of college. On the contrary, Mael et al. (2005) conducted six studies on self-esteem and found mixed results. One of the results indicated that self-esteem was higher in single-sex colleges. Lee and Marks (1992) are also of the view that single-sex school environments help females to overcome gender discriminating attitudes when they find themselves in situations that require them to behave in a gender stereotyped manner. These views suggest that single sex colleges are in a way very good in helping adolescents to find their ego identity.

The findings further contradict Billger's (2009) position that concentration levels and academic achievements are normally high for single sex schools than mixed colleges. The writer was of the view that owing to the dominant presence of boys in co-educational institutions, distraction levels and misbehaviours are always higher compared to when boys and girls study in separate classrooms. On the basis of this assertion, it can be concluded that the presence of boys in the same classroom as girls has a negative impact on the girls' academic work (Billger, 2009). Tsui (2009) also seems to support

single-sex education as he indicated in his study that peer pressure in mixed-sex schools compel females to choose engaging and spending their time with the opposite sex over spending their time on their studies. Tsui concludes further that this pressure from their peers contributes to having a negative impact on the girls' academic work. Hakimi, Hejazi and Lavasani (2011) added that gender-stereotyped subject, attitudes and choices have been observed more in coeducational schools, which have adversely affected the academic achievements of students especially for girls. Going by the views of Rosander, Bäckström and Stenberg (2011), it can be concluded that these subject stereotype attitudes and choices are not as prevalent in single-sex schools as they are in mixed sex schools, which has rather boosted the performance of girls in single-sex schools.

In terms of locus of control, there was a significant with respect to the type of college. Students from mixed colleges had lower internal locus of control compared to those from single-sex colleges. Single sex colleges are described as colleges that enrol only one sex as in only male or only female students, whereas mixed colleges enrol mixed sex students. This result showing that students from mixed colleges had lower internal locus of control compared to those from single-sex colleges is not surprising. This is because most times, in single sex colleges, both male and female students feel free to overcome certain social pressures from the society or peers of the opposite sex which will either compel them to study certain courses or prevent them from studying some other courses which they wished to study simply because of social pressure.

In a study of single sex classes conducted by Salomone (2003), it was detected that adolescent girls felt more comfortable, interacted more with teachers and developed more favourable attitudes. This could contribute in developing greater self-confidence and broader interests among the students.

Hypothesis Three

H_o: Gender will not moderate the influence of self-efficacy on academic achievement of students in College of Education.

H_A: Gender will moderate the influence of self-efficacy on academic achievement of students in College of Education.

This hypothesis sought to determine whether the relationship between self-efficacy and academic achievement depends on gender of respondents. That is whether gender weakens or strengthens the influence of self-efficacy on academic achievement. This hypothesis was tested using moderation analysis with Hayes' PROCESS, with 5000 bootstrap samples. Both the predictor variable, self-efficacy, and the criterion variable, academic achievement, were measured on continuous basis. The moderator variable gender, was categorical, and had two levels: male and female. Dummy was created for gender, and female was used as the baseline category. Results on this hypothesis are shown in Table 17.

As presented in Table 17, the overall model which contained the predictor and the interaction term was statistically significant, $F(3, 627) = 3.48$, $p = .016$, $R^2 = .016$. This shows that the model explained 1.6% of the disparities in academic achievement of students.

Table 17- *Moderation Effect of Gender in the relationship between Self-efficacy and Academic Achievement*

			Boot95%CI		Model Summary				
	B	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	3.043	.266	2.488	3.459	.016	3.48	3	627	.016
X on Y	-.010	.008	-.026	.006					
W1 on Y	-.147	.352	-.846	.539					
X*W1 on Y	.008	.011	-.012	.030					
Conditional interaction					ΔR^2	*F*	df1	df2	*p*
X*W					.001	.599	1	627	.439

*Significant, $p < .05$; W – Gender; W1 – Male; X – Self-efficacy; Y – Academic achievement

The results further showed that self-efficacy was not a significant predictor of academic achievement when interaction between males and self-efficacy was controlled for, *B* = -.01, *Boot95%CI* [-.03, .01]. Interaction between male and self-efficacy was not statistically significant, *B* = .008, *Boot95%CI* [-.01, .03]. The interaction term contributed < .1% to the variances in academic achievement, and this was not significant, $F(1, 627) = .60$, $p = .439$. These results imply that the relationship between self-efficacy and academic was not contingent on gender, hence gender did not moderate the relationship between the two variables. From the results, the null hypothesis that "Gender will not moderate the relationship between self-efficacy and academic achievement of College of Education students" was not rejected.

Discussion

The results obtained from this current study indicated that gender did not significantly moderate the relationship between self-efficacy and academic achievement. This means that whatever relationship that exists between self-efficacy and academic achievement does not depend on the participant's gender type. In effect, these results imply that there was no difference in the degree of relationship between the male students' self-efficacy and academic achievement and female students' self-efficacy and academic achievement. The findings of this study therefore suggest that a continuous increase in a student's self-efficacy will result in either a better or a poor academic achievement regardless of the gender of the student. Similarly, a continuous decrease in a student's self-efficacy will result in either a decrease or an increase in academic achievement irrespective of the gender of the student.

The findings of this study were however in contrast with the findings of Chee, Pino and Smith's (2010) discoveries in South East America, where the writers observed gender differences in the academic ethic and academic achievement of university students. Their findings portrayed that: female students were more likely to possess an academic ethic than their male colleagues, and females tended to have higher GPA than their male counterparts. It must be noted that though the authors did not do moderation exactly, they established gender difference in academic achievement. This implies that when males and females differ in their academic achievement, there is a tendency that how their self-efficacies are related to their academic achievement might equally differ. In this regard the findings of the aforementioned can be related to the current study. This result could also be so on the basis of context. The culture of South America is different from that of Ghana. Therefore, it is obvious that the findings of the studies are in contravention. Within the American context, there are a lot of support services and other opportunities that may facilitate the student's development high self-efficacy. This is mostly not the case within the Ghanaian context, and this could probably be a reason for the contrasting results.

Furthermore, the results did not also side with Berings, De Feyter, Brebels, Van den Broeck and Proost's (2012) study in Belgium where they discovered that among university college students, gender differences in academic effort and achievement could be explained both as a whole and in part by differences in personality. Karau and Schmeck (2009) also postulate that the gender effect on academic results can partly be explained by personality differences between men and women. The writers observe that

females normally score higher than males on agreeableness and neuroticism. Furnham and Monson (2009) also observed gender differences for facets of neuroticism and agreeableness (anxiety and tender-mindedness), but also for orderliness as a facet of conscientiousness. Concerning conscientiousness, De Feyter, Caers, Vigna, and Berings (2012) observed that female students always obtain higher scores on concentration, perseverance and orderliness than their male student colleagues. As a result, females are able to exhibit better in their academic activities than their male counterparts.

Hypothesis Four

H_o: Gender will not moderate the influence of self-esteem on academic achievement of students in College of Education.

H_A: Gender will moderate the influence of self-esteem on academic achievement of students in College of Education.

The aim of this hypothesis was to determine whether the relationship between self-esteem and academic achievement is contingent on gender. In other words, the hypothesis was intended to determine whether there would be a difference in the relationship between self-esteem and academic achievement for male and female students. This hypothesis was tested using the moderation analysis with Hayes' PROCESS with 5,000 bootstrap samples. The predictor variable was self-esteem, which was measured on continuous basis. The criterion variable was academic achievement, and this was also measured on continuous basis using Grade Point Average (GPA). The moderator variable was gender, with two levels. Dummy was therefore created for the gender, with female as the reference category. Table 18 presents the results.

Table 18- *Moderation Effect of Gender in the relationship between Self-esteem and Academic Achievement*

	Boot95%CI				Model Summary				
	B	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.282	.180	1.927	2.631	.039	8.49	3	627	<.001
X on Y	.020	.009	.003	.037					
W1 on Y	.058	.249	-.429	.564					
X*W1 on Y	.003	.012	-.020	.026					
Conditional interaction					ΔR^2	*F*	df1	df2	*p*
X*W					.0001	.084	1	627	.773

*Significant, $p < .05$; W – Gender; W1 – Male; X – Self-esteem; Y – Academic achievement

Data from Table 18 indicates that the model with the predictors and the interaction term was statistically significant, $F(3, 627) = 8.49$, $p < .001$, $R^2 = .039$. The model accounted for 3.9% of variations in students' academic achievement. Specifically, interaction between male category and self-esteem compared with female did not significantly predict academic achievement, $B = .003$, *Boot95%CI* [-.02, .03]. In addition, the interaction term, when added to the model contributed < .001 to the model. This was, however, not significant ($p = .773$). These results imply that gender does not moderate the relationship between self-esteem and academic achievement. The results of this hypothesis led to the decision of failing to reject the null hypothesis that "Gender will not moderate the relationship between self-esteem and academic achievement".

Discussion

The present study did not find gender to be a moderator in the relationship between self-esteem and academic achievement. Thus, the relationship between self-esteem and academic achievement was not contingent on gender. This implies that the relationship between self-esteem and academic achievement was similar for male and female students. The outcome of this study suggests that a continuous increase in a student's self-esteem will lead to a better academic achievement regardless of the gender of the student. In the same way, a continuous decrease in a student's self-esteem can lead to a decrease in academic achievement irrespective of the gender of the student. This means that female students just like male students, can, to a large extent excel in their academic work if they have high self-esteem. The results of this study also suggest that for a given level of self-esteem, male and female college students are likely to perform at the same level academically.

This means therefore that the relationship that exists between self-esteem and academic achievement failed to discriminate with respect to gender.

The results obtained in this current study, therefore, were consistent with those of several other authors (Balouchi, 2001). The findings of this study were at par with those of Meftah (2002) who reported a significant relationship between self-esteem and academic achievement. Meftah however found no significant difference among females and males on the relationship between self-esteem and academic achievement. It is worthy to state that Meftah's study was conducted in Iran, which is a different country and continent from the current study. This finding suggests that similar things might be happing among male and female students from both countries. This may be particular with their self-esteem. The findings of this study also agreed with Balouchi's (2001) results that there was no significant difference between male and female students regarding the relationship between self-esteem and their academic achievement. The results of this study however disagreed with those of Ashtiani (1998) who reported a negative relationship among self-concept, self-esteem and depression which in turn led to a decrease in academic achievement.

Hypothesis Five

H_o: Gender will not moderate the influence of locus of control on academic achievement of students in College of Education.

H_A: Gender will moderate the influence of locus of control on academic achievement of students in College of Education.

This hypothesis sought to explore the moderating role of gender in the influence that locus of control has on academic achievement. That is, the focus

was to find out if the link between locus of control and academic achievement was the same for males and females or it was different for the two sexes. Moderation analysis using PROCESS with 5,000 bootstrap samples was employed in testing the hypothesis. The predictor variable was locus of control which was multidimensional: internality, chance and powerful others. Academic achievement (GPA) was the criterion variable. The moderator variable, gender, was a categorical variable and as such was dummy coded using female as a reference group. Table 19 and Figure 4 present the details of the results.

As shown in Table 19, the entire model with the predictors and the interaction term for all the three models- internality $F(3, 627)= 3.53$, $p=.015$, chance $F(3, 627)= 4.99$, $p=.002$, and powerful others $F(3, 627)= 3.85$, $p=.009$- were all significant. For internality, as a sub-dimension, gender did not significantly moderate the influence of internality on academic achievement, $F(1, 627)= .48$, $p=.489$. This suggests that the influence of internality on academic achievement is the same for male and female students. Similarly, the influence of powerful others on academic achievement was not moderated by gender, $F(1, 627) = 2.83$, $p=.093$. However, gender significantly moderated the influence of chance dimension of locus of control on academic achievement, $F(1, 627)= 5.98$, $p=.015$. The interaction term was responsible for .9% of the variances in academic achievement of students ($\Delta R^2 = .009$). Figure 5 shows a graphical representation of the significant interaction.

Table 19- *Moderation Effect of Gender in the relationship between Locus of Control and Academic Achievement*

			Boot95%CI			Model Summary			
INTERNALITY	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.560	.108	2.357	2.780	.017	3.531	3	627	.015
X on Y	.012	.011	-.003	.0015		Conditional interaction (X*W)			
W1 on Y	.243	.157	-.069	.548	ΔR^2	*F*	df1	df2	*p*
X *W1 on Y	-.005	.007	-.019	.009	.001	.479	1	627	.489
CHANCE	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.429	.195	2.039	2.816	.023	4.990	3	627	.002
X on Y	.010	.007	-.003	.024		Conditional interaction (X*W)			
W1 on Y	.708	.248	.222	1.205	ΔR^2	*F*	df1	df2	*p*
X*W1 on Y	-.022	.009	-.040	-.004	.009	5.982	1	627	.015
POWERFUL OTHERS	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.867	.138	2.590	3.128	.018	3.852	3	627	.009
X on Y	-.006	.207	-.625	.180		Conditional interaction (X*W)			
W1 on Y	-.231	.207	-.625	.180	ΔR^2	*F*	df1	df2	*p*
X*W1 on Y	.014	.008	-.001	.029	.004	2.832	1	627	.093

*Significant, $p < .05$; X- Internality/Chance/Powerful Others; W1- Male; Y- Academic Achievement

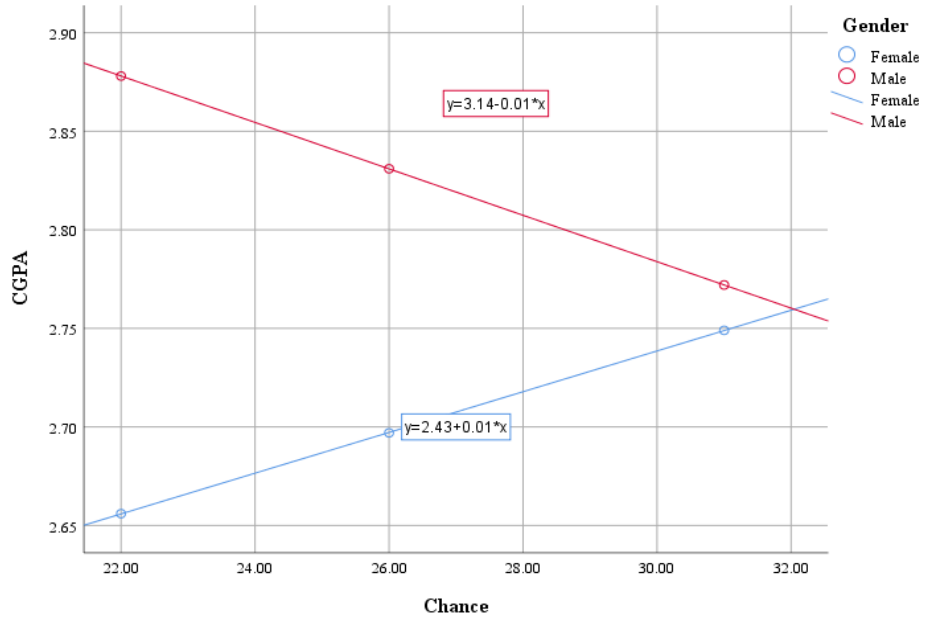


Figure 5- Interaction effect of gender in the relationship between chance and academic achievement

The interaction effect, as indicated in Figure 5, shows that the influence of chance (as a dimension of locus of control) on academic achievement was dissimilar for male and female college students. Whereas the influence of the chance dimension of locus of control on academic achievement was positive for females, it was negative for the males.

Generally, the result revealed that gender significantly moderated the influence of locus of control on academic achievement. Based on the results, the null hypothesis which states that "gender will not moderate the influence of locus of control on academic achievement" was rejected in favour of the alternate hypothesis.

Discussion

The findings from the study revealed that the influence of locus of control on academic performance was not the same for male and female students. Explicitly, internality and powerful others had a different story. In

actual fact, the influence of the two dimensions of locus of control (internality and powerful others) on academic achievement was not significantly different for both male and female students. This implies that for a given level of internality or powerful others locus of control male and female college students are likely to perform academically at the same level. This is to say, the use of either internality or powerful others locus of control failed to discriminate in terms of gender. That is gender neither weakens nor strengthens the influence of internality or powerful others locus of control on academic achievement.

Although there is no readily available literature to explain these findings, I believe a number of factors may be responsible for them. First, it is possible that both male and female student-teachers used different levels of internality and powerful others locus of control but perhaps might not apply this to their academic work (e.g., Bodill & Roberts, 2013; Fakeye, 2011; Oppong & Twum, 2015). That is, even though both males and females may have different usage levels of locus of control, this may be the same when it comes to issues which centre on their academics. It is also likely that both sexes could have different usage levels of internality and powerful others locus of control but other drivers or factors (like teacher motivation, peer influence, programme of study) influence their application in the academic setting. This is a starting point of further investigation for future studies to interrogate.

The story was different for the third dimension of locus of control which is chance. Gender significantly moderated the influence of chance locus of control on academic achievement. This finding suggests that this influence

is different for male and female students. Although at a slower pace, the continuous utilisation of chance locus of control resulted in a significant improvement in academic achievement in the case of female students. In the case of the male students however, the constant use of chance locus of control led to poor academic achievement. This result tends to confirm what has been found in previous literature concerning gender and locus of control. Studies, both local and international, have confirmed that males have or use more of internal locus of control whereas females rely on external locus of control (e.g. Strickland & Haley, 2010; Oppong & Twum, 2015). Strickland and Haley (2010), for example, found that males have higher internal Locus of Control than women because of the gender roles that are prescribed by the society.

