UNIVERSITY OF CAPE COAST

EMOTIONAL INTELLIGENCE, ACADEMIC SELF-EFFICACY AND LOCUS OF CONTROL AS PREDICTORS OF ACADEMIC ACHIEVEMENT OF STUDENTS IN COLLEGES OF EDUCATION IN GHANA

FRANCIS BRITWUM

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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 fulfillment of the requirements for the award of a Doctor of Philosophy degree in Educational Psychology

APRIL, 2023

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my 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 following the guidelines on supervision of thesis laid down by the University of Cape Coast, Cape Coast.

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

Name: ……..

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

Name: ……...

ABSTRACT

Factors influencing students academic success on a global scale have been examined in studies. Some of the studies looked at emotional intelligence, locus of control and academic self-efficacy as against academic achievement but as separate entities. Thus, this study examined academic self-efficacy, emotional intelligence, and locus of control as forecasters of academic achievement of students in Colleges of Education in Ghana. The research was guided by two questions and seven hypotheses. The work used the cross-sectional survey plan with the quantitative concept. Multi-techniques (purposive, proportionate, and table of random numbers) were used to pick out a sample of 500 answerers. The academic self-efficacy scale, emotional intelligence questionnaire and locus of control scale were adapted to collect data for the study. Mean and standard deviations, structural equation model, independent sample t-test and moderation analysis were used to analyse the information. The collection of the study revealed higher levels of academic self-efficacy and emotional intelligence of students in Colleges of Education in Ghana. The findings implied that despite emotional intelligence having favorable association with academic achievement, overall academic self-efficacy, emotional intelligence and locus of control were not found to be predictors of the academic achievement of educatees in Colleges of Education in Ghana. With reference to this, the study recommended that the school management and the tutors in the Colleges of Education should put in a mechanism to foster the emotional intelligence of the students since emotional intelligence had an affirmative relationship with educational achievement.

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DEDICATION

To the Britwum family

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CHAPTER ONE

INTRODUCTION

Education is an ongoing journey that begins early in life, during a phase marked by high receptivity and sensitivity. A crucial aspect of education revolves around attaining goals and accomplishments. The passage of students across educational tiers holds paramount significance, notably during the progression from senior high school to tertiary education (Shelley, 2014). Consequently, admission to tertiary institutions, particularly Colleges of Education, is contingent upon the demonstration of notably strong academic achievement in their final examinations. The curriculum in the Colleges of Education requires leaners to manage their academics and work-life balance for them to become good teachers. Coupled with classroom activities, meeting paper deadlines, going to lectures, preparing for examination and participating in extracurricular activities, College of Education students might feel burdened by negative sentiment of insufficient time to complete tasks satisfactorily. This implies that students are grappling with the challenge of effectively and efficiently managing their resources to excel in their academic endeavors and cope with their workload across different areas of engagement.

Background to the Study

In the realm of education, academic achievement stands as a pivotal benchmark against which the efficacy of teaching and learning methodologies is assessed, employing metrics such as high and low academic achievement (Tella, Tella, & Adeniyi, 2011). It is pertinent to underscore that, within the Ghanaian context, the productive years invested in senior high school serve as the cornerstone or bedrock for tertiary education, particularly within Colleges

of Education (Bawakyillenuo, Akoto, Ahiadeke, Aryeetey, & Agbe, 2013). Several typical qualities and determinants have been cited by researchers to account for students' low academic achievement. Researchers have identified factors such as diminished intelligence quotient, absence of self-assurance, skepticism towards the instructional medium, diminished interest in coursework, parental dynamics, and family surroundings as influential elements (Cooper & Sawaf, 1997; Gardner, 2007; Weisenger, 2006; Shelley, 2014).

Traditionally, education has centred on refining cognitive and analytical skills in students, but there is an increasing emphasis in modern years on the critical function of emotional intelligence in optimising the teaching and learning cycle (Gläser-Zikuda, Fub, Laukenmann, Metz, & Randler, 2005; Hargreaves, 1998; Hargreaves, 2000; Love & Guthire, 1999; Love & Love, 1995). Mayer and Salovey (1990) initially delineated emotional intelligence as a method of social acumen characterised by the capacity to view one's emotional states, differentiate between them, and skillfully utilize this knowledge to control cognitive processes and behavioral responses. Building upon their earlier work (Mayer & Salovey, 1987), they elucidated that emotional intelligence comprises four comprehensive and interrelated competencies: emotional perception, emotional integration, emotional comprehension, and emotional regulation.

Goleman (1995, p. 25) propelled the concept of emotional intelligence (EI) into prominence by defining it as "the capacity to perceive, interpret, appreciate, and effectively harness the potency and discernment of emotions as a wellspring of human vigor, cognition, impetus, ingenuity, and self-

regulation." Subsequent research has underscored that success hinges more on cognitive abilities and personal attributes rather than verbal proficiency, with emotional intelligence emerging as a significant determinant of life quality and career advancement (Kolb & Hanley-Maxwell, 2003; Richburg & Fletcher, 2002; Snarey & Vaillant, 1985). People with such abilities are deemed stable and competent, and the absence of these abilities renders a person socially and emotionally handicapped (Snarey & Vaillant, 1985).

Extensive proof shows that EI influences success in a variety of circumstances, including academic achievement (Goleman, 1995; Villarreal, Furgerson, Garza, Bain & Slate, 2017; Yusoff, Esa, Pa, Mey & Rahim, 2013). Again, there are many well-documented studies indicating the beneficial correlation between emotional intelligence and a variety of critical variables such as interactions within social contexts, accomplishments in professional endeavors, one's belief in personal competence, and attainment in educational (Martínez, 2016; Mayer, Roberts & Barsade, 2008). According to Jackson, Lomax, Low, and Nelson (2004), emotional intelligence is deemed pivotal in enhancing educational outcomes and facilitating students in reaching heightened levels of accomplishment, professional advancement, leadership proficiency, and personal welfare. Consequently, Goleman (1995) posited that emotional intelligence may be superior forecaster of academic achievement compared to conventional intelligence metrics. This underscores the outcome of emotional intelligence on students' academic achievement. Several studies have been conducted in different settings and times to scrutinize the linkage connecting academic achievement and emotional intelligence, although some studies produced contradictory findings (Jahan, Nerali, Parsa, & Kabir, 2022).

Niu and Tienda (2009) found in their study that senior high school grades are better in predicting college performance than standardized test scores (achievement). Other studies have shown that entry grades are poor predictors of academic achievement at the university (McKenzie, & Schweitzer, 2001). Obioma and Salau (2007) also assert that even though the grades of students from senior high schools are statistically significant, they are not of much practical importance in predicting the accomplishment of tertiary students.

Sex in emotional intelligence remains an issue that attracts accrued scientific interest, primarily due to the inconclusive reported findings (Tapia, 1999; Dunn, 2002). For example, studies point out that while males are more optimistic, and adaptable, females generally tend to have a heightened awareness of their emotions, and show more empathy (Ahmad, Bangash, & Khan, 2009). However, while some females are just as competent to handle stress as the most emotionally resilient males, some males are just as empathic as the most interpersonally perceptive females (Ahmad, Bangash, & Khan, 2009; Kar, Saha, & Mondal, 2014). According to Wing and Love (2001), and Singh (2002), women exhibit advanced levels of emotional intelligence compared to males. Additionally, female qualities can be used to elucidate why females have well emotional intelligence than males (Katyal, & Awasthi, 2005; Ahmad, Bangash, & Khan, 2009; Costa, & Faria, 2015). Research has also shown that males achieve well than females in academics, while others have argued that females perform better than males. For instance, it was found that girls outperform boys in academics in senior high schools (Kyei, Apam, & Nokoe, 2011). In another instance, males were seen to achieve greater than their female counterparts (Goni, Yaganawali, Ali, & Bularafa, 2015). This

current study proposes that sex can influence the association amid academic achievement and emotional intelligence after examining the disparities amid males' and females' emotional intelligence and their educational achievement.

Efficiency is connected to academic achievement (Brown ,Multon & Lent, 2000; Wilhite, 1990; Yazache, 2013). Efficiency is defined by Bandura (1977, 1982, 1986) as an assessment of ones's capacity to execute the necessary actions required to achieve desired results. Academic self-efficacy pertains to how well students see their capacity to coordinate and execute learning actions to attain the educational achievement standard (Bandura 1997). A strong academic self-efficacy as promoting a high degree of encouragement, academic achievements, and cultivating an intrinsic interest in the academic subject matter (Bandura, 1997). Zimmerman (2000, p. 175) similarly observes that self-regulatory accounts for capabilities that may benefit students in the areas of "planning, coordinating, and controlling instructional activities; enlisting resources; monitoring one's motivation, and using metacognitive abilities to evaluate the adequacy of one's information and strategies." Thus, in academic contexts, academic self-efficacy addresses students' self-assurance in their competence such academic activities as examination planning, daily lecture participation, and writing term papers.

Students showing low academic self-efficacy lose efficacy in their intellectual performance, but such convictions are not grounded in their actual skills (Campbell & Nolan, 2019). Students who display actions associated with low academic self-efficacy will quickly be driven to partake in harmful activities such as dropping out of school that would impact their lives (Bandura & Locke, 2003). Such students demonstrate a lack of aspiration for

academic achievement, perceiving potential disappointment prior to engaging in efforts toward achieving academic goals. These individuals are susceptible to feelings of despair, where past errors and setbacks serve as rationales for refraining from concerted efforts (Bandura & Locke, 2003). In a research conducted by Multon, Brown, and Lent (2000) on academic self-efficacy research, it was discovered that prevalent assessments of academic self-efficacy exert the most significant influence on student academic achievement. Björkenstam *et al.* (2010) opined that students who struggle to manage their emotions are at a greater risk of losing efficacy in their academics (academic self-efficacy).

Research shows that ladies are fewer possible than boys to complete an academic task (Wilson, Marlino, & Kickul, 2004). Additionally, previous research indicated that females tend to report elevated heights of academic self-efficacy compared to males, even though males tend to overestimate their efficacy (Pajares, 2002). In studies in which females and males had similar academic self-efficacy belief, females consistently outperformed the males on classroom tasks (Lloyd, Walsh, & Yailagh, 2005). Huang (2013) found an overall gender disparity in academic self-efficacy levels, observing that males generally exhibited higher educational self-efficacy.

Locus of control was established by Rotter in 1966. The mark to which people trust they can impact events that impact them is referred to as control of locus (Rotter, 1966). Put differently, control of locus refers to a person's perception regarding the extent to which external forces or internal capabilities influence favorable or unfavorable outcomes experienced throughout their life (Sardogan, Kaygusuz, & Karahan, 2006). Amadi (2010) emphasized that

people possessing an inner locus of control realize their actions as directed by personal choices and attitudes. Those having the characteristic of an inner locus of control assign event to their own attitudes or behaviors. Individuals exhibiting an inner locus of control are cautious, vigilant, domineering, goal-oriented, self-assured, and inventive (Adetunji, Adekunle, Orsat, & Raghavan, 2017). Individuals with an externality, claim that dominant powers, fates, or chances have impacts on them (Adetunji *et al.*, 2017). Thus, individuals believe that occasions affect their lives are unpredictable and beyond their sphere of influence (Gujjar & Aijaz, 2014; Oluwakemi, 2015). Learners with an outer locus of control position argue their conduct is motivated by destiny, chance, or other circumstances. Individuals with externality are less cautious, more swayed by group members, more quickly influenced by external stimuli, less self-assured, and have unstable performances (Rotter, 1975). Individuals distinguish themselves between internal and external control attitudes by assuming that the reinforcement from their previous experiences is the consequence of their attitudes or external influences (Cetin, 2008).

Research has presented that students possessing an inner control of locus attain hightened action compared with outer control of locus. Moreover, inner control of locus is consistently related with improved achievement, whereas external control of locus does not demonstrate predictive capability in this regard (Gifford, Briceno-Perriott, & Mianzo, 2006; Kumaravelu, 2018). Hans (2000) and Mearns (2006) argues that individuals inner control of locus are successful and are ashamed of their defeat where as those with an outer locus of control position do not display much perceptual change in achievement or disappointment. This means that a person who thinks he or she

has no control over academic achievement and setbacks subsequently generates achievement that tends to affirm his or her convictions. Individuals who believe they influence academic achievement are also expected to be more engaged in school and attain higher grades and accomplishment scores (Adetunji, Adekunle, Orsat & Raghavan, 2017).

Cellini, Kutanis, Mesci, and Övdür (2011), along with Cadinu, Maass, Lombardo, and Frigerio (2006), note that female students tend to exhibit higher scores on measures of outer locus of control compared to male students. Ribbens McCarthy (2007) propose that as society has transformed complexly, people have experienced an inflated sense of powerlessness. It may also be genuine that females are more sensitive to alterations in society than males, thus contributing to females' hightened trend regarding externality. In a different opinion on gender differences, Naik (2015) discovered no discernible disparities in locus of control sex. Again, sex is another factor acknowledged to affect students' educational achievement. Many works have shown that girls and boys differ in achievement (e.g., McNamara & O'Reilly, 2007; Bada & Abubakar, 2012). Similarly, Khajehpour and Ghazvini (2011) initiate that female students displayed more inner control of locus in accomplishment than male students. This presupposes that sex can moderate the linkage between locus and academic achievement of stutudents. Hence the need for research in this regard.

Additionally, emotional intelligence and academic self-efficacy converge as individuals assess organisational contexts by discerning thoughts, emotions, and behaviors (Bandura, 1997). Individuals with elevated emotional intelligence tend to exhibit greater levels of academic self-efficacy

(Mikolajczak & Luminet, 2007). In times of stress, students with heightened emotional intelligence are more inclined to employ active coping strategies. According to Penrose, Perry, and Ball (2007), increasing a student's emotional intelligence may have a favourable impact on efficacacious. Since efficacacious is linked to significant outcomes like student learning, this could ultimately result in higher student accomplishment. One might infer that someone who has low self-efficacy and low emotional intelligence will probably find it difficult to keep things organised in their everyday chores.

Locus of control and academic self-efficacy alternatively,are essential components for student success in an academic setting (Fritson, 2008). Improving students' academic self-efficacy enhances their capacity to initiate, persist, and succeed with classroom activities, likewise, encouraging an inner locus of control helps to ensure that students take active responsibility for their learning (Fritson, 2008). The union between control of locus and efficacacious has been proved by evidence (Vituli, 2016; Almy, 2018). The results of these investigations indicated a bond amid control of locus and efficacacious (Vituli, 2016; Almy, 2018). Inferring from the findings, that is to say, students with higher efficacy would be able to face academic challenges and would take responsibility for their learning (locus of control).

Factors such as emotional intelligence (Raj & Chandramohan, 2015), academic self-efficacy (Goulao, 2014), and locus of control (Cobb-Clark, 2015) are important constructs that help students excel. Emotional intelligence, locus of control , academic self-efficacy have been an issue of relevance for most scholars (Thompson, Kuah, Foong, & Ng, 2020) because their importance cannot be overlooked due to their positive and negative

influence on various outcomes such as academic achievement (Aryana, 2010) and the capabilities of meeting challenges in life.

Gowing (2001) states that students with well-developed emotional intelligence would have special abilities that are helpful in their thinking process for behaving most desirably and appropriately, thus, fostering student academic self-efficacy belief in an academic endeavour which will enable students to become autonomous and take responsibilities of their learning, which will impact students academic achievement.

Statement of the Problem

In Ghana, colleges of Education are responsible for training the bulk of teachers in the country. Consequently, instructors are under more pressure to provide students with a top-notch education (Schleicher, 2012). Students are anticipated to undergo periodical classroom activities per semester. Among others, it appears that given the academic pressures, students experience emotions such as anxiety and stress. These emotions can arise from various sources such as the workload, fear of failure, competition with peers, or high expectations from parents and themselves (Agolla, & Ongori, 2009; Alzahem *et al.*, 2011). The overall implication is that unregulated emotions can hinder students' academic achievement by affecting their cognitive abilities, learning processes, motivation, and overall well-being (Ram, 2005; Drago, 2004).

Moreover, studies have shown that students previous academic failures or setbacks and negative feedback received from teachers undermine students efficacy in their abilities (Dweck, Walton, & Cohen, 2014; Horton, 2015). This lack of efficacy could negatively impacts their academic achievement. Studies have revealed that, most students fail to accept their academic responsibilities

but rather attribute failures to significant others such as teachers and circumstances (Linnenbrink & Pintrich, 2002; Bensimon, 2007). Instead of recognising their own shortcomings or lack of efforts, students often blame others for their failures. This could include teachers not teaching well, peers for distracting them, or circumstances like personal issues or bad luck (Boekaerts, 2010; Brophy, 2005). This could be detrimental to students' academic achievement because it prevents them from recognising areas where they need to improve and take proactive steps to address the relevant issues. This therefore served as a motivation for conducting study.

Ogunmakin and Akomolafe (2013) opine that academic achievement which is central to a nation's cultural, scientific, and technical development is the measurement scale for educational achievement. Numerous examinations have found a link connecting academic achievement and other aspects including motivation, attitude, interest in schooling, and study habits (Adediwura & Tayo, 2007; Adeyemo, 2001; Adeyemo, 2005; Aremu, 2000; Bong & Skaavik, 2003; Casey, Thomas, Hocking & Kemp-Casey, 2016; Li, 2012; Yoloye, 2004; Zimmerman, 2000). These psychological factors have been linked to lower academic achievement (Nguyen, Dedding, Pham & Bunders, 2013).

Most scholars studying academic achievement concentrate on the tie between the intelligent quotient and academic achievement itself (Drago, 2004; Snow & Yalow, 2000). Nonetheless, the intelligent quotient alone is not adequate to explain individual academic success (Chamorro-Premuzic & Furnham, 2006). Teng (2002) also postulates that emotional intelligence is twice more important as an intelligent quotient to succeed in any field, and

approximately 90% of higher-level success is related to emotional intelligence. In a report on emotional intelligence and academic achievement, Deary, Strand, Smith, and Fernandes (2007) claimed that general intelligence only accounted for 40% of academic achievement. However, some researchers opine that emotional intelligence is influential than general intelligence in predicting a person's performance in different areas such as school and work (Hale, Fiorello, Kavanagh, Hoeppner & Gaither, 2001; Shipley, Jackson, & Segrest, 2010).

Research indicates that academic achievement is influenced by emotional intelligence (Chew, Zain & Hassan, 2013; Qualter, Gardner, Pope, Hutchinson & Whiteley, 2012). For example, Austin, Evans, Goldwater, and Potter (2005) results revealed a little link amid EI and attainment. Likewise, MacCann et al. (2020) study rumored that emotional intelligence did not seem to forecast potential academic achievement accurately. Björkenstam, Weitoft, Hjern, Nordström, Hallqvist, and Ljung (2010) also indicates that learners who are unable to regulate their emotions are at a greater risk of losing efficacy in their academic trust (academic self-esteem).

However, studies carried out by Bar-On (2006), Brunker (2007), Goleman (2005), and Qualter and Gardner (2007) have shown that emotional intelligence highly predict students' academic achievement. It is worth to noting the various studies above reveal different results. These discrepancies might be due to other methodological limitations that may modify known associations. Hence, the need for further research in this regard.

It appears that academic self-efficacy has been measured using general self-efficacy measures in developing countries (Asante & Doku, 2010; Baah-

Odoom, & Riley, 2013; Chemers, Hu, & Garcia, 2001; Lane & Lane, 2001; McKenzie & Schweitzer, 2001; Sanders & Sander, 2007; Yendork & Somhlaba, 2015). The statement suggests that in academic research conducted in developing countries, instead of specifically tailored measures for academic self-efficacy, researchers often use more general measures of self-efficacy to assess individuals' efficacy in their academic abilities. This may be due to various reasons such as the availability of validated instruments, practical constraints, or the assumption that general self-efficacy beliefs may also influence academic performance. However, this study looked at academic self-efficacy and other variables as influential on academic achievement. Again, the research that was found to focus on educational efficiency used junior high school students in Ghana (Ansong, Eisensmith, Masa & Chowa, 2016) but this study focused on College of Education students.

Empirical data suggests that locus of control affects academic achievement (Deniz, Tras & Aydogan, 2009; Tella & Adika, 2008). Muhammad, Sadia, Saher and Noor (2016) study revealed that students with internality have developed academic achievement and they are productive throughout learning. Those with an externality, are inactive and reactive during their learning stage. Another study by Ziblim, Mohammed and Alhassan (2020) findings revealed that the study's participants had progressive performance in externality than internality.

It could be inferred from the study by Muhammad, Sadia, Saher and Noor (2016) that academic attainment is higher for learners who have an inner control of locus than for those who have an outer control of locus. In order instances, it was also seen that educators with an external control of locus have

hightened educational achievement than students with an internal control of locus (Ziblim, Mohammed & Alhassan, 2020). There are conflicting results between the two studies (Muhammad, Sadia, Saher and Noor, 2016; Ziblim, Mohammed & Alhassan, 2020) in the literature, hence, there is a need for further research in this regard.

Regarding how emotional intelligence moderate the connection amid academic achievement and academic self-efficacy, several scholars (Abdul-Aziz, Sulaiman, & Ab-Razak, 2020; Adeyemo, 2007; Afifi, Shehata, & Mahrousabdalaziz, 2016; Shameema, 2012) underscored a connection among academic achievement, academic self-efficacy, and emotional intelligence. Hence, this work introduces emotional intelligence as a moderating variable in the relationship between academic self-efficacy and academic achievement.

Moreover, in addressing issue of academic achievement, examinations conducted have mostly centered on single elements in predicting academic achievement. For example, a study by Marcum-Phillips (2016) and Malik and Shahid (2016) examined the consequence of college students' emotional power on achievement. This study acknowledged that emotional intelligence was important for enhancing student achievement, their study did not cover control of locus and academic self-efficacy. Similarly, Koloa, Jaafarb and Nobaya (2017), and Ogunmakin and Akomolafe (2013), Clay-Spotser (2015), Ochieng (2015) did a study on educational efficacacious and educational attainment within senior high school students. Emotional intelligence and locus of control within college students studying education were not included in the study. Similar to this, academic achievement and emotional intelligence

were not included in Sagonea and De Caroli's (2014) study, which instead concentrated on control of locus and academic self-efficacy.

Drawing from existing literature, numerous concerns have emerged. Foremost among these is the predominance of research conducted in Western and selected African contexts, thereby potentially diminishing the applicability of findings to the Ghanaian milieu. This is attributable to the plausible disparities in EI, control of locus, educational efficacy, and academic achievement among students between Ghana and aforementioned regions, owing to inherent distinctions in cultural norms, values, and beliefs (Agormedah et al., 2021). Moreover, majority of the studies were done various educational levels and disciplines such as medicine, engineering, general college studies, business studies, school education, and university education.(Fallahzadeh, 2011; Hsieh, Sullivan & Guerra, 2007; Kader, 2014). Thirdly, there was uncertainty as to whether emotional intelligence moderated the linkage amid educational attainment and educational efficacy, whether sex moderated the linkage amid emotional intelligence and educational attainment as well as whether sex moderated the connection amid educational attainment and control of locus of students. Fourthly, in the Ghanaian situation, it appears that there is little literature concerning the subject of interest among students (Tsitsia, Afenu, Kabbah, Attigah & Bimpeh, 2021).

Purpose of the Study

The main purpose of the work was to examine emotional intelligence, academic self-efficacy, and locus of control as predictors of academic achievement of students in Colleges of Education in Ghana.

Objectives of the Study

The following objectives were design to guide the study:

1. To examine the levels of emotional intelligence of students.
2. To examine the levels of academic self-efficacy of students.
3. To determine whether emotional intelligence, academic self-efficacy and locus of control predicted the academic achievement of students.
4. To determine whether emotional intelligence predicted the academic self-efficacy of students.
5. To determine whether academic self-efficacy predicted the locus of control of students.
6. To examine whether there are differences between the academic self-efficacy of male and female students.
7. To examine the moderating effects of emotional intelligence on the relationship between academic self-efficacy and academic achievement of students.
8. To determine whether sex moderated the effect between emotional intelligence and academic achievement of students.
9. To determine whether sex moderated the effect between locus of control and academic achievement of students.

Research Questions

1. What are the levels of emotional intelligence of students?
2. What are the levels of academic self-efficacy of students?

Research Hypotheses

1. H_0: Emotional intelligence, academic self-efficacy, and locus of control will not predict the academic achievement of students.

H_1: Emotional intelligence, academic self-efficacy, and locus of control will predict the academic achievement of students.

2. H_0: Emotional intelligence will not predict the academic self-efficacy of students.

   H_1: Emotional intelligence will predict the academic self-efficacy of students.

3. H_0: Academic self-efficacy will not predict the locus of control of students.

   H_1: Academic self-efficacy will predict the locus of control of students.

4. H_0: There is no statistically significant difference between the academic self-efficacy of male and female students.

   H_1: There is a statistically significant difference between the academic self-efficacy of male and female students.

5. H_0: Emotional intelligence will not moderate the relationship between academic self-efficacy and academic achievement of students.

   H_1: Emotional intelligence will moderate the relationship between academic self-efficacy and academic achievement of students.

6. H_0: Sex will not moderate the relationship between emotional intelligence and academic achievement of students.

   H_1: Sex will moderate the relationship between emotional intelligence and academic achievement of students.

7. H_0: Sex will not moderate the relationship between locus of control and academic achievement of students.

   H_1: Sex will moderate the relationship between locus of control and academic achievement of students.

Significance of the Study

The outcomes of this investigation hold promise for Principals and educators within Ghanaian Colleges of Education. They offer empirical insights into factors potentially impacting students' academic achievement, thereby facilitating informed decision-making. Such discernment stands to enhance policy frameworks aimed at mitigating low academic achievement. The acquisition of knowledge concerning the underlying determinants of diminished academic performance represents a constructive stride towards devising efficacious remedies for this challenge.

The study again would be of significance to stakeholders such as educational administrators, the Directorate of Education, teachers and parents in considering the need to look at and probably add emotional intelligence education to the training process in the country. It will bring to the limelight the essence of an individual to recognise and regulate his or her emotions, especially among students in Colleges of Education.

Understanding how efficiency, emotional intelligence, and control of locus influence educational attainment can inform curriculum development strategies. Educators and policymakers can incorporate interventions that enhance these factors into the curriculum to improve student outcomes. Findings from the study can influence teacher training programs by highlighting the essence in addressing control of locus ,emotional intelligence and effectiveness in teacher education curricula. Tutors can then implement strategies to support these factors in their classrooms.

Moreover, the findings of the study can contributes to theoretical frameworks in educational psychology by scrutinizing the interplay amid

educational efficacy, locus of control, emotional intelligence, and educational attainment. It may lead to the development of integrated theoretical models that account for the complex relationships among these variables.

Finally, the study will provide a literature base, conceptual framework, and procedures of analysis which may serve as a point of reference to scholars who might want to conduct research in the field or replicate the study in a different setting.

Delimitation of the Study

The examination was delineated to variables that included emotional intelligence. Emotional intelligence has four subscales which were used in the study namely "social awareness", "self-awareness", "self-management" and "relationship management". The study was also delimited to academic self-efficacy which was made up of grades, verbalising, studying and attendance. Locus of control which was also made up of three subscales namely internality, chance, and powerful others was used in the study. The scope of the study covers only level 300 students from eight (8) public CoE in Ghana. The research was restricted to academic achievement but not academic performance. The metric used for student academic achievement was test scores in core subject (College algebra, methods of teaching science, English language and curriculum in social studies).

Limitations of the Study

Using of questionnaires might have informed respondents' recollection biases and other social appealling concerns (e.g., under or over-reporting). Simultaneously, participant data were collected by self-reported

questionnaires, same method variance or bias may be a concern. This concept might affect the reliability and validity of the collections.

Definition of key Terms

Certain words and terms were used throughout the study that the reader may not be familiar with. These words and terms have been operationally defined to give the reader a clearer understanding of them:

Academic achievement: can be defined as "the extent to which a student, teacher or institution has achieved their short or long-term educational goals" (Ornstein & Hunkins, 2009, p. 4). But in this study academic achievement refers to what individual has accumulated throughout his academic studies.

Academic self-efficacy: This phrase pertains to individual's assurance in their own capabilities to successfully execute educational responsibilities, meet academic challenges, and achieve desired educational outcomes (Pajares & Schunk, 2001). In this study context it involves efficacy in one's own academic capabilities, including skills such as studying effectively, mastering academic material, and overcoming obstacles encountered in the learning process..

Emotional intelligence: involves recognizing, comprehending, handling, and leveraging emotions to enhance thinking abilities., problem-solving, decision-making, and interpersonal relationships (Caruso, Salovey, & Mayer , 2008). In this study emotional intelligence pertains to how well a person can manage and understand their emotions and change, as well as the ability to address social or personal difficulties.

Control of Locus: relate to "the extent to which individuals believe that they can control events that affect them" (Rotter, 1966). It denotes to the capacity to either accept or refuse to accept responsibilities.

The Organisation of the Rest of the Study

Chapter two discusses the literature affiliated to the study. The review involves theoretical and conceptual frameworks as well as empirical studies of the problem under study. The third chapter describes the methodology, precisely the population, research design, sample and sampling procedures, the research instrument, the procedure for data analysis and data collection. Chapter four dealt with outcome and discussion. The final chapter draws relevant conclusions and recommendations based on the research findings.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study sought to investigate emotional intelligence, academic self-efficacy, and locus of control as predictors of educational achievement of students. It is important to highlight that much of the literature on emotional intelligence was among students and university students. Few studies were found on College of Education (Koloa, Jaafar, & Nobay, 2017). Further, most of the literature used was about general self-efficacy, and, as a result, the literature drew its sources from that area. This section is further divided into three sections:

Theoretical Framework

1. Mayer and Salovey (1990), Bar-On (1997), and Goleman (1995) Model of Emotional Intelligence
2. Bandura's (1977) Self-Efficacy Theory
3. Rotter's (1954) Locus of Control Theory
4. Ryan and Deci's (2000) Self-Determination Theory

Conceptual Review/ Framework

1. Concepts and dimensions of Emotional Intelligence, Academic Self-Efficacy, Locus of Control, and Academic Achievement

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2. Emotional Intelligence and Sex
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4. Academic Self-Efficacy and Sex

5. Locus of Control and Academic Achievement
6. Locus of Control and Sex
7. Emotional Intelligence and Academic Self-Efficacy
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Theoretical Framework

Emotional Intelligence Models

There are three main theoretical methods for explaining emotional intelligence (Palmer, 2007; Spielberger, 2004; McGuire, 2002; Palmer, Gignac, Ekermans, & Stough, 2007). The initial paradigm is the power model by Mayer and Salovey (1990). The second viewpoint sees emotional intelligence as a combination of various factors composed of elements of personality. This model underlines the impact of psychological traits on overall well-being. The third is Goleman's (2001) mixed intelligence model which perceives emotional intelligence as involving facets of cognitive capacity and personality aspects that decide individual performance.

Mayer and Salovey's (1990) Model of Emotional Intelligence

Salovey and Mayer were the scholars who created the word emotional intelligence (). Ever since there have been continuous studies of the meaning of EI. EI can be characterized the capacity to monitor and distinguish one's moods as well as those of others, utilizing this awareness to guide cognitive processes and behavioral responses. This emotional intelligence paradigm incorporates many cognitive competencies or behaviours which are classified into four divisional emotions namely; emotional interpretation, emotional assimilation, emotional comprehension, and emotional control.

Emotional interpretation is the capacity to correctly convey the feelings and personal desires of others, and it often requires the capacity to differentiate between direct and deceptive expressions of emotion. The capacity to differentiate between diverse sentiments and recognise those that influence their thought processes is emotional assimilation. The third division, emotional comprehension, is the capacity to grasp complicated feelings (experiencing two feelings at a time) and the capacity to differentiate changes from one to the other. Emotional control which is the last component is the ability to attach or separate from an emotion due to its helpfulness in a given condition. The model is shown in Figure 1.

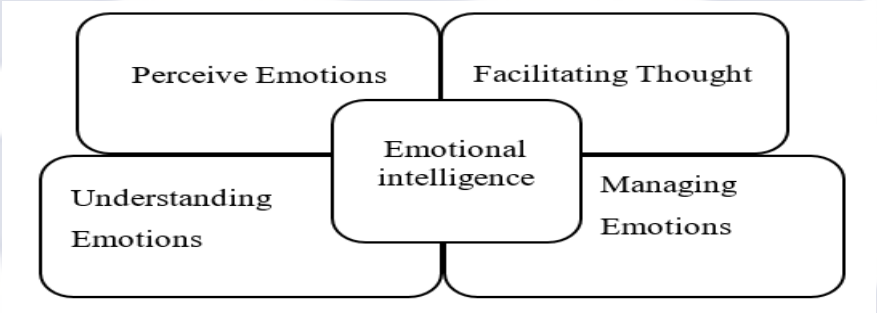

Figure 1: Mayer and Salovey's (1990) Four Branches of Ability Model of Emotional Intelligence

Salovey and Mayer (1990) models of EI is applicable to this study because it provides a framework for understanding how people see, grasp, manage, and skillfully utilize emotions. College of Education students with highten emotional intelligence may be well equipped to regulate their emotions in academic settings, allowing them to stay focused, manage stress, and cope with challenges more effectively. Moreover, College of Education students with higher emotional intelligence may demonstrate better interpersonal relations with tutors, leading to positive classroom environment.