These results revealed by previous studies also perhaps imply that males are poor in using chance locus of control. This might result in poor academic achievement in an attempt to use chance. For females, literature is clear that they "love" to use chance locus of control and thus, the use of it benefited them in terms of academic achievement. This explains why the relationship between chance and academic achievement was positive for females but negative for males. Similarly, this confirms Zaidi and Mohsin's (2013) discoveries among graduation students in Pakistan. The writers discovered that male graduates had internal locus of control, while women had external locus of control.

Hypothesis Six

H_o: Type of college will not moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

H_A: Type of college will moderate the influence of self-efficacy on academic achievement of students in Colleges of Education.

This hypothesis tested the moderation role of type of college played on the influence of self-efficacy on academic achievement. This hypothesis was tested using moderation analysis with Hayes' PROCESS. Specifically, 5000 bootstrap samples were used for estimating the confidence intervals for inference. The predictor variable was self-efficacy, which was measured on continuous basis. The criterion variable was academic achievement, which was measured using GPA. The moderator variable was type of college which was dichotomous: mixed sex college and single sex college. Dummies were created for the moderator variable with mixed sex college used as a reference group. The variables were labelled as follows: X - Self-efficacy; Y - Academic achievement; W – type of college; W1 – mixed College; W2 – Single Sex College. Table 20 and Figure 6 present the results.

Table 20- *Moderation Effect of Type of College in the relationship between Self-efficacy and Academic Achievement*

			Boot95%CI	
	B	*BootSE*	*LLCI*	*ULCI*
Constant	3.262	.182	2.908	3.620
X on Y	-.014	.006	-.025	-.003
W1 on Y	-.887	.391	-1.667	-.124
X*W1 on Y	.024	.012	.002	.047

Model Summary				
R^2	*F*	df1	df2	*p*
.013	2.728	3	627	.043

Conditional interaction (X*W)				
ΔR^2	*F*	df1	df2	*p*
.007	4.723	1	627	.030

*Significant, $p < .05$; W – Type of College; W1 – Single-sex College; X – Self-efficacy; Y – Academic achievement

Results in Table 20 reveals a statistically significant model containing the predictors and the interaction term, $F(3, 627)= 2.728$, $p=.043$. The interaction term significantly predicted academic achievement of student-teachers, $B= .024$, CI (.002, .047) and contributed about 0.70% of the variances in academic achievement of student-teachers ($\Delta R^2=.007$). Type of college was found as a significant moderator in the influence of self-efficacy on academic achievement, $F(1, 627)= 4.723$, $p=.030$. In order to probe this interaction, a graph (Figure 6) was used to show details of the interaction.

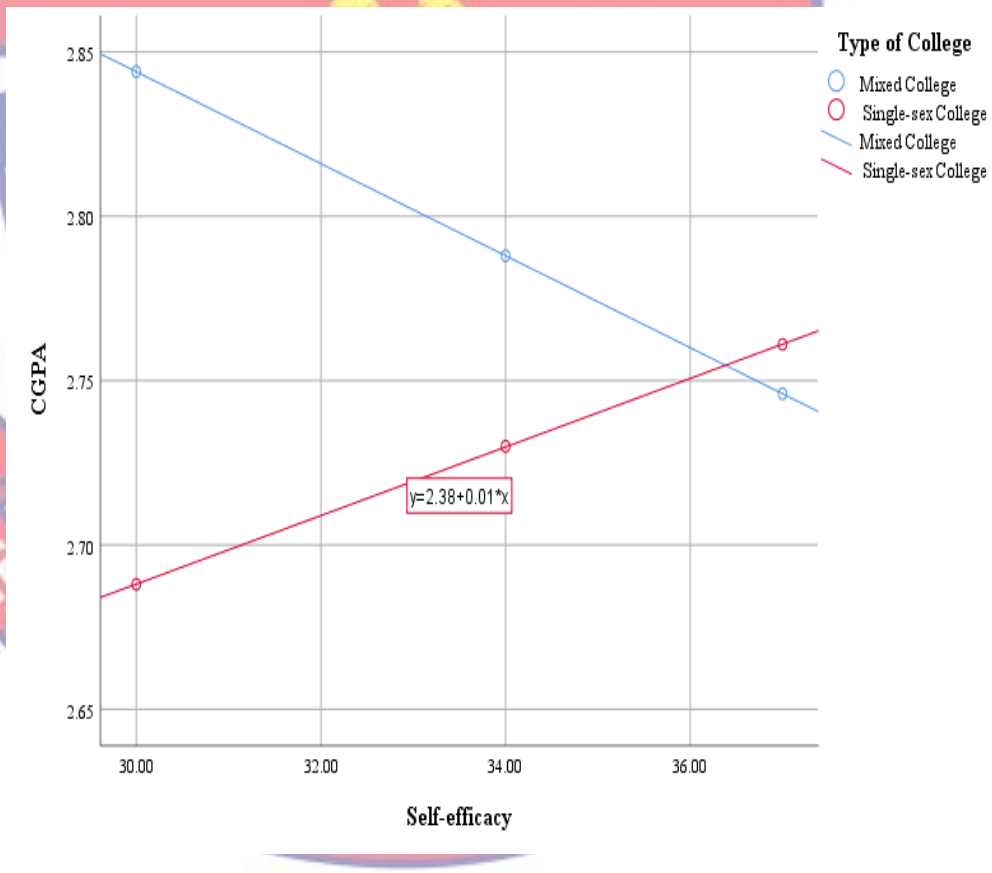


Figure 6- Interaction effect of type of college in the relationship between self-efficacy and academic achievement

A shown in Figure 6, it was obvious that the relationship between self-efficacy and academic achievement of students was moderated by the type of college. This relationship was found to be positive for students in single-sex

colleges. For students in mixed colleges, the relationship was revealed to be negative. On the whole, type of college significantly moderated the relationship between self-efficacy and academic achievement. Thus, the null hypothesis which states that "type of college will not moderate the influence of self-efficacy on academic achievement of College of Education students" was rejected.

Discussion

The findings from my study revealed that the relationship between self-efficacy and academic achievement is different for single-sex and mixed colleges. Increasing levels of self-efficacy improved academic achievement of students in single-sex Colleges of Education. For students from mixed Colleges of Education, the relationship tends to be negative indicating that higher levels of self-efficacy would result in poor academic achievement. The idea is that in single sex schools the students, whether boys or girls feel free to overcome certain social pressures from the society or peers of the opposite sex which will compel them to build confidence and study (Santrock, 2003). This was supported in a study by Salomone (2003) who revealed that adolescent boys/girls in single-sex schools felt more comfortable, interacted more with teachers and developed more favourable attitudes towards maths and science. This was found to develop greater self-confidence and broader interests among the students.

Similarly, Hakimi, Hejazi and Lavasani (2011) proposed that gender-stereotyped subject attitudes and choices have been observed more in mixed schools, which have adversely affected the academic achievements of students especially for girls. What this means is that, girls in mixed schools have

minimal favourable attitudes to so called male subjects such as Maths and Physical Sciences (Hakimi, Hejazi & Lavasani). On the contrary, these subject stereotype attitudes and choices are not so prevalent in single-sex schools as they are in mixed schools and so, the students' feel free to choose whatever courses or subjects they want to study and their achievements are boosted in these gender stereotyped subjects in single-sex schools (Rosander, Bäckström, & Stenberg, 2011). For example, in mission schools in developed countries, the writers observed that females who are enrolled in single-sex institutions are more interested in Mathematics and tend to pursue or read Mathematics courses. In these schools, girls do not often take the so-called gender stereotyped subjects such as foreign languages. In the same vein the writers propel that, males in single-sex schools are also not very likely than those in mixed ones to take non- traditional subjects (Rosander et al., 2011).

Generally, students in single-sex institutions have been found to own higher self-efficacy levels as compared to those who are enrolled in mixed colleges (Hyde, 2007). It is not too surprising that, in this study, students in single-sex Colleges of Education performed better academically. This finding confirms the study of Lee and Marks (1992) who revealed that single-sex school environments help females to overcome gender discriminating attitudes. My experiences confirm this; single-sex schools in Ghana, generally, perform better in high stakes examinations as compared to those from mixed sex schools. In my view, it appears that the special attention given to single-sex schools and not mixed schools has contributed to students from mixed schools developing low self-efficacy, and this translates into their performance which has been observed over some years.

Hypothesis Seven

H_o: Type of college will not moderate the influence of self-esteem on academic achievement in College of Education.

H_A: Type of college will moderate the influence of self-esteem on academic achievement in College of Education.

This hypothesis was meant to find out whether the influence of self-esteem on academic achievement is based on the type of college student-teachers are enrolled in. This hypothesis was tested using moderation analysis with Hayes' PROCESS, using 5000 bootstrap samples. The predictor variable was self-esteem, and the criterion variable was academic achievement. Both the predictor and criterion variables were measured on continuous basis. Type of college was used as the moderator variable. Due to the dummy nature of the moderator, it was dummy coded using mixed college as the reference category. The variables were labelled as: X - Self-esteem; Y - Academic achievement; W – type of college; W1 – Mixed; W2 – Single sex. Table 21 and Figure 7 present the results on the hypothesis.

Table 21- *Moderating Effect of Type of College in the relationship between Self-esteem and Academic Achievement*

				Boot95%CI	
		B	*BootSE*	*LLCI*	*ULCI*
Constant		2.590	.143	2.303	2.865
X on Y		.010	.007	-.003	.023
W1 on Y		-.815	.261	-1.323	-.292
X*W1 on Y		.036	.012	.011	.059
Model Summary					
R^2	*F*	df1	df2		*p*
.046	9.982	3	627		<.001
Conditional interaction (X*W)					
ΔR^2	*F*	df1	df2		*p*
.015	10.10	1	627		.002

*Significant, $p < .05$; W – Type of College; W1 – Single-sex College; X – Self-esteem; Y – Academic achievement

The results shown in Table 21 revealed that the model comprising type of college, self-esteem and their interaction is significant, $F(3, 627)= 9.98$, $p<.001$. The result further showed that type of college significantly moderated the influence of self-esteem on academic achievement, $B=.036$, $CI(.011, .059)$, p=.002. It was found that the interaction accounted for 1.5% of the variances in student-teachers academic achievement ($\Delta R^2=.015$). Figure 7 has been presented to probe the moderating effect of type of college in the influence of self-esteem on academic achievement.

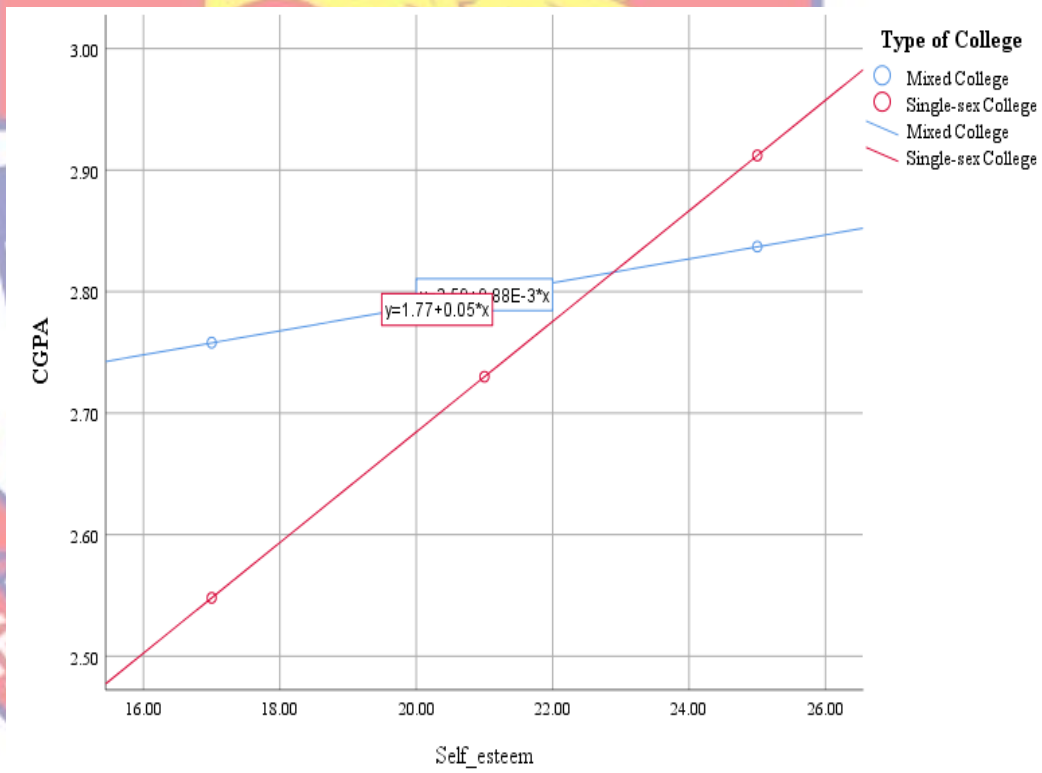


Figure 7-Interaction effect of type of college in the relationship between self-esteem and academic achievement

As indicated in Figure 7, the line representing the single-sex college is steeper than that of the mixed sex college. Figure 7 further indicates that being in single sex college strengthens the influence of self-esteem on academic achievement more than how much being in a mixed college strengthens the influence of self-esteem on academic achievement. This suggests that the

influence of self-esteem on academic achievement was stronger for the students in single-sex colleges than those in mixed sex colleges.

It is clear from the finding that type of college significantly moderates the influence of self-esteem on academic achievement. The result obtained from the analysis led to the rejection of the null hypothesis which states that "type of college will not significantly moderate the influence of self-esteem on academic achievement of College of Education students".

Discussion

The study found that type of college moderated the influence of self-esteem on academic achievement. The influence was not the same for students from single-sex colleges and those from mixed sex colleges. Although the influence was positive for students in both single-sex and mixed sex colleges, it was stronger for single-sex college students. This suggests that continuous increase in self-esteem resulted in better academic achievement for students from single-sex colleges. This was not the case for students in mixed sex colleges because, although higher levels of self-esteem increased academic achievement, this was at a slower pace for students in the mixed sex colleges.

The result seems to suggest that students from single-sex colleges might have special features, treatment or environment which makes them have better self-esteem. Supporting this statement, a number of scholars have reiterated that single-sex educational settings prepare students to develop self-confidence and to have better concept of themselves which increases their self-esteem and subsequently, improves their academic achievement (Lee & Marks, 1992; Santrock, 2003). The findings of the study also confirm a study by Mael, Alonso, Gibson, Rogers, and Smith, (2005) who found that self-

esteem was higher in single-sex schools and this influences achievement positively (Balouchi, 2001; Bray, 2001; Lockett, 2003; Mefteh, 2002).

Hypothesis Eight

H_o: Type of college will not moderate the influence of locus of control on academic achievement of students in Colleges of Education.

H_A: Type of college will moderate the influence of locus of control on academic achievement of students in Colleges of Education.

This hypothesis sought to examine the moderating role of type of college in the influence of locus of control on academic achievement. Moderation analysis was performed using Hayes' PROCESS with 5000 bootstrap samples. The predictor variables were the three dimensions of locus of control: internality, chance, and powerful others. The criterion variable was academic achievement. Type of College which is the moderator variable has two levels (i.e. mixed sex and single sex colleges). The moderator variable was categorical so it was dummy coded, and mixed college was used as the reference category. The variables had the following labels: X - Locus of control; Y - Academic achievement; W – Type of college: W1 – Mixed college; W2 – Single Sex College. Three separate moderation analyses were performed for each of the three dimensions of locus of control. The results are presented in Table 22 and Figure 8 respectively.

Table 22- *Moderating Role of Type of College in the relationship between Locus of Control and Academic Achievement*

			Boot95%CI		Model Summary				
INTERNALITY	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.737	.089	2.565	2.910	.006	1.187	3	627	.314
X on Y	.003	.004	-.005	.011		Conditional interaction (X*W)			
W1 on Y	-.118	.172	-.464	.209	ΔR^2	*F*	df1	df2	*p*
X *W1 on Y	.002	.008	-.013	.017	.000	.055	1	627	.815
CHANCE	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	3.066	.133	2.792	3.317	.016	3.505	3	627	.015
X on Y	-.010	.005	-.020	.000		Conditional interaction (X*W)			
W1 on Y	-.804	.296	-1.388	-.236	ΔR^2	*F*	df1	df2	*p*
X*W1 on Y	.028	.011	.006	.049	.012	7.583	1	627	.006
POWERFUL OTHERS	*B*	*BootSE*	*LLCI*	*ULCI*	R^2	*F*	df1	df2	*p*
Constant	2.872	.118	2.638	3.099	.006	1.273	3	627	.283
X on Y	-.003	.004	-.011	.006		Conditional interaction (X*W)			
W1 on Y	-.345	.240	-.816	.119	ΔR^2	*F*	df1	df2	*p*
X*W1 on Y	.010	.009	-.007	.027	.002	1.271	1	627	.260

*Significant, $p < .05$; X- Internality/Chance/Powerful Others; W- Type of College; W1- Single Sex College; Y- Academic Achievement

The results in Table 22 revealed that the overall model with the predictors and the interaction term for internality $F(3, 627)= 1.19$, $p=.314$ and powerful others $F(3, 627)= 1.27$, $p=.283$ were not significant. The overall model for chance, type of college and the interaction term was significant, $F(3, 627)= 3.51$, $p=.015$. For internality, as a sub-dimension, type of college failed to significantly moderate the influence of internality on academic achievement, $F(1, 627)= .06$, $p=.815$. In effect the influence of internality on academic achievement is the same for students in mixed college and those in single-sex College. Similarly, type of college did not significantly moderate the influence of powerful others on academic achievement, $F(1, 627)= 1.27$, $p=.260$. The situation was different for the chance sub-dimension. Type of college significantly moderated the influence of chance on academic achievement, $F(1, 627)= 7.58$, $p=.006$. The interaction term was responsible for 0.12% of the variances in academic achievement of students ($\Delta R^2 = .012$). Figure 8 shows a graphical representation of the significant interaction.