Bar-On's Model of Emotional Intelligence

Bar-On (1997) created the first emotional intelligence assessment device and it was known as the Intelligent Quotient. Bar-On (1997) delineated emotional intelligence as encompassing self-awareness, interpersonal connectivity, and adaptability to and management of the surrounding milieu. Bar-On's emotional intelligence paradigm was applied to achievement and progress prospects which are the ability to handle strong emotions as well as the capacity in navigating transitions and resolving interpersonal or individual challenges. The model explained that emotional intelligence evolves with age and can be further nurtured through educational experiences.and counselling. The model described five elements of EI namely: "intrapersonal", "interpersonal", "adaptability", "stress management", and "general mood." Figure 2 shows the model.

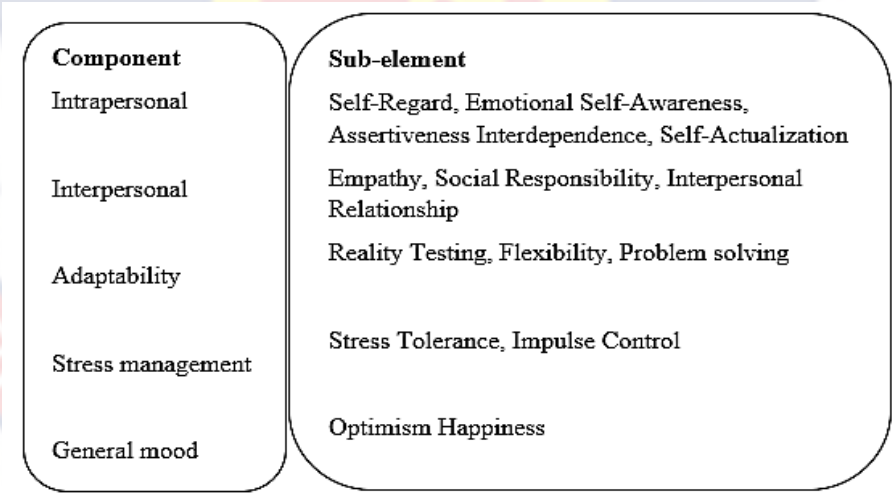

Figure 2: Bar-On's (1997) Mixed Model of Emotional Intelligence

Bar-On's model of EI is applicable to this study because the model emphasizes a broader range of emotional and social skills encompassing various aspects such as overall mood, interpersonal relationships, flexibility, handling stress, and self-awareness. College of Education students with higher

intrapersonal skills may have a better understanding of their emotions and strengths, leading to higher academic self-efficacy. Students having higher adaptability skills might exhibit greater resilience when encountering academic obstacles. and changes, leading to improved academic achievement.

Goleman's Model of Emotional Intelligence

Goleman (1995), a scientist writer and researcher who had before reported for the New York Times on brain and behaviour, uncovered Mayer and Salovey's research in the 1990s. Driven by his observations, Goleman (1995) started to perform his work in the field and finally published emotional intelligence in 1995. Goleman's model delineated five primary components. The initial element, self-awareness, pertains to recognize one's own moods and make decisions guided by intuitive insights. The second component, self-management, necessitates the capability to discern, interpret, and react to the emotions of others while understanding social dynamics. Social awareness is the third principle, and it entails controlling one's feelings and desires as well as adapting to changing circumstances. Relationship management which includes the capacity to encourage, motivate and improve others when handling disputes is the last one (Goleman, 1998).

Goleman's emotional intelligence model provided many emotional competencies. Emotional abilities are not natural gifts, nonetheless, abilities gained have to be practised and improved upon to achieve higher results. People are born with universal mental intelligence that determines their cognitive capacity to comprehend (Goleman, 1998). It is not arbitrary to arrange the abilities under different structures. They exist in groups that help and promote one another (Boyatzis, Goleman & Rhee, 2000). There has been

a critic and it claimed that EI is too wide and therefore non-scientific; therefore, it lacked empirical evidence (Locke, 2005). Locke (2005) further emphasised that Goleman (1995, p. 34), for instance, "in his book provides statistical data about the contribution of emotional intelligence and intelligent quotient to life achievement and the data was not proved by any research at all." Eysenck (2000) also agreed with the claim that Goleman's theory lacks statistical support. Eysenck (2000) similarly averred that the components of emotional intelligence suggested by Goleman lack scientific evidence and show no connection with one another.

Even though Goleman's emotional intelligence has received many criticisms, it plays a significant part in the achievemnt and other aspects of life should not be fully dismissed, and it should be researched further. The theory is applicable in this study because EI is comprehending what you feel and being able to handle such feelings. It is all about being able to keep yourself inspired to get the work completed and become imaginative. These qualities are, therefore, essential for College of Education students to maintain a balance between their personal lives and the stressful demands of school life. The model is also important to this study because College of Education students come to school with the aim of completing academic task within the their four years stay on campus. During their academic studies negative emotion set in such as frustration, and financial problems, students ability to regulate their negative emotions can enhance their academic achievement.

Again, emotional intelligence incorporates a broad range of emotional aspects and qualities that help students succeed. Emotional intelligence included four structures; "self-awareness", "social awareness", "self-

management", "relationship management". The model is presented in Figure 3.

Figure 3: Goleman's (1995) model of Emotional Intelligence

Albert Bandura Self-Efficacy Theory

Self-efficacy is grounded on a wider theoretical basis which implies that achievement is attributed by associations amid a person's behaviour, climate, opinions and views (Bandura, 1986, 1997). The theory offers a valuable mechanism to describe how behavioural determinants function together in understanding behaviours (Bandura, 1977). Bandura (1997) first proposed self-efficacy as a cognitive basis for understanding and forecasting the therapeutic improvements made across various treatment modalities.

Perceived effectiveness in one's skill to plot and implement the behaviour essential to achieve a specific result (Bandura, 1997). People who have a robust self-efficacy in a given mission or objective reason behave and respond otherwise than ineffective people (Bandura, 1977, 1986). Self-efficacy values decide a person's actions by determining the activities they want to do, how much energy they will put into a project, how persistent they

will be in the face of challenges and how resilient they can be (Bandura, 1977). Bandura (1977) suggested dual forms of expectations (one for outcome and the other for efficacy) that influence behaviour. Bandura characterised expectation for the outcome as a person's prediction that a specific behaviour would result in an anticipated outcome. Conversely, the expectation of effectiveness is the efficacy that a person can effectively perform the behaviour and achieve the desired results (Bandura, 1977).

As a consequence, actions are motivated by a person's conviction that he will succeed in a mission (self-efficacy) as well as the conviction that achieving the task will result in a desirable result (expectation for outcome). One criticism that can be levelled against self-efficacy is that the idea is too individualistic. This philosophy is based on the idea that culture cannot be modified so the person must adapt to it. The person's behaviour, on the other hand, is largely representative of society and is influenced by the social role and status he or she holds. It is easy to imagine a social atmosphere that is more conducive to people's happiness.

Although the self-efficacy theory has been criticised, the good side cannot be eliminated. Self-efficacy theory is applicable in this study because, this research is focused on the assumption that students in the Colleges of Education have the goal of successfully performing during their school programmes. Students were not enrolled in school to fail; rather, their ambition is to progress through the programme. The intention of progressing will lead to a behaviour based on a person's assumption of achieving a mission (expectation for efficacy) and that completing the task will result in the desired result (expectation for outcome). Thus, students desire to have higher efficacy

in completing academic task such as attending lectures, doing classroom presentation and completing assignment will result in greater outcome.

Rotter's Locus of Control Theory

Locus of Control was established by Rotter (1954) and it was grounded on the theory of social learning. Social learning provides a broad philosophical structure for interpreting the locus. Rotter (1954) coined the term locus by referring to how often people have the conviction that they are responsible for their surroundings. Locus is a generalised expectation that means a positive result will happen as a result of a person's regulation. An occurrence that is perceived as a reward or affirmation by some people may be perceived and responded to differently by others (Ann-Bode, 1995). Behaviour can be explained in terms of changes caused by many equivalent learning experiences (Rotter, 1966).

Rotter (1954) operationalised three concepts in his theory and they are valued for potential, expectancy, and reinforcement. Potential refers to the probability of performing a certain behaviour in a given situation. In other terms, what is the likelihood in a situation of the individual displaying a certain behaviour? In any given situation, there are multiple behaviours one may engage in. There is potential conduct for every possible behaviour. The person must show the greatest propensity for any behaviour.

Expectancy is the second principle in the philosophy of Rotter's theory which can be explicitly related to the present research as it establishes the basis for locus. The expectation is the probability of a person getting attached to a behaviour that will result in a specific outcome (Rotter, 1954). The expectation is described as a person's conviction, specific action would result

in a specific outcome. It makes no difference how important the reinforcement is or how likely it is to exist in a specific case. A generalised expectation is a locus of control. Individuals can be grouped under internal and external locus. Those with a robust internal locus have the conviction that it is ultimately up to them to decide whether or not they are strengthened. People possessing internal locus assume that actions compensate for progress or loss. Those having an external locus assume life's reinforcers are influenced by powerful others, chance or fate. Therefore, they do not affect the amount of support they are getting through their actions (Rotter, 1966).

The third principle by Rotter (1954) in the theory of social learning is external reinforcement. The importance of an external reinforcement is the degree of choice for each reinforcement to arise when there are equivalent circumstances (Rotter, 1954). It is generally accurate and effective in the degree of choice of a particular people or class and the assumption of a reward does not decide the desires of an individual. Rotter (1954) also discerned the disparity between internal and external strengthening. Rotter (1954) concluded that internal enhancement is the perception or realisation of a subject that a previous incident is of certain significance, whereas external reinforcement is the appearance of an incident that has a certain confirmation meaning for the subject.

Rotter (1954) categorised his theory by emphasising the description of behaviours in social situations and the need required to satisfy them in mediating others. Despite everything, his theory of social learning received many criticisms for being overly empirical and placing so much focus on the individual's cognitive dimension (Carducci, 2009). Rotter's (1975) theory of

social learning brings significant strides for reward theories and cognitive theories. Rotter's (1975) attempt to explore the interaction between behaviour and cognitive theories has encouraged the growth of behavioural change and cognitive development studies. The personality theory of social learning by Rotter provides a vital framework for the systematic understanding of individual variation in personality.

Locus of control theory applies to this study because of the potential in people's ability to perform a task while expectancy is the tendancy that a person's effort will result in a definite outcome. Hence College of Education students effort in completing academic activities such as passing quizzes and completing project work in school can results in higher academic achievement. Again the reinforcement is related to this study because in this study, researchers may examine how students' experiences in the Ghanaian educational system reinforce their locus of control beliefs. For example, if students consistently receive positive feedback and rewards for their efforts, they may develop a stronger internal locus of control. Conversely, if students face systemic barriers or discrimination that hinder their academic progress regardless of their efforts, they may create a more external locus of control orientation.

In summary, Rotter's three concepts of locus of control theory provide a framework for understanding how students' beliefs about control over their academic outcomes (internal vs. external) are related to their academic achievement.

Self-Determination Theory

The principle of self-determination theory, an organismic philosophy of human motivation, thrives on a person's innate desire for personal growth and progress, the obligation for themselves, and operating at a high standard under positive psychology (Bertsch & Ostermann, 2011; Miller & Foster, 2010; Thal & Hudson, 2017). The ongoing progress of the philosophy of self-determination theory has continuously represented an empirical basis for core concepts since the 1970s (Thal & Hudson, 2017; Vansteenkiste, Niemiec & Soenens, 2010). Self-determination theory suggests a desire to be involved in an individual setting, and a curiosity in understanding to improve a person's knowledge in terms of intrinsic and latent human behaviour (Ryan & Deci, 2000). Self-determination theory has three important basic and universal human needs (autonomy, competence, and relatedness) that must be met for external values to be integrated and for personal development to occur (Ryan & Deci, 2000).

Self-Determination Theory is applied to this study in the sense that taking autonomy for instance a student who has an inner control tends to take accountability for his or her accomplishment and disappointment. Emotional intelligence plays a role here as students who have a heightened EI possess enhanced abilities to effectively regulate and navigate their own emotion., which can lead to greater autonomy in their academic decision-making processes. For instance, emotionally intelligent students may be more adept at coping with stress and setbacks, allowing them to maintain a sense of autonomy in their academic endeavors.

Academic self-efficacy is an integral component of competence in Self-Determination Theory (Meece, Glienke, & Burg, 2006). Efficacious pertains to students' convictions regarding their capability to thrive academically. According to Self-Determination Theory, individuals are motivated to seek out challenges and experiences that allow them to demonstrate and improve their competence (Clay-Spotser, 2015). Thus, students in the Colleges of Education with developed academic self-efficacy have the tendency to be driven to engage in academic tasks, leading to higher academic achievement.

The third element of self-determination theory is the need for relatedness which can be referred to as the human desire to have a sense of belonging to and interacting with others (Ryan & Deci, 2000). Students recognise the importance of forming a relationship with their parents and they have high hopes that their parents will invest in their education.

Again, Self-Determination Theory is applicable to this study because the principle of self-determination theory is that people are biologically oriented in the pursuit of progress and personal advancement, people share a set of fundamental psychological needs essential to their well-being and development. (Clay-Spotser, 2015). Considering autonomy, individuals with this trait could decide for themselves what is good for them and what to refrain from to aid their wellness. For competence and relatedness, the aforementioned decisions individuals make stipulate the innate tenacity of the individual to work towards and achieve anything desired while the latter depicts the social forces that in itself exert the need to achieve wellness, not

for the individual's benefit but to be significant to others in the individuals' life. This influences the choice of the theory underpinning this study.

Conceptual Review

Emotional Intelligence

Within the academic discourse, various theoretical frameworks endeavor to comprehensively explicate and assess EI. Mayer and Salovey (1990), credited as pioneers for introducing the term "emotional intelligence" in scholarly literature, offered a definition characterized by the capacity to observe and differentiate both personal and others' emotional states, leveraging this awareness to regulate cognitive processes and behavioral responses (Abraham, 1999; Stys & Brown, 2004). From the concept, it can be inferred that emotional control is very necessary for emotional intelligence people. This description also means that intelligent people will communicate easily and would be able to form supportive relationships with others. Later, these scholars revised their understanding of emotional intelligence, and the current interpretation is perhaps the most widely accepted (Mayer & Salovey, 1990). Emotional intelligence is characterised as the capacity to interpret sentiment, incorporate sentiment to foster contemplation, comprehend feelings, and manage emotions to facilitate individual growth.(Abraham, 1999; Stys & Brown, 2004).

Goleman's publication, "Emotional Intelligence: Why it Matters More than Intelligence Quotient (IQ)," upon its release swiftly attained global acclaim, emerging as a bestseller. In his work, Goleman (2001) elucidated emotional intelligence as the aptitude to recognize and regulate sentiments within oneself and among others. Another well-known emotional intelligence

concept is Bar-On's (1997) concept in which he coined the word "Intelligent Quotient." Adopting a distinctive viewpoint, Bar-On (1997) characterized EI as the understanding of oneself and others, interpersonal engagement, and adaptation to effectively navigate and address the challenges presented by the immediate environment in order to enhance efficacy in meeting situational demands.

Emotional intelligence has also been identified as a term in psychology for some time (Greenspan, 1989; Leuner, 1966; Mayer, Salovey, & Caruso, 2008), but the current version of the definition was not adopted until 1990 (Mayer & Salovey, 1990). The remote antecedent of EI finds its origins in Thorndike's (1920) conception of "social intelligence," which he delineated as the capacity to comprehend and regulate interpersonal interactions, thereby exhibiting astute conduct within human relationships. As a results, Thorndike (1920) characterized "social intelligence" as the capacity to regulate and understand the conduct of others.

The impact of non-intellective influences on intellectual actions was defined by Wechsler (1958). Wechsler (1958) proposed that they were necessary in assessing one's potential for success in life.. Wechsler also noted that certain variables will not be adequately represented until our intelligence models are complete. Leeper (1948) made advances based on the principle of Wechsler and noticed that emotions might guide personal activities, indicating that emotions generated organisation rather than disorganisation and also contributed to critical thought. Researchers started discussing the outcome of emotions on cognition in the 1970s, instead of viewing the idea as distinct structures (Mayer, 1986).

In his seminal work "Frames of Mind: The Theory of Multiple Intelligences", Mackintosh (2011) claimed that traditional forms of intelligence such as Intelligent Quotient (IQ) did not completely describe cognitive ability. Therefore, there was a widespread perception that the traditional description of intelligence concepts lacks the potential to adequately describe achievement outcomes.

Sternberg (1985) proposed three forms of intelligence called componential, experimental, and contextual. Sternberg showed that individuals with good componential intelligence might reason logically and critically. Sternberg (1985, p. 327) identified that “thinking is not a simple feature which makes up a very large spectrum of cognitive and other abilities.” Mayer and Salovey (1990) developed their ability based on emotional intelligence theory in 1990, and the topic only became widely known in 1990.

In the early 1990s, Salovey and Mayer (1990) established the concept of EI by claiming that emotions are internal processes that regulate bodily reactions, cognitions, and cognitive consciousness. Mayer and Salovey (1990) characterized EI as the capacity to comprehend emotions, utilize and create emotions to assist in understanding, recognize feelings and emotional consciousness, and manage emotions in a deliberative manner to promote both emotional and intellectual advancement. In addition, Bar-On (1996) invented the term "Intelligent Quotient" which was used for the general intelligence test.

The inventory was the first clinically established and confirmed indicator of emotional intelligence, and it indicated one's capacity to cope with day-to-day environmental problems and assist in professional and personal life

achievement. As a consequence of increasing emotional intelligence needs, the work on the topic was in process, until popular book, *emotional intelligence: Why It Can Matter More Than Intelligent Quotient*, was released and the concepts became broadly recognised. McCleskey's (2014) time magazine article emphasised his book and emotional intelligence became known in the media. Afterwards, works on emotional intelligence appeared more frequently in a variety of academic journals.

Emotional Intelligence and its Role in Education

Emotions have a substantial impact on the life of people including movement, judgment, and decision-making. Socially conscious individuals understand and utilise their reasoning to control their thoughts rather than their abilities. Emotional intelligence has been a very significant predictor of intelligence, talents, and abilities of an individual in school and personal life during the last two decades (Goleman, 1995). Thus, applying the methodology of emotional intelligence to advanced education can provide numerous benefits for students. It does not satisfy their desire only but also improves their achievement in their profession.

Schooling has usually engrossed on enhancing students' cognitive and analytical capacity, but the critical function of emotions to optimise the education and study cycle has been emphasised increasingly over the last years (Hargreaves, 2000; Glaser-Zikuda *et al*., 2005; Love & Guthire, 1999; Love & Love, 1995). Tutors not understanding emotions correctly have been revealed to misinterpret the knowledge of learners and thus affect their capacity to help learners to learn (Hargreaves, 2000). Tutors with good emotional awareness have been shown to help them build a healthy and

relaxed environment in the classroom by helping students to perform successfully (Holt & Jones, 2005).

Furthermore, the feelings of students are considered to be of vital significance to their desire to know, and their willing management of learning processes (Wosnitza & Volet, 2005). Ediger (1997) found out that thoughts, perceptions, and beliefs are very relevant to the well-being and achievement of an individual throughout his or her life. Ediger (1997) equally postulated that school teachers should emphasise the importance of emotion in the domain of cognition. Ediger (1997) further stated that emotions and feelings assist learners in achieving their full potential in the classroom.

Freshwater and Stickley (2004) examined EI in the classroom by claiming that, when tutors pay slight attention to the emotional growth of students, they struggle to express the essence of interpersonal relationships with students. In addition, when the emotional development of students is ignored, they do not develop intellectually (Mo, 2009). As a result, good academic performance is sustained by productive emotional growth, and that emotion and intelligence are equally essential to learning quality (Greenhalgh, 1994; Hargreaves, 2000). This recognition has also contributed to the assumptions regarding emotions on the education and accomplishment (Pekrun, Gotz, Titz, & Perry, 2002). Khajehpour (2011) suggested that schools can help students master their emotional intelligence capacities. Possessing certain skills will contribute to improved attainment in school.

Glaser-Zikuda *et al.* (2005) claimed that feelings that included curiosity and fear along with comprehension and enthusiasm are part of the learning cycle. Positive emotions, for example, have been shown to encourage

regulated learning (Pintrich, Boekaerts, & Zeidner, 2000) and allow for improvement and evaluation (Trope, Hassin, & Gervey, 2001). However, harmful feelings hamper students' intellectual motivation and undermine their efficacy in learning which results in lower accomplishments (Assor, Kaplan, Kanat-Maymon, & Roth, 2005). Equally, Jaeger (2003) was of the view that it is not necessary to distinguish emotion from learning since learners whose emotions are not involved in what is learned pay less to no attention, and, therefore, do not learn efficiently. Such a viewpoint reflects several studies that have begun to dismiss the conventional emotional viewpoint as an unnecessary strain on academic thinking, and accept the notion that only emotion may have a constructive and rationalising effect on learning (Isen, 1993).

Elias (2001) mentioned that educating students with emotional and social skills at school is very significant and that they have a positive effect on students' success. Nelson and Low (2003) posited EI is substantial single forecaster of students' accomplishment, job performance, and life satisfaction. They believe that an emotionally balanced person can recognise, experience, and convey human emotions safely and constructively. Considering that feelings are not just an educational and learning tool, but an essential and fundamental aspect of education and learning (Hargreaves 2000; Goleman 1995).

Axademic Self-Efficacy

The conception of efficacacious originates from the cognitive theory proposed by Albert Bandura. Bandura (1994, p. 71) defined effectiveness as "individuals' beliefs in their capability to execute designated tasks at

designated levels to produce outcomes that influence their lives." Put simply, principles inherent in academic self-efficacy dictate an individual's perceptions, thoughts, and empowerment within a given academic context. Bandura (1997) points to the beliefs in academic self-efficacy as an engaging and experienced set of contextual beliefs, rather than a fixed characteristic of a person. Bandura (1997, p. 9) characterized effectiveness as "the efficacy in one's capacity to devise and execute the necessary actions to address potential situations." Academic self-efficacy consists of a person's conviction about what he or she can do. A person's willingness to achieve an objective depends on the conviction that the specific goal can be achieved. Bandura created academic self-efficacy through its socio-cognitive thinking philosophy and it was characterised by its assumption to accomplish specific tasks or objectives.

Bandura (1977) described efficacy as "the conviction that the conduct required to produce the results can be successfully achieved" (p. 193). Educational self -confidence is the degree to which a person assumes that in any conditions he or she may execute the necessary behaviour (Kollmuss, & Agyeman, 2002). Thus, confidence involves the development of a person's trust in completing a task. The sense of internal autonomy and superiority is at the core of the psychological improvement strategy for academic self-efficacy (Maddux & Lewis, 1995). Beliefs in academic self-efficacy in the behaviour of humans are through emotional, behavioural, affective, and judgment systems (Bandura & Locke, 2003; Judge & Bono, 2001). The association between what people think and their actions and the trust in their abilities to do stuff is regulated by academic self-efficacy (Swanson & Fouad, 1999). Academic self-efficacy is the ability to adopt certain behaviours and their

perseverance and emotional response while faced with confrontation and challenges (Cinamon, 2006).

Bandura (1994) also claimed that people make life choices dependent on their presumed academic self-efficacy by participating in events and selecting circumstances that they find to be beyond their potential to achieve. If people have a good sense of intrinsic academic self-efficacy, given the challenges they render a stronger attempt to achieve a mission. Learners with developed academic academic self-efficacy are assumed to have a greater propensity to remain in class and persist any potential challenges. Academic self-confidence differs in three dimensions: strength, level, and generality (Bandura, 1997). The level denotes the complexity of a person's capability of performing the activities or tasks. Strength states a person's conviction in his capacity to thrive. Strong perceptions of academic self-efficacy are stable and encourage resilience when one is faced with challenges whereas weak expectations of academic self-efficacy are easily influenced by unconfirmed experiences (Lent & Hackett, 1987).

The extent and robustness of academic self-efficacy evaluate several determinants influencing the initiation of actions, the level of effort exerted, and the persistence of effort in overcoming obstacles. Individuals possessing high levels of educational self-efficacy exhibit a propensity to adapt their environments and strategize for success (Bandura, 1997). For instance, individuals with formidable educational self-efficacy are inclined to engage in challenging activities more frequently (Maddux & Lewis, 1995; Schwarzer, 1992). Those who believe they are unsuccessful, on the other hand, avoid difficulties and challenges, reduce their aspirations, and experience a great

deal of nervousness and tension. They focus on their flaws and focus on their failures. People with strong academic self-efficacy tend to persist through daunting challenges or obstacles and sometimes excel as persistence typically contributes to a positive result.

Sources of Academic Self-Efficacy

Mastery experience

The mastery experience is a significant basis for academic self-efficacy since it depends on being interested in a meaningful encounter. The successful activity contributes to achieving progressively challenging achievements. Situations should be set up in such a way that they yield success rather than failure. The theme should divide tough tasks into small, comparatively easy actions to guarantee a high level of accomplishment (Blankstein, 2004). Persistent determination in the face of setbacks can enable individuals to conquer even the most formidable tasks, as suggested by Bandura (1986).

Vicarious experiences

The subsequent phase in the progression of academic self-efficacy involves exposure to vicarious experiences facilitated by a social model. Bandura (1986) posits that observers' belief systems undergo transformation upon witnessing peers akin to themselves succeed through persistent endeavor. Bandura noted that some variables render a person more susceptible to vicarious control. These variables include uncertainty regarding his or her ability, no prior knowledge, and standards of social assessment. Social models are successful in communicating information and presenting useful skills and techniques for handling their external demands to observers (Bandura, 1994).

Verbal persuasion

People are more likely to take action and continue to take initiative when they are confident than when they are self-doubting and focused on personal flaws. The poor results of an individual's acts can easily validate unrealistic professional competency expectations (Bandura, 1986). If an individual is repeatedly told he lacks the skills needed to complete a task, this idea tends to exacerbate failure thereby causing the person not to persevere in times of challenges. This pattern confirms the related scepticism about the individual's ability (Bandura, 1994).

Physiological state

The physiological state is the next phase used to determine academic self-efficacy. Individuals' stressful responses to tension are perceived as signs of susceptibility to poor results (Bandura, 1994). This is the idea that "individuals with strong academic self-efficacy view daunting behaviours as obstacles to overcome rather than risks to escape" (Williams & Williams, 2010, p. 455).

As mentioned earlier, the four variables are specifically linked to academic achievement and these are issues students recognise that eventually influence their education. As a consequence, Sander and Sanders (2003; 2006a) created four-dimensional scales; Grade, Verbalising, Studying, and Attendance, to quantify academic efficacy.

Efficacy affects achievement both explicitly and indirectly by increasing the grade targets of students. Moreover, students who think that they can do academic work are using more knowledgeable and metacognitive strategies, and are persisting longer than students without knowledge (Pintrich

& Garcia, 1991). Bandura (1977, 1997) fully established the evidence base to confirm the essential function that academic self-efficacy plays in forecasting and understanding human actions. Pajares (1996) also outlined the following:

a. Since people trust in their talents and the effects of their attempts to change their behaviour, experience, expertise, and previous accomplishment the results are also weak predictors of future accomplishments.
b. Because individuals retain their abilities, knowledge, skills, and previous accomplishments, the results of their efforts to influence their behaviour are often poor predictors.
c. Universal measures of context-insensitive educational self-efficacy are weak predictors of academic achievement.

Academic self-efficacy predicts students' attainment through cognition and it also has an indirect effect on perseverance (Diane, 2003). While previous accomplishment enhances academic self-efficacy, the burden for subsequent performance could be the student's understanding of previous achievements and failures (Ochieng, 2015). Academic self-efficacy beliefs often lead to success as they affect mechanisms of thinking, inspiration, and actions (Bandura, 1986). Studies maintain that the effects of skills on subsequent accomplishments are mediated by efficiencies. Following instruction, learners have the opportunity to resolve new problems and make right those they missed. Collins (1982) conveyed that capacity has to do with accomplishment but high-self-efficacy learners overcome more problems, irrespective of their abilities. Academic self-efficacy also increases the cognitive capacity of the students by enhancing resilience (Berry, 1987).

Zimmerman, Bandura, and Martinez-Pons (1992) had a crucial function in delineating the interconnections among self-regulatory perspectives, educational self-efficacy, and academic achievement (Risemberg & Zimmerman, 1992; Zimmerman & Bandura, 1994; Zimmerman, 1989; Zimmerman, 1990; Zimmerman, 1995). Their research effectively showed that self-regulatory efficacy leads to academic effectiveness.

Locus of Control

Rotter introduced the idea of locus of control for the first time in 1954. Locus of control is widely discussed in psychology (Schulz & Schulz, 2009; Bowling, Wang, & Eschleman, 2010). Locus of control implies "the way a person assigns blame for incidents to cause beyond and under their influence or to cause outside their influence" (Alicke, 2000). It often applies to "whether or not a person feels they have power over replacements in their lives" (Giddens, 2023).

A differentiation is made within the locus of control paradigm. Internal locus is the person who has the conviction that he or she is in charge of his or her destiny and, as a result, is still upbeat and in control of his or her external environment (Caird, 2013). Furthermore, they strongly perceive a significant bond amid their actions and the outcomes they experience. External locus of control is a person who feels he or she has no clear power over his or her life and views himself or herself in an inactive position in the social world. Locus is a characteristic that differentiates amid individuals who have the conviction that their lives are governed by internal forces and those who have the conviction that external forces governed them (Spector, 2000).

Spector (2000, p. 211) similarly averred that "people who believe they are controlling consolidation are called internals. People who believe in reinforcements are called externals by destiny. External locus of control describes the "belief of facts, good or negative as an outcome of behaviour, and, therefore, influenced by personal power (Lefcourt, 1982, p. 35). The conviction that one's actions have an impact on what happens to them is measured by locus of control. Some people have the conviction that they are self-sufficient and in control of their fate, and that they are personally responsible for their circumstances (Gibson *et al*., 2000; Singh & Dubey, 2011). People with a strong internal locus of control assume incidents are the consequence of their efforts.

Levenson (1973) created a multidimensional model which was substituted for Rotter's unidimensional locus of control. The idea was built on Rotter's concept as it was suggested that an internal orientation would improve the desire to involve in an activity whereas an external orientation diminishes the commitment to partake in an operation where a person's emotion has little potential to affect the behaviour or result. Levenson (1973) equally reiterated that the locus has three sub-sclaes: powerful others, internality, and chance . The external locus of control is split into two parts of this multidimensional model; Chance, and Powerful Others. The powerful others are linked to the assumption that some important forces influence one's actions and the elements of chance involve an assumption in the unordered and unpredictable existence of the universe, as opposed to the world's belief in order and predictability (Levenson, 1981). There is a capacity for manipulating reinforcement in the dimension of powerful others as opposed to

the dimension of chance; in other terms, this perception of externality may be somewhat close to that of Rotter's view of internality (Levenson, 1981).

Regis (1990) observed that Rotter's unidimensional model of internal-external locus of control did not accurately reflect reality. Dyal (1984, p. 260) suggests that "some of the inconsistencies in the predictive ability of locus of control may have arisen due to the lack of differentiation of the overall internal-external construct into distinct factors" Therefore, the adoption of the multidimensional. The educational locus has the same form as the locus of control (Sarıcam & Duran, 2012) which demonstrates the regulation of values concerning success in the learning context (Daum & Wiebe, 2003).

Students exhibiting an internal locus have tendency to demonstrate greater educational attainment contrasted with those with an external. This association is consistently reported as a positive predictor of academic success, contrasting with the negative correlation observed for an external locus of control (Cetinkalp, 2010; Cassidy & Eachus, 1997; Findley & Cooper, 1983). Conversely, individuals with an external locus of control do not exhibit emotional fluctuations in response to achievement outcomes or failures (Thelma, 1998; Hans, 2000; Mearns, 2006).

Academic Achievement

Continuous assessment of the students throughout the college year and analysis of the aspects associated with it are necessary and unavoidable fundamentals of the quality improvement of the education scheme, mainly at the College of Education (Shams & Farshbandfar, 1995). McQuary (1983) indicated that the main criterion for evaluating an individual's performance is academic achievement. Maintaining high academic achievement and

possessing strong social skills not only hold them in the good hands of parents, instructors, and organisations alike but also improve their self-worth and social status (Shelley, 2014). Academic achievement has since been the sole goal for the plurality of instructors and institutions, parents and students alike.