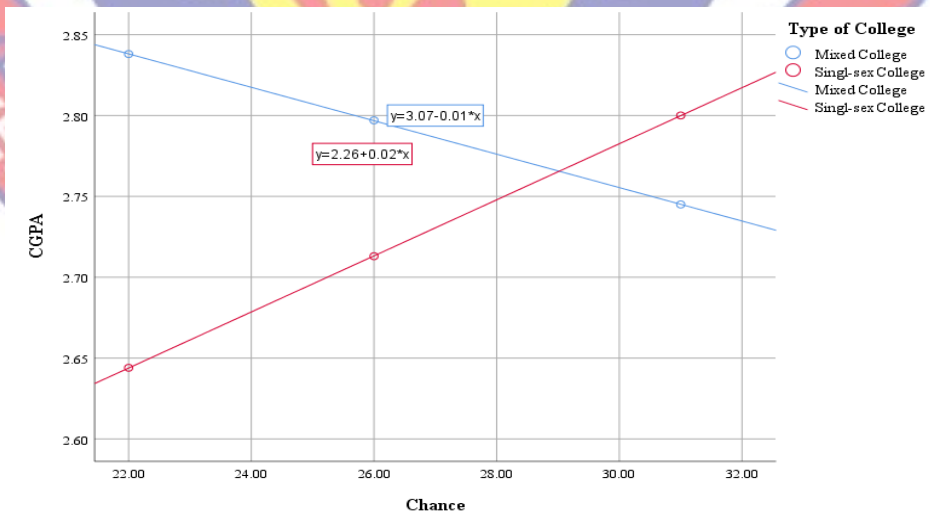


Figure 8- Interaction effect of type of college in the relationship between locus of control and academic achievement

The interaction effect, as indicated in Figure 8, shows that the influence of chance (as a dimension of locus of control) on academic achievement was dissimilar for students enrolled in mixed sex Colleges of Education and those enrolled in single-sex Colleges of Education. The influence of chance on academic achievement was positive for students in single-sex college students but negative for students in mixed sex college.

Largely, the result revealed that type of college significantly moderated the influence of locus of control on academic achievement. Based on the results obtained, the null hypothesis which states that "type of college will not moderate the influence of locus of control on academic achievement" was rejected in favour of the alternate hypothesis.

Discussion

The results of this study indicated that the influence of locus of control on academic achievement was different for students from single-sex and mixed sex Colleges of Education. The influence of Internality and powerful others dimensions of locus of control, unequivocally, had a different story to tell. The influence of these two dimensions of locus of control on academic achievement was significantly similar for students from single-sex and mixed sex colleges of education. This suggests that for a given level of internality or powerful others locus of control, students from single-sex and mixed sex colleges are likely to have similar academic achievement. This means that the use of either internality or powerful others locus of control failed to discriminate in terms of type of college. This might be so because students in both single-sex and mixed Colleges of Education use similar levels of

internality and powerful others locus of control and as a result, affected academic achievement in the same manner.

The influence of chance dimension of locus of control on academic achievement was found to be different for students from single-sex and those from mixed sex Colleges of Education. The influence was positive for single-sex College of Education students, but negative for mixed sex Colleges of Education students. At the same level of chance dimension of locus of control for both students in single-sex and mixed colleges, the academic achievement of those in single-sex colleges will increase whereas those from mixed College of Education will decrease. This can be understood from the point of view that students from single-sex Colleges of Education use more of chance locus of control than those from mixed colleges. Hence the conclusion that chance locus of control positively influences academic achievement of students in single sex college. Of course, once such students maximize the use of chance and it benefits them, academic achievement is likely to improve.

This finding is consistent with a study by Drago, Rheinheimer, and Detweiler, (2016) who investigated the connection among locus of control (LoC) and academic achievement of students enrolled at a mixed public university in North-Eastern United States. Results of the study showed that locus of control positively and significantly influence academic achievement. Similarly, Nilson-Whitten, Morder, and Kapakla (2007) also found a significant relationship between academic success and locus of control.

Based on the results of the study, the final observed model is presented in Figure 9.

Observed Model of the Study

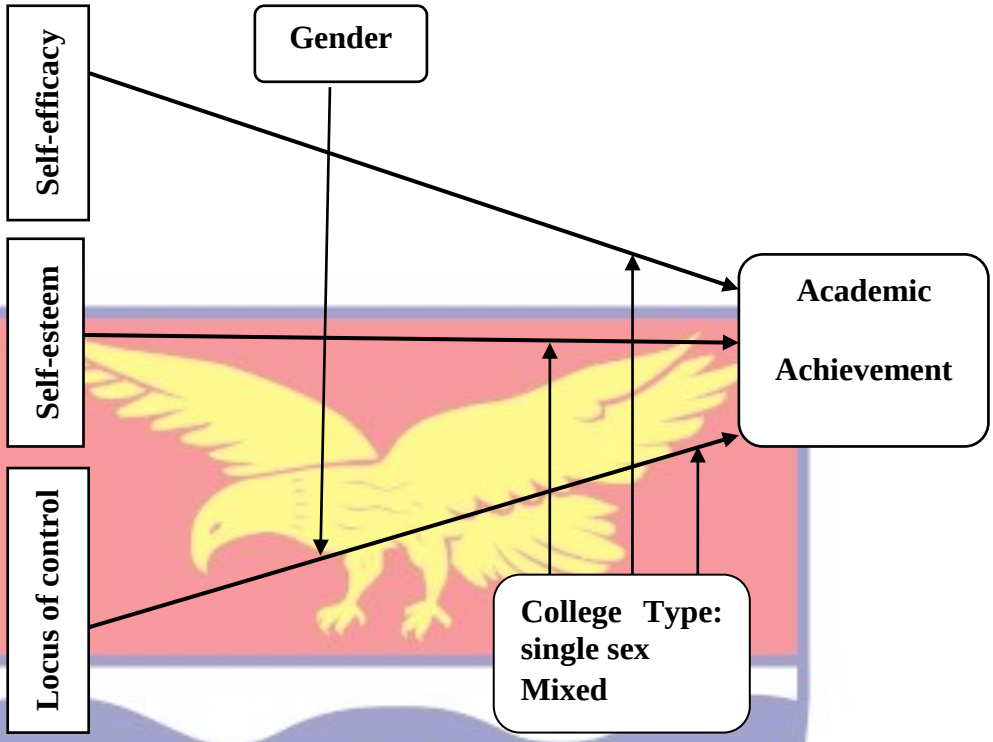


Figure 9 - Observed Model depicting the influence of self-efficacy, self-esteem, and locus of control on College of Education students' academic achievement

The observed model in Figure 9 indicates that self-efficacy, self-esteem and locus of control actually influence academic achievement either positively or negatively. It was found that the moderating variable gender did not strengthen or weaken the influence of self-efficacy on academic achievement neither did it strengthen or weaken the influence of self-esteem on academic achievement. Gender however influenced the chance dimension of locus of control on academic achievement. In the case of type of college as a moderating variable, it was evident in the study that it moderated the influence of self-efficacy, self-esteem, and locus of control on academic achievement.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

This chapter gives a summary of the study, the conclusions drawn, suggestions and recommendations for further studies based on the findings.

Summary

Overview of the Study

The purpose of the study was to investigate the influence of self-efficacy, locus of control, and self-esteem on students' academic achievement in Colleges of Education in Ghana. The study employed descriptive cross-sectional survey design with a quantitative approach. The population for the study comprised 692 level 200 student-teachers pursuing Diploma in Basic Education in the Colleges of Education in Ghana. Questionnaires used for the study were validated using Confirmatory Factor Analysis (CFA). Through multi-level sampling techniques, the questionnaires were administered to 692 students. A return rate of 91.2% was recorded. The data collected were analysed using simultaneous multiple linear regression analysis, independent samples t-test, one-way multivariate analysis of variance (MANOVA), and moderation analysis with Hayes' PROCESS, with 5000 bootstrap samples.

Key Findings

The following were the findings of the study:

1. It was revealed that self-efficacy, self-esteem, and locus of control, jointly explained less than four percent of the variances in academic achievement. While self-esteem was a positive predictor of academic achievement, self-efficacy was a negative predictor of academic achievement. Locus of control had no significant influence on academic achievement of students.
2. No statistically significant differences exist between male and female student-teachers in terms of self-esteem and self-efficacy. That is, both female and male students have equal levels of self-esteem and self-efficacy. In terms of locus of control, females had more internal locus of control that males. Paradoxically, females were higher on the chance dimension of locus control than males. With respect to powerful others, no significant difference was found between males and females. There was a statistically significant difference between females and males in terms of academic achievement. Comparatively, the males performed better academically than the females.
3. There was no statistically significance difference in self-efficacy, self-esteem, and academic achievement with respect to type of college. There was, however, a statistically significant difference between students in mixed colleges and those in single-sex College in terms of internality and chance dimension of locus of control. On the powerful others dimension of locus of control there was a statistically significant difference.

4. Gender did not significantly moderate the influence of self-efficacy on academic achievement. That is, the influence of self-efficacy on academic achievement was not dependent on gender. The finding of this study implies that the influence of self-efficacy on academic achievement was the same for male and female students.
5. Gender did not statistically moderate the influence of self-esteem on academic achievement. That is, the influence of self-esteem on academic achievement was not contingent on gender. This implies that the influence of self-esteem on academic achievement was similar for both female and male students of College of Education.
6. Gender did not moderate the influence of internality on academic achievement. Similarly, gender did not significantly moderate the influence of powerful others on academic achievement. This was, however, not the case for the chance sub-dimension as gender significantly moderated the influence of chance on academic achievement, with an interaction term accounting for less than a percentage of the variances in academic achievement of student-teachers. The probing results revealed that the influence of chance locus of control on academic achievement was dissimilar for female and male college student-teachers. This influence was positive for the female students but negative for male students.
7. Type of college moderated the influence of self-efficacy on academic achievement. The interaction term explained about less than a percentage of the variances in academic achievement. The influence of self-efficacy on academic achievement was found to be positive

for students in single-sex colleges and negative for students in mixed sex colleges.

8. The results further showed that type of college significantly moderates the influence of self-esteem on academic achievement. The interaction accounted for less than two percent of the variances in academic achievement of students. The influence self-esteem on academic achievement was stronger for student-teachers in single-sex colleges than those in mixed sex colleges.
9. Type of college did not significantly moderate the influence of internality on academic achievement. Equally, type of college did not significantly moderate the influence of powerful others on academic achievement. Type of college however significantly moderated the influence of chance on academic achievement. Further probing found that the influence of chance dimension of locus of control on academic achievement was dissimilar for student-teachers in mixed sex colleges and those in single-sex colleges. This influence was positive for student-teachers in single-sex colleges but negative for those in mixed sex colleges.

Conclusions

Based on the findings, it can be concluded that self-efficacy, locus of control and self-esteem influence the academic achievement of students in the Colleges of Education. Students who have so much belief and see themselves in a very positive manner are more likely to perform better academically than those who do not believe in themselves. By extension, students who are not able to transfer their competencies from other situations to issues of

academics, have a greater tendency of performing poorly academically. This could be that students are not able to strike a balance from one situation to the other.

It can further be concluded that gender plays very little role in the relationship between self-efficacy and academic achievement. Thus, students irrespective of their gender, are likely to perform very well in their academic pursuits provided they have high self-efficacy. Making inference from the results, students who have high self-efficacy are more likely to possess enough motivation that will propel them in achieving academic excellence in any field of endeavour. It can also be concluded that the gender of an individual does not necessarily determine the influence of self-esteem on an individual's academic achievement. If male and female students believe in their abilities to succeed in their academic endeavour, and also put in the needed effort, then, such students are likely to succeed irrespective of their gender status.

It is apparent that male student-teachers in most cases employ internal locus of control whereas their female counterparts mostly resort to external locus of control, particularly chance. This explains why females are known to benefit from the utilisation of chance locus of control. That is, most female student-teachers believe that their success and failure are attributed to chance. This explains why the relationship between chance and academic achievement was positive. For male college students, they refrain from the use of chance and consequently, the utilisation of chance results to poor academic achievement. In a nutshell, the utilisation of chance locus of control does not favour male student-teachers as it does for the females, and this affects their academic achievement accordingly.

Inferring from the results, it is obvious that enrolling in either a mixed sex college or single-sex college has a bearing on how self-esteem and self-efficacy affect students' academic achievement. Students in single-sex College of Education perform very well academically in the presence of high self-esteem and self-efficacy. For students in mixed college, they are likely to perform poorer compared to those in single sex colleges even when they have high self-esteem and self-efficacy. This pattern of results gives an indication that there are some factors present in mixed sex colleges preventing high self-esteemed and self-efficacious students from performing very well. I believe these factors are so significant that their presence drastically decrease academic achievement as and when students develop higher esteem and efficacy. This can also explain the reason behind the negative relationship between chance and academic achievement for students in mixed colleges of education.

Recommendations for Policy and Practice

Based on the findings of the study and the conclusions drawn, the following recommendations were made:

Recommendations for policy development:

1. The colleges of education should organize regular in-service programmes for Tutors in the Colleges of Education on how to help student-teachers to develop self-efficacy, self-esteem, and locus of control since these variables have been found to positively influence academic achievement of student-teachers.
2. The colleges of education should consider including innovative oriented courses in the curriculum to help student-teachers live

consciously, accept themselves, be responsible and assertive, live purposefully, and ensure personal integrity since these traits are ingredients for academic success.

3. Academic Boards of Colleges of Education should continually sensitize their academic staff through workshops and seminars to enlighten them on ways of improving student-teachers' self-efficacy, self-esteem, and internal locus of control irrespective of whether they are in single-sex or mixed sex college.
4. College Council and Academic Board should continue to help build and maintain a formidable gender equitable College environment for both male and female student-teachers to benefit socially, academically, and emotionally, by ensuring that the needs of all learners are satisfied in mixed Colleges of Education since college types were significant moderators between locus of control, self-esteem, self-efficacy and academic achievement of student-teachers.

Recommendation for Practice;

1. Educational psychologists in Ghana are recommended to provide maximum guidance to student-teachers so that they can effectively transfer their competencies from other situations to their academic work. Students of the Colleges of Education in Ghana should be encouraged by educational psychologists to believe in themselves to deal with problems that confront them, since doing that would boost their level of locus of control.
2. Educational psychologists, tutors, and parents are entreated to encourage female student-teachers to work hard academically to bridge

the academic achievement gap between them and their male counterparts.

3. Educational psychologists, counsellors, tutors, and parents are entreated to encourage both their male and female student-teachers on effective ways of increasing their level of self-esteem since a continuous increase in a student's self-esteem will result in a better academic achievement regardless of the gender of the student.
4. Educational psychologists should orient parents, teachers and immediate family members on the importance of assisting their wards to develop and build a positive image of themselves at an early age. The immediate family members can do this by treating their children with love, unconditional positive regard as well as any positive parental support such children may need at that early age. This will culminate in helping such children develop high self-esteem for themselves.
5. Educational psychologists should train male and female college student-teachers to use appropriate locus of control. As the males are trained to develop strong internal locus of control, the females should be taught to build their external locus of control since these are what is known to work best for them. Parents also have a role to play at home by trying to nurture their male and female children to respectively develop their internal and external locus of controls.

Contribution to Knowledge

Creswell (2018) has identified four key areas through which research seeks to contribute to knowledge: developing concept, thinking through the methodology, building on an existing study, and being able to change directions. This study, based on Creswell's assertion, sought to contribute to knowledge by building on existing studies. It has been found that college of Education students have high level of self-efficacy, moderate level of self-esteem, and moderate level of locus of control. High self-efficacy has been found to lead to the development of self-confidence and also leading to students performing better in their academic work, and also completing set objectives, this study has also found that even though students can have high self-efficacy their academic performance can be poor so, it is not always the case that students with high self-efficacy can achieve set goals or perform well academically. This could be as a result of complacency or student-teachers setting unrealistic targets for themselves. Both male and female student-teachers have equal levels of self-efficacy and self-esteem. This is not surprising that most women these days are the bread winners of their homes which indirectly makes them the heads of their homes.

It is evident from this study that no matter the learning environment in terms of whether the student is enrolled in a single sex college or mixed sex-college, their levels of self-efficacy, self-esteem, and academic achievement are not different. That is, college of education students operate at the same level of self-efficacy, self-esteem, and academic achievement whether they are in a single sex college of mixed sex college. However, students in mixed

colleges and those in single sex colleges differ in their levels of locus of control.

Anther observation from this study is the fact that a difference in the degree of the relationship between the male students' self-efficacy and academic achievement and female students' were reported. In the same manner a difference in the degree of the relationship between the male students' self-esteem and academic achievement and female students' were reported. Therefore it is evident that a continuous increase or decrease in a student's self-efficacy or self-esteem will result in either a better or a poor academic achievement regardless of the gender of the student.

The current study has established that the relationship between self-efficacy and academic achievement is different for single-sex and mixed colleges in that, as high levels of self-efficacy improved academic achievement of students in single-sex Colleges of Education it results in poor academic achievement students in mixed Colleges of Education. In addition, it has further been noted that the relationship between self-esteem and academic achievement is different for single-sex colleges and mixed colleges. Although at a high level of self-esteem, students in both mixed and single-sex colleges performed well in their academic work, the performance was stronger for single-sex college students than students in mixed colleges. The relationship between locus of control and academic achievement is different for single-sex and mixed colleges. At the same level of locus of control for both students in single-sex and mixed colleges, the academic achievement of those in single-sex colleges will increase whereas those from mixed College of Education will decrease.

The contribution of this study to knowledge is seen in the area of the need for intervention and guidance. That is, tutors can help student-teachers to be self-confident and channel their energy into more useful ways by not being self-complacent but rather living consciously, being assertive, accepting themselves and seeking help when necessary. It is also important that all colleges, whether mixed or single-sex should make their environments gender, equality and social inclusion friendly so that no student will be unduly disadvantaged.

Suggestions for Future Research

Subsequent research should:

1. Include the student-teachers' entry behaviour by considering their West African Senior Secondary Certificate Examination results.
2. Investigate other moderating variables such as type of programme being pursued by the student-teachers, age, and socio-economic background that influence academic achievement of Colleges of Education Students.
3. Investigate other factors that account for the variations in student-teachers academic achievement in Colleges of Education since the present study has revealed that self-efficacy, self-esteem, and locus of control jointly explained 3.3% of the variations
4. Investigate the sources of student-teachers' locus of control orientation without controlling for self-efficacy and self-esteem.

REFERENCES

Abd-Elmotaleb, I., & Saha J. (2013). *Identification and elimination of sex stereotypes in and from school textbooks: Institute for women studies in the Arab World*. Unpublished manuscript.

Abdullah, J. (2006). The limitations of intergroup learning in confessional school systems in the case of Lebanon. *Arab Studies Quarterly (ASQ), 24*(4), 61-72.

Abdu-Raheem, B. O. (2010). *Relative effects of problem solving and discussion methods on secondary schools students' achievement in social studies.* Unpublished manuscript.

Abdu-Raheem, B. O. (2012). The influence of gender on secondary school students' academic performance in South-West, Nigeria. *Journal of Social Sciences, 31*(1), 93-98.

Abugaroo, R. (2013). Female adolescents' identity development: Age comparisons and perceived child-rearing practices. *Developmental Psychology, 19,* 249-256.

Abukari, Z., Mashoud, M. A., & Andani, A. B. (2020). Academic outcomes of high school students in northern Ghana: The mediator role of locus of control. *Journal of Educational and Social Research, 10*(1), 117-129.

Abu-Tineh, J., Khasawneh, S., & Khalaileh, P. (2011). Peer power: Preadolescent culture and identity. New Brunswick, NJ: Rutgers University Press.

Adams, L., Faseur, T., & Geuens, M. (2011). The influence of the self-regulatory focus on the effectiveness of stop-smoking campaigns for young smokers. *Journal of Consumer Affairs, 45,* 275-305.

Adeoye, H., & Emeke, E. A. (2010). Emotional intelligence and self-efficacy as determinant of academic achievement in English language among students in Oyo state senior secondary schools. *Ife Psychologia, 18* (1), 252-269.

Adeoye, M. A. (2008). *Emotional intelligence and self-efficacy as determinant of academic achievement in English language among students in Oyo state senior secondary schools.* Unpublished manuscript.

Adeyemo, M. (2015). Self-esteem, social identity and school achievement in adolescence Psychology. *The Journal of the Hellenic Psychological Society*, *7*, 278-289.

Agi, W. C. (2017). Effects of group counselling and self-reinforcement on study behaviour of students in selected universities in Nigeria. *International Journal of Education and Evaluation, 3*(3), 1-7.

Akin, A. (2011). Academic locus of control and self handicapping. *Procedia Social And Behavioral Sciences, 30*, 812–816.

Akram, B., & Ghazanfar, L. (2014). Self-efficacy and academic performance of the students of Gujarat University, Pakistan. *Academic Research International, 5*(1), 283-290.

Akturk, A. O., Kesici, S. & Sahin, I. (2009). Analysis of cognitive learning strategies and computer attitudes, according to college students' gender and locus of control. *Computers in Human Behaviour, 25*(2), 529–534.

Alexa, G. (2011). *Girls' self-esteem rates in single sex and coeducational high schools*. Trinity College: Hartford.

Alise, M. A., & Teddlie, C. (2010). A continuation of the paradigm wars? Prevalence rates of methodological approaches across the social/behavioral sciences. *Journal of Mixed Methods Research, 4*(2), 103-126.

Al-Kfaween, E. M. (2010). Self-efficacy among the students of the university and relation to gender and specialization. Retrieved on November, 2017 from www.eurojournals.com/ejsr_46_3_11.pdf

Alves-Martins, M., & Peixoto, F. (2000). Self-esteem, social identity and school achievement in adolescence. *Psychology: The Journal of the Hellenic Psychological Society, 7*, 278-289.

Alves-Martins, M., Peixoto, F., Gouveia Pereira, M., Amaral, V., & Pedro, I. (2002). Self-esteem and academic achievement among adolescents. *Educational Psychology, 22*, 51-62.

Amorin, M. J., & Aboagye, D. A. (2020). Locus of control and vulnerability to peer pressure: A study of adolescent behavior in urban Ghanaian Context. Scholarly Journal of Psychology and Behavioral Sciences, 4(1), 396-404.

Arhin, V., & Amoako, I. (2019). Relationship between self-esteem and academic achievement among university undergraduate psychology students, Ghana. *Assia Pacific Journal of Education, Arts and Sciences, 6*(2), 104-108.

Aryana, M. (2010). Relationship between self-esteem and academic achievement amongst pre-University Students. *Journal of Applied Sciences, 10*, 2474-2477.

Asafo-Agyei, S. (2015). *Psychological testing* (7th ed). New York: McMillian.

Asante, B. (2013). Self-esteem. *The Psychologist, 11*, 339–342.

Asha, S. (2008). *Gender differences in subject-specific academic performance predicted by self-efficacy and interests of twelfth grade Indian students*. Retrospective theses and dissertations. Retrieved from https://lib.dr.iastate.edu/rtd/15301.

Ashley, H., & Rittmayer, F. (2003). Individualism and collectivism: *The case of Lebanon*. NY, USA: Lebanese American University.

Ashtiani, H. (1998). Discussion. In P. M. Greenfield & R. R. Cocking (Chairs). Continuities and discontinuities in the cognitive socialization of minority children: *Proceedings from a workshop, Department of Health and Human Services, Public Health Service, Alcohol, Drug Abuse, and Mental Health Administration*. Washington, DC.

Ashton, P. T., & Webb, R. B. (2014). *Making a difference*: *Teachers' sense of efficacy and student achievement* (2nd ed.). White Plains, NY: Longman, Inc.

Aspinwall, L. G., & Taylor, S. E. (1992). Modelling cognitive adaptation: A longitudinal investigation of the impact of individual differences and coping on college adjustment and performance. *Journal of Personality and Social Psychology, 63*, 989-1003.

Atkinson, J., & Feather, N. (1966). *A theory of achievement*. New York, NY: Wiley and Sons.

Baard, P. P., Deci, E. L., & Ryan, R. M. (2004). Intrinsic need satisfaction: A motivational basis of performance and well-being in two settings. *Journal of Applied Social Psychology, 34*, 2045-2068.

Balbag, Z., Cemrek, F., & Mutlu, T. (2010). The role of selfesteem, locus of control and big five personality traits in predicting hopelessness. *Procedia Social And Behavioral Sciences, 9,* 1788-1792.

Balouchi, P. (2001). The stormy decade: Fact or fiction? *Psychology in the Schools, 1*. 224-231.

Bandura, A. (1977). *Self-efficacy: The exercise of control*. New York: W. H. Freeman and Company.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioural change. *Psychological Review, 84* (2), 191-215.

Bandura, A. (1989). Social cognitive theory. In R. Vasta (Ed.), *Annals of child development: Six theories of child development* (pp. 1-60). Greenwich, CT: JAI Press.

Bandura, A. (1993). Perceived self-efficacy in cognitive-development and functioning. *Educational Psychologist, 28*(2), 117–148.

Bandura, A. (1994). *Social cognitive theory and exercise of control over HIV infection.* New York, NY: Springer Science and Business Media.

Bandura, A. (2002). Self-efficacy: toward a unifying theory of behavioural change. *Psychological Review, 84,* 191-215.

Bandura, A. C., Barbaranelli, G., Caprara, V., & Pastorelli, C. (1996). 'Multifaceted impact of self-efficacy beliefs on academic functioning'. *Child Development, 67,* 1206-1222.

Bandura, A., Barbaranelli, H., Caprara, T., & Pastorelli, O. (2001). Self-efficacy mechanisms in human agency. *American Psychologist, 37,* 122-147.

Barling, J., & Beattie, R. (1983). Self-efficacy beliefs and sales performance. *Journal of Organizational Behaviour Management, 5,* 41-51.

Baron, A., & Galizio, M. (2015). Positive and negative reinforcement: Should the distinction be preserved? *The Behaviour Analyst, 38*(1), 14-27.

Bar-On, R. (2002). *Bar-On Emotional Quotient Inventory (EQ-I) Technical Manual*. Toronto: Multi-Health Systems.

Bashir, I., & Mattoo, N. H. (2012). A study on study-habits and academic performance among adolescents (14-19) years. *International Journal of Social Science Tomorrow, 1*(5), 1-5.

Beck, M. (2008). If at first you don't succeed, you're in excellent company. *The Wall Street Journal, 8*(1), 123-130.

Bell. E. E. (2009). *Impact of self-esteem and identification with academics on the academic achievement of African American students*. Ph.D. Thesis. Liberty University: The Faculty of the School of Education. Unpublished manuscript.

Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy, 42,* 1129-1148.

Berings, D., & Adriaenssens, S. (2012). The role of business ethics, personality, work values and gender in vocational interests from adolescents. *Journal of Business Ethics, 106,* 325-335.

Berings, D., De Feyter, T., Brebels, L., Van den Broeck, A. & Proost, K. (2012). *Gender, personality and academic performance*: *Self determination theory and regulatory focus theory as levers to open the*

black box between gender, personality, academic effort and performance. Brussel: Leuven Association.

Billger, S. M. (2009). On Reconstructing School Segregation: The efficacy and equity of single-sex schooling. *Economics of Education Review, 28,* 393-402.

Boateng, P., & Owusu- Sekyere, F. (2018). Exploring in-service teachers' self-efficacy in the kindergarten classrooms in Ghana. *International Journal of Instruction, 11*(1), 239-254.

Bodill, K., & Roberts, L. D. (2013). Implicit theories of intelligent and academic locus of control as predictors of studying behaviour. *Learning and individual differences, 27,* 163-166.

Bong, M. (2001). Role of self-efficacy and task-value in predicting college students' course performance and future enrolment intentions. *Contemporary Educational Psychology 26*(4) 553-570.

Bosomah, W. (2014). The effect of a physical activity intervention package on the self-esteem of pre-adolescent and adolescent females. *Adolescence, 32*(127), 693-709.

Boulter, L. T. (2002). Self-concept as a predictor of college freshman academic adjustment. *College Student Journal, 36,* 234-247.

Bowling, N. A., Eschleman, K. J., & Wang, Q. (2010). A metaanalytic examination of work and general locus of control. *Journal of Applied Psychology, 95*(4), 761-768.

Brackett, M.A., Rivers, S.E., & Salovey, P. (2011). Emotional intelligence: implications for personal, social, academic, and workplace success. *Social Personal Psychology Compass, 5,* 88–103.

Branden, N. (1995). *The six pillars of self-esteem. Bantam:* Bredean Publishing Home.

Bray, B. M. (2001). *The influence of academic achievement on a college student's self-esteem.* Missouri Western State University, Saint Joseph: MO.

Brebels, L., De Cremer, D., Van Dijke, M., & Van Hiel, A. (2011). Fairness as social responsibility: a moral self-regulation account of procedural fairness enactment. *British Journal of Management, 22,* 47-58.

Burke, W., Hunt, A., & Bickford, P. (1985). Gender roles and self-esteem. *A* consideration of environmental factors. *Journal of Counselling and Development, 72,* 323-326.

Charmaz, K. (2000). Grounded theory: Objective and constructivists methods. In N. K. Denzin & Y. S. Lincoln (eds.) *Handbook of qualitative research* (2nd ed.), 509-535. Thousand Oaks, CA: Sage.

Chee, K. H., Pino, N. W., & Smith, W. L. (2010). *Gender differences in the academic ethic and academic achievement.* Retrieved from https://www.researchgate.net/publication/285914333

Chemers, N., Hu, M., & Garcia, F. (2001). *Adolescent self-esteem and locus of control: a longitudinal study of gender and age differences.* Retrieved from www.findarticles.com/p/articles/mi_m2248/

Choi, E. Y. (2013). Relationship among learning satisfaction, learning attitude, self-efficacy and the nursing students' academic achievement after simulation-based education on emergency nursing care. *The Journal of Korean Academic Society of Nursing Education, 17*(1), 5-13.

Clickenbeard, S. (2012). Of Caldecotts and Kings: Gendered images in recent American children's books by black and non-black illustrators. *Sex Roles*, *7*, 227-245.

Cohen, J. (1988). Statistical power analysis for the behavioural sciences (2nd ed.) Hillsdale, NJ: Lawrence Earlbaum Associates.

Considine, G., & Zappala, G. (2002). Influence of social and economic disadvantage in the academic performance of school students in Australia. *Journal of Sociology*, *38*, 129-148.

Coopersmith, S. (1967). *The antecedents of self-esteem*. CA: W. H. Freeman.

Coopersmith, S. (1969). *The antecedents of self-esteem*. San Francisco: W. H. Freeman and Company.

Correlating, F. (2018). Correlating self-esteem and academic outcome. *Psychology and Behavioural Science International Journal*, *8*(10), 8-19.

Covington, M. V. (2000). Goal theory, motivation and students achievement: An integrated Review. *Annual Review of Psychology*, *51*, 171-200.

Creswell, J. (2002). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research.* Upper Saddle River, NJ: Merrill Prentice.

Creswell, J. W., & Creswell, J. D. (2018). Research designed: Qualitative, quantitative and mixed methods approaches. London, UK: SAGE Publications.

Dale, R. R. (1974). *Mixed or single-sex schoo*l? London: Routedge and Kegan Paul.

De Bilde, J., Vansteenkiste, M., & Lens, W. (2011). Understanding the association between future time perspective and self-regulated learning through the lens of self-determination theory. *Learning and Instruction, 21*, 332-344.

De Feyter, T., Caers, R., Vigna, C., & Berings, D. (2012). Unraveling the impact of the big five personality traits on academic performance: The moderating and mediating effects of self-efficacy and academic motivation. *Learning and individual Differences, 22*(4), 439-448

Deci, E. L., & Ryan, R. M. (2012). Self-determination theory. In P. A. M. Van Lange, A. W. Kruglanski, & E. T. Higgins (Eds.), *Handbook of Theories of Social Psychology: 1*, 416-437. Thousand Oaks, CA: Sage.

Dinçyürek, S., Güneyli, A., & Çaglar, M. (2012). The relation between assertiveness levels, locus of control and academic success of Turkish language teacher candidates. *Sociology Mind, 2*(1), 61-66.

Downs, C. (2005). Messages that motivate: How praise molds students' beliefs, motivation, and performance (in surprising ways). In Aronson, J. (Ed.), *Improving academic achievement: Impact of psychological factors on education* (pp. 37-60). San Diego, CA: Academic Press.

Drago, A., Rheinheimer, D., & Detweiler, T. (2016). Effects of locus of control, academic self-efficacy, and tutoring on academic performance. *Journal of College Student Retention: Research, Theory & Practice, 19*(4), 433-451.

Duckworth, K., Akerman, R., McGregor, A., Salter, E., & Vorhaus, J. (2009). *Self-regulation: A review of literature. (Report 33).* London: Centre for Research on the Wider Benefits of Learning, Institute of Education.

Duriez, B., Meeuws, J., & Vansteenkiste, M. (2012). Why are some people more susceptible to ingroup threat than others? The importance of a relative extrinsic to intrinsic value orientation. *Journal of Research in Personality*, *146*, 164-172.

Duyah, K. (2015). Development of sex differentiated preferences. During late childhood and adolescence. *Developmental Psychology*, *18*(3), 406-412.