Academic achievement is the willingness to gain consistency in the subject learned over time, and the potential to do consistently in the examination. Alim and Naseem (2008) defined academic achievement as a learner's achievement after some instructional course which is measured in terms of marks or grades obtained in a given area of knowledge. Terenzini, Pascarella, and Blimlin (1996) believed that students who registered the largest number of casual and out-of-class interactions with their teachers appeared to show a higher amount of maturity which was perceived to be an achievement. Stenberg (1985) identified educational achievement as the grades or marks earned by people at school or college, success by structured academic achievement tests, or the number of years spent in school. In other terms, academic achievement is the information acquired by the students in the subjects taught and evaluated by teachers in a specified time.

Shelley (2014) noted that students' academic achievement has been the parents' primary concern. They expect their children to obtain good grades, credits, and marks in the subjects taught in the classroom and examined by the teachers according to the institution's examination norms and rules. Kohli (1975) and Bandura (2000a) reported that one of the variables affecting the result of their academic achievement, development, and maturation cycle is the capacity of students to recognise and appreciate the various principles of

learning. Students need a set of preparation and structured scheduling in their research timetable to produce such a learning result.

Nelson and Low (2003) proposed that they would develop emotionally strong, mentally healthy, socially educated, morally balanced, and vocationally secure if students want to be competent and effective in life. Students with these abilities and attributes would need to set standards for their peers. Such positive qualities can improve their temperament, which in effect gives them the courage to accept obligations, and tasks and take decisions for themselves.

Empirical Review of Related Literature

Emotional Intelligence and Academic Achievement

Parker (2005), Newsome, Day, and Catano (2000), Feldmann, Aper, and Meredith (2011) and Al-Rabadi's (2012) studies revealed that emotional intelligence is essential for student development and academic achievement. Research carried out by Bar-On (2006), Goleman (2005), Brunker (2007), and Qualter and Gardner (2007) have shown that emotional intelligence predicted student academic achievement. Student achievement relies on social abilities, analytical capacity, and willingness to sustain stable relationships and emotional control. This necessitates the implementation of programs that will help students expand their cognitive and non-cognitive skills (Terenzini, Pascarella, & Blimling, 1996; Mo, 2009; Al-Asmari, 2014).

Al-Shakifi (2015) led EI levels, mental habits, and accomplishment of students. It employed the Emotional Intelligence Scale formed by Parker (2000) and the Mind Habits Scale by Baldauf, Roger, Wenk-Siefert, and Doolittle (2000). It discovered notable emotional intelligence and engagement

in mental habit practices among the participants. Elhaj (2015) study established a linkage connecting emotional intelligence and English language attainment.

Ishak, Shuib, Ahmad, and Amat (2018) looked into the linkage amid EI and educational attainment of students. The Malaysian Emotional Quotient Inventory-Children was utilised. Emotional intelligence sub-dimensions were found to influence pupils' academic achievement. It believes that the Malaysian Emotional Quotient Inventory was specifically used for children to collect the data. But this study aims at using Mohapel's emotional intelligence to collect data from College of Education students to predict students' academic achievement and to see if there would be consistency in results.

Al-Sahafi (2016) studied EI and gifted students' accomplishment in Saudi Arabia. The analysis was done using multiple regression and the t-test. The study's results revealed the effect of EI on accomplishment of students. Fayombo (2012) used Barchard's (2001) EI scale to evaluate the connections amid EI and student accomplishment among 151 students. EI subscales were found to have a connection with academic accomplishment. When the total emotional intelligence construct was merged it predicted students' academic achievement. Schutte et al. (1998) used a total of 150 respondents and the outcome revealed that emotional intelligence influenced students' academic achievement.

The previous studies used a sample size that was below 200 students, and the sample sizes were not enough for completing a quantitative study (Amedehe, 2002). The previous studies could have used 200 or more to make an appropriate generalisation of the target population. Although the outcome

of the studies was in congruence with other studies (Ebinagbome, & Nizam, 2016; O'Connor & Little, 2003), there were indications to prove that EI is linked to educational attainment. That is to say, a student with greater emotional intelligence is predicted to have a greater academic achievement. There is, therefore, the need for a higher sample size to be used.

Farooq (2003) conducted an inquiry into the impact of EI on students' educational accomplishment. The research encompassed a sample of 246 students. Findings discovered heightened levels of emotional intelligence. Similarly, Yates (2009) investigated the link between emotional intelligence and accomplishment, involving 159 students in their study. Results demonstrated that emotional intelligence influenced students' accomplishment. In a related examination, Vela (2003) utilized a sample of 760 respondents. The study elucidated a clear connection between emotional intelligence and students' accomplishment.

Fallahzadeh (2011) also studied emotional intelligence and accomplishment, using 322 respondents through the help of cluster sampling from a community of health-related students (medicine, dentistry, nursing college, and healthcare college). The study concluded that EI significantly predicted students accomplishment. Drago (2004) examine the effect of EI on academic attainment by stating that students with high EI can cope with academics and are always successful in school.

Mushtaq, Asghar, and Bakhtawar (2019) conducted an investigation into EI of students and its correlation with performance. Findings discovered elevated grades of EI demonstrated higher performance. In a related study, Frederickson, Petrides, and Furham (2004) scrutinized the connection amid

emotional intelligence and educational achievement, involving a sample of 650 respondents. Outcomes discovered a hightened connection linking EI and performance.

Qualter, Whiteley, Morely, and Dudiac (2009) studied the connection amid EI and educational attainment. The study involved 465 university students. Results indicated a correlation amid EI and students' action. Similarly, Little and O'Connor (2003) conducted a review that affirmed the connection amid EI and attainment. It used 90 university students. It discovered EI inventory showed a significant connection with educational achievement.

Research by Yahaya, Ee, Bachok, Yahaya, Bon, and Ismail (2011) explored the five elements of emotional intelligence and performance. The examination aimed to ascertain if the five elements of emotional intelligence would influence students' performance. Findings disclosed that only three elements of emotional intelligence namely empathy, motivation, and self-awareness had a link with academic achievement.

Similarly, Ebinagbome and Nizam (2016) used independent variables comprising self-awareness, empathy, self-motivation, emotional management, and interpersonal skills while performance was the dependent variable. The regression coefficients of the five predictive variables showed a robust positive association with the performance. However, empathy and self-motivation significantly had an impact on performance. Regardless of the sample collection process, the outcomes of such studies could have been compromised. The researcher's bias cannot be easily avoided with convenient sampling since the population from which the survey is taken falls inside the

researcher's sphere and thus the understanding of the findings may be undermined, thus the need for this recent analysis.

Akram, Masome and Davood (2016) conducted a research and used an emotional intelligence questionnaire. It discovered a connection amid emotional intelligence and performance. Chamundeswari (2013) examine emotional intelligence and student's performance. The research used a simple random technique to choose 321 respondents. Mishra's (2018) emotional intelligence scale was used in the study. It discovered a connection linking emotional intelligence and students' performance.

Tamannaifar, Sedighi-Arfai and Salami-Mohammadabadi (2010) examined the linkage among self-conception, emotional intelligence, self-esteem, and educational attainment. The study showed that self-esteem, EI, and self-conception were substantially connected to academic performance. Similarly, Aremu, Tella. and Tella (2008) studied the connection amid emotional intelligence, parental engagement, and attainment with the use of the EI and parental involvement rating scale. It discovered that EI was strongly linked to attainment of students.

The preceeding studies aimed at using emotional intelligence, self-esteem, self-concept, parental participation, and attainment of students. This study attests to the fact that self-concept, emotional intelligence, self-esteem and parental involvement are good predictors of academic performance, hence, there is a clear gap as Ebenuwa-Okoh (2010), Ewumi (2012) and Nyamekye (2019) had already stated. They stated that self-regulation, motivation, attitude, parental involvement, self-concepts, and study habits have been examined in previous studies mostly focused on senior high school students

and undergraduate students but much interest is not shown in the Colleges of Education.

Nasir and Masrur (2010) did the educational attainment and EI of Islamic University students. Students' end-of-term exam result was used to measure students' academic performance. It discovered a strong link connecting academic achievement and emotional intelligence. Again, the examination only looked at academic achievement emotional and intelligence and did not take into account other factors that have the probability of affecting the educational achievement of students. The study failed to add in its scope academic self-efficacy which this study deemed important, especially in an Islamic community where freedom of speech and rights are very much limited.

Malik and Shujja (2013) research findings discovered a remarkably connection linking emotional intelligence and students' educational performance. The outcome also showed that students who were mindful of their feelings and that of others were well-balanced in their academics. Roy, Sinha and Suman (2013) examined emotional intelligence among students with strong, low and average motivation for accomplishment. The data were analysed using correlation. The study's outcomes showed a linkage connecting emotional intelligence and motivation for achievement. The research again indicated that students having low, medium and strong motivation for emotional intelligence vary from each other.

The previous study used only person product-moment correlation in analysing the data but this study aims at using multiple statistical tools such as

PROCESS analysis, and structural equation model in analysing the data; hence, this fills a methodological gap that the previous study did not cater for.

Raj and Chandramohan (2015) three hundred (300) post-graduate students in psychology served as the research sample with the use of the EI scale by Schutle *et al.* (1998). It revealed that emotional intelligence strongly connected to performance.

Although the majority of studies discovered a link amid EI and educational attainment, there are also related works that do not relate academic performance to emotional intelligence (Bigna, Fonkoue, Tchatcho, Dongmo, Soh, & Um, 2014; Chew, Zain & Hassan, 2013; Ranjbar, Khademi & Areshtanab, 2017; Shah, Sanisara, Vaghela, & Mehta, 2014). Kashani, Azimi and Vaziri (2012) looked at emotional intelligence and its link with academic achievement. The examination enlisted 100 students to participate who where from Islamic Azad University by employing an emotional intelligence questionnaire. From their findings, there was no link between educational attainment and EI. Research on educational attainment and EI was also carried out by Lotfi, Lotfi and Vaziri (2012). A group of 100 students were chosen using convenience sampling. The outcome showed no substantial linkage.

Arul-Lawrence and Deepa (2013) looked at attainment and EI. The outcome showed no linkage. Adnan, Chaudhry and Malik (2012) explored the connection amid the attainment and EI of students with a convenient selection of 293 students offering management science from various universities in Afghanistan and Pakistan. The data gathered was analysed using regression.

The findings failed to correlate emotional intelligence with students' educational performance.

Malik and Shahid (2016) outcome showed a poor association amid educational attainment and EI. Similarly, Kallivokas, Antonatou and Sdrolias (2016) used 648 university students in a study. Based on the findings, there was no link between academic performance and emotional intelligence. Burns ,Bastian and Nettelbeck (2005) looked at the connections among life satisfaction, emotional intelligence, anxiety, coping ability, problem-solving, and academic attainment.

From the above literature, most of the studies reported no or weak link between academic performance and EI. This disputes the discoveries of other studies (Malik & Shujja, 2013; Roy, Sinha & Suman, 2013; Shelley, 2014; Tamannaifar, Sedighi-Arfai & Salami-Mohammadabadi, 2010), hence, there is a controversy which this study seeks to resolve. Again, most of these studies carried out in the African continent have different cultures and moral value systems and are usually individualistic. The study, therefore, seeks to establish the case of the Ghanaian community which is more of a collective culture. Given the diverse findings within the literature concerning the connection between academic achievement and emotional intelligence , as delineated previously, there exists a need for additional investigation into this concept. Perhaps, it could be due to the scales that were utilised in the previous studies.

Emotional Intelligence and Sex

There is a lot of conflicting research about sex differences in emotional intelligence. Some researchers (Goleman, 1998; Joseph & Newman, 2010; Patel, 2017) asserted that no sex differences in emotional intelligence existed,

even though there is an acceptance that differences existed in profiles of weaknesses and strengths in different areas of emotional intelligence among males and females. Yet it is not on the whole and their levels are equivalent. It has been instituted that in most instances women score greater on emotional intelligence unlike their male counterparts in all settings (Mayer & Geher, 1996; Mayer, Salovey & Caruso, 2008; Sparkman, 2008). These two schools of thought arrived at different findings regarding emotional intelligence and sex but these findings may relate more to the model adopted by the study. In Goleman's view, emotional intelligence is a mixed construct of ability and personality while for Bar-On, emotional intelligence is a trait of personality even though both accept it as learnable and can be thought of.

Similarly, studies conducted had shown that women have more advanced emotional intelligence than men in their respective research works (Cabello et al., 2016; Meshkat & Nejati, 2017; Naghavi & Redzuan, 2011; Shaheen, & Shaheen, 2016). This could be explained by individual differences and societal expectations such as the idea that girls should be more emotionally expressive than boys, particularly in Asia and Africa. Generally, no matter how unpleasant the circumstance, a man is expected to keep his emotions in check and refuse to express them. A research endeavor carried out in Tamil Nadu, India (Chandra, Gayatri, & Devi, 2017), unveiled that within the cohort of medical graduates, women exhibited elevated levels of emotional intelligence compared to men. Similarly, among Sri Lankan medical students, females attained higher mean scores in emotional intelligence, as documented by Ranasinghe et al. (2017).

Contrary to the findings of females having higher emotional intelligence scores in other studies, Villarreal et al. (2017) disclosed that the differences in emotional intelligence scores favour the male respondents as men scored higher than women in emotional intelligence. It seems that male students manage their emotions and are more likely to have a positive perception of themselves regarding the accomplishment of their goals. Meanwhile, when sex was used as an independent variable in other studies (Brackett *et al.,* 2006; Aquino, 2003; Depape *et al.,* 2006; Brown & Schutte, 2006 cited in Nejati & Meshkat, 2017), no variation was found between female and male students' scores concerning emotional intelligence. Other studies carried out in Myanmar by Ahmadi and Heydari (2011) and Myint and Aung (2016) found no variation in scores of EI relating to sex.

The contradiction of results can be attributed to different issues for instance Sparkman (2008), in his view suggested the discrepancy may be an issue of choice relating to the instrument based on which the measurement instrument emanated. Again, the cultural settings could be a contributing factor as in collective cultures, it is so strange and difficult for men to express their emotions while individualistic cultures permit some degree of emotional expression by males. Secondary, Fernández-Berrocal et al. (2012) suggested from a genetic standpoint that female biochemistry is better suited to understanding both individual and interpersonal emotions, highlighting their significance for survival. Meshkat and Nejati (2017) mentioned that in the females' brain, certain areas for processing emotions are large as compared to the corresponding areas in males invariably, the processes of emotional

activities in women and men differ (Craig et al., 2009) which positively affect the differences in emotional intelligence.

However, despite utilizing self-reported assessments, no discernible gender discrepancy was detected in emotional intelligence. Brackett and Mayer (2003), however, observed that females outperformed males in emotional intelligence when assessed through performance measures. Consequently, further investigation is warranted to ascertain the presence of gender disparities in emotional intelligence. Thus, this study contributes to the ongoing exploration of whether substantial differences exist in the emotional intelligence between males and females.

Academic Self-Efficacy and Academic Achievement

Individuals with advanced educational self-efficacy for a certain task act otherwise than those who perceive themselves as ineffective Bandura (1977, 1986). Persons with developed academic self-efficacy are probable to interpret accomplishment and disappointment otherwise than those with lesser self-efficacy (Hataway, 2016). Extremely efficient people attribute disappointment to absence of determination and as a consequence will work tougher to overcome disappointment before accomplishing their goals. Chow (2010) also averred that there is empirical evidence that suggested regular lecture attendance as a dimension of educational self-efficacy as an indicator of students' commitment and motivation to their studies which invariably influences grade point average (GPA) positively. Educational self-efficacy and the academic performance has been discovered (Al-Harthy & Was, 2013; Khan, 2013; Turner, Chandler & Heffer, 2009; Williams & Williams, 2010).

Student behaviours such as task selection, initiation, persistence, commitment and effort are linked to students' accomplishments (Hsieh, Sullivan & Guerra, 2007). Students with advanced academic efficiency are inclined to persevere despite difficulties (Hsieh et al., 2007). First and foremost, it has an impact on students' desire to grow and improve. Second, it has to do with the student's ability to demonstrate it. Finally, it leads to a desire on the part of the student to conceal any incompetence. When students are faced with academic demands, student behaviours have a substantial part in student outcomes, but efficiency has effect on these behaviours. Students with a developed academic self-efficacy are probable to engage in difficult academic tasks thereby increasing their academic achievement (Hsieh et al., 2007).

Loo and Choy (2013) used a total of 178 third-year students in the study. Academic performance was measured using end-of-term exam results in mathematics. It findings discovered a link amid efficacy and mathematical performance. Odiri (2020) looked at the association amid students' efficacy and performance. A total of 500 students were chosen at random from 25 public secondary schools. Students' academic self-efficacy was obtained using a questionnaire while students GPA was calculated using their mathematics results. Linear regression was employed to discover a link between educational self-efficacy and students' educational performance.

Melyani, Alyami,Al-Johani, Ullah, Alyami, Sundram and Henning (2017) concluded that effectiveness is directly related to students accomplishment. This was a correlational cross-sectional study of Saudi Arabia Psychology students with a sample size of 290. Consequently, there is

the need to scrutinize all the dimensions of academic self-efficacy as established in literature; hence, the need to conduct the present study. This study seeks to examine academic self-efficacy (grades, verbalising, studying and attendance) and how it predicts academic achievement. Again, Hashemi, Khezri, Abbasi, Hemmati and Hashemi (2014) found a substantial link amid efficacy and students' accomplishment.

Chow (2010) studied undergraduate university students in western Canada with a sample size of 501, using convenience sampling. The study found a linkage amid efficacy (attendance) and GPA. The outcome of the study may have been compromised due to the method of sample selection. With convenient sampling, the researcher's bias cannot be escaped easily. This is because the collection from which the sample is drawn lies within the domain of the researcher, and the interpretation of results could be compromised. Vuong, Brown-Welty and Traczs (2010) examined academic self-efficacy and students' performance using 1,291 college students. It found that efficacy had a substantial link with the performance of the students.

Similarly, Robbins (2003) conducted a meta-analysis comprising 109 studies involving college students, examining efficacy, psychosocial variables, and study skills that influence academic performance. The findings underscored academic effectiveness as the most influential on accomplishment. In a related investigation, Elias and MacDonald (2007) assessed influence of effectiveness on students accomplishment. Their study revealed an effect of effectiveness on students' accomplishment.

Additionally, Turner, Chandler, and Heffer (2009) explored the connection amid educational performance and educational efficacy. Their findings indicated that educational efficacy influenced to students' educational

attainment. Furthermore, Moturi (2012) probed the connection amid educational performance and academic self-efficacy in mathematics and English, utilizing purposive and random sampling techniques to select 240 students from public secondary schools. It unveiled a connection amid students' educational performance and academic self-efficacy success.

Olanrewaju and Oyadeyi (2014) investigated effectiveness and performance among students. The information was analysed using correlation, and it was discovered that there was a link amid efficacy and students' performance. Akomolafe and Ogunmakin (2013) conducted a study on locus, efficacacious, and educational performance among students in secondary school. The study involved 364 students. Utilizing regression analysis, the research revealed a significant influence of locus and educational efficacy on educational performance.

Goulao (2014) looked at the linkage between educational effectiveness and students' educational attainment. Data were obtained from 63 undergraduate students. The collection revealed that educational effectiveness and the educational attainment had a link. Similarly, Oyuga, Raburu, and Aloka (2019) explored the connection linking efficacy and educational performance using a random technique to gather 300 students and 11 principals. The main data-gathering instrument was a questionnaire and an interview guide. The study discovered that efficacy is a critical component of students performance.

Motlagh, Abderahim, Amrai, Yazdani, Altaib, Abderahim and Souri (2011) looked at self-efficacy and academic performance. Two hundred fifty (250) students were used. End-of-term exams were used in evaluating students' performance. The information was analysed using correlation and

regression. It was discovered that academic self-efficacy predicted academic achievement. Komarraju and Nadler (2013) looked into academic self-efficacy, cognitive-metacognitive skills resource management and academic performance. As a representative sample, 407 undergraduate students were used. Students' accomplishment was predicted by efficacy. Chowdhury and Shahabuddin (2011) looked at effectiveness, motivation, and performance among students. The students provided data using a self-administered questionnaire. It was established that educational self-efficacy and the educational performance had a link.

Ciftci (2011) probed educational attainment and educational effectiveness. Two hundred and fifty (250) students were used in the study. The effect of the research demonstrated a favourable joining amid educational attainment and educational effectiveness. Tenaw (2013) looked into the relation amid efficiency and second-year student accomplishment. Hundred (100) students were employed in the study. The data analysis indicated a substantial link amid efficiency and accomplishment.

The linkage between academic performance and academic self-efficacy was explored by Carrol, Houghton, Wood, Hattie, and Bower (2007). The findings revealed that efficacy correlated with performance. Nwaukwa, Onyemechara and Ndubuisi (2019) investigated educational self-efficacy and students' educational achievement. There were 846 students in the study's population and 271 students were used. Information was gathered using the Self-Efficacy Questionnaire (SEQ) and the Financial Accounting Performance Test (FAPT). The findings demonstrated a strong link between students' mastery experience, vicarious experience, and their financial accounting

academic achievement. The data also showed that students' experience types (mastery and vicarious) and social persuasion had a link with academic achievement.

Most of these studies had positive results which could stem from the kind of practices adopted in their system. They are mostly Western-based studies where human rights are upheld in high esteem especially the rights of the child. The same cannot be said about the African content specifically the Ghanaian settings where some cultural practices are directly in contrast with some child rights issues hence the study. Nasir and Iqbal (2019) examined the link between students' efficacy and performance. One hundred and thirty-five (135) students were enrolled in teacher training programs. Results revealed connection amid efficacy and the performance.

Koloa, Jaafar, and Nobay (2017) investigated students' efficacy beliefs and attainment. The findings discovered that 80.82% had a hightened level of efficacious. Although studies by Koloa, Jaafar, and Nobay (2017) and Nasir and Iqbal (2019) looked at the linkage between College of Education students' efficacy and attainment. It could be realised that throughout the literature reviewed, there were few studies conducted among College of Education students.

However, divergent findings have been presented in several empirical investigations. For instance,Weigand and Reynolds (2010) examined the connection amid psychological attitudes, efficacious, and attainment among 164 students. Their study concluded that efficiency did not demonstrate a connection with attainment. Similarly, Eghbal and Sima (2014) utilize a sample of 200 students in a reseaarch. They employed the Self-efficacy questionnaire developed by Pintrich and De Groot (1990) to assess self-

efficacy, with end-of-term exam results serving as a measure of academic performance. It revealed no connection amid efficacy and academic performance among mathematics students. Hence, there is a necessity to empirically contextualize the Ghanaian educational setting within the broader international landscape, particularly in the realm of Colleges of Education.

Academic Self-Efficacy and Sex

The consistency of findings relating to sex and academic self-efficacy is contradictory. There is evidence of difference as well as evidence of no difference; hence, there is a need for more studies to establish a concrete stance in this regard. To determine any gender disparities in educational self-efficacy, Brandon (2000) used 300 second-year potential teachers from three Botswana teacher colleges in his research. The study sample consisted of 218 females and 72 males. Before practising teaching, there was a substantial sex difference in educational self-efficacy ratings. Males' academic self-efficacy for teaching was substantially higher than females.

Alyami *et al.* (2017) citing Cavallo, Potter and Rozman (2004) opined that, in some content domains such as physics, research suggested a sex disparity in educational self-efficacy and that it favours males over females. Sander, Putwain and Fuente (2013) used 2,429 undergraduate students. The collection disclosed that males developed educational self-efficacy more than females. Further research utilising the ABC scale revealed students in the UK who were male were more assured than female students on the subscales of Verbalising, Grades and Studying which is consistent with earlier findings (Betts, Hartley, & Murray, 2007; Mercer, Sander & Sanders, 2009). Sander and Sander (2006) also averred that students in UK with dyslexic in higher

education had low academic efficacy on the Verbalising, Grades, and Studying subscales while neither dyslexic students nor female students had low academic self-efficacy on the Attendance subscale.

Khan, Canseveret, Avsar and Acemoglu (2013) also discovered substantial variation amid the sex groups with men having hightened efficiency than females. The study looked at first, second, and third-year university students. Ochieng (2015) did a study to determine sex differences in effectiveness and students attainment. The examination used a descriptive research approach and a quantitative research methodology. Three hundred and ninety secondary school students were employed. Male students had greater effectiveness than their female colleagues.

Shkullaku (2013) investigated sex disparities in efficacy and students accomplishment, drawing data from a sample of 180 students. T-tests were conducted to compare educational self-efficacy and educational performance linking male and female respondents. The findings indicated a sex variation. Similarly, Lal and Kumar (2006) examined academic self-efficacy and sex distinctions between adolescents. Sex differences emerged, with female students attaining higher scores in educational self-efficacy compared to male students. In a related work, Shaukat and Bashir (2016) observed that female students demonstrated a hightened efficiency across attendance, grades, and verbal expression compared to male students.

Further, Arslan (2013) looked at the link amid students' opinions about the sources of efficacious, sex, attainment, grade level, socioeconomic status (SES) and learning style. Fifty-one per cent (51%) of the students were composed of females and 48.9% were males. The findings suggest a notable

disparity between female and male students regarding their perceptions of sources contributing to academic self-efficacy. Specifically, female students exhibit hightened efficacy compared to males.

These findings, however, contradicted those of Syed Ali, Che Hassan and Jani (2014) who revealed no sex difference in efficacy of Physical Education students. Similarly, Sawari and Mansor (2017) looked into how students' academic self-efficacy differed in terms of gender. Four hundred and eighty-nine (489) students from four schools were surveyed. Information was quantitatively analysed using correlation. It established no gender difference in efficacy. Adelodun and Asiru (2015) reviewed educational effectiveness and gender on the educational attainment of English students. The examination employed three validated instruments: the English Language Essay Screening Test, the English Language Essay Achievement Test. Contrary to expectations, the results revealed no sex variation in efficacy.

Locus of Control and Academic Achievement

Studies indicated that both internal and external locus is substantial forecasters of academic performance (Crandall, Katvosky & Crandall, 1965; Hjelle, 1970; Messer, 1972). Students with an internal locus are identified in academics to do better (Stipek, & Hoffman, 1980). Students with an internal locus have hightened educational attainment (Hjelle, 1970). Messer (1972) found that students who had an internal locus received greater grades than those who had an external locus. Masqud (1993) examined a study based on Eysenck's research and concluded that personality traits such as locus and intelligence quotient play a role in achieving educational goals. Masqud (1993) looked at 7th-grade pupils in Botswana and discovered that externality

had a negative link with academic performance whereas internality had a favourable link with academic performance.

A study by Kutanis, Muammer and Övdür (2011) examined locus of control influences on student achievement. Güngör's (2006) learning scale was used to discover that students with an internal locus of control performances were high and those with the external locus of control performances were low. This leads to more proactive and effective individuals with an internal locus of control. During their learning process, more passive and reactive individuals were attributed to an external locus of control. Mohammed, Mohammed and Ahmed (2018) investigated the association amid locus and nursing students' academic progress. Third-year students were chosen to take part in the study. There were 250 students in total. Students' demographic information and health status as well as the trice academic locus of control scales were used. It discovered a substantial link amid locus and academic performance.

Khir, Redzuan, Hamsan and Shahrimin (2015) investigated the locus of control and its link with students' academic performance. The study included 402 students from ten secondary schools across the states of Perak and Pahang. Data was acquired using a questionnaire. The majority of the respondents (61.94 per cent) had an external locus. Further, the analysis showed that locus revealed substantial variations in academic performance. In comparison to students with low academic performance, those with higher academic performance had an internal locus. Kader (2014) looked at the link amid locus and attainment among students studying microeconomics. The Fear of Failure Scale, the Locus of Control Scale, the Achievement Goal

Scale, the Test Anxiety Scale, and the Procrastination Scale were used. A median split of 8.5 was used to divide the class into two equal-sized groups of 22 students using locus of control. Internals were those with a score of 8 or less while externals had a score of 9 or more. Internals performed better academically, had less test anxiety, scored higher on a mastery approach, and worked longer hours than externals.

Uguak, Elias, Uli and Suandi (2007) examine the link amid locus of control and educational performance. Internals had much higher academic performance than externals and the more internal one is the better academic performance he or she is likely to have. Wang, Kick, Fraser and Burns (1999) discovered that locus was substantially connected with educational and occupational accomplishment and that locus had a greater impact on academic accomplishment. Shepherd, Fitch, Owen and Marshall (2006) looked at the link between locus of control and students' academic performance. The study enlisted the participation of 187 students. The Nowicki Strickland locus of control Scale was completed by 81 females (43.3%) and 106 males (56.7%). It was discovered that students with higher GPAs were more likely to have an internal locus of control than students with lesser GPAs who were more possible to have an external locus of control. The authors concluded that locus of control was linked to academic performance.

Buluş (2011) looked into the role of prospective teachers' locus of control in goal orientations and academic performance. There were 270 undergraduate students from Pamukkale University. The information was gathered by employing goal orientations and the locus of control scale. The

findings established that mastery goal orientation was connected to the locus and attainment, while avoidant goal orientation was negatively connected to the locus and attainment. Academic attainment and locus were found to have a positive association. Majzub, Bataineh, Ishak and Rahman (2016) looked at the linkage between locus and attainment. The respondents for the study were given the multidimensional-multi-attributional causality scales (MMCS). After that, the MMCS were compared to academic performance and gender. A link amid locus and attainment was found.

Gujjar and Aijaz (2014) looked at the linkage between locus and academic performance. Majority of the students were found to be more internal than external in their locus. The findings were supported by numerous studies that established a link amid locus and attainment. Hasan and Khalid (2014) examined the link between locus of control and academic performance. The study employed the purposive sampling procedure. Students with scores ranging from 0 to 14 were classified as internal while those with scores greater than 14 were classified as external. The findings revealed substantial link amid locus and accomplishment.

Despite the apparent favourable impact of locus on attainment, Ross and Broh (2000) found that locus had no meaningful effect on attainment and that self-esteem had a considerably higher influence on educational attainment. The authors again discovered a link amid locus and self-esteem. The link between locus of control and academic performance was not significant according to Findley and Cooper (1983). Although Landine and Stewart (1998) found a weak correlation between the locus and academic performance, they concluded that motivation had the greatest impact on attainment but not the locus. The association amid locus and attainment was

explored by Sa'adiya and Abdulkadir (2018). In their study, a correlational research design was used to study 346 students. Students' end-of-term exam (English Language and Mathematics) was used to measure their attainment. The findings established a good but limited link between the internal locus and educational attainment as well as a positive but limited link between the external locus and educational attainment. The findings indicated that there was no link amid locus and educational attainment.

In a similar view, Ibeawuchi and Iruloh (2017) looked at the link amid self-esteem, locus of control and educational attainment among students. A sample of 240 students labelled as underachievers were drawn using a purposive sampling approach. The results discovered locus did not influence students' educational attainment. However, self-esteen predicted the academic performance of students. Bakare's (1977) progressive matrices scale was used to identify children with strong mental ability. Self-esteem, internal and external locus and educational attainment were found to have a very weak link. It can be inferred from the data presented that, although some research did not support the assumption that locus is linked to educational attainment, the bulk of investigations suggested a link between locus and educational attainment.

Locus of Control and Sex

The results of many studies on sex variations concerning locus of control have produced mixed results. Some of these examination established no sex variations in locus of control (Bar-Tal & Darom, 1979). For example, Hansford and Hattie (1982) found no substantial variation in locus and sex. Hilton and Berglud (1974) also found no variations in locus amid female and male students. In a study by Naik (2015) on locus of control and the

difference among different gender, and locality among college students. The effect could not find differences among locus of control, sex, course of study, and locality.

Chalak and Nasri (2015) looked into the link amid locus of control and sex with a total of 100 pupils from various age groups participating in the study. The tool employed was the trice academic locus questionnaire which identifies the internal and external locus. The study findings pointed no sex variation in locus of control. Callaghan and Manstead (1983), based on earlier studies, stated that some sex fluctuations in locus and educational attainment. Sex have different patterns of cause attributions for similar attainment outcomes, according to the research. McGinnies, Nordholm, Ward, and Bhanthumnavin (1974) looked at sex and cultural fluctuations in locus of control in five nations. Based on the analysis of variance (McGinnies et al., 1974), females had greater scores on the externality dimension of locus of control than males, sex and nation. The country's main effects indicated that females from Japan,Sweden, the United States,Australia, and New Zealand had the highest external scores. Overall, the findings revealed that females were more external than males in all socio-cultural categories.

Weisz and Stipek (1981) investigated the link connecting locus of control, sex, and cognitive tendencies among Yarmouk University students. The study included a total of 582 students. Sex variation were shown to be statistically significant where male scores were found to be more internal than females. This, however, could be linked to social desirableness since females may perceive that an internal view is incompatible with female gender part, and hence socially unsuitable. Females who had strong social desirability beliefs had higher external scores than females who had low social desire

beliefs (Stipek & Weisz, 1981). As a result, female responses on the locus of control scale were influenced by their gender role beliefs. Locus of control and assertiveness differences in male and female students were examined in a different study by Cooley and Nowicki (1984). There was a substantial link between internality and strong assertiveness for males but not females. Cooley and Nowicki (1984) explained the disparity by claiming that males are encouraged to be more forceful than females.

Zaidi and Mohsin (2013) investigated gender variations in locus of control among Pakistani graduate students. Two hundred (200) students were chosen from various academic institutions in the Faisalabad District of Punjab, Pakistan. The findings revealed that males had an internal locus of control whereas females had an external locus of control. Strickland and Haley (1980) administered the Rotter locus of control scale to 200 males and 200 females. Men and women were both directed to respond to the scale as either “super males” or “super females.” Men and women who completed the scale with the “super male” criteria obtained high internal scores. Those who replied with the “super female” criteria obtained high external scores. The findings, therefore, indicated that there is a considerable difference in the locus of control between males and females.

Emotional Intelligence and Academic Self-Efficacy

Nikoopour, Farsani, Tajbakhsh, and Kiyaie (2012) employing pearson product-moment analysis, they determined a connection amid EI and students efficacy. In a related inquiry, Aziz, Sulaiman, and Razak (2020) examined the effect of students' efficacy and EI on their attainment Their analysis involved Pearson correlation analyses and t-tests. The findings revealed that attainment

was influenced by both efficacy and emotional intelligence. Ali, Azmat, and Parveen (2017) studied the connections between elementary students' achievement, efficiency, and EI. It discovered that emotional intelligence and efficacy had a strong linkage.

Alasmee, Alsulami, and Barabbud (2022) findings discovered no connection amongst emotional intelligence, efficacy, and accomplishment. However, upon further analysis, a significant correlation was observed amid EI and efficacy. Similarly, Sun and Lyu (2022) led the connection amid efficacy and EI among college students. Employing a descriptive survey design, the examination revealed a direct correlation between students' efficacy and EI.

Matthews (2012) looked into the association amid teachers' educational effectiviness and EI, employing convenience sampling to select a sample from a cohort of 90 students. The primary findings of the study indicated an absence of connection between teachers' efficacy and EI. While this report explored the connection between teachers' effectiviness and EI found no such relationship, the present investigation delves into the predictive capacity of EI on students' efficacy.

Academic Self-Efficacy and Locus of Control

Academic locus of control and self-efficacy were investigated by Severino, Aiello, Cascio, Ficarra, and Messina (2011), who discovered a robust link between the two constructs. Greater efficiency is linked to resilience, the capacity to bounce back from setbacks, and the ability to exert some control over circumstances that have an impact on students' lives. According to Ashagi and Beheshtifar (2015), effectiveness beliefs and internal

locus were directly related, but educational effectivness and external locus were not meaningfully related. Similarly, Cascio, Magnano, Elastico, Costantino, Zapparrata, and Battiato (2014) examined the interactions between efficacy beliefs and locus of control among school students. It revealed that educational self-efficacy influenced the locus of control.

Malikeh (2015) scrutinized the link amid learners' locus and efficacious among students, utilizing a sample size of 220 participants, comprising 94 men and 126 women. Data were collected through an adapted questionnaire, employing a descriptive survey design. The study disclosed that efficiency influenced locus of control. Similarly, Joo, Lim, and Kim (2013) conducted a research examining efficacacious and locus. The results unveiled a connection between locus of control and efficacy. Moreover, Maizan, Mohd, and Zainal (2016) explored the association linking locus and educational efficacious, employing a correlational research design. Their findings discovered a connection amid efficacious and locus.

Conceptual Framework

Figure 4 shows a conceptual structure developed by the researcher to aid emotional intelligence, academic self-efficacy, and locus of control as predictors of academic achievement of students. This framework provided a foundation for making decisions on methodology and hypothesis formulation.

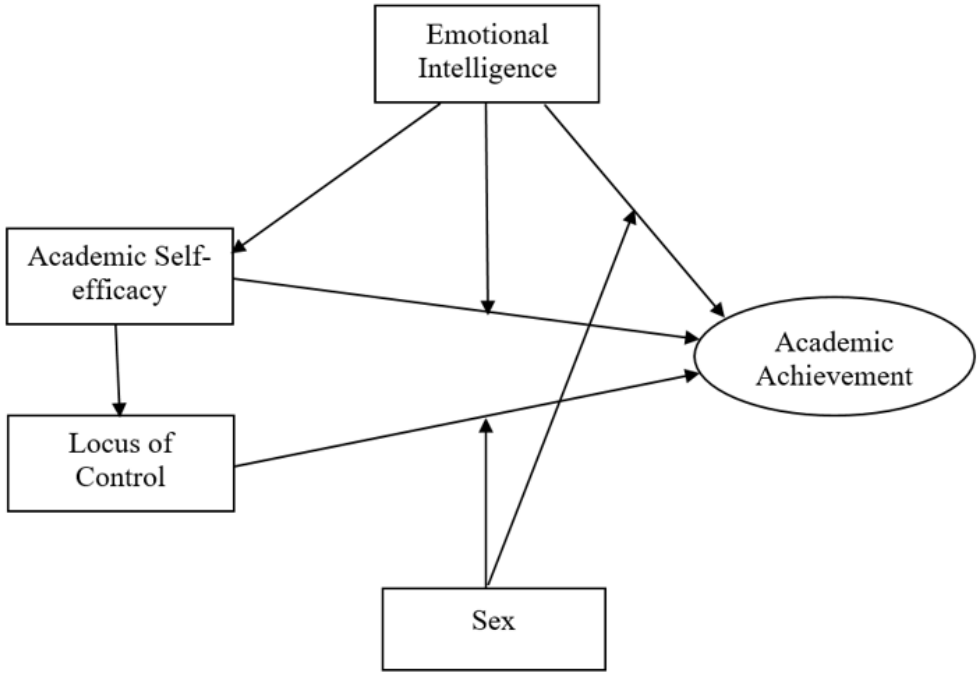

Figure 4: Conceptual framework of the respective variables

The literature reviewed indicated that EI has four sub-scales (relationship management, social awareness, self-awareness and self-management) that influence the attainment of the individual in the learning activities. Educational self-efficacy comprises grades, verbalising, studying, and attendance which is believed to influence academic achievement. Locus of control, on the other hand, comprises three factors namely; internality, chance, and powerful others which are also believed to influence academic achievement. The study also looked at how emotional intelligence could predict academic self-efficacy as well as how academic self-efficacy could predict locus of control. When all these personality traits and cognitive abilities are well developed partly due to the physical environment, home conditions, and vicarious experience, the individual is set to put up his or her best achievement in academics and any other environment of work.

The study also looked at how EI would moderate the link connecting academic self-efficacy and academic achievement. It is believed students who can regulate their emotions would have high efficacy in completing academic tasks or academic activities which will in turn influence their academic achievement. The study also looked at how sex could moderate the link connecting emotional intelligence and academic achievement as well as the moderating role of sex in the link between locus of control and academic achievement of students.

Summary of Review of Literature

In examining the interplay between ,academic achievement emotional intelligence, academic self-efficacy and locus of control among students, a nuanced understanding emerges regarding the multifaceted nature of educational success. Across a breadth of empirical studies, a consensus is evident regarding emotional intelligence, locus, and educational effectiveness on educational attainment. This statement suggests that there is an intricate link between emotional intelligence, educational effectiveness, locus of control, and educational attainment. This means that these factors do not operate in isolation but interact with each other in influencing educational outcomes.

The review of literature under the theoretical framework considered Mayer and Salovey (1990), Bar-On (1997), and Goleman's (1995) model of emotional intelligence. Bandura's (1977) self-efficacy theory, Rotter's (1954) locus of control theory, and Deci's and Ryan (2000) self-determination theory (SDT) was examined. On the other hand, concepts and dimensions of educational effectiveness, EI, locus of control, and educational attainment

were also examined. Finally, empirical studies were carried out under the following headings: academic attainment and EI, academic attainment and academic self-efficacy, locus of control and academic attainment, academic self-efficacy and EI.

CHAPTER THREE

RESEARCH METHODS

Introduction

This section delineates the methodology employed in conducting the research. It encompasses the research design, study location, research population, sample selection and sampling techniques, data collection tools, procedures for data collection, and methods for data processing and analysis.

Research Paradigm

The researcher used the positivist approach for their study. Positivists believe that social things should be studied scientifically, focusing on evidence and facts. This method was developed by Auguste Comte, a French philosopher, in the 19th century. He thought that we could understand reality by observing it. positivists believe in the scientific method, which includes using statistics and making sure that research results can be applied broadly. They think that this method can prove or disprove a hypothesis. Comte (1885) said that knowledge has to be scientific to be valid. This means it has to come from gathering observable, measurable, and numerical data using specific kinds of reasoning. Comte's philosophy from 1855 led to the idea of positivism. Positivism says that all knowledge comes from what we see, hear, touch, and experience. We can only make it better by watching and testing things out, according to (Cohen & Grifo, 2007).

Collins (2010) agreed with this idea by saying that positivism goes along with empiricism. Empiricism is the belief that knowledge comes from our own experiences. He also said that positivism sees the world as made up

of individual things we can see and understand. These things interact in a way that lets us make reliable observations, according to Collins (2010).

Positivists believe that only measurements can help us learn more in science. Skinner (1993) said that to predict how people act, psychology needs to look at both rewards and punishments for behavior. He thinks that anything else that can't be measured objectively doesn't matter. Positivists say that reality happens because of something that comes before it, whether it's at the same time or before, even if we can't figure out the cause and effect using a naturalistic inquiry approach, as said by Patton (2002).

The paradigm is useful since it approves or disapprove hypotheses through generalizability of results, statistical analysis, and numerical data. Hence, this approach is good for conducting a quantitative study.

Research Approach

The study used a quantitative research approach. This means the researchers asked participants a series of questions with specific answer choices to find out what they preferred. In this approach, numbers are used to objectively measure data, showing how different things are connected. It helps to figure out how big and how often certain ideas or concepts are, so we can understand them better. By looking at numbers and using statistics, we can analyze the data more clearly, as explained by Kothari (2004).

Therefore, quantitative research provides answers to inquiries about the relations among variables used in the study. To develop theory, linkages must be established, validated, or confirmed and large generalisations must be made (Leedy & Ormrod, 2005). Since this is the primary goal of the study, the emphasis is on establishing links between factors such as academic

mindfulness, academic resilience, student involvement, and self-controlled learning of senior high students.

Research Design

Bless and Higson-Smith (2000) observed that, to meet a study's aims, all research investigations require a study design. A research design is a framework or plan that the researcher uses to come up with answers to the research questions (Hanson, Balmer, & Glardino, 2011). Gay (2004, p. 187) postulates that "the descriptive survey involves collecting data to test hypotheses or to answer research questions concerning the current status of the subject of study." It involves describing and forecasting phenomena without altering the factors that impact those phenomena (Amedahe, 2002). Williams (2007, p. 7) defines descriptive research as "the identification of characteristics of a single phenomenon based on observation or the investigation of the link between two or more variables."

Hunger and Polit (1995) also posit that cross-sectional survey is to observe, describe, and document aspects of a situation that occur in the natural world. Kothari (2004) characterized a descriptive cross-sectional survey as a methodological approach aimed at delineating, documenting, evaluating, and communicating the prevailing conditions or circumstances. The descriptive cross-sectional survey approach was used for this study since it permits the collection of facts at a single moment thereby allowing for the generalisation of findings from a lesser sample group to a larger group (Devetak, Vogrinc & Glažar, 2010). The design was chosen because it allows broad generalities to the entire population. The design was also ideal for the study since it was good for getting the thoughts and trends on a small scale as well as its low cost and

availability of information (Shuttleworth, 2008). Again, in a cross-sectional study, the investigator measures the outcome and the exposures in the study participants at the same time.

Population

A population is a people from whom a sample is drawn to create study results (Gorard, 2001). The target population was eight (8) public Colleges of Education in Ghana. There are 46 approved public Colleges of Education in Ghana (Institute of Education, 2021). The Colleges of Education (CoE) in Ghana are organised into five zones: the Northern Zone (10 CoE), the Brong/Ashanti Ahafo Zone (13 CoE), the Volta Zone (7 CoE), the Greater Accra/Eastern Zone (9 CoE), and the Central/Western Zone (7 CoE). Level 300 students from eight (8) public Colleges of Education (see Table 3) were the accessible population for the examination which constituted 18 per cent of the population. Dobson, Hinman, Roos, Abbott, Stratford, Davis, and Bennell (2013), through recommendation, indicated that using 10 to 20 per cent of the population can be chosen to be a representation of the population.

The level 300 students were picked for the study because by the time students reach their third year of college, they have likely acclimated to the academic environment and have gained substantial experience in navigating college life. They may have developed coping mechanisms and strategies for academic challenges, making their responses more insightful and reflective. Moreover, level 300 students have completed a significant portion of their coursework and may have a deeper understanding of the subject matter compared to students in level 200 and level 100. This depth of understanding

could result in more nuanced responses to questions about academic self-efficacy emotional intelligence, and locus of control.

Additionally, the level 300 students are the only students who are under the supervision of the Institute of Education, University of Cape Coast, hence they were used because of uniformity or homogeneity. The total number of level 300 students in eight (8) public Colleges of Education was 2,634 (Institute of Education, 2021). As Kothari (2004) pointed out, a study's sample is drawn from the accessible population.

Table 1: Distribution of Colleges of Education (CoE) by zones

Zones	Number of CoEs
Northern Zone	10
Ashanti/Brong Ahafo Zone	13
Volta Zone	7
Eastern/Greater Accra Zone	9
Central/Western Zone	**7**
Total	46

Source: Institute of Education, 2021

Sample and Sampling Procedures

Krejcie and Morgan's (1970) sample size discovery table was used as a guide to choosing the sample from the population. Based on Morgan and Krejcie's (1970) sample size calculations, a sample of 335 students should be chosen from a population of 2,634. It was suggested by some studies that 10 to 20% of a population can be used to be a representation of the population (Amedahe, 2002; Cohen, Janicki-Deverts, & Miller, 2007; Cresswell, 2014; Fowler, 2009). Again, Krejcie and Morgan (1970) also calculated the least number of samples which can be used depending on the population size. Clearly, for the sake of generalisations, a researcher is allowed to use a higher

number of the population as indicated by Amedahe (2002), Fowler (2009) and Cresswell (2014). Hence the sample size that was used in the study was 500 College of Education students. Below describes the multi techniques used in the study.

Stage 1

First of all, five zones were considered to form clusters in the study and each zone had more than six Colleges of Education; hence, the uneven number of the zones was also considered in determining the number of Colleges of Education to be taken from a particular zone. To select the sample from the five zones under which the Colleges of Education were found, the purposive sampling procedure was used to choose the quantity of Colleges of Education from each of the zones. The purposive sampling procedure was used because the researcher wanted to purposively select mixed schools for the study. Again, the purposive sampling procedure was used because it allows researcher to target specific groups or individuals who possess unique knowledge, experiences, or perspectives related to the research topic (Creswell & Creswell, 2017). This targeted representation guarantee that the sample accurately reflects the desired population and provides valuable insights into the phenomenon under study. For example, the purposive sampling procedure was used to select two Colleges of Education from the Northern zone (*see* Table 2).

Table 2: Selected Colleges of Education (CoE) from the zones

Zones	Number of CoEs	Selected Colleges of Education
Northern Zone	10	Tamale CoE
		Gbewaa CoE
Ashanti/Brong Ahafo	13	Agona SDA CoE
Zone		St Ambrose CoE
Volta Zone	7	Peki CoE
Eastern/Greater Accra	9	Accra CoE
Zone		Abetifi CoE
Central/Western Zone	7	Komenda CoE
Total	46	8

Source: Field Data, 2021

Stage 2

The proportionate sampling method was used to distribute the respondents (students) based on the chosen Colleges of Education. The proportionate sampling procedure was used since the researcher needed to ensure a fair representation of the different Colleges of Education in terms of the population and sex of the respondents. For example, proportionate sampling was employed at Tamale College of Education to determine the number of respondents required at level 300. For level 300 students of Tamale College of Education, the proportion was given by the total number of level 300 students in Tamale College of Education (520) divided by the whole number of College of Education students in the population (2,634) multiplied by the sample (500). Using the formula, a sample of ninety-nine (99) out of 520 students was selected for the Tamale College of Education. This consisted of sixty-two (62) males and thirty-seven (37) females. The sample distribution is illustrated in Table 3.

Stage 3

After the second step of the sample methods and based on the proportions of students needed in each of the Colleges of Education as indicated in Table 3, the students were selected using the table of random numbers of the simple random sampling with the list of each grade level as the sampling frame. To select ninety-nine (99) from 520 students in Tamale College of Education, the table of random figures was used. The list that contained the names of all the level 300 students were taken from the Colleges of Education. The table was entered randomly and the numbers were labelled from 1 to 520 (where 520 is the total population of level 300 students in Tamale College of Education). Moving in a vertical direction on the table of random numbers, the numbers that fall within the range were selected one after the other until all the 99 students needed in Tamale College of Education had been selected. The same approach was used in selecting the rest of the respondents.

Table 3: Distribution of Samples for the College of Education

CoE	Population			Sample		
	Male	Female	Total	Male	Female	Total
Tamale CoE	326	194	520	62	37	99
Peki CoE	146	127	273	28	24	52
Agona SDA CoE	125	71	196	24	13	37
Abetifi CoE	219	161	380	42	31	73
Accra CoE	186	110	296	35	21	56
Gbewaa CoE	206	192	398	39	36	75
St Ambrose CoE	89	97	186	17	18	35
Komenda CoE	235	150	385	45	28	73
Total	1532	1102	2,634	292	208	500

Source: Field Data, 2021

Data Collection Instrument

The study used questionnaires as the main research instrument. The questionnaire was to assess the behaviour, attitudes, preferences, opinions, and intentions of a large group of individuals in a more cost-effective and time-efficient manner than other methods (Paralov, 2006). The questionnaire was made up of four sections. Section A consisted of the demographic information of the respondents based on their sex.

Section B was made up of an adapted Emotional Intelligence Questionnaire by Mohapel (2012). The questionnaire had thirty (30) items with a Cronbach alpha value of .82. The questionnaire constituted four dimensions namely social awareness (.78), self-awareness (.72),relationship management (.80), and self-management (.76). Mohapel measured the instrument on a 5-point Likert-scale which ranged from 0-Never to 4-Always. But the version used in this study was calculated on a six-point Likert scale (Strongly Agree-6, to Strongly Disagree-1) because the researcher wanted to better capture the subtile variations of opinions.

Section C was made up of an adapted Academic Self-Efficacy Scale by Sander and Sanders (2003). The scale had 17 items with four subscales namely grades, verbalising, studying and attendance. The instrument was calculated using five-point Likert scale ranging from Not at all Confidence (NC)- 1, Not Confident (NC)- 2, Somewhat Confident (SC)- 3, Confident (C)- 4, and Very Confident (VC)- 5. The internal uniformity of the scale was .88 with subscales .78 for Verbalising, .78 for Grades, .74 for Attendance, .72 for Studying.

Levenson's (1973, 1981) Multidimensional Locus of Control Scale comprised Section D, which was adapted and used in the study. Levenson (1973, 1981) who originally developed the scale reported that it was a reconceptualisation of Rotter's (1966) scale. The scale was measured on a six-point Stapel scale ranging from Disagree Somewhat (DS) -2, Strongly Disagree (SD) -3, Slightly Disagree (SD) -1, Slightly Agree (SA) +1, Agree Somewhat (AS) +2, and Strongly Agree (SA) +3. The scale had 24 items with a Cronbach alpha value of .82. The questionnaire constituted three subscales namely internal (.64), powerful others (.77) and chance (.78). Each of the three scales comprises eight elements which are combined into a single 24 item attitude scale. The content sections in the items are counterbalanced such that all three dimensions appear at the same time. To score each scale adds up the points of the circled answers for the items appropriate for that scale. In addition to this +24, each scale has a possible range of 0 to 48.

On the three dimensions of the Internal scale, Powerful Others Scale and Chance Scale, each subject earns three scores that show its locus of control. A person could empirically score high or low on all three aspects (Levenson, 1973, 1981). For example, following the scoring rules of the scale, if an individual chooses -3 throughout, the scoring was given by -3×8+24=0 and if the individual chooses +3 throughout the scoring was given by +3×8+24=48. Hence, 0-16= Low score which indicates that the subject does not expect to have control over his or her own life, and 32-48=High score which indicates that the subject expects to have control over his or her own life concerning internality. Meanwhile, for Powerful Others and Chance, the interpretation is the reversal of internality.

On the other hand, students' achievement test scores in core subjects (College Algebra, English, Science, and Social Studies) were used to measure their academic achievement. The University of Cape Coast's Institute of Education provided the results of the academic achievement test.

Pilot-Test

Pilot-test was done to confirm the instrument, that is, to see if it was reliable and valid for the primary data collection. The researcher used 40% of level 300 students from Wesley College of Education for piloting the instrument. Thus, 150 students were used in piloting the instrument. The piloting data was entered into SPSS to determine the instrument's consistency. The reliability analysis conducted for the 30 items emotional intelligence instrument yielded Cronbach's alpha value of .84 with sub-scales "social awareness" .68, "self-management" .74, "self-awareness" .75, and "relationship management" .78 respectively.

The 17 items for the efficacy scale yielded a value of .89 with sub-scales of .77 for Grades, .73 for Verbalising, .70 for Studying, and .71 for Attendance. Again, the reliability estimate for the 24 items of the locus of control produced a value of .89 with subscales of .62 for internal, .77 for Powerful Others, and .83 for Chance.

Validation of the Instruments

Validation procedures were conducted employing Karl Joreskog's Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) within a covariance-based structural equation model (Hair, Hult, Ringle, & Sarstedt, 2014). This particular structural equation model proves highly effective for confirmatory factor analysis, wherein the predetermined factors

are loaded onto observable variables. Consequently, the previously developed emotional intelligence questionnaire underwent validation through both exploratory and confirmatory factor analyses. Similarly, the academic self-efficacy and locus of control scales underwent validation solely through confirmatory factor analysis, utilizing Analysis of Moment Structure (AMOS) software, with 1000 bootstrap samples employed to reaffirm the obtained data.

Convergent and divergent validity were evaluated through factor analysis. Unit with low factor loadings, defined as those below .30, were excluded from the final dataset prior to analysis (Pallant, 2010). In addition, convergent validity was assessed by ensuring an Average Variance Extraction (AVE) value of .50 or higher (Larcker & Fornell, 1981). Discriminant validity was examined following Fornell and Larcker's (1981) guideline, which stipulates that the square roots of AVEs should exceed the correlations between construct. In addition, if the measure of the correlation between or among latent exogenous constructs (sub-scale) is less than .85 or .90, then, the discriminant validity has been achieved (Awang, 2012; Awang, 2014; Hair, Black, Babin, Anderson, & Tatham, 2006).

Exploratory Factor Analysis of Emotional Intelligence Questionnaire

Exploratory factor analysis is an analytical statistical approach that is used in the formulation of questionnaires to guarantee that they reference point what they are intended to measure. The study employed an altered thirty (30) items version of Mohapel's (2012) emotional intelligence questionnaire.

Principal Component Analysis (PCA) was done to determine the appropriateness of the variables using SPSS version 20. To verify these factors, factor loadings based on the content of the objects were employed.

Factor loadings greater than 0.3 were selected because the higher the loading, the more effective the variable is at measuring what it was supposed to assess, and a factor loading of 0.1, for example, was insufficient to determine the purity of the factor measure (Howell, 2002). To ascertain another important component of exploratory factor analysis, Bartlett and Kaiser-Meyer-Olkin's test of sphericity was run first and it is presented in Table 4.

Table 4: KMO and Bartlett's Test of sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	1783.539
	Df	435
	Sig.	.000

Source: Field Work, 2021

The appropriateness was evaluated before executing the Principal Component Analysis. Coefficients of .3 and higher were discovered when the commonalities were examined (see Appendix C). The Kaiser-Meyer-Olkin value was .803 which exceeded the advisable value of .6 (Kaiser, 1974) and Bartlett's Test of Sphericity (Bartlett 1954) reached statistical significance (p = .000), encouraging the factorability of the correlation matrix.

Screw Plot

The scree plot indicated that the extraction yielded about five factors, but a more thorough examination led to a conclusion of about four factors. Because the line slants at the fourth factor, it begins to form a straight line after the fifth factor. However, four-factor extractions were considered for this study and they conform to the literature. Figure 5 shows the scree plot.

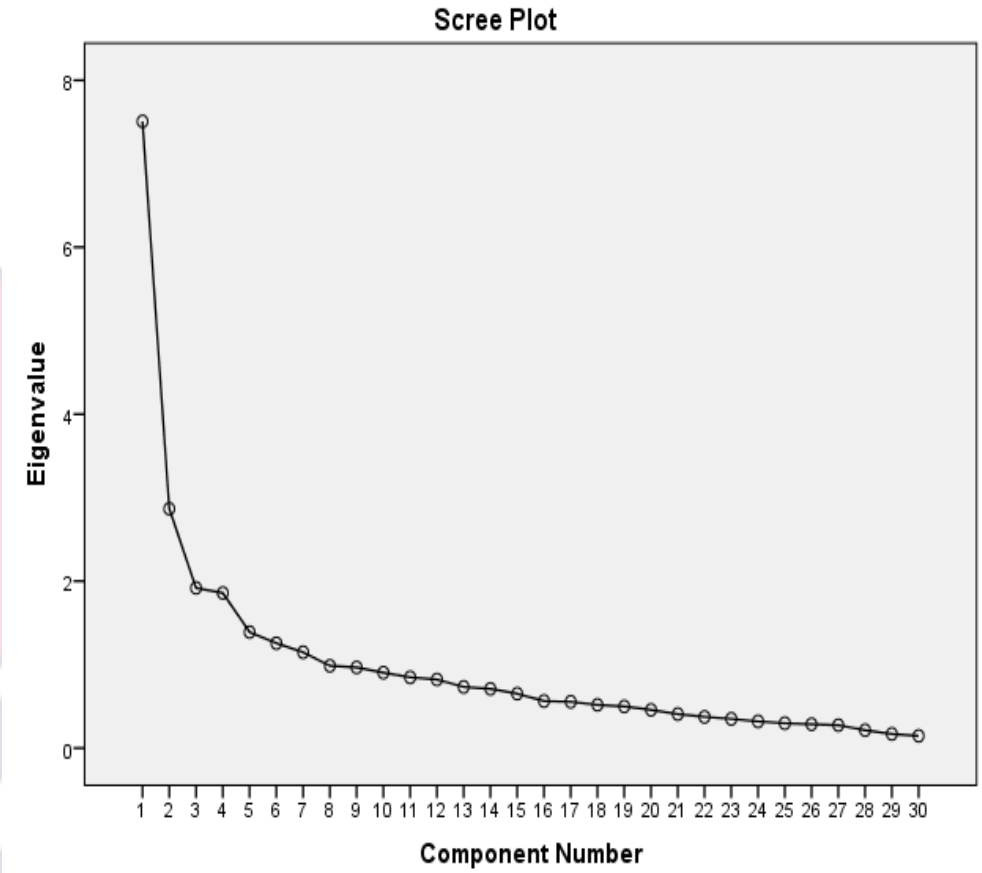

Figure 5: Scree Plot

Rotated Factor Matrix

After the initial extraction (see Appendix C), the study proceeded to rotate and four factors were established to be valid constituents of the construct. It should be noted that the pool of items through the matrix yielded four measured factors with acceptable engine values. Again, engine values that were below .1 were suppressed and this is shown in Table 5.

Table 5: Rotated Factor Matrix

Items	Factor			
	1	2	3	4
EI-1	.183	.309	**.368**	.296
EI-2	-.169		**.482**	-.171
EI-3	-.140		**.551**	-.278
EI-4		.333	.262	**.401**
EI-5		.172	**.653**	.103
EI-6	.124	.143	**.541**	.325
EI-7	.172		-.185	**.520**
EI-8	.430			**.547**
EI-9	.148		.156	**.419**
EI-10		.436	-.221	**.440**
EI-11		.103		**.539**
EI-12	.329	**.339**		.198
EI-13	**.694**	.191		.154
EI-14	**.773**	.195		.168
EI-15	**.719**	.283		.145
EI-16	**.815**	.232		.171
EI-17	**.764**	.166	.102	
EI-18	**-.342**			
EI-19	.104	.204	**.499**	.258
EI-20		**.423**	.271	.290
EI-21	.103	**.388**	.160	.283
EI-22	.217	**.662**		.243
EI-23	.170	**.542**	.318	
EI-24	.276	**.381**	.375	.260
EI-25	.210	**.557**	.293	.127
EI-26		**.510**		
EI-27				
EI-28	.209	**.496**	.131	
EI-29		**.698**		
EI-30	.235	**.318**	.235	.169

It should be noted that item 27 which has been highlighted in Table 5 was excluded because the engine value did not meet the recommended value of .1+, and, therefore, the item was removed from the main questionnaire which was used for the study.

Factor Extraction from Rotated Factor Matrix

Based on the literature, it was postulated that there would be four factors of emotional intelligence. With regards to the rules, a factor is valid

when it is more than three loadings onto it; hence, it was collapsed. Therefore, four factors were used as established by the Principal Component Analysis. The engine values from the rotated extraction are presented in Table 6.

Table 6: Factor Extraction from Rotated Factor Matrix

	Factor			
Components (EI)	**1**	**2**	**3**	**4**
Self Management				
SEM 13	**.694**			
SEM 14	**.773**			
SEM 15	**.719**			
SEM 16	**.815**			
SEM 17	**.764**			
SEM 18	**-.342**			
Relationship Management				
REM 12		**.339**		
REM 20		**.423**		
REM 21		**.388**		
REM 22		**.662**		
REM 23		**.542**		
REM 24		**.381**		
REM 25		**.557**		
REM 26		**.510**		
REM 27		**.496**		
REM 28		**.698**		
REM 29		**.318**		
Social Awareness				
SOAW 1			**.368**	
SOAW 2			**.482**	
SOAW 3			**.551**	
SOAW 5			**.653**	
SOAW 6			**.541**	
SOAW 19			**.499**	
Self Awareness				
SEAW 4				**.401**
SEAW 7				**.520**
SEAW 8				**.547**
SEAW 9				**.419**
SEAW 10				**.440**
SEAW 11				**.539**

Source: Field Work, 2021

Four factors in Tabe 6 were extracted. Factor 1 which is self-management had 6 items (13,14,15,16,17,18), and Factor 2 which is relationship-management had 11 items (12,20,21,22,23,24,25,26,27,28,29).

Factor 3 which is social awareness had 6 items (1,2,3,5,6,19) and Factor 4 which is self-awareness had 6 items (4,7,8,9,10,11). The study further proceeded to use the 29 items to conduct a confirmatory factor analysis. The outcomes are conferred in Table 7:

Confirmatory Factor Analysis of Emotional Intelligence Questionnaire

The validity of emotional intelligence questionnaire is conferred in Table 7.

Table 7: Item loadings, AVE, and Composite Reliability (CR)

Dimensions	Items	Loadings	AVE	CR	Alpha	mega
Self Management	EI-18	.213*	.40	.79	.74	.76
	EI-17	.656				
	EI-16	.742				
	EI-15	.601				
	EI-14	.646				
	EI-13	.774				
Relationship Management	EI-29	.562	.29	.81	.78	79.
	EI-28	.385				
	EI-27	.632				
	EI-26	.226*				
	EI-25	.588				
	EI-24	.639				
	EI-23	.593				
	EI-22	.517				
	EI-21	.553				
	EI-20	.587				
	EI-12	.459				
Social Awareness	EI-19	.536	.29	.70	.68	.69
	EI-6	.618				
	EI-5	.735				
	EI-3	.378				
	EI-2	.400				
	EI-1	.484				
Self-Awareness	EI-11	.721	.37	.71	.75	.78
	EI-10	.498				
	EI-9	.727				
	EI-8	.664				
	EI-7	.478				
	EI-4	.488				

EI-1 – EI-29 = questionnaire items (see Appendix A**)**

In Table 7, items SEM-18 and REM-26 had a factor loading of smaller than .30; thus, they were deleted. These were the only items that were

eliminated because their factor loadings were less than the satisfactory loading of .30 (Pallant, 2010). All of the AVEs for the several dimensions in Table 7 were less than .50. This indicated that the dimensions were not convergently valid. Average Variance Extraction (AVE) was also used to run convergent validity (Larcker & Fornell, 1981). Again, the dimensions lacked convergent validity,Cronbach Alpha, the Composite Reliability (CR), and Omega Reliability were all above .50. This indicated that the construct were more reliable (Idsoe & Roland , 2001). The initial or original measurement model with 29 items is presented in Figure 6.