Eagle, M. N. (2011). Theories of motivation. In G. Gabbard, B. Litowitz & P. Williams (Eds.), *Textbook of Psychoanalysis*, (2nd ed.), (39-52). Arlington, VA: American Psychiatric Publishing.

Eisenkopf, G., Hessami, Z., Fischbacher, U., & Ursprung, H. W. (2015). Academic performance and single-sex schooling: Evidence from a natural experiment in Switzerland. *Journal of Economic Behavior & Organization*, *115*(6), 123-143.

Elliott, J. W., & Lopez Del Puerto, C. (2014). Self-Efficacy, motivation and locus of control, among male and female construction management students. Colorado: *American Society for Engineering Education*, *2*(3), 231-240.

Eshun, J. (2016). Primary prevention during school transitions: social support and environmental structure." *American Journal of Community Psychology*, *10*, 277-290.

Facey-Shaw, L., & Golding, P. (2005). *Effects of peer tutoring and attitudes on academic performance of first year introductory programming students.* Unpublished manuscript.

Fakeye, D. O. (2011). Locus of control as a correlate of achievement in English as a second language in Ibadan. *Journal of Education and Social Research. 4*(17), 5-9.

Fenning, P., & May, F. (2013). Student gender, school size and changing perceptions of science learning environments during the transition from primary to secondary school. *Research in Science Education, 28*(4), 387-397.

Findley, H. R., & Cooper, R. E. (1983). The cultural matrix of social psychology. In D. T. Gilbert, S. Fiske, & G. Lindzey (ed.), *Handbook of social psychology* (4th ed., 915-981). New York: McGraw-Hill.

Flowers, L. A., Milner, H. R., & Moore, J. L. (2003). Effects of locus of control on African-American high school seniors' educational aspirations: implications for pre-service and in-service high school teachers and counsellors. *High School Journal, 87*(1), 39-50.

Fodor, E. M., & Carver, R. A. (2000). Achievement and power motives, performance feedback, and creativity. *Journal of Research in Personality, 34*, 380-396.

Fornell, C., & Larker, D. (1981). Evaluating Structural Equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.

Frimpong, P. (2013). Self-esteem gender gap widens in adolescence. APA *Monitor, 22*, 29-41.

Furnham, A., & Monson, J. (2009). Personality traits and intelligence predict academic school grades. *Learning and Individual Differences, 18, 28-33.*

Gagne, F. (2000). Understanding the complex choreography of talent development through DMGT-based analysis. In: Heller, K. A., Monks, R. J., Sternberg, R. J. & Subtonic, R. F. (Eds.). *International handbook of giftedness and talent*, 2nd ed. Oxford: Elsevier Science Ltd. 67–79.

Ghana Statistical Service [GSS]. (2012). 2010 population and housing census: Summary report of final results. Accra: Author.

Ghasemzadeh, A., & Saadat, M. (2011). Locus of control in Iranian university student and its relationship with academic achievement. *Procedia Social and Behavioural Sciences, 30,* 2491–2496.

Ghasemzadeh, A., Karami, S., Saadat, M., & Soleimani, M. (2012). Relationship between self-esteem and locus of control in Iranian university students. *Procedia Social and Behavioural Sciences, 31,* 530– 535.

Ghazvini, S. D., & Khajehpour, M. (2011). Gender Differences in Factors Affecting Academic Performance of High School Students. *Procedia Social and Behavioural Sciences, 15* (11) 1040-1045.

Gibb, S. J., Fergusson, D. M., & Horwood, L. J. (2008). Gender differences in educational achievement to 25. *Australian Journal of Education, 52* (1), 63-80.

Glenn, D. I. (1992). *Determining sample size*. Florida: Florida Cooperative Extension Services, University of Florida.

Grantz, M. (2012). Do you have the power to succeed? Locus of control and its impact on education. *Advanced Social Psychology*, *2*(1), 324-330.

Graziano, A. M., & Raulin, M. L. (2007). *Research Methods: A Process of Inquiry*. New York, NY: Pearson Education Inc.

Grebennikov, L., & Skaines, I. (2009). Gender and higher education experience: A case study. *Higher Education Research & Development, 28,* 71-84.

Guarisco, C. (2010). *Single-sex schools and gender roles: Barrier or breakthrough?* Retrieved from: www.jstor.org/stable/3174110

Hakimi S., Hejazi E., & Lavasani M. G. (2011). The relationships between personality traits and students' academic achievement. *Procedia Social and Behavioral Sciences, 29,* 836-845.

Hamill, S. (2003). Resilience and self-efficacy: The importance of efficacy beliefs and coping mechanisms in resilient adolescents. *Colgate University Journal of the Science, 35,* 115-146.

Hansot, E., & Tyack, D. (1988). Gender in American Public Schools: Thinking Institutionally. *Signs, 13*(4), 741-760.

Harter, S. (1981). A model of mastery motivation in children: Individual differences and developmental change. In W. A. Collins (Ed.), *The Minnesota symposium on child psychology* (Vol. 14, pp. 215–255). Hillsdale, NJ: Erlbaum.

Hasanzadeh, R., & Imanifar, P. (2011). The relation of creativity and self-esteem with educational achievement of young people. *The Journal of Socialism 1*(3), 55-65.

Haws, K. L., Dholakia, U. M., & Bearden, W.O. (2010). An assessment of chronic regulatory focus measures. *Journal of Marketing Research, 47,* 967-982.

Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). New York, NY: The Guildford Press.

Healy, M., & Perry, C. (2000). Comprehensive criteria to judge validity and reliability of qualitative research within the realism paradigm. *Qualitative Market Research, 3*(3), 118-126.

Hesse-Biber, S. (2012). Feminist approaches to triangulation: uncovering subjugated knowledge and fostering social change in mixed methods research. *Journal of Mixed Methods Research, 6,* 137-146.

Hughes-Isley, S. (2015). *Differences between Male and Female Community College Students in Achievement and Attitude on College Remedial Mathematics*. Colorado State University: School Of Education.

Hui, E. P., Sun, R. F., Chow, S., & Chu, M. (2011). Explaining Chinese students' academic motivation*:* Filial Piety and Self-Determination. *Educational Psychology, 31*, 377-392.

Hyde, J. S. (2007). *Half the human experience: the psychology of women* (7th ed.). Boston: Houghton Mifflin.

Institute of Education, (2019). *Students' Enrolment Figures: Data management 2018/2019*. Cape Coast, Ghana: Author.

Jackson, C. K. (2012). Single-sex schools, student achievement, and course selection: Evidence from rule-based student assignments in Trinidad and Tobago. *Journal of Public Economics, 96* (1), 173-187.

Jackson, J. (2010). Dangerous presumptions: How single sex schooling reifies false notions of sex, gender and sexuality. *Gender and Education, 22,* 227-238.

Jackson, J. W. (2002). Enhancing self-efficacy and learning performance. The *Journal of Experimental Education, 70,* (3), 243-254

Jackson, K. (2017). The effect of single-sex education on test scores, school completion, arrest and teen motherhood: Evidence from school transitions. Retrieved from http://www.nber.org/papers/w22222

Kader, A. A. (2014). Locus of control, student motivation and achievement in principles of microeconomics. *American International Journal of Contemporary Research*, *4*(9)1-11.

Kang, H. S., Chang, K. E., Chen, C., & Greenberger, E. (2015). Locus of control and peer relationships among Caucasian, Hispanic, Asian, and African American adolescents. *Journal of Youth and Adolescence*, *44*(1), 184–194.

Karau, S. J., & Schmeck, R. R. (2009). The big five personality traits, learning styles, and academic achievement. *Personality and Individual Differences*, *51*(4), 472-477.

Katz, I., Kaplan, A., & Buzukashvily, T. (2011). The role of parents' motivation in students' autonomous motivation for doing homework. *Learning and Individual Differences, 21,* 376-386.

Kenin, A. (2018). Religiosity/spirituality, social support, general self-efficacy and mental health of community dwelling older adults in Accra. Unpublished master's thesis, submitted to University of Ghana, Legon.

Kernis, U., Kitayama, S., & Markus, H. R. (1989). Yin and yang of the Japanese self: The cultural psychology of personality coherence. In D. Cervone & Y. Shoda (Eds.), *The coherence of personality: Social*

cognitive bases of personality consistency, variability, and organization. NY: Guilford.

Kirkpatrick, M. A., Stant, K., & Downes, S. (2008). Perceived locus of control and academic performance: broadening the construct's applicability. *Journal of College Student Development*, *49*(5), 486-496.

Klassen, J., Krawchuk, S. H., & Rajani, D. E. (2008). Educational implications of self-esteem. *Psychology in the Schools*, *9*, 314-316.

Knox, M., Funk, J., Elliott, R., & Bush, E. G. (1998). Adolescents' possible selves and their relationship to global self-esteem. *Sex Roles, 39,* 61-80.

Komarraju, M., Karau, S. J., & Schmeck, R. R. (2009). Role of the big five personality traits in predicting college students' academic motivation and achievement. *Learning and Individual Differences 19*, 47-52.

Kothari, C. R. (2008). *Research methodology methods and techniques* (2nd ed.). New Delhi: New Age International.

Krampen, G. (1989). Perceived child rearing practices and the development of locus of controlling early adolescence. *International Journal of Behavioural Development*, *12*, 177-193.

Krejcie, R.V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educ. Psychol. Meas., 30*, 607-610.

Kristen, J. M. (2010). The single sex debate for girls in science: A comparison between two informal science programmes on middle school students' stem identity formation. *Journal of Research in Science Teaching*, *47*(5), 564-582.

Kugbey, N., Mawulikem, E. K., & Atefoe, E. A. (2015). Adolescents' self-esteem and academic achievement in Ghana: the role of parenting styles and sex differenced. *British Journal of Education, Society and Behavioural Science, 7*(3), 194-201.

Kupkova, A. (2017). *The effects of locus of control, self-perceived masculinity or femininity and gender on academic achievement*. Thesis submitted to State University of New York: Department of Psychology.

Laryea, J. E., Saani, A. J., & Dawson-Brew, E. (2014). Influence on students; self-concept on their academic performance in the Elmina Township. *European Journal of Research and Reflection in Educational Sciences, 2*(4), 213-220.

Lawrie, L., & Brown, R. (1992). Sex stereotypes, school subject preference and career aspirations as a function of single /mixed sex schooling and presence/absence of an opposite sex sibling. *British journal of Educational Psychology, 62*(1), 132-138.

Lebel, E. (2010). Attitude accessibility as a moderator of implicit and explicit self-esteem correspondence. *Self and Identity, 9*(1), 195-208.

Lee, J. (2012). Ethnic identity as a predictor of locus of control and academic self-efficacy. *Sentience: The University of Minnesota Undergraduate Journal of Psychology, 7*, 17-21.

Lee, V. E., & Marks, H. M. (1992). Who goes where? Choice of single-sex and coeducational independent secondary schools. *Sociology of Education, 65,* 225-253.

Lent, R. W., & Hackett, G. (2017). Career self-efficacy: Empirical status and future directions. *Journal of Vocational Behaviour, 60*(1), 347-382.

Levenson, H. (1981). Differentiating among internality, powerful others, and chance. In H. M. Lefcourt (Ed.), *Research with the locus of control construct 1*, 15-63. New York: Academic Press.

Locke, E. A., & Latham, G. P. (2002). Building a practically useful theory of goal setting and task motivation: A 35-year odyssey. *American Psychologist, 57* (9), 705-71.

Lockett, C. T., & Harrell, J. P. (2003). Racial Identity, self-esteem, and academic achievement: Too much interpretation, too little supporting data. *Journal of Black Psychology*, *29*(3), 325-336.

Lockett, S. (2003). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, *98*, 224-253.

Lunenburg, F. (2011). Self-efficacy in the workplace: Implications for motivation and performance. *International Journal of Management, Business, and Administration*, *14*(1), 1 - 6.

Mael, F., Alonso, A., Gibson, D., Rogers, K., & Smith, M. (2005). *Single-Sex versus Co-educational Schooling: A systematic review.* Paper presented to the Department of Education office of Planning Evaluation and Policy Development., U.S.A.

Maltby, J., Day, L., Macaskill, A. (2007). *Personality, individual differences and intelligence* (1st ed.). Harlow: Pearson Prentice Hall.

Mandy, G. (2002). Do you have the power to succeed: locus of control and it impact on education? *Advanced Social Psychology*, *2*(1), 324-330.

Manso, D. (2014). Instructional preferences of Cree, Inuit, and Mohawk teachers. *Journal of American Indian Education*, *33*(1), 1-20.

Marra, R. M., Rodgers, K. A., Shen, D., & Bogue, B. (2009). Wome engineering students and self-efficacy: A multi-year, multi-institution study of women engineering student self-efficacy. *Journal of Engineering Education*, *98*(1), 27-38

Mathur, R. (2014). Academic achievement of college students and their locus of control. *The International Journal of Indian Psychology*, *1*(3), 2348-5396.

McClelland, D. C. (1961). *The achieving society*. Princeton, NJ: Van Nostrand Pub.co.

McClelland, D. C. (1985). The *achieving society* (4th ed.). New York, Princeton: Van Nostrand Pub.co.

McClelland, D. C. (1991). *The achieving society* (2nd ed.). New York: Princeton, Van Nostrand Pub.co

McClelland, D. C., & Atkinson, J. W. (1948). The projective expression of needs: I. The effect of different intensities of the hunger drive on perception. *Journal of Psychology*, *1*(25) 205–232.

McCombs, B. (1991). *Metacognition and motivation in higher level thinking*. Paper presented at the annual meeting of the American Educational Research Association, Chicago.

McCombs, B. L. (2009). Self-regulated learning and academic achievement: A phenomenological view. In B. Zimmerman & D. Schunk (Eds.), *Self-regulated learning and academic achievement: Theoretical perspectives*, (2nd ed.). New York, NY: Routledge.

McDermott, B. J. (2002). *The utility of perceived stress, locus of control, and "Type A behaviour" pattern as predictors of doctoral degree completion in a non-traditional programme.* Dissertation submitted to the College of Human Resources and Education at West Virginia University. Morgantown, West Virginia.

McGruder, K. E., & James, S. (2002). The current controversy over self-esteem. *Psychological bulletin, 126* (1), 26-54.

McKenzie, J. K. (1999). *Correlation between self-efficacy and self-esteem in students.* Thesis submitted to the University of Wisconsin-Stout Menomonie, Wisconsin.

Meftah, D. (2002). Cognitive behaviour modification with exceptional children: A promise yet unfulfilled. *Exceptional Education Quarterly, 1*, 83-88.

Mefteh, S. (2002). *The relationships between timidness (shyness), self-esteem and academic achievement among middle school students.* University of Tarbiyat Moallem, Tehran, Iran.

Mensah, A. O., & Asamani, L. (2013). The influence of employees' self-efficacy on their quality of work life: The case of Cape Coast, Ghana. *International Journal of Business and Social Science, 4(2), 195-205.*

Mensah, J. L. (2015). Stress inoculation training. *Counselling Psychologist, 16*, 69-90.

Mhmoodi, Z., Eisazadegan, A., Saribeiglo, R., & Ketabi, D. (2013). Self-esteem and educational achievement: Independent constructs or a common cause. *Journal of Personality and Social Psychology, 40,* 962-975

Mieza, L. A. (2012). Self-esteem and reaching out: Implications for service learning. *Professional School Counselling, 1*(2), 29-32.

Moeller, C. (1994). *Self-Esteem: Research, Theory and Practice*. New York: Springer Publishing Company.

Molden, D. C., & Dweck, C. S. (2006). Finding "meaning" in psychology: A lay theories approach to self-regulation, social perception, and social development. *American Psychologist, 61(3), 192-203.*

Moorhead, G., & Griffin, R. W. (2004). *Organisational behaviour: Managing people and Organisations* (7th ed.). Boston: Houghton Mifflin Company.

Muhonen, T., & Torkelson, E. (2004). Work locus of control and its relationship to health & job satisfaction from a gender perspective. *Stress and Health, 20*(1), 21-28.

Naderi, H., Rohani, A., Tengku-Aizan, H., Jamaluddin, S., & Kumar, V. (2009). Creativity, age and gender as predictors of academic achievement among undergraduate students. *Journal of American Science. 5*(5), 101-112.

Nevid, J. S. (2009). *Psychology: Concepts and applications* (3rd ed.). Boston: Houghton Mifflin Company.

Niemiec, C. P., Ryan, R. M., & Deci, E. L. (2009). The path taken: consequences of attaining intrinsic and extrinsic aspirations in post-college life. *Journal of Research in Personality, 43, 291-306.*

Nilson-Whitten, M. K., Morder, B., & Kapakla, G. M. (2007). R*elationship between locus of control, optimism and academic performance.* Proceedings of the Annual Conference of the New Jersey Counselling Association Eatontown, New Jersey.

Nishimura, T., Kawamura, S., & Sakurai, S. (2011). Autonomous motivation and meta-cognitive strategies as predictors of academic performance: does intrinsic motivation predict academic performance? *Japanese Journal of Educational Psychology, 59, 77-87.*

Nolan, J. G. (1996). Self-esteem: Change and stability between ages 13 and 23. *Developmental Psychology, 19,* 257-268.

Numale, M. K., Ohene, J., & Addison, A. K. (2010). *Psychological basis for teaching and learning.* The Institute of Educational Development and Extension, University of Education, Winneba.