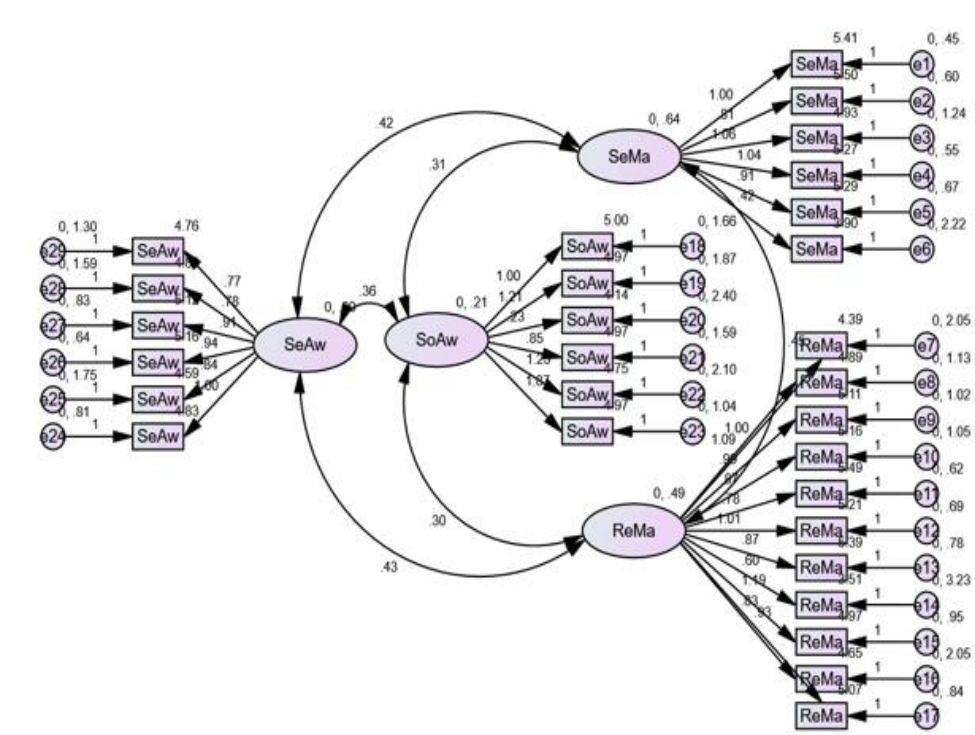

Figure 6: Initial hypothesised first-order CFA with four factor structure model of Emotional Intelligence Questionnaire (29-items)

Table 8: Discriminant Validity

Variable	SeMa	ReMa	SoAw	SeAw
Self-Management	(.63)*			
Relationship Management	.80	(.54)*		
Social-Awareness	.35	-.11	(.54)*	
Self-Awareness	.58	.69	.27	(.61)*

*Values in parenthesis are square roots of Average Varience Extraction (AVE)

In Table 8, apart from the link between self-management and relationship management (.80), and relationship management and self-awareness (.69) all the square roots of AVEs were bigger than the relationship between the dimensions. In addition, the intercorrelation value (.80, and .69) of the sub-scale of emotional intelligence was less than the value of .85 or .90 (Hair et al., 2006; Awang, 2012; 2014). This condition means that the problem of multicollinearity did not exist between or among the dimension . Consequently, all the determined variables of the emotional intelligence scale were grouped under their respective construct. It was concluded that discriminant validity has been established as a result of this. The final or new measurement model for the emotional intelligence questionnaire is shown in Figure 7.

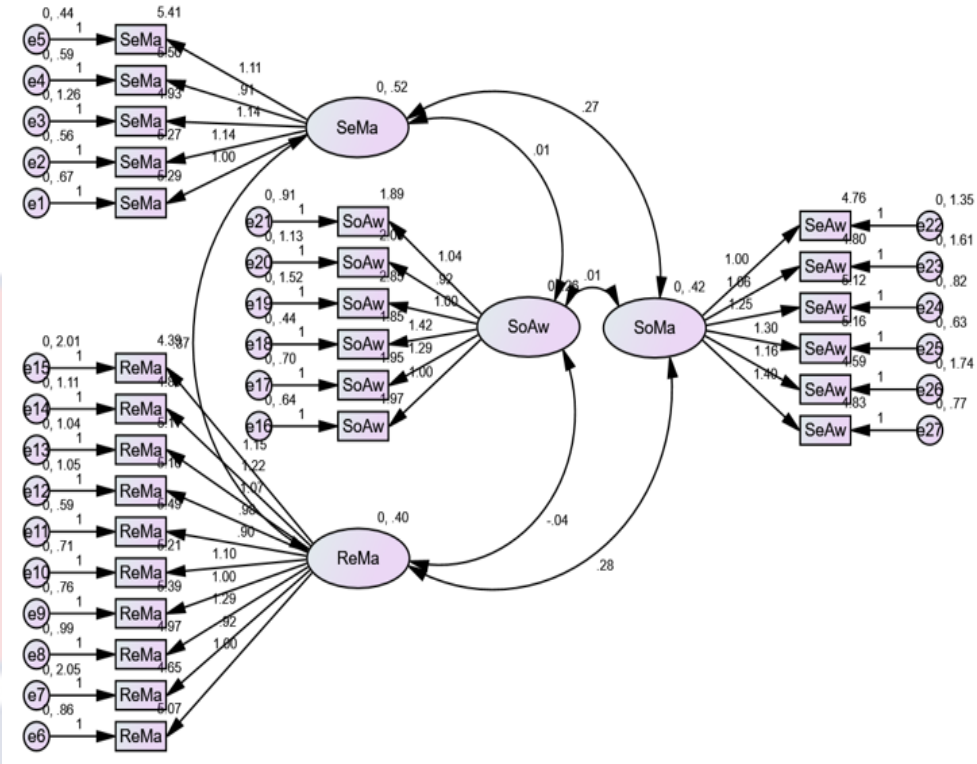

Figure 7: Final hypothesised first-order CFA with four factor structure model of Emotional Intelligence Questionnaire (27-items)

Model Fit

The model fit indices were assessed to see if the hypothesised model fit the data collected. In addition, the new model (with 27 items) was calculated using TLI, NFI, and CFI among other variables. The following thresholds were used to evaluate the model fit indices for the models: Chi-square ($p > 0.05$; Babin, Hair, Black, Anderson, & Tatham, 2006), CFI (>0.90; Kline, 2013), NFI (>0.90; Kline, 2013), CMIN/DF (2 or 3; Barlow, Nora, Stage, Schreiber,& King, 2006), IFI (>0.90; Kline, 2013), RMSEA (≤0.08; Schreiber *et al*., 2006)TLI (>0.90; Kline, 2013), and AIC (least values estimate reality) (Civelek, 2018) (See Table 9). The model fit indices are presented in Table 9.

Table 9: Goodness of Fit Indices of Emotional Intelligence Questionnaire

Fit Indices	Values (29-items)	Values (27-items)	Threshold
Chi-square ($\chi 2$)	682.515, p<0.000	475.987, *p*<0.000	> .05
CMIN/DF	1.840	1.497	≤ 2 or 3
Comparative Fit Index	.759	.859	≥.90
Normed Fit Index	.599	.677	≥.90
Incremental Fit Index	.766	.863	≥.90
Tucker-Lewis Index	.737	.844	≥.90
Root Mean Square Error of Approximation	.075	.058	≤ .08
Akaike Information Criterion	868.515	649.987	

Note: Minimum discrepancy/degrees of freedom (CMIN/DF), Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Akaike Information Criterion (AIC).

Almost all the model fit signal for the 29-item model displayed that the data did not fit the anticipated model as presented in Table 9. This can be the result of incorrect model specification.(Kline, 2011). Only the RMSEA and the CMIN/D fit indicators revealed a good fit based on Schreiber et al's (2006) criterion with very close values of 1.840 and .075 respectively. Even though the CMIN/DF and RMSEA fit indicators for the 29 items suggested a good fit, the selected scholars' standards were not met.

The model fit indices for the final or the new model (27 items) seemed better than the initial or original model with 29 items (Table 9). The AIC index for the 29-item model was 868.515 and that of the 27-item model was 649.987 indicating that the final or the new model (27-items) is the model which is closer to realness and demonstrated adequate fit (Civelek, 2018). Although the 27-item model showed competent fit as compared to the 29-item

model, the model fit indices for the model (27 items) did not live up to the expectations of the chosen scholars. It is concluded that upcoming researchers who intend to create or re-examine the emotional intelligence questionnaire in the Ghanaian settings should utilize the final or the new model (27 items) instead of the initial or the original model (29 items) and re-validate the new model (27 items) in their settings.

Confirmatory Factor Analysis of Academic Self-Efficacy Scale

The validation of academic self-efficacy scale are conferred in Table 10.

Table 10: Item loadings, AVE, and Composite Reliability (CR)

Dimensions	Items	Loadings	AVE	CR	Alpha	Omega
Grades	ASE-2	.420	.37	.77	.77	.78
	ASE-7	.672				
	ASE-10	.585				
	ASE-11	.668				
	ASE-13	.570				
	ASE-16	.679				
Verbalising	ASE-3	.642	.41	.74	.73	.74
	ASE-5	.696				
	ASE-8	.693				
	ASE-9	.533				
Studying	ASE-1	.573	.38	.71	.70	.71
	ASE-4	.638				
	ASE-14	.567				
	ASE-15	.687				
Attendance	ASE-6	.699	.45	.71	.71	.71
	ASE-12	.685				
	ASE-17	.631				

ASE-1 – ASE-17 = questionnaire items (see Appendix A**)**

Table 10 shows that all of the items were loaded above the recommended loading of .30 (Pallent, 2010). As a result, all of the items were kept. Table 10 shows that all of the AVEs for the different dimensions were below .50. This indicated that the dimensions do not have convergent validity.

However, the Cronbach Alpha, Composite Reliability (CR), and Omega Reliability were all above .50. This indicated that the construct were more reliable (Idsoe & Roland , 2001).

Table 11: Discriminant Validity

Variable	Grades	Verbalizing	Studying	Attendance
Grades	(.61)*			
Verbalising	.80	(.64)*		
Studying	.89	.63	(.62) *	
Attendance	.88	.73	.89	(.61)*

*Values in parenthesis are square roots of Average Varience Extraction (AVE)

From Table 11, apart from the correlations between Verbalising and Studying (.63), all the intercorrelation values (.80, .89, .88, .73 and .89) were higher than the square roots of the AVEs of the relevant dimensions. In addition, intercorrelation values (.80, .89, .88, .73 and .89) were lower than the value of .90. This confirmed the non-existence of multicollinearity in the data set (Hair et al., 2006; Awang, 2012; 2014). Consequently, all the discovered variables of the academic self-efficacy scale were grouped under their respective dimensions. As a result, discriminant validity was determined to be accepted. For the final data collection, 17 items were kept in total. The factor loadings of each item are presented in Figure 8 jointly with the hypothesised model for academic self-efficacy.

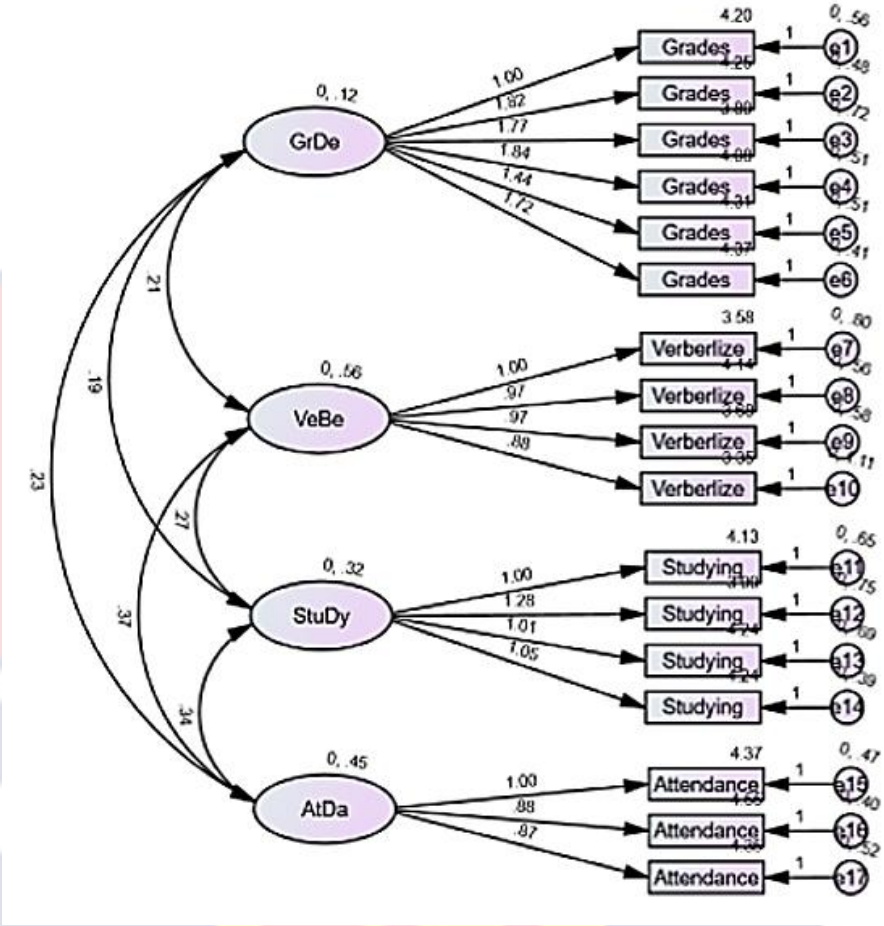

Figure 8: Multi-Factor First-Order CFA Model with the Original 27-Items

Model fit

The model fit indices were established to see whether the hypothesized model fit the data acquired. The model (with the 17 items) was also estimated using TLI, NFI,and CFI among other methods. The following thresholds were employed to estimate the model fit indices: Chi-square ($p > 0.05$; Hair, et al, 2006), NFI (>0.90; Kline, 2013), CMIN/DF (2 or 3; Nora, Schreiber, Barlow,Stage, & King, 2006), CFI (>0.90; Kline, 2013), IFI (>0.90; Kline, 2013), TLI (>0.90; Kline, 2013), and RMSEA (≤0.08; Schreiber *et al.*, 2006) (See Table 12). Table 12 displays the model fit indices.

Table 12: Goodness of Fit Indices of Academic Self-Efficacy Scale

Fit Indices	Estimates	Recommended Threshold
Chi-square ($\chi 2$)	326.135, p<0.000	> .05
CMIN/DF	2.886	≤ 2 or 3
Comparative Fit Index	.787	≥.90
Normed Fit Index	.712	≥.90
Incremental Fit Index	.792	≥.90
Tucker-Lewis Index	.744	≥.90
Root Mean Square Error of Approximation	.113	≤ .08

Note: Minimum discrepancy/degrees of freedom (CMIN/DF), Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA).

The chi-square ($\chi 2$) in Table 12 indicated that there is no irregularity connecting the expected and actual data. Only the CMIN/DF fit indicator with a very close value of 2.886 demonstrated a tolerable fit that Schreiber et al's (2006) metrics provided. Even though the CMIN/DF fit indicator presented a good fit, it did not meet the metrics set by the researchers. The data did not fit the hypothesised model in almost all of the model fit indicators for the 17-item model. This could be due to model misspecification (Kline, 2011). It is concluded that upcoming researchers who want to replicate or re-examine the academic self-efficacy scale should re-validate the scale in their localized settings due to cultural variation and expectations (Britwum, Adjei, Amoah, Djan, Acheampong, Aidoo, & Sefah, 2022).

Confirmatory Factor Analysis of Locus of Control Scale

The locus of control scale results are shown in this section. Table 13 summarises the confirmatory factor analysis.

Table 13: Item loadings, AVE, and Composite Reliability (CR)

Dimensions	Items	Loadings	AVE	CR	Alpha	Omega
Internal	LOC-23	.293*	.17	.60	.89	.60
	LOC-21	.471				
	LOC-19	.319				
	LOC-18	.461				
	LOC-9	.587				
	LOC-5	.266*				
	LOC-4	.516				
	LOC-1	.273*				
Powerful Others	LOC-24	.518	.31	.78	.62	.72
	LOC-16	.637				
	LOC-14	.590				
	LOC-12	.498				
	LOC-10	.511				
	LOC-7	.631				
	LOC-6	.517				
	LOC-3	.545				
Chance	LOC-22	.635	.37	.90	.83	.84
	LOC-20	.540				
	LOC-17	.688				
	LOC-15	.633				
	LOC-13	.593				
	LOC-11	.693				
	LOC-8	.590				
	LOC-2	.597				

LOC-1 – LOC-24 = questionnaire items (see Appendix A**)**

As indicated in Table 13, items LOC-23, LOC-5, and LOC-1 had a factor loading of below .30; hence, they were erased because their loadings were less than the satisfactory loading of .30 (Pallent, 2010). All of the AVEs for the respective dimensions in Table 13 were below .50. This indicated that the dimensions were not convergently valid. Meanwhile, the Cronbach Alpha, Composite Reliability (CR), and Omega Reliability were all beyond .50. This indicated that the dimensions were more reliable (Idsoe & Roland , 2001). The initial or original measurement model is shown in Figure 9.

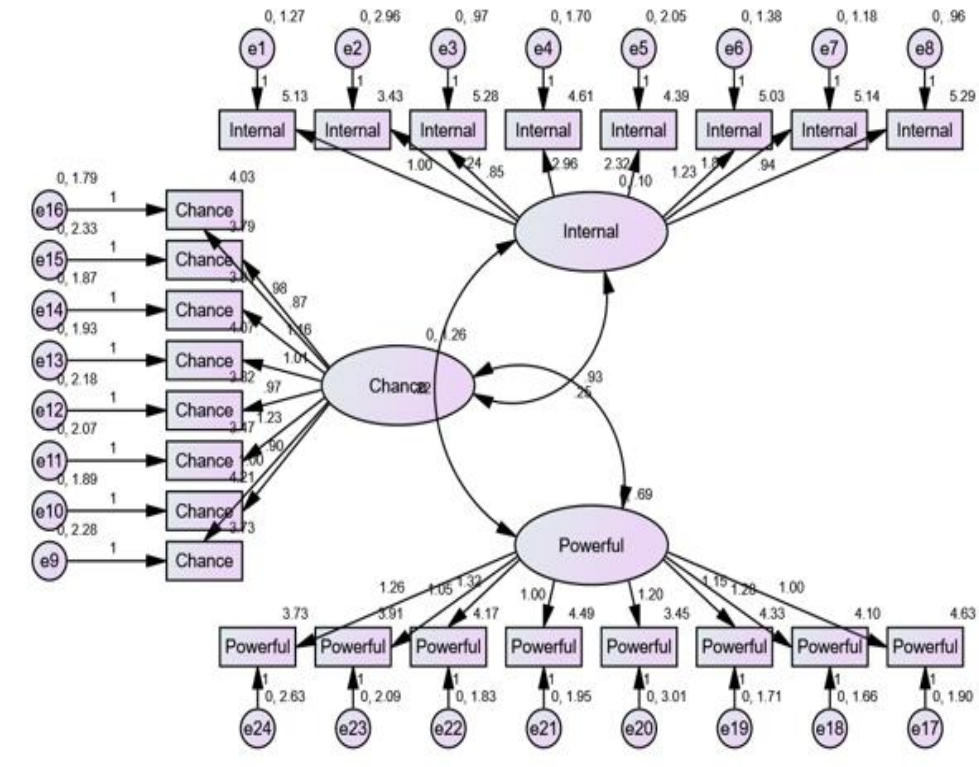

Figure 9: Initial hypothesised first-order CFA with three factor structure model of Locus of Control Questionnaire (24-items)

Table 14: Discriminant Validity

Variable	Internal	Powerful Others	Chance
Internal	(.41)*		
Powerful Others	.83	(.57)*	
Chance	.69	.89	(.61) *

*Values in parenthesis are square roots of AVEs

As shown in Table 14, the correlations between Internal and Powerful Others (.83), Internal and Chance (.69) and Powerful Others and Chance (.89) were stronger than the square roots of the AVEs of the relevant dimensions. Further, the correlation coefficients (.83, .69 and .89) of the sub-scale of the locus of control scale were less than the value of .85 or .90 (Hair et al., 2006; Awang, 2012; 2014). This condition means there was no concern with multicollinearity between or among the dimensions. As a result, all of the

locus of control scale's discovered variables were categorized into their respective dimensions. As a result, it was set that discriminant validity has been accepted. For the final data collection, 21 items were selected. The factor loadings of each item are provided in Figure 10 collectively with the final hypothesised model for the locus of control.

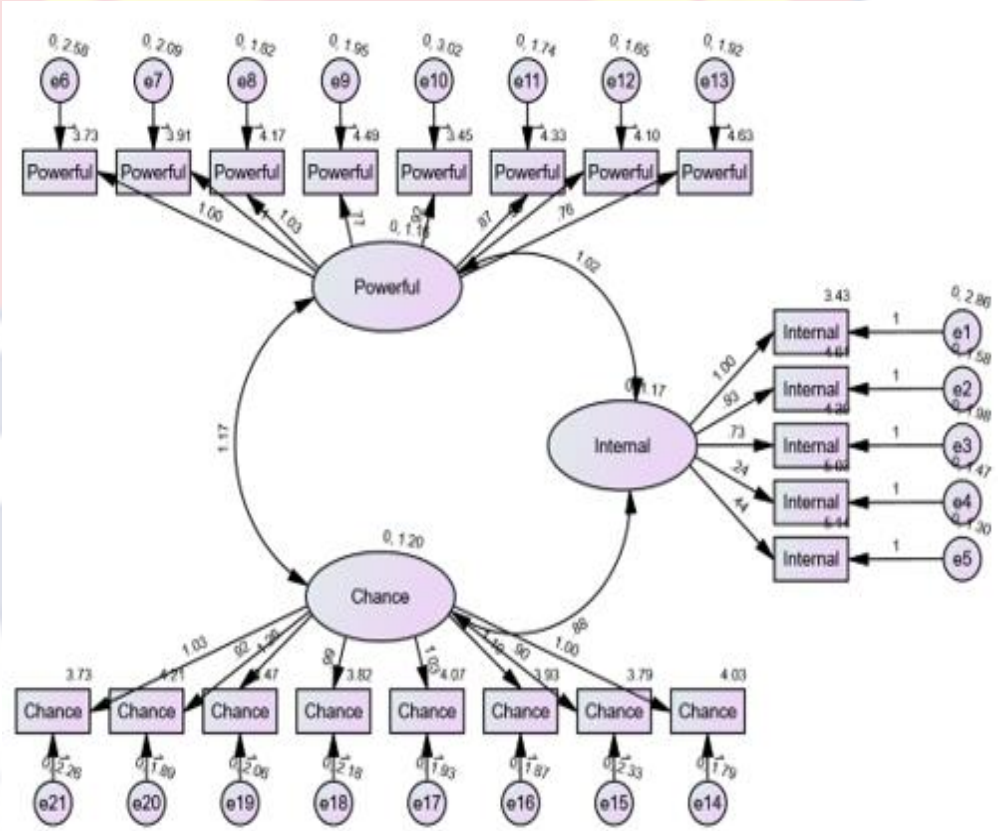

Figure 10: Final hypothesised first-order CFA with three-factor structure model of Locus of Control (21-items)

Model Fit

The model fit indices were used to determine if the hypothesised model matched the data. In addition, the new model (which included 27 components) was calculated using TLI, NFI, and CFI among other factors. The following thresholds were used for the evaluation of the model fit indices for the models: Chi-square ($p > 0.05$; Hair *et al*., 2006), NFI (>0.90; Kline,

2013), CMIN/DF (2 or 3; Schreiber *et al*., 2006), CFI (>0.90; Kline, 2013), TLI (>0.90; Kline, 2013), IFI (>0.90; Kline, 2013), RMSEA (≤0.08; Schreiber *et al*, 2006) and AIC (least values approximate reality) (Civelek, 2018) (See Table 15). The model fit indices are shown in Table 15.

Table 15: Goodness of Fit Indices of Locus of Control Scale

Fit Indices	Values (24-items)	Values (21-items)	Threshold
Chi-square ($\chi 2$)	541.845, p<0.000	377.094, *p*<0.000	> .05
CMIN/DF	2.176	2.027	≤ 2 or 3
Comparative Fit Index	.736	.807	≥.90
Normed Fit Index	.608	.685	≥.90
Incremental Fit Index	.742	.811	≥.90
Tucker-Lewis Index	.707	.782	≥.90
Root Mean Square Error of Approximation	.089	.083	≤ .08
Akaike Information Criterion	691.845	509.094	

NOTE: Minimum discrepancy/degrees of freedom (CMIN/DF), Comparative Fit Index (CFI), Normed Fit Index (NFI), Incremental Fit Index (IFI), Tucker-Lewis Index (TLI), Root Mean Square Error of Approximation (RMSEA), Akaike Information Criterion (AIC).

Just about all the model fit indicators for the 24-items model displayed that the data did not fit the anticipated model as shown in Table 15. This could be due to the model's misspecification (Kline, 2011). Solely the CMIN/DF fit indicator revealed a good fit based on Schreiber *et al*'s (2006) criterion with very close values of 2.176. Even though the CMIN/DF fit indicator for the 24-items suggested a dandy fit, it did not meet the threshold by the official.

The model fit indices for the final or the new model (21-items) seemed better than the initial model with 24-items (Table 15). The AIC index for the 24-item model was 691.845 and that of the 21-item model was 509.094

informing that the final or the new model (21-items) was the model which was closer to realness and demonstrated sufficient fit (Civelek, 2018). More-so the 21-item model showed competent fit as compared to the 24-item model, the model fit indices for the model (21-items) failed to meet the accepted by the researchers. It is concluded that emerging researchers that intend to create or re-examine the locus of control scale in the Ghanaian setting must use the final or the new model (21- items) rather than the original model (24-items).

Ethical Considerations

Ethical clearance was acquired from the Institutional Review Board of University of Cape Coast. Inform concern was obtained from the participants. The researcher created an information sheet or consent form outlining all relevant details of the study. This document included the study's title, purpose, procedures, expected duration, potential benefits and risks, confidentiality measures, voluntary engagement, and contact information for the researchers. The right to privacy, voluntary participation, no harm to participants, anonymity, and confidentiality were all highly valued in the pursuit of ethical issues. It is important to remember that students had the right to privacy and that these rights were maintained during the period of the study. The respondents' privacy rights in the study were protected, and the respondents were not used for the study without their knowledge or consent. Furthermore, responding to a questionnaire in a study of this sort necessitates effort which can cause respondents' normal routines to be disrupted. The researcher disclosed the study's objectives and relevance to the respondents. For this reason, he allowed them to exercise their right to choose whether or not to participate in the study.

Another ethical concern in educational research is that the activity should not injure the study participants regardless of whether they volunteer or not. Harm might be physical, psychological or emotional in this context. As a result, questions were structured in such a way that respondents had various options and the opportunity to choose the answers that were most suited for them. Furthermore, as part of research ethics, the ultimate purpose was to preserve and safeguard the respondents' well-being, interests, and identities.

Data Collection Procedure

Data collection was done by the researcher together with the assistance of three field assistants. The field assistants were briefed by the investigator about the study's goal, and how to administer the questionnaire. The researcher received a letter of commencement from the Head of the Department of Education and Psychology of the University of Cape Coast. The researcher met the Principals of the selected Colleges of Education. The Principals introduced the researcher to some of the tutors who were in charge of students' affairs. The respondents were told of the time, venue, and how to answer the questionnaire. Two months were used to gather the data. The researcher was able to reach 100 percent return rate meaning that all the 500 questionnaires were retrieved from the participant.

Data Processing and Analysis

The data from the study were examined for completeness, double responses, and non-response. The double responses and uncompleted questionnaires were taken out of the data collected and only single responses to items and completed questionnaires were used for the analysis. To make it easier to identify the questionnaire, it was serially numbered. This precaution

was important to ensure prompt discovery of any cause of errors when they occurred during data tabulation.

The response for each item on each scale was scored for easy entry and management purposes. The data was cleaned before the needed data transformation by executing consistency checks on each variable. Following data verification, corrections were made. Demographic variables of the respondents were analyse using simple frequencies, and percentages.

For Research Question 1, a 6-point Likert-type scale comprising 27 items was utilized, with responses ranging from 6 to 1. A mean grade of 3.5 was employed, representing the mean of all responses (i.e., mean of means). The individual mean scores of the unit were aggregated and divided by the total figure of responses to derive the mean of means. A mean grade exceeding 3.5 was construed as indicative of a great level of emotional intelligence, whereas a mean score below 3.5 indicated a low level of emotional intelligence. Standard deviation was utilized to gauge the extent of variation exhibited by each score from its respective mean.

For Research Question 2, a 5-point Likert-type scale encompassing 17 items was employed, with responses ranging from Not at all Confidence - 1, Not Confident - 2, Somewhat Confident - 3, Confident - 4, and Very Confident - 5. A mean score surpassing 3 was heeded as indicative of a great level of academic self-efficacy, while a mean score below 3 signified a low level of academic self-efficacy. Standard deviation was utilized to reference the degree of variation exhibited by each score from its respective mean.

Hypotheses 1, 2, and 3 were individually evaluated through structural equation path analysis, employing 5000 bootstrap samples and bias-corrected

accelerated confidence intervals. The confidence intervals were utilized to scrutinize the bootstrap outcomes, ensuring their reliability. Specifically, if the upper and lower confidence intervals of the bootstrap results did not encompass '0' and exhibited the same sign ('+ +' or '- -'), the result was considered significant. This implies that the regression coefficient could not be '0'. Structural equation modeling, as a methodological framework, integrates elements of regression and factor analysis, enabling researchers to concurrently explore connections among observed variables and latent constructs, including interrelationships among latent constructs (Hair et al., 2014). The structural equation model permits the incorporation of explicit measurement error modeling to produce impartial approximation of relationships among variables. This capability enables researchers to mitigate the influence of measurement errors on correlation and regression estimates (Khine, 2013).

In hypothesis 4, an independent sample, t-test, was run to ascertain the existence of a statistically significant difference in the mean scores for a self-reported dimension of academic self-efficacy between female and male students of the College of Education. Again, the construct was computed and run against gender and the result of the test was considered significant at a $p<.05$. According to Pallant (2016), an independent sample test is used to compare the mean score, on a ceaseless variable for two different groups of participants. Hence the decision to use the statistical tool.

Finally, hypotheses 5, 6, and 7 were examined through moderation analysis utilizing the PROCESS tool developed by Hayes (2018), employing 5000 bootstrap samples with 95% bootstrap confidence measure. PROCESS, a

regression-based modeling approach, estimates model parameters using ordinary least squares (OLS) regression. In this method, the linear regression model employing the OLS criterion generates numerous potential pairs. The set of values for the regression constant and coefficient, produced by OLS regression, lowers the residual sum of squares. According to Hayes (2018), moderation analysis allows testing for the power of a variable, Z, on the link connecting variables X and Y. Instead of testing a causal link between these other variables, moderation tests for when or under what conditions an outcome occurs. Moderators can strengthen, weaken or reverse the nature of the link. For example, emotional intelligence moderates the link between academic achievement and academic self-efficacy. Thus, emotional intelligence is considered a moderator in this case because it interacts with academic self-efficacy, creating a different effect on educational achievement. Hence the decision to use the statistical tool.

CHAPTER FOUR

RESULTS AND DISCUSSION

Overview

The purpose of the study was to examine emotional intelligence, academic self-efficacy, and locus of control as predictors of academic achievement of students. This chapter comprises the presentation and interpretation of the findings from the study. Table 16 and 17 presents the demographic distribution of the respondents.

Demographic/Background Characteristics of the Respondents

Each respondent was asked to provide information about his or her background characteristics. Table 16 display the findings of the sex analysis of the respondents.

Table 16: Sex of Students

Subscale	Frequency	Percentage (%)
Male	292	58.4
Female	208	41.6
Total	500	100.0

Source: Fieldwork (2021)

Deducing from Table 16, out of the 500 answerer who were involved in the study, 292 were males corresponding 58.4% whiles 208 were females corresponding 41.6%. Thus, the bulk of the respondents were males.

Table 17: Age range of Students

Subscale	Frequency	Percentage (%)
18 and below	12	2.4
19-23	259	51.8
24 above	229	45.8
Total	500	100.0

Source: Fieldwork (2021)

Table 17 shows that majority (n =259) of the respondents falls within 19-23 age category followed by (n =229, 24 above). However, the least (n=12) falls within 18 and above.

Research Question 1

What are the levels of emotional intelligence of students in Colleges of Education in Ghana?.

This research enquiry sought to determine the emotional intelligence levels of College of Education students. A 6-point Likert-type scale comprising 27 items was employed to evaluate emotional intelligence levels among students. A mean grade of 3.5 was utilized, representing the aggregate mean of all responses (referred to as the mean of means). This involved summing the mean scores of all unit and dividing by the total figure of responses to derive the mean of means. A mean score exceeding 3.5 was interpreted as indicative of a great level of emotional intelligence, while a mean grade below 3.5 indicated a low level of emotional intelligence. Advance elucidation regarding the delineation of emotional intelligence levels is provided in Table 18.

Table 18: Respondents levels of Emotional Intelligence

Scale/sub-scales	No. of items	Mean	SD
Self Management	5	5.05	1.03
Relationship Management	10	4.83	.911
Social Awareness	6	3.67	1.39
Self-Awareness	6	4.60	.996
Mean of means		4.54	1.08

Source: Field survey (2021)

The average score of participants on emotional intelligence was calculated to be M = 4.54, with a standard deviation of SD = 1.08, based on a measure ranging from 1 to 6. This suggests that respondents generally exhibit elevated levels of emotional intelligence. Additionally, the mean scores of the diverse dimensions were computed, and relatively, among the dimensions of emotional intelligence, self-management was the highest (M = 5.05, SD = 1.03), followed by relationship management (M = 4.83, SD = .911), and self-awareness (M = 4.60, SD = .996). However, social awareness was the lowest (M = 3.67, SD = 1.39). Generally, all four dimensions of emotional intelligence were high.

Research Question 2

What are the levels of academic self-efficacy of students in Colleges of Education in Ghana?.

This research questions sought to examine the levels of academic self-efficacy of College of Education students. A mean score of 3 was employed as a reference point, representing the mean of all responses (referred to as the mean of means). This involved aggregating the mean grade of all items and dividing by the total figure of responses to calculate the mean of means. A mean grade exceeding 3 was construed as indicative of a great level of academic self-efficacy, whereas a mean score below 3 indicated a low level of academic self-efficacy. The outcomes are delineated in Table 19.

Table 19: Respondents levels of Academic Self-Efficacy

Scale/sub-scales	No. of items	Mean	SD
Grades	6	4.09	.678
Verbalizing	4	3.71	.840
Studying	4	4.08	.758
Attendance	3	4.35	.747
Mean of means		4.06	.756

Source: Field survey (2021)

The gross mean of means of academic self-efficacy was (*M* = 4.06, *SD* = .756). This indicates that students have higher levels of academic self-efficacy. Again, among the four dimensions of academic self-efficacy, attendance (M = 4.35, SD = .747) was the most adopted, followed by grades (M = 4.09, SD = .678), then studying (M = 4.08, SD = .758), and verbalizing (M = 3.71, SD = .841). Largely, all four dimensions of academic self-efficacy were practised.

Hypotheses Testing

The investigation scrutinized seven hypotheses. Preceding the evaluation of the normality assumption, these hypotheses, considered fundamental among all parametric assumptions, was examined. This evaluation involved employing measures such as median, mean, the normal Q-Q plot , skewness, and 5% trimmed mean . The findings are outlined in Table 20.

Table 20: Test for Normality

Parameters	EI	ASE	LOC	AA
Mean	118.55	69.72	86.45	266.40
Standard Deviation	14.88	10.39	20.91	20.51
5% Trimmed mean	119.60	70.49	86.57	266.42
Median	122.50	71.50	87.00	266.00
Skewness	-1.13	-1.74	-.080	.071
Std. Error	.198	.198	.198	.198
Zskewness	-5.71	-8.78	-.40	.36

Note: Emotional Intelligence (EI), Academic Self-Efficacy (ASE), Locus of Control (LOC) and Academic Achievement (AA)

As illustrated in Table 20, the mean, median, and 5% trimmed mean values for academic self-efficacy, emotional intelligence, locus of control, and educational achievement were nearly identical. This suggests a normal distribution of scores for these variables. Further analysis of the skewness coefficients revealed that the values for locus of control (Zskew = -.40) and academic achievement (Zskew = .36) fell in acceptable range of -3.29 and +3.29 (Fidell & Tabachnick, 2007), demonstrating normal distribution. However, the skewness coefficients for emotional intelligence (Zskew = -5.71) and academic self-efficacy (Zskew = -8.78) indicated negative skewness. Moreover, scrutiny of the normal Q-Q plots in Appendix D revealed that the distribution of scores for all variables closely approximated the straight line (Pallent, 2016) (see Appendix D). To heighten the accuracy of the tests, procedures such as bootstrap were employed for all analyses, aiming to address any anomalies in the distribution of scores for EI and academic self-efficacy.

Relationships among Study Variables

The relationships among the study variables were appraised using Pearson's product-moment correlation coefficient. The effect are shown in Table 21:

Table 21: Correlation Matrix of Study Variables

	Variable	1	2	3
1	Emotional Intelligence	1		
2	Academic Self-efficacy	.391**	1	
3	Locus of Control	.136**	.110**	1

**. Correlation is significant at the 0.01 level (2-tailed)

The relationship amongst EI, academic self-efficacy, and locus of control were positive and within the weak range (Table 21).

Research Hypothesis 1

H_0: Emotional intelligence, academic self-efficacy and locus of control will not predict the academic achievement of students in Colleges of Education in Ghana.

H_1:Emotional intelligence, academic self-efficacy and locus of control will predict the academic achievement of students in Colleges of Education in Ghana.

The hypothesis aimed to ascertain whether emotional intelligence, academic self-efficacy, and locus of control could predict students' academic achievement. Structural Equation Model (SEM) was conducted, utilizing bias-corrected accelerated confidence intervals and 5000 bootstrap samples. The exogenous (predictor) variables, namely academic self-efficacy, emotional intelligence, and locus of control, were assessed continuously. Academic

achievement served as the criterion variable, measured through students' academic performance scores. Comprehensive findings are outlined in Figure 11 and Table 22.

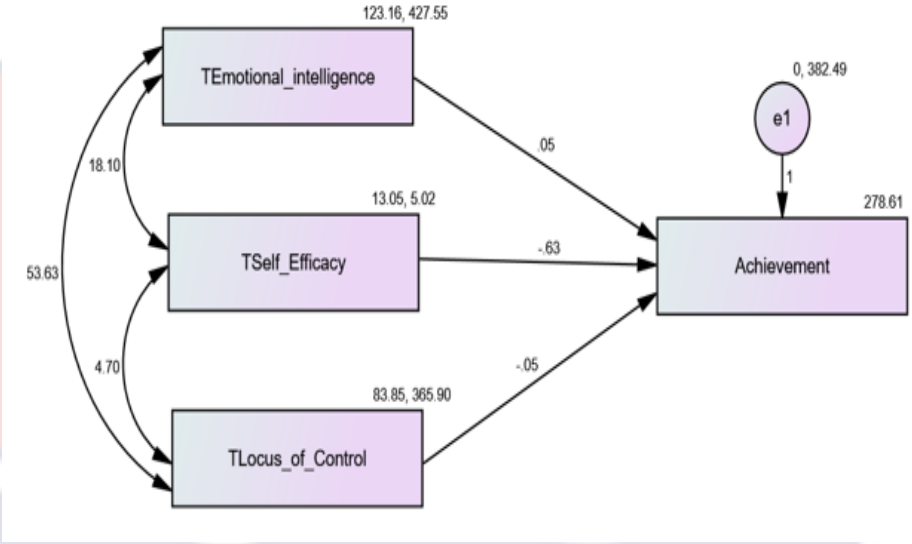

Figure 11: Path model of Emotional Intelligence, Academic Self-Efficacy, Locus of Control and Academic Achievement

As presented in the path analysis (Figure 11), emotional intelligence foretold academic achievement by .05 with a mean and error variance of (123.16, 4427.55), academic self-efficacy foretold academic achievement by -.63 with a mean and error variance of (13.05, 5.02), and locus of control predicted academic achievement by -.05 with a mean and error variance of (83.85, 365.90) and an intercept of 278.61 for academic achievement. Table 22 shows the significance of the path model.

Table 22: Regression Model of Emotional Intelligence, Academic Self-Efficacy, Locus of Control and Academic Achievement

				95% Confidence Interval	
Model	*B*	*SE*	*CR*	Lower	Upper
(Constant)	278.608	6.912	40.307	264.986	282.331
Emotional Intelligence	.050	.046	1.081	-.041	.141
Academic Self-Efficacy	-.631	.426	-1.484	-1.470	.207
Locus of Control	-.054	.046	-1.167	-.145	.037

$p > .05$; $R = .089$; $R^2 = .008$

As shown in Table 22 show that the data do not fit the model. The three self-reported variables (i.e. emotional intelligence, locus of control and academic self-efficacy) explained about 8% of the variability in the educational achievement of students. The outcome from the analysis reveal that emotional intelligence is not a predictor of academic achievement of students, [b = .050, SE = .046, Boot95%CI (-.041, .141)]. Although the results were not significant, the result (B = .050) implies that emotional intelligence has a positive influence on the academic achievement of students. The results from the analysis reveal that academic self-efficacy is not a predictor of the academic achievement of students, [b = -.631, SE = .426, Boot95%CI (-1.470, .207)]. The result (B = -.631) implies that academic self-efficacy has a negative influence on the academic achievement of students. The outcome further reveal that locus of control is not a predictor of academic achievement of students, [b = -.054, SE = .046, Boot95%CI (-.145, .037)]. The result (B= -.054) implies locus has a negative impact on the academic achievement of students in Colleges of Education in Ghana. Founded on the results, the study failed to reject the null hypothesis which stated that academic self-

efficacy,emotional intelligence and locus of control will not predict the academic achievement of students.

Although the three self-reported variables did not predict academic achievement, it can be seen that academic self-efficacy (β = -.631, Boot95%CI (-.1.470, .207)] made a significant contribution as compared to the other predictors, locus of control [b = -.054, Boot95%CI (-.145, .037)], followed by emotional intelligence [b = .050, Boot95%CI (-.041, .141)] as shown in Table 22. This implies that educational self-efficacy made a unique part to the prediction of academic achievement.

Research Hypothesis 2

H_0: Emotional intelligence will not predict the academic self-efficacy of students in Colleges of Education in Ghana.

H1: Emotional intelligence will predict the academic self-efficacy of students in Colleges of Education in Ghana.

The hypothesis sought to determine whether EI predicted academic self-efficacy of students in Colleges of Education. The Structural Equation Model (SEM) path analysis with 5000 bootstrap samples and bias-corrected accelerated confidence intervals were used. The exogenous (predictor) variable was emotional intelligence which was calculated on a continuous basis. The standard variable was academic self-efficacy, which was also calculated on a continuous basis. This section is in two parts. The first part looks at the sub-dimensions of emotional intelligence ("Self-Management" [SeMa], "Relationship-Management" [ReMa], "Social-Awareness" [SoAw], "Self-Awareness" [SeAw]) and sub-dimensions of academic self-efficacy (Grades, Verbalising, Studying, and Attendance), and the second part also

looks at the total construct of EI and academic self-efficacy. Information of the results are conferred in Figure 12 and Table 23.

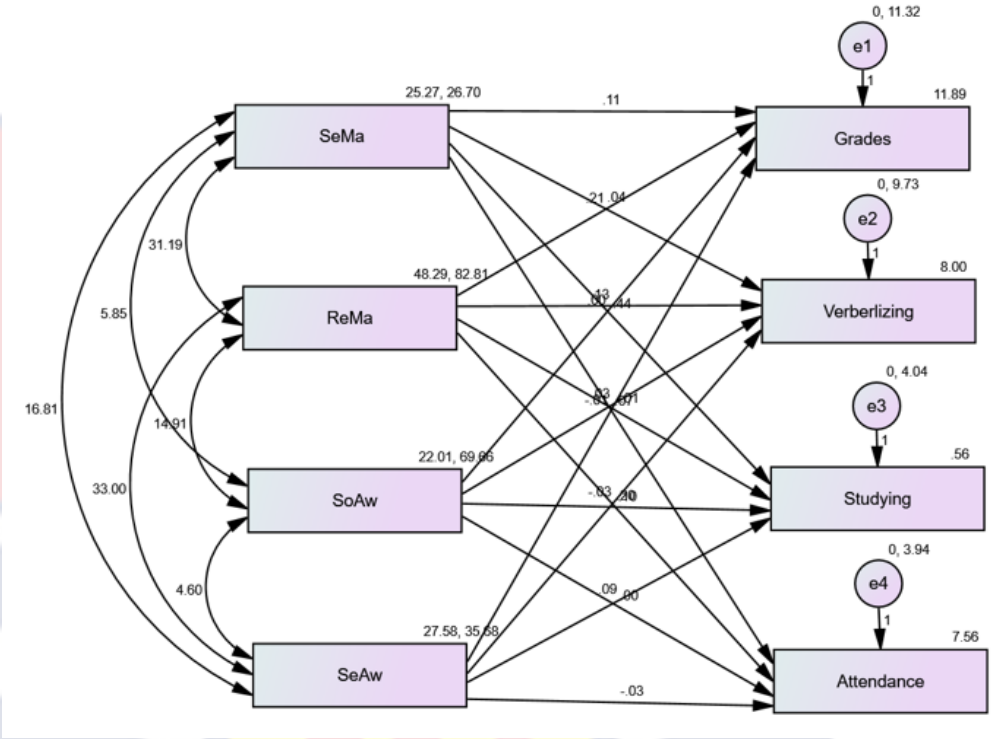

Figure 12: Path model for sub-dimensions of Emotional Intelligence and Academic Self-Efficacy

As presented in the SEM path analysis (Figure 12), all the exogenous variables of emotional intelligence ("Self-Management" [SeMa], "Relationship-Management" [ReMa], "Social-Awareness" [SoAw] and "Self-Awareness" [SeAw]) indirectly predicted the sub-dimensions of academic self-efficacy (Grades, Verbalising, Studying and Attendance). Table 23 showcase the significance of the path model.

Table 23: SEM Model for sub-dimensions of Emotional Intelligence and Academic Self-Efficacy

Dependent		Parameter	Estimate	S.E	C.R	*P*
Grades	<---	SeMa	.111	.040	2.775	.006
Verberlizing	<---	SeMa	.041	.037	1.101	.271
Studying	<---	SeMa	.439	.024	18.303	.000
Attendance	<---	SeMa	.072	.024	3.059	.002
Grades	<---	ReMa	.207	.024	8.506	.000
Verberlizing	<---	ReMa	.125	.023	5.550	.000
Studying	<---	ReMa	-.007	.015	-.465	.642
Attendance	<---	ReMa	.095	.014	6.626	.000
Grades	<---	SoAw	.005	.018	.249	.804
Verberlizing	<---	SoAw	.025	.017	1.483	.138
Studying	<---	SoAw	.200	.011	18.146	.000
Attendance	<---	SoAw	-.004	.011	-.324	.746
Grades	<---	SeAw	-.008	.033	-.241	.809
Verberlizing	<---	SeAw	-.029	.030	-.945	.344
Studying	<---	SeAw	.090	.020	4.615	.000
Attendance	<---	SeAw	-.031	.019	-1.603	.109

NOTE: [a]R-squared = .315 (Adjusted R-squared = .309). [b]R-squared = .138 (Adjusted R-squared = .131). [c]R-squared = .721 (Adjusted R-squared = .719). [d]R-squared = .214 (Adjusted R-squared = .207).

Table 23 provides outcome of the sub-dimensions of emotional intelligence predicting the sub-dimensions of academic self-efficacy. The results revealed that, using grades, verbalizing, studying and attendance as a criterion variables, self-management predicted grades ([*b* = .111; *S.E* = .040; *p* = .006]), studying ([*b* = .439; *S.E* = .024; *p* = .000]), and attendance ([*b* = .027; *S.E* = .024; *p* = .002]). However, self-management was not a predictor of verbalizing ([*b* = .041; *S.E* = .037; *p* = .271]). The effect imply that students with self-management will probable have grades, studying and attendance in school.

Using grades, verbalizing, studying and attendance as a criterion variables, relationship management predicted grades ([*b* = .207; *S.E* = .024; *p* = .000]), verbalizing ([*b* = .125; *S.E* = .023; *p* = .000]), and attendance ([*b* = .095; *S.E* = .014; *p* = .000]). However, relationship management was not a predictor of studying ([*b* = -.007; *S.E* = .015; *p* = .642]). The results express that students with relationship management will possibly have grades, verbalising and attendance in school.

Using grades, verbalizing, studying and attendance as a criterion variables, social awareness was not a predictor of grades ([*b* = .005; *S.E* = .018; *p* = .804]), verbalizing ([*b* = .025; *S.E* = .017; *p* = .138]), and attendance ([*b* = -.004; *S.E* = .011; *p* = .746]). However, social awareness predicted of studying ([*b* = .200; *S.E* = .011; *p* = .000]). The results further revealed that with the criterion variables (grades, verbalizing, studying and attendance), self awareness was not a predictor of grades ([*b* = -.008; *S.E* = .033; *p* = .809]), verbalizing ([*b* = .029; *S.E* = .030; *p* = .344]), and attendance ([*b* = -.031; *S.E* = .019; *p* = .109]). However, self awareness predicted of studying ([*b* = .090; *S.E* = .020; *p* = .000]). The outcome imply that students with self awareness will probably study in school.

The outcome above revealed that some of the sub-dimensions of emotional intelligence predicted some of the sub-dimensions of academic self-efficacy. In another instance some of the sub-dimensions of emotional intelligence were not found to be predictors of sub-dimensions of educational self-efficacy. Hence, the study further proceeded to look at the total construct of academic self-efficacy and emotional intelligence to see the direction of the prediction. The results are given in Figure 13 and Table 24.

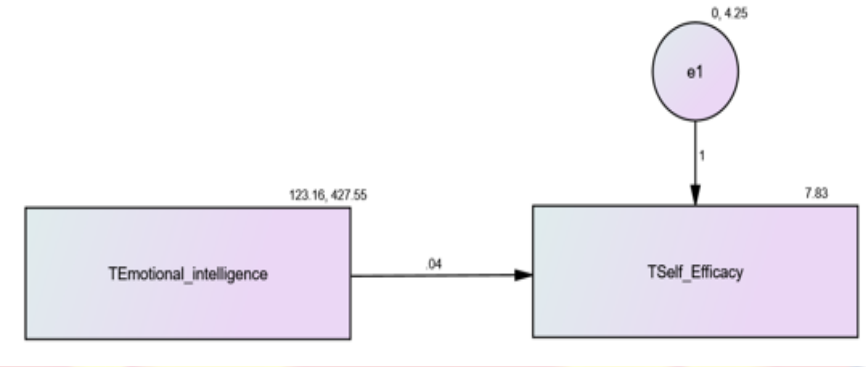

Figure 13: Path model of Emotional Intelligence and Academic Self-Efficacy

From Figure 13, emotional intelligence predicted academic self-efficacy by .04 with a mean and error variance of (123.16, 427.55) and an intercept of 7.83 for academic self-efficacy. Table 24 gives the significance of the path model.

Table 24: Regression Model for Emotional Intelligence (EI) and Academic Self-Efficacy

				95% Confidence Interval	
Model	*B*	*SE*	*CR*	Lower	Upper
(Constant)	7.832	.557	14.052	6.736	8.928
Total EI Construct	.042	.004	9.486	.034	.051

$p < .05$; $R = .391$; $R^2 = .153$

The overall construct of academic self-efficacy and emotional intelligence of students in Colleges of Education was ascertained using path analysis. From Table 24, emotional intelligence explained 15.3% of the variance in academic self-efficacy. The effect further discovered that emotional intelligence was a forecaster of academic self-efficacy of students, [b = .042, Boot95%CI (.034, .051)]. The result (B = .042) implies that

emotional intelligence positively predicted the academic self-efficacy of students in Colleges of Education in Ghana.

Research Hypothesis 3

H_0: Academic self-efficacy will not predict the locus of control of students in Colleges of Education in Ghana.

H1: Academic self-efficacy will predict the locus of control of students in Colleges of Education in Ghana.

The hypothesis sought to determine whether academic self-efficacy predicted locus of control of students in Colleges of Education. The Structural Equation Model (SEM) path analysis with bias-corrected accelerated confidence intervals and 5000 bootstrap samples were used. The exogenous variable was academic self-efficacy while the criterion variable was locus of control. Both of the variables were measured on a continuous basis. This section is in two parts. The first part looks at the sub-dimensions of academic self-efficacy (Grades, Verbalising, Studying, and Attendance), and the sub-dimensions of locus of control (Powerful others, Chance and Internal) and the second part also looks at the total construct of locus of control and academic self-efficacy. Information of the results are shown in Figure 14 and Table 25.

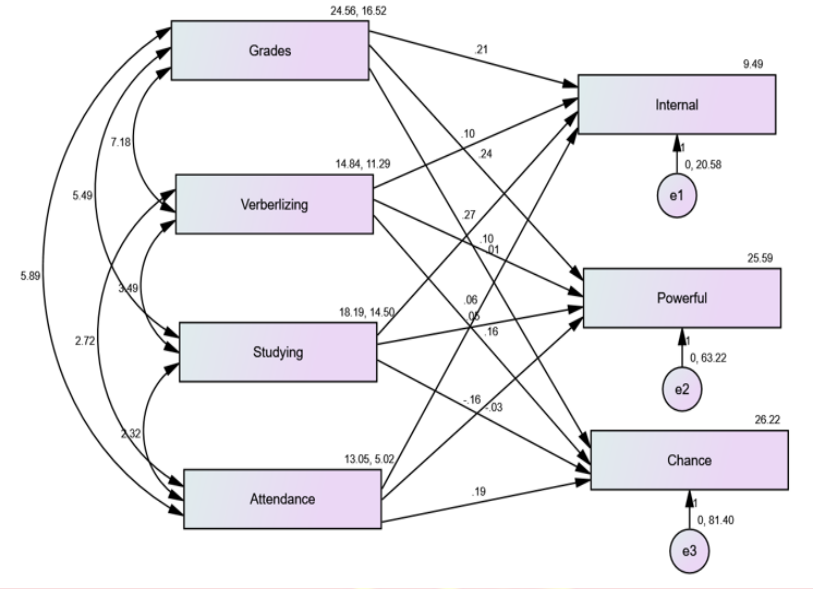

Figure 14: Path model for sub-dimensions of Academic Self-Efficacy and Locus of Control

As presented in the SEM path analysis (Figure 14), all the exogenous variables of academic self-efficacy (Grades, Verbalising, Studying and Attendance) indirectly predicted locus of control (Chance, Powerful others and Internal). Table 25 shows the significance of the path model.

Table 25: SEM Model for sub-dimensions of Academic Self-Efficacy and Locus of Control

Dependent		Parameter	Estimate	S.E	C.R	*P*
Internal	<---	Grades	.213	.073	2.915	.004
Powerful	<---	Grades	.244	.128	1.905	.057
Chance	<---	Grades	-.007	.145	-.045	.964
Internal	<---	Verberlizing	.104	.072	1.454	.146
Powerful	<---	Verberlizing	.096	.125	.766	.444
Chance	<---	Verberlizing	.155	.142	1.090	.276
Internal	<---	Studying	.269	.057	4.672	000
Powerful	<---	Studying	.046	.101	.452	.651
Chance	<---	Studying	-.035	.114	-.305	.761
Internal	<---	Attendance	.060	.119	.503	.615
Powerful	<---	Attendance	-.158	.209	-.755	.450
Chance	<---	Attendance	.185	.237	.781	.435

NOTE: [a]R-squared = .139 (Adjusted R-squared = .133). [b]R-squared = .018 (Adjusted R-squared = .010). [c]R-squared = .006 (Adjusted R-squared = -.002).

From Table 25, the results revealed that, using internal, powerful others and chance as a criterion variable, grades predicted internal ([*b* = .213; *S.E* = .073; *p* = .004]). However, grades was not found to be a predictor of powerful others ([*b* = .244; *S.E* = .128; *p* = .057]), and chance ([*b* = -.007; *S.E* = .145; *p* = .964]). Using internal, powerful others and chance as a criterion variable, verbalising was not found to be a predictor of internal ([*b* = .104; *S.E* = .072; *p* = .146]), powerful others ([*b* = .096; *S.E* = .125; *p* = .444]), and chance ([*b* = .155; *S.E* = .142; *p* = .279]).

Using internal, powerful others and chance as a criterion variable, studying predicted internal ([*b* = .269; *S.E* = .057; *p* = .000]). However, studying was not found to be a predictor of powerful others ([*b* = .046; *S.E* = .101; *p* = .651]), and chance ([*b* = -.035; *S.E* = .114; *p* = .761]). The results further revealed that with the criterion variable (internal, powerful others and chance), attendance was not found as a predictor of internal ([*b* = .060; *S.E* = .119; *p* = .615]), powerful others ([*b* = -.159; *S.E* = .209; *p* = .450]), and chance ([*b* = .185; *S.E* = .237; *p* = .435]).

The results above revealed that some of the sub-dimensions of educational self-efficacy predicted some of the sub-dimensions of locus of control. On the order hand, some of the sub-dimensions of educational self-efficacy were not found to be predictors of some of the sub-dimensions of educational self-efficacy. Hence, the study further proceeded to examine the total construct of locus of control and academic self-efficacy to see the direction of the prediction. The results are given in Figure 15 and Table 26.

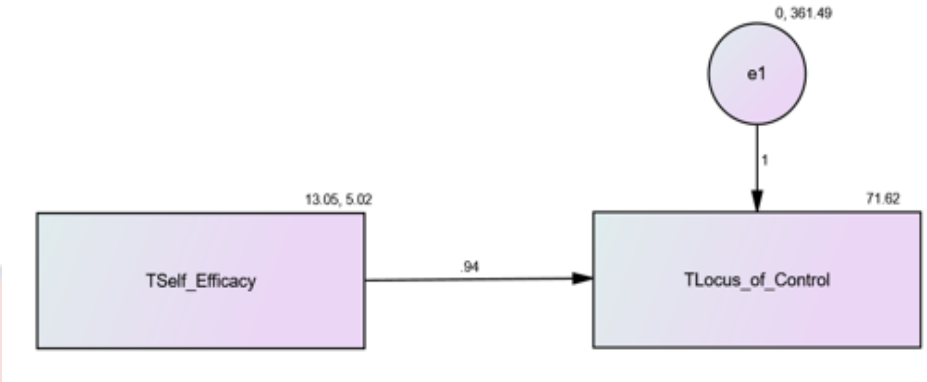

Figure 15: Path model of Academic Self-Efficacy and Locus of Control

From Figure 15, academic self-efficacy predicted locus of control by .94 with a mean and error variance of (13.05, 5.02) and an intercept of 71.62 for locus of control. Table 26 shows the significance of the path model.

Table 26: Regression Model for Academic Self-Efficacy (ASE) and Locus of Control

				95% Confidence Interval	
Model	*B*	*SE*	*CR*	Lower	Upper
(Constant)	71.617	5.030	14.237	61.724	81.511
Total ASE Construct	.938	.380	2.468	.191	1.685

$p < .05$; $R = .110$; $R^2 = .012$

The overall construct of locus of control and academic self-efficacy of students in Colleges of Education was determined using path analysis. From Table 26, academic self-efficacy explained 1.2% of the variance in the locus of control. The results disclosed that educational self-efficacy was found to be a predictor of the locus of control of the students, [b = .938, Boot95%CI (.191, 1.685)]. The result (B = .938) implies that educational self-efficacy positively predicted the locus of control of students in Colleges of Education in Ghana.

Research Hypothesis 4

H_0: There is no statistically significant difference between the academic self-efficacy of male and female students of the College of Education in Ghana.

H1: There is a statistically significant difference between the academic self-efficacy of male and female students of the College of Education in Ghana.

This hypothesis wanted to examine the difference connecting the academic self-efficacy of female and male students of the College of Education. An independent sample t-test was used to test this hypothesis. Table 27 shows the descriptive statistics of mean scores for the self-reported academic self-efficacy between female and male students.

Table 27: Frequency, the mean, and standard deviation of academic self-efficacy by sex

Variable	Gender	N	*M*	*SD*
Self-Efficacy	Male	292	13.10	2.32
Construct	Female	208	12.97	2.14

Source: Field survey, 2021

Table 27 displays the frequencies, means and standard deviations of the self-reported total academic self-efficacy construct between male and female students of the College of Education. To test if these disparities in means are statistically significant, an independent sample t-test was run and the results are presented in Table 28.

Using Leven's test for equality of variation, Table 28 reveals the equality of variances test that was not significant for academic self-efficacy (p = .89), therefore the premise of homogeneity of variances has been met. The effect of the t-test indicated no statistically significant difference connecting the academic self-efficacy construct of males (M = 13.10; SD = 2.32) and

females (M = 12.97; SD = 2.14; t(.670) = .498, p = .503). Thus, the study failed to reject the null hypothesis which expressed that there is no difference between the academic self-efficacy of female and male students of the College of Education.

Table 28: Academic Self-Efficacy and Sex of College of Education students

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total Self-Efficacy	Equal variances assumed	.018	.894	.670	.498	.503	.13639	.20352	-.26347	.53626
	Equal variances not assumed			.679	466.229	.497	.13639	.20078	-.25815	.53094

Source: Field survey, 20

Research Hypothesis 5

H_0: Emotional Intelligence will not moderate the relationship between academic self-efficacy and academic achievement of students in Colleges of Education in Ghana.

H1: Emotional Intelligence will moderate the relationship between academic self-efficacy and academic achievement of students in Colleges of Education in Ghana.

The study looked at the moderating role of emotional intelligence in the link connecting academic self-efficacy and academic achievement. An examination of two-way interaction-moderation (moderated moderation) analysis was carried out to see if a third variable (i.e., Emotional Intelligence) could increase or lessen the link connecting a predictor (i.e., academic self-efficacy) and an outcome variable (i.e., educational achievement). The moderators were ("Self-Management" [SeMa], "Relationship-Management" [ReMa], "Social-Awareness" [SoAw] and "Self-Awareness" [SeAw]). The predictor was academic self-efficacy and the reference was an academic achievement. The analysis employed 5000 bootstrap samples by using a 95% confidence interval. The analysis highlighted six different models. In the first four models, single moderators were used (i.e., [SeMa], [ReMa], [SoAw], [SeAw]). The last two had double moderators (i.e., [SeMa_ReMa]; and [SoAw_SeAw]. Details are shown in Table 29.

Table 29: Model Summary

Model	R	R-Square	F	df1	df2	P
1	.0958	.0092	1.5300	3.0000	496.0000	.2058
2	.0606	.0037	.6094	3.0000	496.0000	.6091
3	.1989	.0395	6.8075	3.0000	496.0000	.0002*
4	.0738	.0055	.9064	3.0000	496.0000	.4378
5	.0744	.0055	.9196	3.0000	496.0000	4311
6	.1807	.0326	5.5799	3.0000	496.0000	.0009*

*Significant, $p < 0.05$.

Table 29 depicts the results of four distinct models. In Model 1, the coefficient of determination (R^2) was .0092, explaining merely 0.92% of the variance in students' self-reported academic achievement. Even so, this model was deemed statistically nonsignificant, as indicated by $F(3, 496) = 1.5300$, $p = .205$. Similarly, Model 2 yielded nonsignificant results, with $F(3, 496) = .6094$, $p = .609$, and an R^2 of 0.37%, accounting for the variance in academic achievement. Conversely, Model 3 displayed a slightly higher R^2 value of .0395, explaining 3.95% of the variance in educational achievement. This model was statistically significant, as evidenced by $F(3, 496) = 6.8075$, $p = .0002$. Finally, Model 4 yielded nonsignificant results, with $F(3, 469) = .9064$, $p = .437$, and an R^2 of 0.55%. Model 5 exhibited nonsignificant results, with $F(3, 469) = .9196$, $p = .431$, indicating an R^2 value of 0.55%, explaining the variance in students' self-reported academic achievement. The ultimate model, however, demonstrated an R^2 of 3.26%, accounting for the variance in academic achievement. This final model yielded statistically significant outcomes, as evidenced by $F(3, 469) = 5.5799$, $p = .0009$. Further details are provided in Table 30.