Nyarko, K., Addai, P., & Amissah, C. M. (2014). Influence of childhood attachment on adolescents' interpersonal relationship and self-esteem among undergraduate students of the University of Ghana. British *Journal of Education, Society & Behavioural Science, 5*(3), 368-376.

Odame-Mensah, S. (2019). Effect of self-esteem on achievement motivation among university students. *International Journal of Research and Scientific Innovation, 6*(3), 211-214.

Ofori, R., & Charlton, J. P. (2002). Issues and innovations in nursing education: A path model of factors influencing the academic performance of nursing students. *Journal of Advanced Nursing, 38,* 507-515.

Ogunmakin, A. O., & Akomolafe, M. J. (2013). Academic self-efficacy, locus of control and academic performance of secondary school students in Ondo State, Nigeria. *Mediterranean Journal of Social Sciences, 4*(11), 2039-9340.

Oloko, M. (2012). *Influence of Relationship Marketing on Performance of Commercial Banks in Kenya. Education Research Journal, 2*(2), 37-42.

Oppong, O., & Twum, A. (2015). How did students cope with the war: The experience of Lebanon. *Journal of Higher Education, 9*(4), 406-423.

Ormond, J. E. (2008). *Human learning*. (5th ed). Upper Saddle River: Pearson.

Owayed, E. F. (2005). Academic achievement and its relationship with anxiety, self-esteem optimism and pessimism in Kuwaiti students. *Society for Personality Research, 33*(1), 95-104

Pajares, F. (1996). Self-efficacy beliefs, motivation, and achievement in writing: A review of the literature. *Reading and Writing Quarterly, 19*, 139-158.

Pakseresht, A. (2010). *Brand equity and corporate responsibility: A review of brand valuation methods.* Retrieved from http://www.essays.se/essay/9e20739689/

Pan, Y., & Gauvain, M. (2012). The continuity of college students' autonomous learning motivation and its predictors: a three-year longitudinal study. *Learning and Individual Differences, 22*, 92-99.

Pan, Y., Sheng, S., & Xie, F. (2011). Antecedents of Customer Loyalty: An Empirical Synthesis and Re-examination. *Journal of Retailing and Consumer Services. 19,* 150-158.

Park, J., Lee, H., & Kim, C. (2014). Corporate social responsibilities, consumer trust and corporate reputation: South Korean consumers' perspectives. *Journal of Business Research, 67*(3), 295-302.

Partey, A. P., & Yidana, M. B. (2018). Self-esteem and academic achievement of economics students in selected senior high schools in the Ashanti Region, Ghana. *Journal of Innovation in Education in Africa, 2*(1), 40-50.

Partey, P. A., & Yidana M. B. (2018). Self-esteem and academic achievement of economics students in selected senior high schools in the Ashanti region. Ghana. *Journal of Innovation in Education in Africa, 2*(1), 40-50.

Patrick, C. L., & Zhenxing, M. (2016). The relation among self-efficacy, learning approaches, and academic performance: An exploratory study, *Journal of Teaching in Travel & Tourism, 16*(3), 178-194.

Peperah-Asiase, K. (2015). A longitudinal study of school adjustment in urban, minority adolescents: Effects of a high school transition program. *American Journal of Community Psychology, 22*(3), 341-69.

Piasah, W. (2015). *An overview of self-concept theory for counsellors*. ERIC Clearinghouse on Counselling and Personnel Services, Ann Arbor, Mich. (An ERIC/CAPS Digest: ED304630.

Pintrich, A. (2000). The relationships between self-esteem and academic achievement: An investigations of sex differences. *Psychology in the Schools, 11*, 213-216.

Pope, M., Myers, J., Kilmartin, C., Felck, R., & kilewer, W. (1989). *Gender and age patterns in emotional expression, body image, and self-esteem: a qualitative analysis.* Retrieved from http://findarticles.com/p

Poropat, A. E. (2009). A meta-analysis of the five factor model of personality and academic performance. *Psychological Bulletin*, *135*, 322-338.

Poropat. A. E. (2014). Other-rated personality and academic performance: evidence and implications. *Learning and Individual Differences, 34:24–32*

Prociuk, W. W., & Breen, J. (1974). The inviting relationship*: An expanded perspective for professional counselling*. Englewood Cliffs, NJ: Prentice-Hall, Inc.

Pruessner, J. C., Baldwin, M. W., Dedovic, K., Renwick, R., Mahani, N. K., Lord, C., Meaney, M., & Lupien, S. (2005). "Self-esteem, locus of control, hippocampal volume, and cortisol regulation in young and old adulthood," Neuroimage, *28*, 815-826.

Pullmann, H., & Allik, J. (2008). Relations of academic and general self-esteem to school achievement. *Personality and Individual Differences, 45*(6), 559-564.

Raman, M., Lim, W., & Nair, S., (2012). *Impact of Corporate Social Responsibility on Consumer Loyalty, Kajian Malaysia*, *30*(2), *71-93.*

Ramsdal, G. (2008). Differential relations between two dimensions of self-esteem and the Big Five? *Scandinavian Journal of Psychology, 49*(1), 333-338.

Rastegar, M., Heidari, N., & Akbarzadeh, M. (2012). On the relationship among locus of control, sense of well-being and language proficiency in Iranian EFL learners. *The Iranian EFL Journal*, *8*(5), 197-207.

Rathus, S. A. (2010). Psychology: Principles in practice. USA; Holt McDougal.

Ray, D. (1980). *Women, men, and society*. (4th ed.), Boston: Allyn and Bacon.

Reasoner, R. (2005). The true meaning of self-esteem. *International Council for self-esteem. Retrieved November 4th from* http://www.self-esteem-nase.org/whatiself-esteem,shtml.

Redmond, B. F. (2010). *Self-efficacy theory: Do I think that I can succeed in my work? Work attitudes and motivation.* Pennsylvania State University Website; World Campus.

Reynolds, L., & Weigand, K. P. (2010). General and specific self-esteem in late adolescent students: Race x gender x SES effects. *Adolescence, 20,* 555-566.

Rice, R. W., Barth, K. H., Guadango, J. L., Smith, S. D., & McCallum, J. (2012). Global self-esteem across the life span. *Psychology and Aging, 17*, 423-434.

Ridgell, S. D., & Lounsbury, J. W. (2004). Predicting academic success: General intelligence, "Big Five" personality traits, and work drive. *College Student Journal, 38*, 607−618.

Robinson, W. P., & Tayler, C. A. (1991). Correlates of low academic attainment in three countries: England, France and Japan. *Análise Psicológica, 9,* 277-290.

Roch, C., Vezeau, C., & Bouffard, T. (2008). Mixed or single-sex school: Does it make a difference on high school girls' academic motivation? *Educational Studies. 34*(2), 129-144.

Romero, E., Gómez-Fraguela, J. A., & Villar, P. (2012). Life aspirations, personality traits and subjective well-being in a Spanish sample. *European Journal of Personality*, 26, 45-55.

Rosander, P., Bäckström, M., & Stenberg, G. (2011). Personality traits and general intelligence as predictors of academic performance: a structural equation modelling approach. *Learning and Individual Differences, 21, 590-596.*

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton, NJ: Princeton University Press.

Rosenberg, M. (1979). Conceiving the self. New York: Basic.

Rosenberg, M. (1990). The Self-concept: Social product and social force. *Sociological Perspectives*, *3*(1), 593-624.

Rotter, J. B. (1966). Generalised expectancies for internal versus external control of reinforcement. *Psychological Monographs, 80*(1), 609-611.

Rotter, J. B. (1990). Internal versus external control of reinforcement: A case history of a variable. *American Psychologist*. *45*(4), 489-493.

Saadat, M., Ghasemzadeh, A., & Soleimani, M. (2011). Self- esteem in Iranian university students and its relationship with academic achievement. Retrieved from http://ozelacademy.com/EJESv2n38.pdf

Sadaat, M., Ghasemzadeh, A., & Soleimani, M. (2012). Self-esteem in Iranian university students and its relationship with academic achievement. *Procedia - Social and Behavioural Sciences, 31*, 10-14.

Sagone, E., & De-Caroli, M. E. (2014). Locus of control and academic self-efficacy in university students: The effects of self-concept. *Procedia Social and Behavioural Sciences, 114*, 222-228.

Salami, S. O. (2010). Emotional intelligence, self-efficacy, psychological well-being and students' attitudes: implications for quality education. Kampala International University. *European Journal of Educational Studies, 2*(3), 341-355.

Salmalian, Z., & Kazemnejhad, L. E. (2014). Correlation between self-concept and academic achievements of students. *Journal of Holistic Nursing and Midwifery, 24*(1), 40-47.

Salomone, R. C. (2003). *Same, Different, Equal: Rethinking Single-Sex Schooling*. New Haven and London: Yale University Press

Sanders, M., & Wooley, D. (2005). *Microteaching skills for sex equity in classroom interaction*. Silver Spring, MD: N.A.K. Production Associates.

Santrock, J. W. (2003). *Children*. (7th ed.). New York: McGraw-Hill Inc.

Sarfo, F. K., Amankwah, F., Sam, F. K., & Konin, D. (2015). Teachers' Self-efficacy Beliefs. *Ghana Journal of Development Studies, 12*(1 & 2), 19-32.

Saunders, R., Davis, T., William, C., & Williams, H. (2004). Developmental change and stability in adolescent self-concept. *Development Psychology, 20*(6), 1100 -1110.

Sawari, T., & Mansor, J. (2013). *Emotions, the social bond and human reality*. Cambridge: Cambridge University Press.

Schneider, F., & Coutts, L. (1982). In favour of coeducation: The Educational Attitudes of Students from Coeducational and Single-Sex High Schools. *Canadian Journal of Education,13*(4), 479-496.

Schultz, D. P., & Schultz, S. E. (2005). *Theories of personality* (8th ed.). Wadsworth: Thomson.

Schunk, D. H. (2009). *Self-efficacy theory*. Routledge, Madison Ave, New York.

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio.* Causal and control beliefs (pp. 35-37). Windsor, UK: NFER-NELSON.

Schwarzer, R., & Renner, B. (2000). Social-cognitive predictors of health behaviour: Action self-efficacy and coping self-efficacy. *Health Psychology, 19*(5), 487-495.

Sciangula, A., & Morry, Marian. (2009). Self-Esteem and perceived regard: how I see myself affects my relationship satisfaction. *The Journal of Social Psychology, 149*(2), 143-158.

Scotland, J. (2012). Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive and critical research paradigms. *English Language Teaching, 5*(9), 9-16.

Severiens, S., & Ten Dam, G. (2012). Leaving college: a gender comparison in male and female-dominated programs. *Research in Higher Education, 53, 453-470.*

Shikullaku, N. H. (2013). *The self-esteem fraud: why feel-good education does not lead to academic success.* Retrieved from http://www.ceousa.org/READ/self.htm

Siegle, R. G., & McCoach M. (2007). Disturbance at the self-image at adolescence. *American Sociological Review, 38*, 553-568.

Sirin, S. R., & Rogers-Sirin, L. (2004). Exploring school engagement of middle-class African American adolescents. *Youth Soc., 35*, 323-340.

Skinner, B. F. (1969). Myth and misperception. *Teaching of Psychology, 19*(2), 68-73.

Slagsvold, B., & Sorensen, A. (2008). Age, education, and the gender gap in the sense of control. *International Aging and Human Development, 67*(1), 25-42.

Smyth, E. (2010). *Single-sex education: what does research tell us*? Retrieved from https://www.researchgate.net/publication/

Soenens, B., Sierens, E.,Vansteenkiste, M., Dochy, F., & Goossens, L. (2012). Psychologically controlling teaching: examining outcomes, antecedents and mediators. *Journal of Educational Psychology, 104, 108-120.*

Sparks-Wallace, O. J. (2007). A study of gender differences in academic performance in a rural county in Tennessee. Electronic theses and dissertations. Retrieved from https://dc.etsu.edu /etd/2101

Stephan, M. X., & Timothy, P. H. (2013). Gender differences in self-esteem: A meta-analysis. *Psychological Bulletin, 125,* 470-500.

Stephan, R., & Timothy, J. (2013). *Organisational behaviour* (5th ed.). Boston, USA: Pearson Education Inc.

Stewart, W. H., Jr., & Roth, P. L. (2007). A meta-analysis of achievement motivation differences between entrepreneurs and managers. *Journal of Small Business Management, 45,* 401-421.

Stipek, D. J., & Weisz, J. R. (1981). Previewed personal control and academic achievement. *Review of Educational Research*, 51, 101-137.

Stoeber, J., Childs, J. H., Hayward, J. A., & Feast, H. R. (2011). Passion and motivation for studying: predicting academic engagement and burnout in university students. *Educational Psychology, 31*(4), 513-528.

Strickland, E., & Haley, M. (2010). Gender differences in general academic self-concept and success expectations on defined academic problems. *Journal of Educational Psychology, 82*(3), 591-598.

Sullivan, A., Joshi, H., & Leonard. D. (2010). Single sex schooling and academic attainment at school and through the life course. *American Educational Research Journal, 47,* 6-36.

Tanle, A. B. (2014). Decomposing global self-esteem. *Journal of Personality, 70,* 443-483.

Tenaw, D. L. (2013). Problem behaviour and academic achievement among first semester college freshman. *Journal of College student Development, 36,* 280-288.

Thompson, J. S. (2000). The effect of single-sex secondary schooling on women's choice of college major. *Sociological Perspectives 46,* 257-278.

Tsui, L. (2009). Recruiting females in male dominated programs. *Journal of College Admission, Spring 8-13.*

T-Tel Professional Development Programme. (2016). *Theme 3: Talk for learning; professional development guide for tutors.* Accra: Ministry of Education.

Uguak, U. A., Elias, H., Uli, J., & Suandi, T. (2007). The influence of causal elements of locus of control on academic achievement satisfaction. *Journal of Instructional Psychology, 34*(2), 120–128.

United Nations Educational, Scientific and Cultural Organization [UNESCO] (Oct 2017 Edition). *Unpacking sustainable development goal* (SDG4) education 2030 guide. Retrieved from http://www.un.org /ga /search /view

Van Dinther, M., Dochy, F., & Segers, M. (2011). Factors affecting students' self-efficacy in higher education. *Educational Research Review, 6*(2), 95-108.

Vansteenkiste, M., Niemiec, C. P., & Soenens, B. (2010). The development of the five mini-theories of self-determination theory: An historical overview, emerging trends, and future directions. In T. C. Urdan & S. A. Karabenick (Eds.), *Advances in motivation and achievement, the decade ahead: theoretical perspectives on motivation and achievement*, Volume 16A (pp. 105-165). London: Emerald Group Publishing Limited.

Vansteenkiste, M., Sierens, E., Soenens, B., Luyckx, K., & Lens, W. (2009). Motivational profiles from a self-determination theory perspective: the quality of motivation matters. *Journal of Educational Psychology, 101*(3), 671-688.

Vitulli, W. L. (2016). *The effect academic self-efficacy and locus of control have in the successful completion of high school cyber courses.* Retrieved from http://knowledge.library.iup.edu/etd/1428

Wallace, M., Barry, C., Zeigler-Hill, V., & Green, B. (2012). Locus of Control as a Contributing Factor in the Relation between Self-Perception and Adolescent Aggression. *Aggressive Behaviour, 38*(1), 213-221.

Wally-Dima, L., & Mbekomize, C. J. (2013). Causes of Gender Differences in Accounting Performance: Students' Perspective. *International Education Studies, 6* (10), 13-26

Wambu, G. W., & Fisher, T. A. (2015). School guidance and counselling in Kenya: Historical development, current status, and future prospects. *Journal of Education and Practice, 6*(11), 93-102.

Watkins, D., Dong, Q., & Xia, Y. (1997). Age and gender differences in the self-esteem of Chinese children. *The Journal of Social Psychology, 137*, 374-379.

Weber, S., Puskar, K., & Ren, D. (2010). Relationships between depressive symptoms and perceived social support, self-esteem, and optimism in a sample of rural adolescents. *Issues in Mental Health Nursing, 31*(1), 584-588.

Weiner, B. (1972). Attribution theory, achievement motivation, and the educational process. *Review of educational research, 42*(2), 203-215.

Weiner, B. (2007) Examining Emotional Diversity in the Classroom: An Attribution Theorist Consider the Moral Emotions. In Schutz, P. A. and Pekrun, R. (Eds.), *Emotions in Education.* California: Academic Press.

Weiten, W. (2010). *Psychology; themes and variations.* (8th ed.). Belmont, USA: Wadsworth

Weymer, R. A. (2002). Factors affecting students' performance in sixth grade modular technology education. *Journal of Technology Education, 13,* (2), 34-47.

Wheeler, V. A., & Ladd, G. W. (2012). Assessment of children's self-efficacy for social interactions with peers. *Developmental Psychology, 48,* 795-805.

Williams, T., & Williams, K. (2010). Self-efficacy and performance in mathematics: Reciprocal determinism in 33 nations. *Journal of Educational Psychology, 102* (2), 453-466.

Wiredu, A. M. (2015). *Does it matter in urban poor communities? The influence of self-esteem in academic performance among urban poor adolescents in Accra, Ghana*. Regional Institute for Population Studies (RIPS) - University of Ghana, Legon.