Table 30: Moderating Role of Emotional Intelligence in the link between Academic Self-Efficacy and Academic Achievement

Model	Variable	B	SE	t-value	p-value	BootLL	BootUL
1	(Constant)	293.1364	16.3469	17.9322	.0000	261.0186	325.2542
	ASE	-1.1431	1.3572	-.8423	.4000	-3.8096	1.5234
	SeMa	-.7671	.7161	-1.0712	.2846	-2.1741	.6399
	ASE*SeMa	.0394	.0570	.6917	.4895	-.0725	.1513
2	(Constant)	285.1084	19.2121	14.8401	.0000	247.3614	322.8554
	ASE	-.9124	1.5756	-.5791	.5628	-4.0080	2.1832
	ReMa	-.1709	.4503	-.3795	.7045	-1.0555	.7137
	ASE*ReMa	.0110	.0353	.3124	.7048	-.0583	.0804
3	(Constant)	294.5005	13.9010	21.1856	.0000	267.1885	321.8126
	ASE	-2.4062	1.0509	-2.2896	.0225	-4.4710	-.3414
	SoAw	-.7103	.6200	-1.1456	.2525	-1.9283	.5079
	ASE*SoAw	.0850	.0465	1.8284	.0681	-.0063	.1763
4	(Constant)	297.2608	21.1391	14.0621	.0000	255.7274	338.7841
	ASE	-1.7687	1.6451	-1.0751	.2828	-5.0010	1.4635
	SeAw	-.7515	.8024	-.9365	.3495	-2.3281	.8251
	ASE*SeAw	.0511	.0613	.8331	.4052	-.0694	.1715
5	(Constant)	281.6117	11.7562	23.9544	.0000	258.5136	304.7097
	ASE	-.4980	.9781	-.5092	.6109	-2.4197	1.4237
	SeMa_ReMa	-.0052	.0112	-.4641	.6428	-.0273	.0169
	ASE*SeMa_ReMa	.0002	.0009	.2344	.8148	-.0015	.0019
6	(Constant)	298.4435	11.1359	26.8002	.0000	276.5642	320.3228
	ASE	-2.4912	.8534	-2.9191	.0037	-4.1680	-.8145
	SoAw_SeAw	-.0332	.0184	-1.8058	.0716	-.0692	.0029
	ASE*SoAw_SeAw	.0033	.0014	2.3670	.0183	.0006	.0060

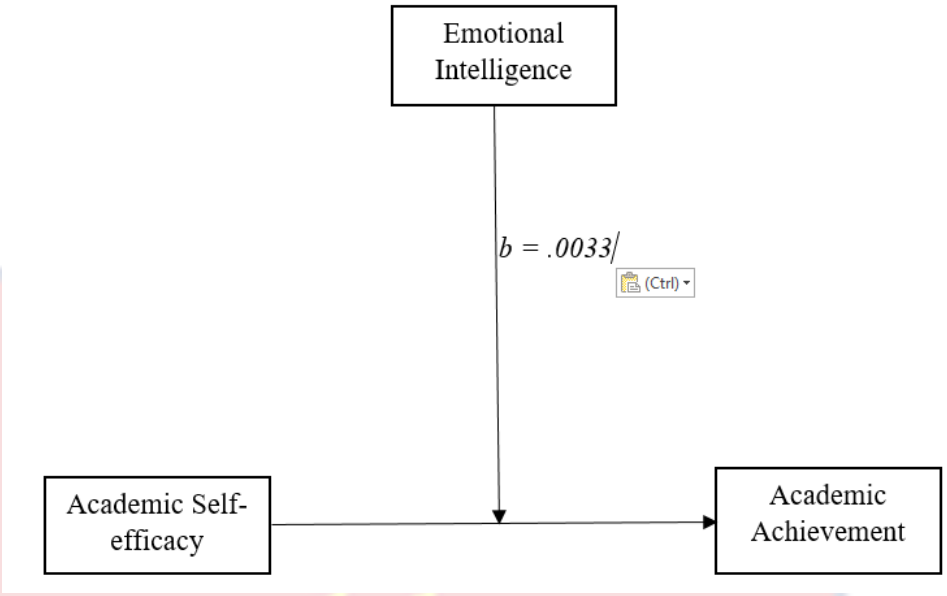

Figure 16: Statistical model results using model 1 of PROCESS Macro

Table 30 gives on the moderating role of emotional intelligence in the link connecting academic achievement and academic self-efficacy of students. Figure 16 also shows the diagrammatical presentation of the statistical model. In model 1, self-management [SeMa] was not a moderator connecting academic self-efficacy and educational achievement (b = .0394; SE = .0570; t = .6917; p = .4895, Boot95%CI (-.0725, .1513). Similarly, relationship management [ReMa] was not found as a moderator between academic self-efficacy and academic achievement (b = .0110; SE = .0353; t = .3124; p = .7048, Boot95%CI (-.0583, .0804). In model 3, social awareness [SoAw] was not found as a moderator connecting academic self-efficacy and academic achievement (b = .0850; SE = .0465; t = 1.8284; p = .0681, Boot95%CI (-.0063, .1763). In model 4 self-awareness [SeAw] was not found as a moderator connecting academic self-efficacy and educational achievement (b = .0511; SE = .0613; t = .8331; p = .4052, Boot95%CI (-.0694, .1715). In model 5, self-management and relationship management [SeMa_ReMa] was

not found to be a moderator connecting academic self-efficacy and academic achievement (b = .0002; SE = .0009; t = .2344; p = .8148, Boot95%CI (-.0015, .0019). However, the final model 5, social awareness and self awareness [SoAw_SeAw], were found to be a moderator connecting academic self-efficacy and academic achievement (b = .0033; SE = .0014; t = 2.3670; p = .0183, Boot95%CI (.0006, .0060). The result implies that emotional intelligence moderated the link connecting academic self-efficacy and academic achievement of students in Colleges of Education in Ghana. Therefore, the study rejected the null hypothesis in approval of the alternative hypothesis.

Research Hypothesis 6

H_0: Sex will not moderate the relationship between emotional intelligence and academic achievement of students in Colleges of Education in Ghana.

H1: Sex will moderate the relationship between emotional intelligence and academic achievement of students in Colleges of Education in Ghana.

The hypothesis intended to investigate the moderating influence of gender on the relationship connecting emotional intelligence and educational achievement among students in Ghanaian Colleges of Education. Four distinct models were analyzed, each incorporating a sole moderator (Sex) to moderate the association between emotional intelligence sub-dimensions and academic achievement. The hypothesis was evaluated employing the moderation model of PROCESS by Hayes (2018), utilizing 5000 bootstrap samples and 95% bootstrap confidence intervals. Detailed outcome are outlined in Tables 31 and 32.

Table 31: Model Summary

Model	R	R-Square	F	df1	df2	P
1	.1534	.0235	2.9833	3.0000	496.0000	.0080*
2	.1337	.0179	3.0074	3.0000	496.0000	.0300*
3	.3058	.0935	17.0552	3.0000	496.0000	.0000*
4	.1252	.0157	2.6333	3.0000	496.0000	.0493*

*Significant, $p < 0.05$.

In model 1 of Table 31, the R^2 value was .0235, explaining 2.35% of the variability in students' self-reported academic achievement. The model exhibited a statistically significant outcome, with $F(3, 496) = 2.9833$, $p = .008$. Moving to model 2, the findings were also significant, $F(3, 496) = 3.0074$, $p = .030$, with an R^2 value of 1.79%, elucidating the variance in self-reported academic achievement. Model 3 demonstrated an R^2 value of .0935, indicating 9.35% of the variance in students' self-reported academic achievement, and yielded a significant result, $F(3, 496) = 17.0552$, $p = .0000$. Regarding model 4, the results were significant, $F(3, 469) = .0157$, $p = .0493$), with an R^2 value accounting for 1.57% of the variance in students' self-reported academic achievement. Noteworthy findings are represented in Table 33.

Table 32: Moderating Role of Sex in the Relationship between Emotional Intelligence and Academic Achievement

Model	Variable	B	SE	t-value	p-value	BootLL	BootUL
1	(Constant)	296.4497	14.2323	20.8294	.0000	268.4867	324.4127
	SeMa	-.6870	.5466	-1.2569	.2094	-1.7610	.3869
	Sex	-9.9003	8.7590	-1.1303	.2589	-27.1096	7.3089
	SeMa*Sex	.1954	.3404	.5740	.5662	-.4733	.8641
2	(Constant)	299.7355	.15.2882	19.6057	.0000	269.6978	329.7731
	ReMa	-.4324	.3079	-1.4044	.1608	-1.0374	.1726
	Sex	-14.7659	9.5028	-1.5538	.1209	-33.4367	3.9049
	ReMa*Sex	.2075	.1941	1.0692	.2855	-.1738	.5888
3	(Constant)	243.7153	7.7206	31.5669	.0000	228.5462	258.8844
	SoAw	1.7904	.3315	5.4017	.0000*	1.1392	2.4417
	Sex	13.4528	6.0909	2.2087	.0277	1.4856	25.4200
	SoAw*Sex	-.9189	.2415	-3.8041	.0002*	-1.3934	-.4443
4	(Constant)	285.6034	13.2882	21.4931	.0000	259.4954	311.7114
	SeAw	-.2496	.4665	-.5351	.5928	-1.1661	.6669
	Sex	-5.9564	8.2971	-.7179	.4732	-22.2583	10.3455
	SeAw*Sex	.0443	.2951	.1500	.8808	-.5356	.6241

*Significant, $p < 0.05$.

Table 32 gives results on the moderating role of sex in the link connecting emotional intelligence and the educational achievement of the students. In model 1, sex was not found as a moderator connecting self-management [SeMa] and academic achievement (b = .1954; SE = .3404; t = .5740; p = .5662, Boot95%CI (-.4733, .8641). Likewise, sex was not found as a moderator linking relationship management [ReMa] and academic achievement (b = .2075; SE = .1941; t = 1.0692; p = .2855, Boot95%CI (-.1738, .5888). Yet, in model 3, sex was found as a moderator connecting social awareness [SoAw] and academic achievement (b = -.9189; SE = .2415; t = -3.8041; p = .0002, Boot95%CI (-1.3934, -.4443). In model 4, sex was not found as a moderator connecting self-awareness [SeAw] and academic achievement (b = .0443; SE = .2951; t = .1500; p = .8808, Boot95%CI (-.5356, .6241).

The meaning of the result is that sex was a moderator connecting and academic achievement and emotional intelligence of students in Colleges of Education in Ghana. Since sex was a significant moderator in the link between academic achievement and emotional intelligence, the study proceeded to do further probing and the results are illustrated in Figure 17.

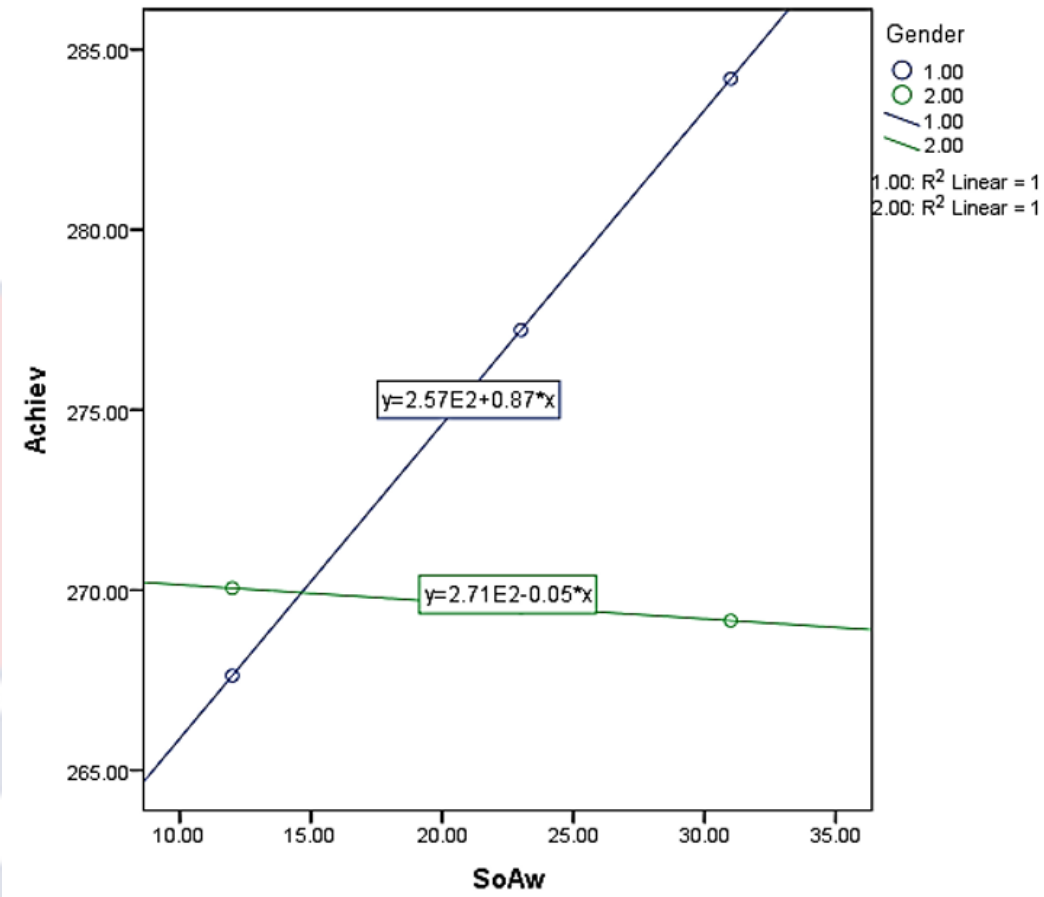

Figure 17: Sex in the link between Social Awareness (SoAw) and Academic Achievement

As presented in Figure 17, the link connecting social awareness (SoAw) and academic achievement was positive for males and negative for females. This shows that, on one hand, as the social awareness [SoAw] level of males increased from 12 to 32, their achievement also increased from 265 to 285.2 On the other hand, as the social awareness [SoAw] level of females increased from 12 to 32, their achievement decreased from 270.1 to 265.9 These results generally mean that as male students became more social awareness [SoAw], their achievement was enhanced. Female students, however, experienced a decline in achievement as they became more socially aware [SoAw]. The implication is that sex significantly moderated the link

between the academic achievement and emotional intelligence of students. The statistical model is given in Figure 18.

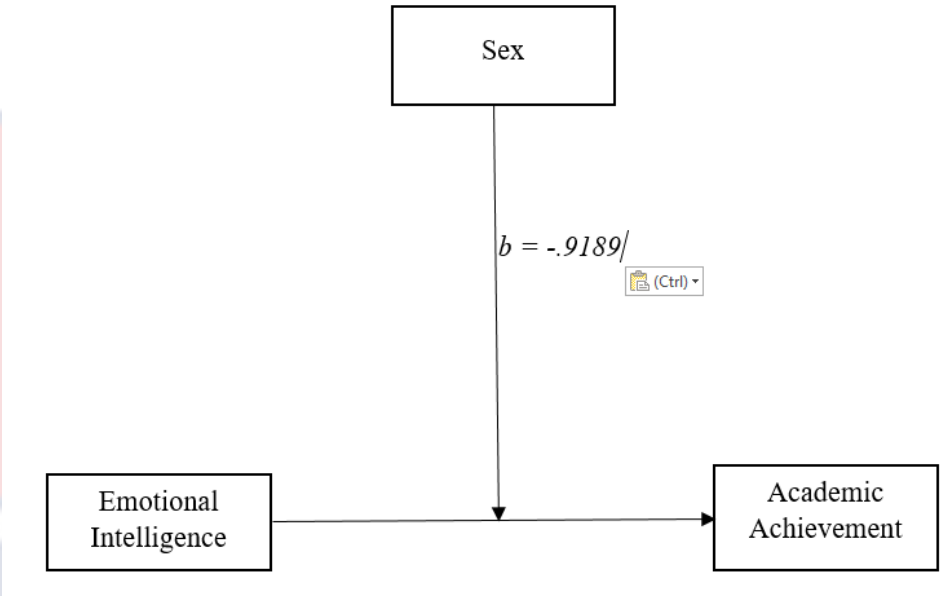

Figure 18: Statistical model results using model 1 of PROCESS Macro

Research Hypothesis 7

H_0: Sex will not moderate the relationship between locus of control and academic achievement of students in Colleges of Education in Ghana.

H1: Sex will moderate the relationship between locus of control and academic achievement of students in Colleges of Education in Ghana.

The hypothesis examined the moderating role of sex in the relationship connecting locus of control and academic achievement of students in Colleges of Education in Ghana. Moderation analysis was done to find out if a third variable (i.e., Sex) could fortify or weaken the relationship between the predictor (i.e., locus of control) and a finish variable (i.e., academic achievement). The moderator variable was sex. The predictor was the locus of control and the criterion was an educational achievement. The analysis

employed 5000 bootstrap samples by using a 95% confidence interval. Details are shown in Tables 33 and 34.

Table 33: Model Summary

Model	R	R-Square	F	df1	df2	P
1	.1223	.0150	2.5103	3.0000	496.0000	.0580
2	.1228	.0151	2.5305	3.0000	496.0000	.0565
3	.1336	.0179	3.0049	3.0000	496.0000	.0301*

*Significant, $p < 0.05$.

In model 1 of Table 33, the R^2 value was .0150 which stood for 1.5% of the variance in the self-reported educational achievement of the students. Model 1 was not significant, $F(3, 496) = 2.5103$, $p = .058$. In model 2, the effects were not significant $F(3,496) = 2.5305$, $p = .056$ and the R^2 accounted for 1.51% of the variance in the self-reported educational achievement of the students. The R^2 value in the final model 3 was .0179 which accounted for 1.79% of the variance in the self-reported academic achievement of the students. Model 3 revealed a significant result, $F(3, 496) = 3.0049$, $p = .030$.

Table 34: Moderating Role of Sex in the Relationship between Locus of Control and Academic Achievement

Model	Variable	B	SE	t-value	p-value	BootLL	BootUL
1	(Constant)	265.6699	12.3813	21.4573	.0000	241.3436	289.9962
	Internal	.5762	.5484	1.0507	.2939	-.5013	1.6536
	Sex	4.1905	8.1034	.5171	.6053	-11.7308	20.1118
	Internal*Sex	-.3964	.3622	-1.0943	.2744	-1.1080	.3153
2	(Constant)	281.8616	10.7261	26.2782	.0000	260.7875	302.9358
	Powerful Others	-.1128	.3272	-.3449	.7304	-.7556	.5300
	Sex	-4.2056	7.5922	-.5539	.5799	-19.1225	10.7112
	Powerful*Sex	-.0072	.2318	.0309	.9754	-.4625	.4482
3	(Constant)	283.5795	9.1476	31.0004	.0000	265.6066	301.5523
	Chance	-.1741	.2903	-.5995	.5491	-.7445	.3964
	Sex	-4.8390	6.2865	-.7697	.4418	-17.1905	7.5125
	Chance*Sex	.0121	.2002	.0605	.9518	-.3812	.4054

p>0.05

Table 34 shows results on the moderating role of sex in the link connecting locus of control and academic achievement of the students. In model 1, sex was not found as a moderator connecting internal and academic achievement (b = -.3964; SE = .3622; t = -1.0943; p = .2744, Boot95%CI (-1.1080, .3153). Likewise, sex was not instituted as a moderator connecting powerful others and academic achievement (b = -.0072; SE = .2318; t = .0309; p = .9754, Boot95%CI (-.4625, .4482). Ultimately, in model 3, sex was not found as a significant moderator connecting chance and academic achievement (b = .0121; SE = .2002; t = .0605; p = .9518, Boot95%CI (-.3812, .4054). The meaning of the result is that sex was not a moderator connecting locus of control and academic achievement of students in Colleges of Education in Ghana. The statistical model is shown in Figure 19:

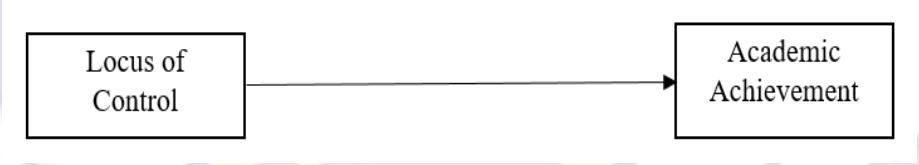

Figure 19: Statistical model results using model 1 of PROCESS Macro

Discussion

Levels of Emotional Intelligence

The study revealed that students had greater levels of emotional intelligence. The connection between Goleman's (1995) ideas and the results indicating higher emotional intelligence in students suggests that these students may possess better skills in managing their emotions, communicating effectively with others, and navigating social situations. This could potentially lead to various positive result such as improved academic performance, better relationships with peers and teachers, and overall well-being. The result is amazing because as students of the College of Education, it was anticipated

that students will score high on the emotional intelligence measure as one needs to demonstrate a higher level of academic achievement before getting admission into the College of Education. The hightened levels of EI that were reported in this current study can aid effectiveness in a working environment as suggested by Mophel (2012). This suggests that the majority of the College of Education students can recognize the sentiments of others, identify their own sentiments and probably use them for their benefit in a given context. This assertion finds reinforcement in the work of Salovey and Mayer (1990), who posited that individuals endowed with heightened emotional intelligence exhibit proficiency in appraising and managing their own emotions as well as those of others, leveraging this capacity to influence others' cognition and behavior. Consequently, individuals with elevated emotional intelligence are adept at recognizing and regulating their emotional states, thereby fostering a deeper understanding of their emotional experiences and enhancing their ability to navigate them effectively.

Levels of Academic Self-Efficacy

The study found that College of Education students fall within the great levels of academic self-efficacy. The connection between Bandura's (1977) theory and the results indicating hightened efficacy among these students suggests that they likely have efficacy in their academic abilities. This belief in their capability to succeed academically can influence various aspects of their behavior, such as their motivation to study, their persistence in overcoming challenges, and their overall academic achievement. This result affirms the statement made by Pajares (2002) who stated that higher academic self-efficacy will have the capability to do the things that he or she tries to do.

What students know, the knowledge or skills, or the achievements they have previously accomplished are often predictions of subsequent accomplishment because the beliefs that they hold about the outcomes of their efforts powerfully influence how they will behave (Pajares, 2002). This suggests that College of Education students with higher levels of efficacy will face academic challenges in the school environment. Students with hightened efficiency will also be able to complete school activities such as completing term papers, meeting task deadlines, passing examinations and others.

Results backing the discoveries by Sharon and Vialle (1998) who found that confident students take control over their own learning experience and are more apt to participate in classroom learning. Also, students reporting low academic self-efficacy typically shied away from academic interaction and isolated themselves in their studies. Collins (1982) declared that students with heightened efficacacious solve complications and also redo more problems than students of the same ability who have low effectiveness. Students sometimes execute poorly not because they lack the skills but because they lack perceived efficacacious.

Emotional Intelligence and Academic Achievement

The investigation into the academic achievement and EI of students was warranted as there is a need for empirical evidence in this regard. Invariably, it was demonstrated by respondents that connection amid EI and the accomplishment of students. The link between Goleman's (1995) theory and this result suggests that students with hightened EI are likely to experience greater achievement in their academic endeavors. This is evident in other studies and is attested to in other parts of the world (Cazan & Năstasă, 2015;

Trevino, 2014; Vela, 2003). Although this positive relation was not significant it attests to the possibility that the academic achievement of is being affected by other variables which require further research. The assertion that EI plays a crucial role in educational endeavour as found in previous research is also evident in this study (Ranjbar, Khademi, Areshtanab, 2017; Fallahzadeh, 2011; Vernon et al., 2008; Farnia, 2012). This finding is supported by previous research which mentioned positive relations between educational attainment and EI although the predictiveness of EI was not established in this study as in others (Shah et. al., 2014; Hashemi, Khezri, Abbasi, Hemmati & Hashemi, 2014). Maybe the results may stem from the notion that any student who gets the opportunity to be admitted into the College of Education in Ghana deems it a priority to pass out no matter what happened. This is because the profession comes with high prestige in Ghanaian society. It is also associated with entry to the teaching field after school and it appears that relatively people with a family relative in the teaching profession who have good standing usually get the opportunity to attend the College of Education. Consequently, either individual is there to maintain the standard set by the family while others do get there with passion.

However, the assertion of positive relations has been challenged by other studies which suggest little or no link amid academic achievement and emotional intelligence among students (Johnson, 2008; Parker et. al., 2004; Suliman, 2010). The assertion of no relationship disagrees with the outcomes of this study. This could indicate the intervention of certain variables which aid in the stabilization of emotions hence no relationship was seen in t hose studies. It could be cultural specifics and formal social support services such

as guidance and counselling services, and psychological and psychotherapeutic assistance among others. This suggests that other variables such as self-esteem, birth order, financial status and economic status of students could also account for the achievement of College of Education students in Ghanaian tertiary institutions.

Academic Self-Efficacy and Academic Achievement

The results revealed that academic self-efficacy negatively predicted academic achievement of students. Bandura's (1977) theory assumes that individuals have an accurate perception of their capabilities. If students overestimate their academic self-efficacy, they may not adequately prepare for academic tasks, leading to lower achievement despite their efficacy. The current study results contradict prior research that found a link amid efficacy and academic accomplishment among students (Al-Harthy & Was, 2013; Khan, 2013; Turner, Chandler & Heffer, 2009; Williams & Williams, 2010). Alyami et al. (2017) also indicated that educational self-efficacy was linked to attainment. This could be a result of the practices used in their system. They are largely Western-based studies in which human rights, particularly the rights of children, are held in high regard. The same cannot be true for African countries, particularly Ghana where several cultural traditions directly contradict some children's rights issues (Mubangizi, 2012). Again, the above results could stem from the fact that academic institutions demand a lot from their students. These students can be overburdened with academic tasks that they are unable to fulfil. In a semester, students are required to read seven to eight courses. Apart from that, students must finish their projects and assignments within the same semester. This may limit students' ability to

accomplish all the academic tasks given to them which may influence their academic achievement.

The outcome of the present investigation aligns with prior research that similarly failed to discover a connection amid educational self-efficacy and educational attainment (Reynolds & Weigand, 2010; Eghbal & Sima, 2014; Pintrich & De Groot, 1990). This could be that, in the Ghanaian context, children are expected to usually comply with the wish of parents and guardians without much hesitation even though in some situations the decision may not be the ultimate will of the child. This is evident, especially in the career choice of students predominantly in the transition period which begins from Junior High School. Therefore, the individual is expected to perform to his or her best capability even though the educational choice is an imposed one hence this result. That is to say, students who aim at studying to get good grades to please the will of parents/guardians will continue to attend classes to help demonstrate the mastery of content through verbalizing to affirm their commitment to achieving that educational goal. This assertion is supported by (Hashemi, Khezri, Abbasi, Hemmati & Hashemi, 2014; Adelodun & Asiru, 2015) who postulated that students whose major aim is to achieve their educational goals will demonstrate high commitment to the educational enterprise by showing mastery of content, regular attendance of classes, seeking to understand what is being taught by asking questions and to get better grades.

Locus of Control and Academic Achievement

The results of this study agree with previous studies which state that locus did not influence students' educational attainment (Abdulkadir, 2018;

Ibeawuchi & Iruloh, 2017; Landine & Stewart, 1998). Rotter (1995) theory of locus of control is affiliated to this results as he suggested that people with external locus their lives are being controlled by outer factors where they do not see their own effort in situations and this can negatively affect their achievement. For instance, Ross and Broh (2000) conducted a study on the link between locus and the educational attainment of students. The results disclosed that locus of control had no meaningful effect on educational achievement.

In contrast to the results obtained in this research, previous studies conducted by Crandall,Crandall, and Katvosky (1965), Hjelle (1970), and Messer (1972) highlighted the locus as impact on students' educational attainment. These studies indicated that individuals with an internal locus tended to exhibit finer academic outcomes compared to those with an outer locus (Stipek & Hoffman, 1980). Masqud (1993) who looked at 7th-grade pupils in Botswana indicated that internality has a favourable link with educational attainment than students with an outer locus. It could be inferred from the results that individuals with an internal locus of control accomplish more academically than individuals with an outer locus of control. For example, an internal student, who studies hard and does well on a test, will assign the success to his or her efforts or actions. This student will then proceed to study hard because the prospect to succeed in the future is established. Moreover, the individual feels a positive emotional response of pride for success, which strengthens the expectation and motivation. On the other, external students could study and do well on a test but will believe the success is due to an simple test or luck or a variety of other factors. This

student does not assign success to his or her effort and so may not regularly study.

Emotional Intelligence and Academic Self-Efficacy

Goleman (1995) model of EI relates to the current results in that students with greater levels of EI may have a better understanding of their own strengths, emotions, and weaknesses. The results are in line with studies by Nikoopour, Farsani, Tajbakhsh, and Kiyaie (2012) who examine the link connecting EI and educational efficacacious. Their results revealed that EI was found to be a predictor of students' academic self-efficacy. It could be inferred that students with well-developed EI will have the ability and capacity to complete academic tasks in the school environment. The collection of this study align with the research done by Alasmee, Alsulami, and Barabbud (2022) and Aziz, Sulaiman, and Razak (2020), whose findings revealed a connection between students' efficiency and EI. Enhancing an individual's academic self-efficacy fosters self-awareness regulation, which plays a crucial role in emotional development. These findings are consistent with Bandura's (1997) proposition that self-awareness contributes to the establishment of strong efficiency beliefs, as academic self-efficacy underscores the value of self-awareness and self-regulation in shaping individuals' efficacy beliefs.

The study results contradicted the study by Matthews (2012) who looked at the union between teachers' educational efficacious and EI. The main conclusions of the study indicated that there is no correlation between teachers' EI and educational efficacious. It should be noted that the study looked at teachers' efficacy and emotional intelligence in completing their daily school activities which resulted in a low relationship between the two

variables. However, this current study looked at how emotional intelligence could predict the academic achievement of students in Colleges of Education.

Academic Self-Efficacy and Locus of Control

They believe that their efforts, skills, and strategies can lead to success, aligning with an inner locus of control. Conversely, students with low academic self-efficacy may perceive academic achievement or failure as being largely determined by outside factors, such as luck or external circumstances, aligning with an outer locus of control. The study outcome are in line with the study done by Severino, Aiello, Cascio, Ficarra, and Messina (2011) who discovered a strong correlation between locus of control and academic self-efficacy. Thus, higher academic self-efficacy is linked to resilience and the ability to bounce back from obstacles, and the capacity to exercise some control over situations that influence students' academic lives. The study supported the study conducted by Malikeh (2015), Onkundi (2014) and Ashagi and Beheshtifar (2015) who revealed that educational self-efficacy beliefs and internal locus of control were directly related, however, the external locus of control and academic self-efficacy were not meaningfully related. This could mean that the more the students perceived themselves as more efficient in overcoming the difficulties with academic tasks and making decisions on what to do in an academic context, the more students believed to have under their control the circumstances of their life.

Sex and Academic Self-Efficacy

The results contradicted the study by Ochieng (2015) who did a study to determine sex variations in the efficacy of secondary school students. Three hundred and ninety (390) secondary school students were used in the study.

The outcome revealed sex differences in self-efficacy with male students having greater academic self-efficacy than their female colleagues. The study results also contradict the study by Kumar and Lal (2006) who looked at sex differences in self-efficacy among students. The results revealed gender differences as female students scored higher than their male equivalent.

Further, the study results contradicted the study by Khan, Canseveret, Avsar and Acemoglu (2013) who discovered a variation amid the gender with males having hightened educacational effectiviness than females. The explanation for this could be that the Ghanaian cultural environment promotes men to be louder than women which could stifle the development of self-esteem and efficacy. Typically, very talkative ladies are given a variety of labels that have a cognitive impact and may infiltrate the idea of self-worth which could result in the outcomes. This study's result is in line with those of Syed Ali, Che Hassan and Jani (2014) who revealed no significant differences in attitudes across genders when it comes to academic self-efficacy of Physical Education students. Similarly, Sawari and Mansor (2017) looked into how students' academic self-efficacy differed based on gender. Four hundred and eighty-nine students from four schools were surveyed. Information was quantitatively analysed using correlation. The results of the study established no gender disparities in academic self-efficacy. The study ended that academic self-efficacy was similar for both male and female learners.

Emotional Intelligence, Academic Self-Efficacy, and Academic Achievement

The study outcome revealed that EI moderated the link between academic self-efficacy and academic achievement. Goleman (1995) model of

EI is related to the current results as suggested that EI also encompasses the ability to set emotions and behaviors effectively. Hightened EI may be greater equipped to manage stress, anxiety, and distractions that could otherwise undermine their academic self-efficacy. By regulating their emotions and maintaining focus on academic tasks, they may bolster their belief in their ability to achieve academic achievement. Given EI competency, such as the capacity to control one's feelings, problem-solving abilities, "social awareness", "self-management", "self-awareness" and "relationship management skills", are significantly relevant to academic performance, this conclusion is readily explicable (Adeyemo, 2007).

According to Adeyemo (2007), students can use these abilities to combat the tension and anxiety that come with taking tests and examinations which will make them efficacious in completing the academic task for them to excel in the academic task. As indicated by Bar-On (2006), those who possess emotional intelligence are optimistic and goal-oriented which makes them competent to achieve success in the school environment. Bar-On (1997) categorized individuals with emotional intelligence as those exhibiting self-assurance, self- efficacy, and a proactive orientation toward maximizing their abilities, capacities, and talents. This characterization reinforces the conclusions drawn from the present study. Therefore, the empirical evidence obtained from this study validates Bar-On's observations.

The findings are consistent with Ream's (2010) proposition that effective regulation of emotions enables individuals to accurately attribute school-related case and objectively comprehend how feelings and attributions influence their feelings, thoughts, and expectations regarding future academic endeavors. Consequently, individuals are better equipped to cultivate

educational self-efficacy beliefs, thereby influencing their academic performance. In essence, emotional regulation significantly influences the cognitive processes underlying academic self-efficacy, as "unregulated emotions can disrupt the cognitive processing of information crucial for achievement" (Gundlach *et al.*, 2003, p. 234).

Sex, Emotional Intelligence, and Academic Achievement

The results of the examination is in line with Villarreal *et al.* (2017) who discovered variation in EI scores favours the male respondents as men scored higher than women in EI. The reason may be that male students managed their emotions and were more likely to have a positive perception of themselves regarding the accomplishment of their goals.

The results of the work contradicted with other examinations carried out by Ahmadi and Heydari (2011) and Myint and Aung (2016) who found no sex changes in EI. Similarly, this study's results contradicted the studies that have shown that women have more advanced emotional intelligence than men in their respective research works (Fernández-Pinto, Sorrel,Cabello, Extremera & Fernández-Berrocal, 2016; Meshkat & Nejati, 2017; Naghavi & Redzuan, 2011; Shaheen & Shaheen, 2016). Individual variations and societal expectations such as the belief that girls should be more emotionally expressive than boys could account for this, particularly in Asia and Africa. A man is expected to keep his emotions in check and refuses to express them, regardless of how terrible the situation is.