Woodfield, R., & Earl-Novell, S. (2006). An assessment of the extent to which subject variation in relation to the award of first-class degree between the arts and sciences can explain the 'gender gap'. *British Journal of Sociology of Education, 27*(3), 355-372.

Wu, A. M. S., Tang, C. S. K., & Kwok, T. C. Y. (2004). Self-efficacy, health locus of control, and psychological distress in elderly Chinese women with chronic illness. *Aging and Mental Health, 8*(1), 21-28.

Wunpini, L. P. (2015). *An assessment of the challenges facing counsellors in Senior High schools in the Tamale Metropolis, Northern Region of Ghana*. Unpublished manuscript.

Wuviadzi, A. (2014). Principles of psychology. Cambndge, MA. Harvard University Press.

Yaratan, H., & Yucesoylu, R. (2010). Self-esteem, self-concept, self-talk and significant others' statements in fifth grade students: Differences according to gender and school type. *Procedia Social and Behavioral Sciences, 2,* 3506–3518.

Yari M, (2000). The relationship between self-esteem and social support for school female students in district 14 of Tehran. Master's Thesis submitted to University of Tehran, Tehran.

Zaidi, I. H., & Mohsin, M. N. (2013). Locus of control in graduation students. *International Journal of Psychological Research, 6*(1), 15-20.

Zajacova, A., Lynch, S. M., & Espenshade, T. J. (2005). Self-efficacy, stress, and academic success in college. *Research in Higher Education, 46*(6), 677-706.

Zeegers, P. (2004). Student learning in higher education: a path analysis of academic achievement in science. *Higher Education Research & Development, 23*(1), 35-56.

Zimmerman, B. (2000). Self-efficacy: An essential motive to earn. *Contemporary Educational Psychology, 25*, 82-91.

Zimmerman, B. J., & Cleary, T. J. (2006). Adolescents' development of personal agency. In F. Pajares, & T. Urdan (Eds.), *Self-efficacy beliefs of adolescents,* (pp. 45–69). Greenwich, Connecticut: Information Age Publishing.

APPENDICES

APPENDIX A

GRADUATION STATISTICS FROM 2009/2010 – 2016/2017

CLASS	2009/2010		2010/2011		20112/012		2013/2014		2014/2015		2015/2016		2016/2017	
	NUM	%	NUM	%	NUM	%	NUM	%	NUM	%	NUM	%	NUM	%
Pass	24	**8.25**	8	2.3	7	2.52	**2**	0.71	**3**	**1.11**	**6**	**2.09**	**18**	**4.81**
3rd Class	113	**38.83**	78	26.62	72	25.90	**65**	22.97	**67**	**24.81**	**76**	**26.48**	**102**	**27.27**
2nd Class (Lower Division)	128	**43.99**	156	54.27	160	57.55	**149**	52.65	**130**	**48.15**	**125**	**43.55**	**155**	**41.44**
2nd Class (Upper Division)	25	**8.59**	48	16.38	**37**	13.31	**65**	22.97	**63**	**23.33**	**72**	**25.09**	**93**	**24.87**
1st Class	1	**0.34**	0	0.00	**2**	0.72	**2**	0.71	**7**	**2.59**	**8**	**2.79**	**6**	**1.60**
TOTAL	**291**	**100.00**	**293**	**100.00**	278	**100.00**	283	**100.00**	270	**100.00**	287	**100.00**	374	**100.00**

APPENDIX B

GRADUATION STATISTICS BASED ON GENDER 2009/2010 – 2016/2017

CLASS	2009/2010				2010/2011				2011/2012				2013/2014			
	M		F		M		F		M		F		M		F	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
1st Class	1	0.53	0	0.00	0	0.00	0	0.00	2	1.12	0	0.00	2	1.04	0	0.00
2nd Class (Upper Division)	21	11.23	4	3.85	40	20.73	8	8.00	32	17.98	5	5.00	50	26.04	15	16.48
2nd Class (Lower Division)	93	49.73	35	33.65	115	59.59	44	44.00	112	62.92	48	48.00	98	51.04	51	56.04
3rd Class	59	31.55	54	51.92	35	18.13	43	43.00	30	16.85	42	42.00	42	21.88	23	25.27
Pass	13	6.95	11	10.58	3	1.55	5	5.00	2	1.12	5	5.00	0	0.00	2	2.20
TOTAL	**187**	**64.26**	**104**	**35.74**	**193**	**65.87**	**100**	**34.13**	**178**	**64.03**	**100**	**35.97**	**192**	**67.84**	**91**	**32.16**

APPENDIX B CONTINUED

CLASS	2014/2015				2015/2016				2016/2017			
	M		F		M		F		M		F	
	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%	NO.	%
1st Class	6	3.37	1	1.09	6	3.41	2	1.80	4	1.63	2	1.55
2nd Class (Upper Division)	53	29.78	10	10.87	58	32.95	14	12.61	62	25.31	31	24.03
2nd Class (Lower Division)	81	45.51	49	53.26	73	41.48	52	46.85	107	43.67	48	37.21
3rd Class	37	20.79	30	32.61	38	21.59	38	34.23	61	24.90	41	31.78
Pass	1	0.56	2	2.17	1	0.57	5	4.50	11	4.49	7	5.43
TOTAL	**178**	**65.93**	**92**	**34.07**	**176**	**61.32**	**111**	**38.68**	**245**	**65.51**	**129**	**34.49**

APPENDIX C

QUESTIONNAIRE FOR STUDENTS

Students' Bio-data

Complete this section by filling in the gaps or tick {√} the appropriate box

i. **Student's Index Number:** ……

ii. **GENDER**: Female **[ ]** Male **[ ]**

iii. **Type of College**: Mixed [ ] Single Sex [ ]

Generalized Self-Efficacy Scale

Instruction: Study the following statements and define to what extent each of them describes you, and indicate by ticking (√) in the box that corresponds to your answer. Response format:

Exactly True – ET, Moderately True – MT, Hardly True – HT, Not at all True – NAT

S/N	STATEMENTS	ET	MT	HT	NAT
1	I can always manage to solve difficult problems if I try hard enough.				
2	If someone opposes me, I can find a means and ways to get what I want.				
3	It is easy for me to stick to my aims and accomplish my goals.				
4	I am confident that I could deal efficiently with unexpected events.				
5	Thanks to my creativity, I know how to handle unforeseen situations.				
6	I can solve most problems if I devote the necessary effort				
7	I can remain calm when facing difficulties because I can rely on my coping abilities.				

S/N	STATEMENTS	ET	MT	HT	NAT
8	When I am confronted with a problem, I can usually find several solutions.				
9	If I am in trouble, I can usually think of something to do.				
10	No matter what comes my way, I'm usually able to handle it.				

Self-Esteem Scale

Instruction: The statements below deal with general feelings about ourselves. For each of them please indicate your level of agreement or disagreement using the given scale by kindly putting a check () mark in the box that corresponds to your answer. The Response format is;

Strongly Agree – SA, Agree – A, Disagree – D, and Strongly Disagree – SD.

S/N	STATEMENTS	SA	A	D	SD
1	On the whole, I am satisfied with myself				
2	At times, I think I am not good at all				
3	I feel that I have a number of good qualities.				
4	I am able to do things just as most other people are able to.				
5	I feel I do not have much to be proud of.				
6	I certainly feel useless at times.				
7	I feel that I'm a person of worth, at least on an equal plane with others.				
8	I wish I could have more respect for myself.				
9	Al in all, I am motivated to feel that I am a failure.				
10	I take a positive attitude toward myself.				

Locus of Control Scale

For each of the following statements, indicate the extent to which you agree or disagree depending on the way you feel about each, and tick (√) the appropriate number in the column. The response format is:

Strongly disagree= SD, Disagree Somewhat = DS, Slightly Disagree = SLD

Slightly Agree = SA, Agree Somewhat = AS Strongly Agree = SA

S/N	STATEMENTS	SD	DS	SLD	SLA	AS	SA
1	Whether or not I get to be leader depends mostly on my ability.						
2	To a great extent my life is controlled by accidental happenings.						
3	I feel like what happens in my life is mostly determined by powerful people.						
4	Whether or not I pass my end of semester examination with excellent grades depends mostly on how good/intelligent I am.						
5	When I make plans, I am almost certain to make them work.						
6	Often there is no chance of protecting my personal interests form bad luck happenings.						
7	When I get what I want, it's usually because I'm lucky.						
8	Although I might have good ability, I will not be given leadership responsibility without appealing to those in positions of power.						
9	How many friends I have depends on how nice a person I am.						
10	I have often found that what is going to happen will happen.						
11	My life is mostly controlled by powerful others.						
12	Whether or not I pass my end of semester examination with excellent grades is mostly a matter of luck.						

S/N	STATEMENTS	SD	DS	SLD	SLA	AS	SA
13	People like myself have very little chance of protecting our personal interest when they conflict with those of strong pressure groups.						
14	It's not always wise for me to plan too far ahead because many things turn out to be a matter of good or bad fortune.						
15	Getting what I want requires pleasing those people above me.						
16	Whether or not I get to be a leader depends on whether I'm lucky enough to be in the right place at the right time.						
17	If important people were to decide they didn't like me, I probably wouldn't make many friends.						
18	I can pretty much determine what will happened in my life.						
19	I am usually able to protect my personal interests.						
20	Whether or not I pass my end of semester examination with excellent grades depends mostly on how easy or difficult the questions are.						
21	When I get what I want, it's usually because I worked hard for it.						
22	In order to have my plans work, I make sure that they fit in with the desires of people who have power over me.						
23	My life is determined by my own actions.						
24	It's mainly a matter of fate whether or not I have a few friends or many friends.						

APPENDIX D

PERFROMANCE RECORD SHEET

No.	Index number	Grade for each Course					GPA
		1	2	3	4	5	
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							
13							
14							
15							
16							
17							
18							
19							

APPENDIX E

APPLICATION FOR ETHICAL CLEARANCE

University of Cape Coast,

College of Education Studies,

Department of Education and Psychology,

Cape Coast.

31st May, 2019.

The Chairman,

Faculty Review Board of University of Cape Coast,

University of Cape Coast.

Dear Sir/Madam,

Application for Ethical Clearance

I wish to apply for ethical clearance to conduct a study on the topic "Influence of self-efficacy, self-esteem, and locus of control on academic achievement of Colleges of Education students in Ghana".

I am a PhD student offering Educational Psychology at the Department of Education and Psychology. The participants of the study will be students in Colleges of Education in Ghana.

Attached to this application are the relevant documents for your attention.

Thank you.

Yours faithfully,

Regina Sally Maison.

APPENDIX F

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/43/19-38
Your Ref: .....
Date: June 6, 2019

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Regina Sally Maison Reg. No. ED/EPY/15/0002 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:

Influence of self-efficacy, self-esteem and locus of control on the academic achievement of Colleges of Education students in 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)

APPENDIX G

LETTER OF CONSENT TO RESPONDENTS

University of Cape Coast,

College of Education Studies,

Department of Education and Foundation,

Cape Coast.
7th June, 2019.

Dear Respondent,

I am conducting a study on influence of Self-efficacy, Self-esteem, and Locus of Control on Academic Achievement of College of Education Students in Ghana. Kindly respond to the questions below as honestly as possible. I will need your index number to be able to analyse your responses. If you want a feedback from the analysis kindly provide your cell phone number to enable me furnish you with it. Your answers will be treated with utmost confidentiality.

Kindly sign the space indicated participant's signature below to show your consent to participate in the study.

Thank you very much.

Yours sincerely,

Regina Sally Maison

(Researcher).

Student/Participant's consent

Signature……

APPENDIX H

INTRODUCTORY LETTER TO THE HEADS OF THE RESPECTIVE COLLEGES

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:

9th July, 2019

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

LETTER OF INTRODUCTION
MS. REGINA SALLY MAISON

We introduce to you Ms. Maison, a Doctor of Philosophy student from the Department of Education and Psychology, University of Cape Coast. She is pursuing a Ph.D. degree programme in Educational Psychology and is currently at the thesis stage.

Ms. Maison is researching on the topic:

"Influence of Self-Efficacy, Self-Esteem and Locus of Control on Academic Achievement of College of Education Students in Ghana".

As part of the programme requirement, she is expected to collect data for her thesis and has opted to make the study/ data collection at your institution/establishment.

We would be most grateful if you could provide her the information needed. Any information given would be treated as strictly confidential.

Thank you.

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

APPENDIX I

INTRODUCTORY LETTER TO DIRECTOR, INSTITUTE OF

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:

9th July, 2019

The Director
Institute of Education
UCC

Dear Sir/Madam,

LETTER OF INTRODUCTION
MS. REGINA SALLY MAISON

We introduce to you Ms. Maison, a Doctor of Philosophy student from the Department of Education and Psychology, University of Cape Coast. She is pursuing a Ph.D. degree programme in Educational Psychology and is currently at the thesis stage.

Ms. Maison is researching on the topic:

"Influence of Self-Efficacy, Self-Esteem and Locus of Control on Academic Achievement of College of Education Students in Ghana".

As part of the programme requirement, she is expected to collect a secondary data for her thesis and has opted to make the study/ data collection at your institution/establishment.

We would be most grateful if you could provide her the information needed. Any information given would be treated as strictly confidential.

Thank you.

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

EDUCATION

APPENDIX J

Application Letter to Director, Institute of Education for CGPA

College of Education Studies,
Department of Education and Psychology,
University of Cape Coast,
Cape Coast, Ghana.
12th July, 2019.

The Director,
Institute of Education,
University of Cape Coast,
Cape Coast, Ghana.

Dear Sir/Madam,

APPLICATION FOR CUMMULATIVE GRADE POINT AVERAGE (CGPA)

RE: REGINA SALLY MAISON (ED/EPY/15/0002)

I am a PhD student offering Education Psychology at the Department of Education and Psychology, University of Cape Coast. I am currently writing my Thesis and researching on the topic:

"Influence of Self-Efficacy, Self-Esteem, and Locus of Control on Academic Achievement of College of Education Students in Ghana"

I humbly write to request for the CGPAs of the 2020 batch of students from 10 Colleges of Education (CoE) randomly selected for the study and from whom primary data have already been collected. The CGPA are required in only the core courses which include English Language, Ghanaian Language, Education Studies, Information and Communication Technology, and HIV AIDS Education.

The Colleges are:

Ada CoE,	Akrokeri CoE
Atebubu CoE,	Holy Child CoE,
Komenda CoE,	Mampong Technical CoE,
Mount Mary CoE,	ST Teresa's CoE,
St Vincent CoE,	Tumu CoE.

Attached to this application is an introductory letter from my Head of Department, UCC, for your perusal.

I hope my request will be granted.

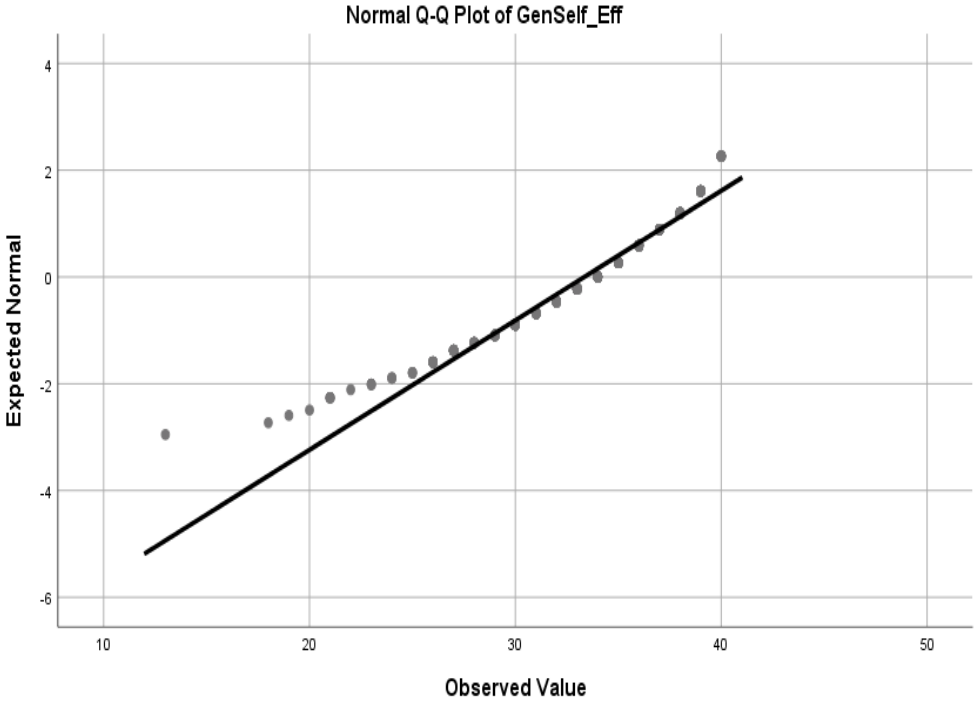
Thank you.

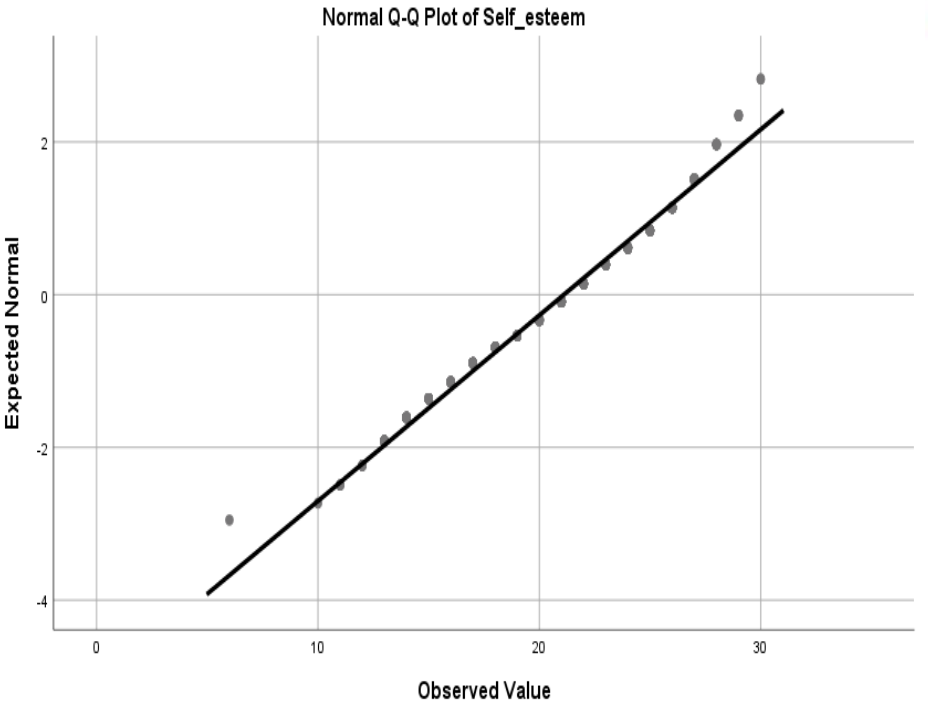
Yours faithfully,

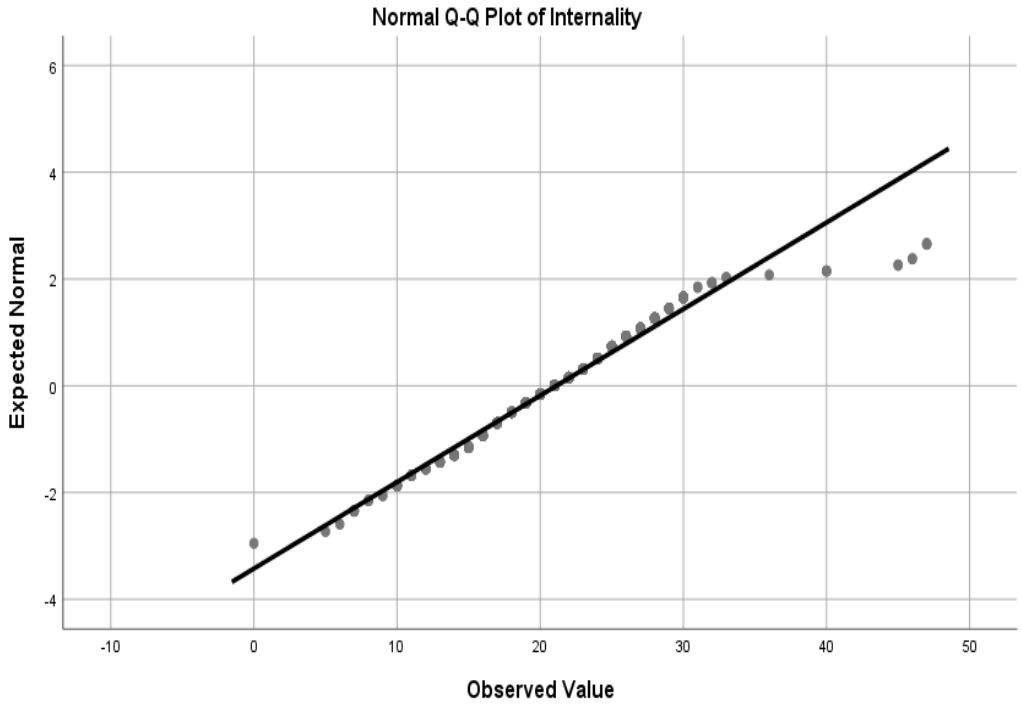
Regina Sally Maison

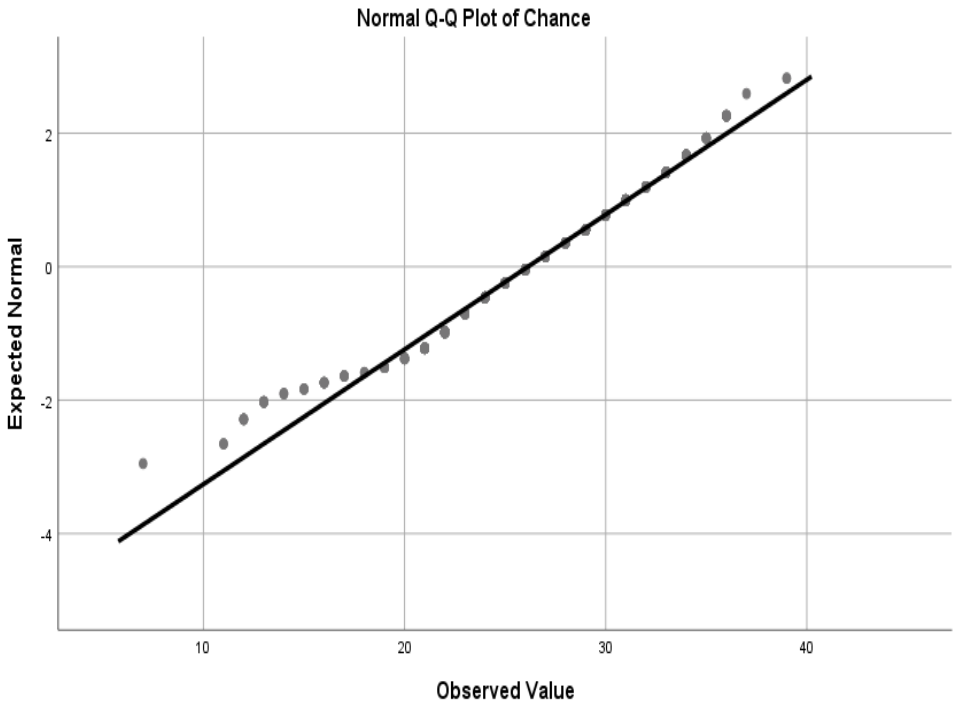
APPENDIX K

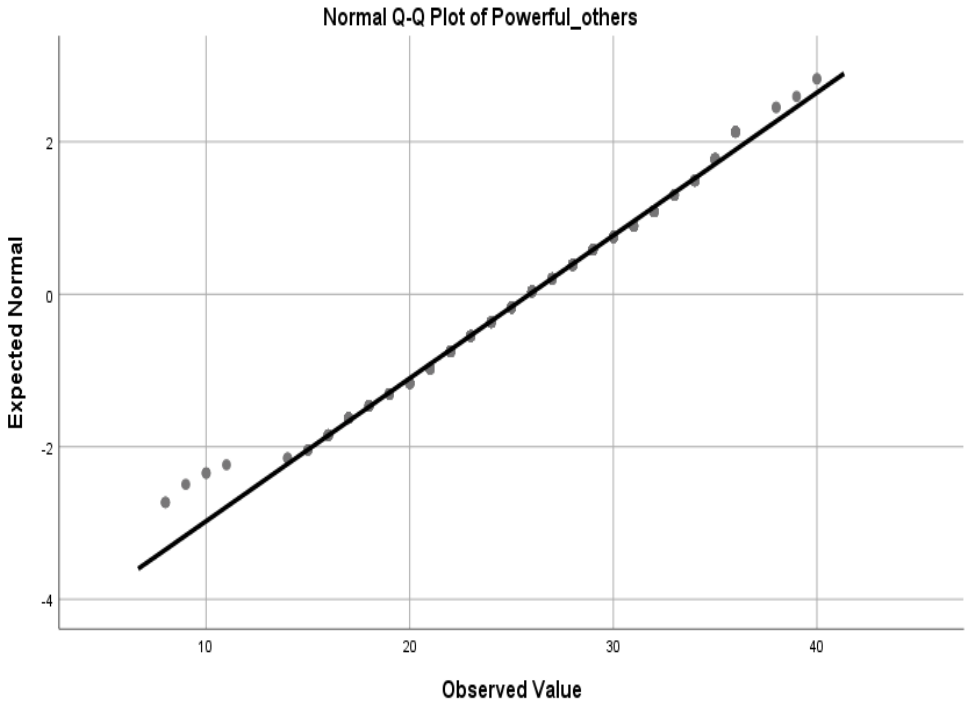
NORMALITY TEST

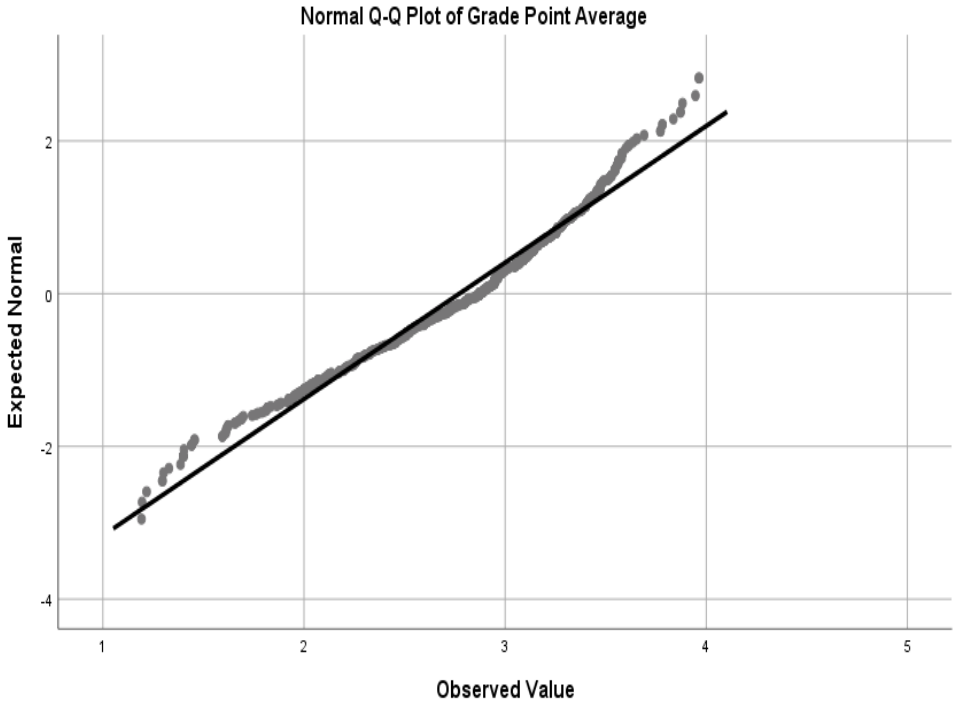






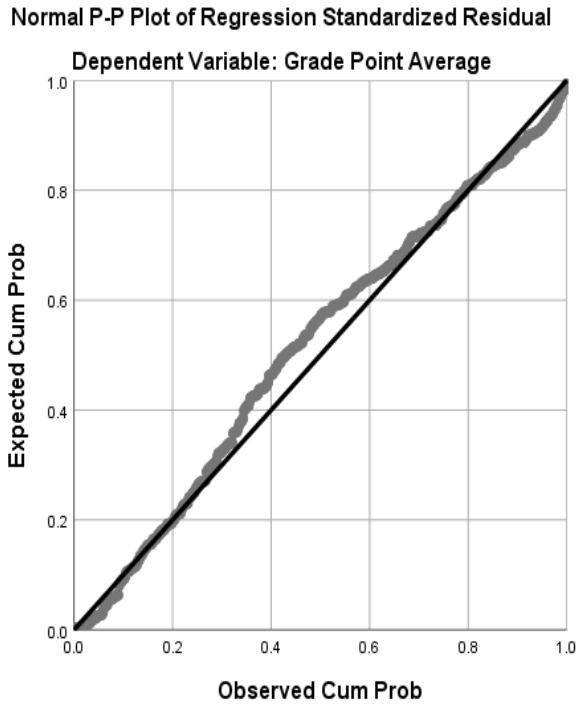


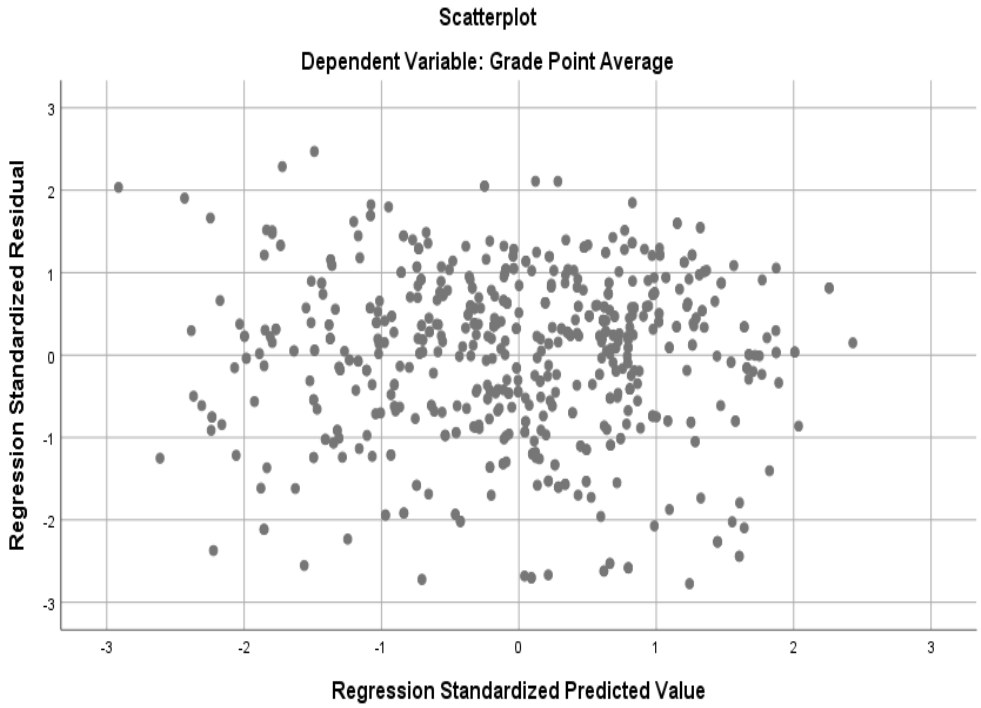




APPENDIX L

NORMAL P-P PLOTS OF REGRESSION STANDARDIZED RESIDUAL AND SCATTER PLOTS





APPENDIX M

DESCRIPTIVE STATISTICS OF HYPOTHESIS ONE

Descriptive Statistics

	gender	Mean	Std. Deviation	N
Internality	female	21.9037	6.59803	301
	male	20.4303	5.67426	330
	Total	21.1331	6.17147	631
Chance	female	26.6379	4.72424	301
	male	25.6848	5.11010	330
	Total	26.1395	4.94890	631
Powerful_others	female	26.1296	5.65389	301
	male	25.6667	5.03403	330
	Total	25.8875	5.33943	631

Levene's Test of Equality of Error Variances[a]

		Levene Statistic	df1	df2	Sig.
Internality	Based on Mean	.178	1	629	.674
	Based on Median	.136	1	629	.713
	Based on Median and with adjusted df	.136	1	563.611	.713
	Based on trimmed mean	.156	1	629	.693

Chance	Based on Mean	2.411	1	629	.121
	Based on Median	2.388	1	629	.123
	Based on Median and with adjusted df	2.388	1	628.497	.123
	Based on trimmed mean	2.239	1	629	.135
Powerful_others	Based on Mean	.979	1	629	.323
	Based on Median	.941	1	629	.332
	Based on Median and with adjusted df	.941	1	603.534	.332
	Based on trimmed mean	1.192	1	629	.275
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Q1					

APPENDIX N

Descriptive Statistics of Hypothesis Two

Descriptive Statistics				
	type of college	Mean	Std. Deviation	N
Internality	mixed	20.6709	6.52586	395
	single sex	21.9068	5.45385	236
	Total	21.1331	6.17147	631
Chance	mixed	25.7772	5.30070	395
	single sex	26.7458	4.23800	236
	Total	26.1395	4.94890	631
Powerful_others	mixed	25.6101	5.67879	395
	single sex	26.3517	4.69214	236
	Total	25.8875	5.33943	631

Levene's Test of Equality of Error Variances[a]					
		Levene Statistic	df1	df2	Sig.
Internality	Based on Mean	2.088	1	629	.149
	Based on Median	2.016	1	629	.156
	Based on Median and with adjusted df	2.016	1	587.439	.156
	Based on trimmed mean	2.056	1	629	.152

Chance	Based on Mean	5.520	1	629	.019
	Based on Median	5.682	1	629	.017
	Based on Median and with adjusted df	5.682	1	590.381	.017
	Based on trimmed mean	5.107	1	629	.024
Powerful_others	Based on Mean	5.387	1	629	.021
	Based on Median	5.383	1	629	.021
	Based on Median and with adjusted df	5.383	1	596.276	.021
	Based on trimmed mean	5.236	1	629	.022
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.					
a. Design: Intercept + Q2					