The disagreement in results might be attributed to a variety of factors. For example, Sparkman (2008) indicated that the discrepancy in results could be due to a choice of the instrument based on which the measurement instrument was derived. Again, cultural circumstances could play a role as it is

weird and difficult for a male to exhibit his feelings in collective cultures where as individualistic cultures allow for some emotional expression by males.

Sex, Locus of Control, and Academic Achievement

The outcome of the study are in line with the study conducted by Callaghan and Manstead (1983), who stated sex variations in educational attainment and locus of control. Females and males have various patterns of cause attributions for related attainment outcomes, according to the research. The results of the study confirmed the finding by Chalak and Nasri (2015) who looked into the link connecting locus of control and sex with a total of 100 pupils from various age groups to participate in the study. The tool employed was the Trice Academic locus of control questionnaire which identified the internal and outer locus of control. The study findings established no sex variation in the locus of control. Similarly, Hansford and Hattie (1982) who examine sex variation in locus of control of students. The results disclosed no difference in the locus of control between male and female students.

The current study did look at students in a society where sex equality is taking the place of gender roles. In today's society, it makes sense that both men and women are motivated and have different viewpoints on where the locus of control lies. If one were to adopt a feminist perspective, one might even surmise that, in order to make up for the old gender roles of the past, women today feel more in charge of their own destiny than do men.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Introduction

In this chapter, the conclusions, summary and recommendations of the study were highlighted. The summary highlighted the primary objective of the study and aspects of the methodology. The conclusions drawn from the findings of the study and finally, recommendations and areas for advance research were suggested in the chapter.

Overview of the Study

The purpose of the study was to examine emotional intelligence, academic self-efficacy, and locus of control as predictors of academic achievement of students in Colleges of Education in Ghana. The work was guided by two research questions and seven hypotheses. Descriptive survey design was used in the study with the quantitative approach which was anchored in the positivist paradigm. The study used a sample size of 500 respondents in the study. Multi technique namely purposive sampling procedure, proportionate sampling technique, and table of random numbers were used in the sampling process. An academic self-efficacy scale, emotional intelligence questionnaire and locus of control scale were used to gather data for the study. This instrument was validated using 150 Wesley College of Education students who were not part of the sample selection for the study. Simple frequencies and percentages were used to analyse the demographic variables of the study. Research questions 1 and 2, were analysed using means and standard deviation. Hypotheses one, two, and three were tested using a structural equation model while hypothesis four was tested using an

independent sample t-test. However, hypotheses five, six and seven were tested using PROCESS analysis.

Summary of Key Findings

1. The results of the study indicated higher levels of emotional intelligence of students.
2. The results further reveal higher levels of educational self-efficacy of students.
3. The outcome of the study show that emotional intelligence has a positive relationship with academic achievement. Despite the relationship, emotional intelligence does not significantly predict academic achievement. Again, the study further showed that academic self-efficacy and locus of control are negative predictors of the academic achievement of students.
4. The findings of the examination indicates that emotional intelligence positively predict the educational self-efficacy of students.
5. The findings of the study further reveal that academic self-efficacy positively predict the locus of control of students.
6. The study results show no variations between the academic self-efficacy of female and male students.
7. The results of the study show that emotional intelligence moderates the link connecting academic self-efficacy and academic achievement of students.
8. The findings of the study again show that sex moderates the link between academic achievement and emotional intelligence of students

in Colleges of Education in Ghana, with males having more scores than the female students.

9. The results of final hypothesis testing reveal that sex is not found as a moderator between academic achievement and locus of control of students.

The proposed model demonstrated a good fit with the collected data, as evidenced by its saturation and lack of discrepancy between the hypothesized and predicted models. Consequently, I present the finalized model in Figure 20.

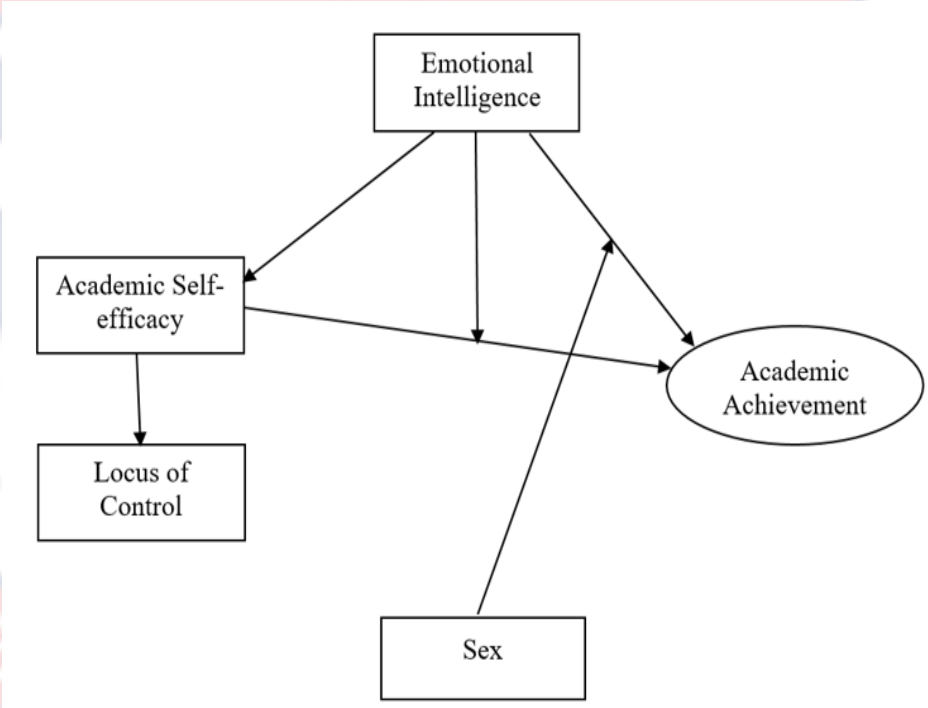

Figure 20: Final model

Conclusions

The study concluded students with higher levels of emotional intelligence would be able to manage their emotions in difficult situations and students with higer levels of academic self-efficacy will be efficacious in facing academic challenges in the school environment. The study concluded

that students with well-enhanced emotional intelligence regulate their emotions which can positively affect their educational attainment. However, students with low academic self-efficacy may not be able to face academic challenges and they are aptly to engage in risky behaviours such as dropping out of school which can negatively affect their academic achievement. Students with a lack of internality, powerful others and chance, maybe less cautious, less determined and more easily swayed by external stimuli which can negatively affect their academic achievement. As none of the variables (academic self-efficacy, emotional intelligence, and locus of control) predicted the outcome variable (academic achievement), the study concluded that there may be other factors which may influence the academic achievement of students in Colleges of Education in Ghana.

The study again concluded that students with well-improved emotional intelligence will have the desire to complete academic tasks and will be able to face academic challenges in school situations. A student with higher academic self-efficacy will have control over their own lives will take the blame for their action and work harder to succeed in the classroom.

Founded on the results revealed, the study proceeded to say that there is no difference linking the academic self-efficacy of female and male students of the College of Education in Ghana. In summary, academic self-efficacy was similar for both female and male students of the College of Education.

The study concluded that students have to be emotional intelligence before they can have higher educational self-efficacy, which will in turn influence their academic achievement. That is to say, students with well-enhanced emotional intelligence can manage their emotions and can have the

ability or competence to complete their academic tasks within a semester which eventually will result in higher academic achievement.

The study concluded that academic achievement and emotional intelligence differ in terms of sex where male students dominated or scored high than their female counterparts. That is to say, male students who have well-enhanced emotional intelligence can have higher academic achievement than their female counterparts.

The work again showed that sex did not moderate the link connecting locus of control and educational achievement of students in Colleges of Education in Ghana. However, locus of control may solely influence students' academic achievement regardless of gender. That is to say, sex is not a requirement for the locus of control to predict the educational achievement of students in Colleges of Education in Ghana.

Recommendations

Settled on the findings and the conclusions, the following recommendations were made:

1. From hypothesis one, the study recommended that the school management and the tutors in the Colleges of Education should put in a mechanism to foster the emotional intelligence of the students since emotional intelligence had a positive relationship with academic achievement. Teachers should enhance positive relationship with their students to help students help feel safe in approaching teachers with their emotional problems
2. It was also recommended that the negative influence of academic self-efficacy on students' academic achievement is an indication that their

academic self-efficacy is not well developed. Therefore the school administrators and tutors should put in a mechanism to increase efficacious of the students.

3. The work recommended that tutors in the Colleges of Education should emphasise hard work as a path to success to strengthen students and dispel the notion of locus of control (internal, chance, fate or powerful others) as factors of their achievement. This will motivate students to work harder for their progress with the belief that they are responsible for their success or failure.
4. From hypothesis two, the examination recommended that tutors in the Colleges of Education should continue their interaction with students and teach them how to handle their emotions and cooperate with other members of the College community. When students can control their emotions, they will be able to develop higher efficacy in facing academic challenges and completing academic tasks.
5. From hypothesis three, the study recommended that significant others such as principals and tutors in the Colleges of Education should instil academic efficacy in the students which will promote autonomy among students within the educational context.
6. From hypotheses four and seven, it was recommended that principals and school boards in the College of Education should provide equal training or the same coaching programmes for both female and male students in the development of academic self-efficacy and locus of control.

7. From hypothesis six, the work recommended that the Ministry of Education should strongly consider implementing emotional intelligence development and coaching programmes for students especially females to aid in the development or increase of emotional intelligence.

Suggestions for Future Research

This study warrants replication in senior high schools and junior high schools due to potential variations in internal policies and workshops across different educational institutions, which may lead to differing outcomes.

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APPENDICES

APPENDIX A

Questionnaire on Emotional Intelligence, Academic Self-Efficacy, and Locus of Control for College of Education Students

Dear Respondent,

This item asks about emotional intelligence, academic self-efficacy, and locus of control. You are kindly requested to check the boxes that best describe you. Please rest assured that the information you supply will be used just for academic purposes and will be kept completely confidential. As a result, you are urged to react to all items honestly and objectively.

SECTION A:

1. Sex:Male [ ] Female[ ]

2. Age: 18 years and below [ ] 19-23 years [ ] 24 years Above [ ]

SECTION B: Kindly indicate the extent to which you are aware of your emotions and how you express them using the following degrees as it applies to you.

Strongly Disagree **(SD)**	Moderately Disagree **(MD)**	Slightly Disagree **(SD)**	Slightly Agree **(SA)**	Moderately Agree **(MA)**	Strongly Agree **(SA)**
1	**2**	**3**	**4**	**5**	**6**

Emotional Intelligence Questionnaire

No	Items	SD	MD	SD	SA	MA	SA
1	I can explain my actions in respect to its expression	1	2	3	4	5	6
2	Emotions play an important part in my life	1	2	3	4	5	6
3	External events easily influence my feelings.	1	2	3	4	5	6
4	I can describe what I am feeling at a given moment	1	2	3	4	5	6
5	I know my moods impact the people around me both at home and	1	2	3	4	5	6

	the work place						
6	I recognize the things that are happening to me while I'm angry.	1	2	3	4	5	6
7	I stay calm even in difficult circumstances	1	2	3	4	5	6
8	I am emotionally balanced person because I know when to react to a situation and when not to do so.	1	2	3	4	5	6
9	I accept responsibilities for my reactions being good or bad	1	2	3	4	5	6
10	I do not easily get irritated by things and other people	1	2	3	4	5	6
11	I can restrain myself when I feel anger towards someone	1	2	3	4	5	6
12	I direct my energy into creative works in relation to my hobbies	1	2	3	4	5	6
13	I possess the capability to inspire myself to complete challenging tasks.	1	2	3	4	5	6
14	I am clear about my goals for the future	1	2	3	4	5	6
15	My career is moving in the right direction as I expect	1	2	3	4	5	6
16	I'm thrilled when I envision my goals and actively pursue them.	1	2	3	4	5	6
17	I act consistently towards my goals in spite of obstacles	1	2	3	4	5	6
18	I find it too challenging to maintain my enthusiasm when I encounter problems	1	2	3	4	5	6
19	I can sense when those nearby are getting irritated.	1	2	3	4	5	6
20	I can comprehend others' emotions effectively.	1	2	3	4	5	6
21	People choose to be with me due to how I treat them	1	2	3	4	5	6
22	I get on well with people being it at home or outside home	1	2	3	4	5	6
23	I care what happens to other people because we are human	1	2	3	4	5	6
24	During an interaction with people, I easily sense it when a person’s feeling changes	1	2	3	4	5	6
25	I‘m able to show affection towards a person who is in need	1	2	3	4	5	6
26	Expressing my profound emotions to others comes more naturally to me.	1	2	3	4	5	6

27	I feel uncomfortable when other people get emotional about issues	1	2	3	4	5	6
28	I am able to talk someone down when they are upset because I demonstrate maturity in my dealings with people	1	2	3	4	5	6
29	It is easier for me to make friends because I'm sociable and fun to be with.	1	2	3	4	5	6
30	I know other people depend on me so I'm careful the way I behave in situations and circumstances	1	2	3	4	5	6

SECTION C: Academic Self-Efficacy Scale. Please indicate in the scale provided the degree how you perceive yourself in your academic journey.

Not at all Confidence **(NC)**	Not Confident **(NC)**	Somewhat Confident **(SC)**	Confident **(C)**	Very Confident **(VC)**
1	**2**	**3**	**4**	**5**

No.	Items	NC	NC	SC	C	VC
1	In my quiet study, I can study effectively.	1	2	3	4	5
2	Under test conditions, I can produce my best work.	1	2	3	4	5
3	In front of a full lecture hall, I am allowed to answer questions posed by my lecturers	1	2	3	4	5
4	To meet school deadlines, I manage my workload.	1	2	3	4	5
5	I am capable of giving a presentation to a small group of peers.	1	2	3	4	5
6	Throughout the semester, I attend the majority of class sessions.	1	2	3	4	5
7	In my work, I get good grades.	1	2	3	4	5
8	I can hold a productive academic debate with my classmates.	1	2	3	4	5
9	During a lecture, I can question lecturers about the content they are teaching.	1	2	3	4	5
10	I can complete coursework to the required standard.	1	2	3	4	5
11	I use an academic writing style when I	1	2	3	4	5

	write.					
12	I make every effort to arrive on time for lectures.	1	2	3	4	5
13	I make every effort to pass examinations on the first try.	1	2	3	4	5
14	Before exams, I make adequate revision schedules.	1	2	3	4	5
15	I usually maintain a high level of motivation throughout.	1	2	3	4	5
16	In coursework assignments, I generate my finest work.	1	2	3	4	5
17	Throughout the semester, I will be available for tutorials.	1	2	3	4	5

SECTION D: Locus of Control Scale. Please indicate in the scale provided

Strongly Disagree	Disagree Somewhat	Slightly Disagree	Slightly Agree	Agree Somewhat	Strongly Agree
-3	**-2**	**-1**	**+1**	**+2**	**+3**

N	Scale	SD	DS	SD	SA	AS	SA
1.	Whether I become a leader or not is mostly determined by my ability.	-3	-2	-1	+1	+2	+3
2.	Accidental events rule a large portion of my existence.	-3	-2	-1	+1	+2	+3
3.	I have the impression that powerful individuals control the majority of what happens in my life.	-3	-2	-1	+1	+2	+3
4.	Whether or not I have a car accident relies heavily on my skill as a driver.	-3	-2	-1	+1	+2	+3
5.	When I make plans, I am highly confident that they will be realized.	-3	-2	-1	+1	+2	+3
6.	In many cases, there is no way to protect my interests from poor luck.	-3	-2	-1	+1	+2	+3
7.	I usually achieve what I want due to my luck..	-3	-2	-1	+1	+2	+3
8	Even with my skills, I won't be entrusted with leadership duties until I garner favor from those in authority positions.	-3	-2	-1	+1	+2	+3
9.	The number of friends I have depends on my level of politeness.	-3	-2	-1	+1	+2	+3

10	What I've discovered time and time again is that what will happen will happen.	-3	-2	-1	+1	+2	+3
11	Others with a lot of power in my life have a lot of control over my life.	-3	-2	-1	+1	+2	+3
12	Whether or not I get into a car accident mainly count on luck.	-3	-2	-1	+1	+2	+3
13	When our interests conflict with influential pressure groups, individuals like myself have minimal opportunity to safeguard them.	-3	-2	-1	+1	+2	+3
14	I often feel it's not wise for me to make long-term plans since many outcomes seem to rely heavily on chance.	-3	-2	-1	+1	+2	+3
15	To get what I want, I have to please those who are higher up than me.	-3	-2	-1	+1	+2	+3
16.	If fortune favors me by placing me in opportune circumstances, I may have the chance to assume a leadership role.	-3	-2	-1	+1	+2	+3
17	I'm not sure I'd make many friends if significant people decided they didn't like me.	-3	-2	-1	+1	+2	+3
18	I possess a clear understanding of what to expect in my life.	-3	-2	-1	+1	+2	+3
19	In most cases, I can safeguard my interests.	-3	-2	-1	+1	+2	+3
20	Whether or not I am involved in an automobile accident is mostly determined by the other driver.	-3	-2	-1	+1	+2	+3
21	I usually get what I want after putting in a lot of effort.	-3	-2	-1	+1	+2	+3
22	In order to ensure the success of my plans, I ensure they are in harmony with the preferences of individuals in influential positions.	-3	-2	-1	+1	+2	+3
23	My actions determine the course of my life.	-3	-2	-1	+1	+2	+3
24	Whether I have a few or a lot of friends is largely a matter of chance.	-3	-2	-1	+1	+2	+3

APPENDIX B

RELIABILITY ESTIMATE FOR PRE-TESTING OF EMOTIONAL INTELLIGENCE INSTRUMENT

SCALE: ALL VARIABLES

Reliability Statistics

"Cronbach's Alpha"	"N of Items"
.843	29

Subscales: Social Awareness

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	"N of Items"
.682	.694	6

Inter-Item Correlation Matrix

	1	2	3	5	6	19
1. In my quiet study, I can study effectively	1.000	.183	.031	.329	.394	.306
2. Under test conditions, I can produce my best work	.183	1.000	.434	.317	.213	.062
3. In front of a full lecture hall, I am allowed to answer questions posed by my lecturers	.031	.434	1.000	.300	.132	.223
5. I am capable of giving a presentation to a small group of peers	.329	.317	.300	1.000	.450	.397
6 Throughout the semester, I attend the majority of class sessions	.394	.213	.132	.450	1.000	.350
19. I am capable of comprehending how others feel	.306	.062	.223	.397	.350	1.000

Self-Awareness

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.756	.765	6

Inter-Item Correlation Matrix

	4	7	8	9	10	11
4. I can express how I'm feeling at any given time	1.000	.260	.405	.327	.254	.257
7. Even in the face of adversity, I maintain my composure.	.260	1.000	.295	.401	.157	.376
8. Because I know when to respond to a situation and when not to, I am an emotionally balanced individual	.405	.295	1.000	.454	.251	.493
9. I accept responsibility for my acts, whether positive or negative.	.327	.401	.454	1.000	.393	.517
10. I'm not easily irritated by things or people	.254	.157	.251	.393	1.000	.445
11. When I'm angry at someone, I can control myself.	.257	.376	.493	.517	.445	1.000

Self-Management

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.745	.771	6

Inter-Item Correlation Matrix

	13	14	15	16	17	18
13. I focus my energies on creative projects related to my interests	1.000	.504	.475	.572	.458	.164
14. My future objectives are quite obvious to me	.504	1.000	.366	.536	.410	.071
15. My career is progressing expectedly.	.475	.366	1.000	.472	.403	.300
16. When I think about my objectives while I work toward them, I get excited.	.572	.536	.472	1.000	.482	.165
17. In the face of adversity, I persist in pursuing my objectives.	.458	.410	.403	.482	1.000	.010
18. I can detect if the individuals in my immediate vicinity are becoming irritated	.164	.071	.300	.165	.010	1.000

Relationship Management

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	"N of Items"
.781	.805	11

Inter-Item Correlation Matrix

	12	20	21	22	23	24	25	26	27	28	29
12. I focus my energies on creative projects related to my interests	1.000	.442	.172	.069	.307	.130	.274	.125	.229	.237	.160
20. People choose to be around me because of the way I treat them.	.442	1.000	.353	.241	.362	.389	.380	.006	.351	.206	.196
21. I get along well with others, whether at home or away from home.	.172	.353	1.000	.302	.379	.367	.331	.151	.358	.229	.324
22. Because we are all human, I am concerned about what happens to others.	.069	.241	.302	1.000	.490	.419	.263	.129	.289	.348	.290
23. I can tell when a person's mood shifts throughout a conversation with them.	.307	.362	.379	.490	1.000	.394	.378	.128	.374	.262	.199
24. I'm able to express compassion to someone who is in need.	.130	.389	.367	.419	.394	1.000	.273	.176	.403	.269	.473
25 It's easier for me to convey my deepest feelings with others.	.274	.380	.331	.263	.378	.273	1.000	.108	.321	.182	.332
26. Because I'm outgoing and enjoyable to be around, it's easier for me to establish friends.	.125	.006	.151	.129	.128	.176	.108	1.000	.155	.267	.106
27. I'm aware that other people rely on me, so I'm cautious about how I act in certain situations.	.229	.351	.358	.289	.374	.403	.321	.155	1.000	.223	.481
28. “It is easier for me to make friends because I’m sociable and fun to be with”	.237	.206	.229	.348	.262	.269	.182	.267	.223	1.000	.206
30. “I know other people depend on me so I’m careful the way I behave in situations and circumstances”	.160	.196	.324	.290	.199	.473	.332	.106	.481	.206	1.000

RELIABILITY OF SELF-EFFICACY SCALE
SCALE: ALL VARIABLES

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.897	.900	17

Subscales: Grades

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.772	.772	6

Inter-Item Correlation Matrix

	2	7	10	11	13	16
2. Under test conditions, I can produce my best work.	1.000	.460	.272	.360	.200	.109
7. In my work, I get good grades.	.460	1.000	.272	.505	.432	.428
10. I can complete coursework to the required standard	.272	.272	1.000	.395	.321	.327
11. I use an academic writing style when I write.	.360	.505	.395	1.000	.505	.386
13. I make every effort to pass examinations on the first try.	.200	.432	.321	.505	1.000	.449
16. In coursework assignments, I generate my finest work.	.109	.428	.327	.386	.449	1.000

Verbalizing

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	"N of Items"
.737	.740	4

Inter-Item Correlation Matrix

	3	5	8	9
3. In front of a full lecture hall, I am allowed to answer questions posed by my lecturers	1.000	.441	.508	.463
5. I am capable of giving a presentation to a small group of peers.	.441	1.000	.428	.311
8. I can hold a productive academic debate with my classmates.	.508	.428	1.000	.344
9. During a lecture, I can question lecturers about the content they are teaching.	.463	.311	.344	1.000

Studying

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.703	.708	4

Inter-Item Correlation Matrix

	1	4	14	15
1. In my quiet study, I can study effectively.	1.000	.545	.219	.334
4. To meet school deadlines, I manage my workload.	.545	1.000	.274	.388
14. Before exams, I make adequate revision schedules.	.219	.274	1.000	.503
15. I usually maintain a high level of motivation throughout.	.334	.388	.503	1.000

Attendance

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	"N of Items"
.710	.711	3

Inter-Item Correlation Matrix

	6	12	17
6. Throughout the semester, I attend the majority of class sessions.	1.000	.481	.421
12. I make every effort to arrive on time for lectures.	.481	1.000	.450
17. Throughout the semester, I will be available for tutorials.	.421	.450	1.000

Reliability of Locus of Control Scale

Scale: ALL VARIABLES

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	N of Items
.893	.887	24

Subscales: Internal

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	N of Items
.620	.642	8

Inter-Item Correlation Matrix

	1	4	5	9	18	19	21	23
1. Whether I become a leader or not is mostly determined by my ability.	1.000	.112	.376	.060	-.006	.301	.200	.118
4. Whether or not I am involved in a car accident is mostly determined by how excellent a driver I am.	.112	1.000	.033	.334	.237	.089	.213	.095
5. When I establish plans, I am almost positive that they will come to fruition.	.376	.033	1.000	.107	-.058	.348	.197	.183
9. How many friends I have is determined by how polite I am.	.060	.334	.107	1.000	.279	.062	.239	.070
18. I have a good idea of what will happen in my life	-.006	.237	-.058	.279	1.000	.225	.191	.077
19. In most cases, I am able to safeguard my personal interests.	.301	.089	.348	.062	.225	1.000	.408	.257
21. I usually get what I want after putting in a lot of effort.	.200	.213	.197	.239	.191	.408	1.000	.374
23. My actions determine the course of my life.	.118	.095	.183	.070	.077	.257	.374	1.000

Powerful Others

Case Processing Summary

		N	%
Cases	Valid	150	100.0
	Excluded[a]	0	.0
	Total	150	100.0

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

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.773	.776	8

Inter-Item Correlation Matrix

	3	5	7	10	12	14	16	24
3. I have the impression that powerful individuals control the majority of what happens in my life.	1.000	.286	.335	.321	.196	.207	.258	.305
5. When I establish plans, I am almost positive that they will come to fruition.	.286	1.000	.426	.213	.336	.321	.256	.198
7. It's typically because I'm lucky that I obtain what I desire.	.335	.426	1.000	.263	.284	.401	.554	.273
10. What I've discovered time and time again is that what will happen will happen.	.321	.213	.263	1.000	.256	.272	.294	.270
12. It's primarily a matter of luck whether or not I get in a car accident.	.196	.336	.284	.256	1.000	.335	.295	.149
14. I don't always think it's a good idea for me to plan too far ahead because a lot of things turn out to be a question of luck.	.207	.321	.401	.272	.335	1.000	.495	.266
16. If I'm lucky enough to be in the right position at the right time, I might be able to become a leader.	.258	.256	.554	.294	.295	.495	1.000	.402
24. Whether I have a few or a lot of friends is largely a matter of chance.	.305	.198	.273	.270	.149	.266	.402	1.000

Chance

Reliability Statistics

"Cronbach's Alpha"	"Cronbach's Alpha Based on Standardized Items"	N of Items
.834	.834	8

Inter-Item Correlation Matrix

	2	8	11	13	15	17	20
2. Accidental events rule a large portion of my existence.	1.000	.294	.444	.342	.342	.362	.355
8. Despite my abilities, I will not be awarded leadership responsibilities until I appeal to individuals in positions of power.	.294	1.000	.401	.354	.381	.447	.366
11. Others with a lot of power in my life have a lot of control over my life.	.444	.401	1.000	.384	.478	.486	.416
13. When our interests clash with those of powerful pressure groups, people like me have very little chance of protecting them.	.342	.354	.384	1.000	.481	.358	.313
15. To get what I want, I have to please those who are higher up than me.	.342	.381	.478	.481	1.000	.447	.451
17. I'm not sure I'd make many friends if significant people decided they didn't like me.	.362	.447	.486	.358	.447	1.000	.350
20. Whether or not I am involved in an automobile accident is mostly determined by the other driver.	.355	.366	.416	.313	.451	.350	1.000

APPENDIX C

EXPLORATORY FACTOR ANALYSIS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.803
Bartlett's Test of Sphericity	Approx. Chi-Square	1783.539
	Df	435
	Sig.	.000

Communalities

	Initial	Extraction
I can explain my actions concerningtheir expression	1.000	.633
In terms of its expression, I can describe my acts	1.000	.548
In terms of its expression, I can justify my conduct	1.000	.663
External events have a strong influence on my mood	1.000	.584
I can express how I'm feeling at any given time	1.000	.551
At home and work, I am aware that my moods affect others around me.	1.000	.527
I'm conscious of what's going on around me while I'm upset.	1.000	.507
Even in the face of adversity, I maintain my composure.	1.000	.615
Because I know when to respond to a situation and when not to, I am an emotionally balanced individual.	1.000	.535
I accept responsibility for my acts, whether positive or negative.	1.000	.589
I'm not easily irritated by things or people.	1.000	.512
When I'm angry at someone, I can control myself.	1.000	.379
I focus my energies on creative projects related to my interests.	1.000	.644
I focus my energies on creative projects related to my interests.	1.000	.761
My future objectives are quite obvious to me.	1.000	.648
My career is progressing expectedly.	1.000	.750
When I think about my objectives while I work toward them, I get excited.	1.000	.717
In the face of adversity, I persist in pursuing my objectives.	1.000	.687
I can detect if the individuals in my immediate vicinity are becoming irritated.	1.000	.682
I am capable of comprehending how others feel.	1.000	.447

People choose to be around me because of the way I treat them.	1.000	.443
I get along well with others, whether at home or away from home.	1.000	.642
Because we are all human, I am concerned about what happens to others.	1.000	.551
I can tell when a person's mood shifts throughout a conversation with them.	1.000	.694
I'm able to express compassion to someone who is in need.	1.000	.534
It's easier for me to convey my deepest feelings to others.	1.000	.658
Because I'm outgoing and enjoyable to be around, it's easier for me to establish friends.	1.000	.573
I'm aware that other people rely on me, so I'm cautious about how I act in certain situations.	1.000	.535
“It is easier for me to make friends because I’m sociable and fun to be with”	1.000	.632
“I know other people depend on me so I’m careful the way I behave in situations and circumstances”	1.000	.703

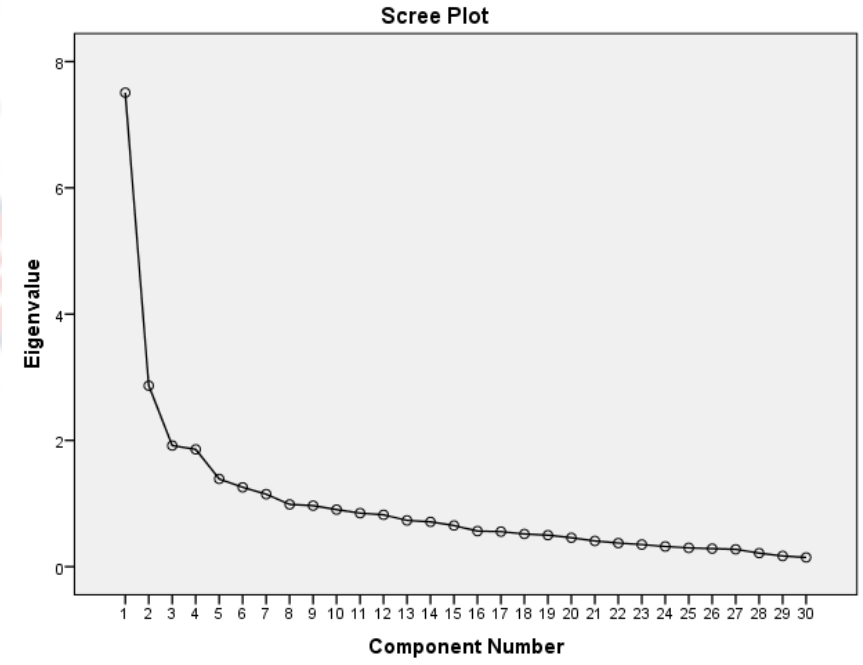
Extraction Method: Principal Component Analysis.

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	7.507	25.024	25.024	7.507	25.024	25.024
2	2.866	9.554	34.579	2.866	9.554	34.579
3	1.918	6.393	40.971	1.918	6.393	40.971
4	1.858	6.192	47.163	1.858	6.192	47.163
5	1.390	4.633	51.796	1.390	4.633	51.796
6	1.257	4.190	55.986	1.257	4.190	55.986
7	1.148	3.827	59.813	1.148	3.827	59.813

8	.986	3.287	63.100			
9	.967	3.222	66.322			
10	.904	3.014	69.336			
11	.847	2.825	72.161			
12	.821	2.738	74.900			
13	.733	2.444	77.343			
14	.710	2.366	79.710			
15	.651	2.172	81.881			
16	.564	1.879	83.760			
17	.555	1.851	85.611			
18	.518	1.727	87.338			
19	.499	1.663	89.001			
20	.458	1.528	90.529			
21	.408	1.359	91.889			
22	.374	1.247	93.136			
23	.350	1.167	94.302			
24	.320	1.065	95.367			
25	.298	.994	96.361			
26	.286	.953	97.314			
27	.275	.916	98.230			
28	.215	.715	98.945			
29	.170	.566	99.511			
30	.147	.489	100.000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component						
	1	2	3	4	5	6	7
I can explain my actions in respect to its expression	.562	.242	-.012	.169	-.476	.041	.029
In terms of its expression, I am able to describe my acts	-.029	.576	-.309	.124	-.252	.184	.083
In terms of its expression, I can justify my conduct	-.028	.613	-.348	.091	.255	.249	-.175
External events have a strong influence on my mood	.525	.222	.229	.186	-.351	.021	-.220
I can express how I'm feeling at any given time	.415	.499	-.279	.225	.007	.029	.022
At home and work, I am aware that my moods affect others around me.	.492	.326	-.109	.378	-.084	.026	.127
I'm conscious of what's going on around me while I'm upset.	.222	-.398	.350	.386	.088	.118	.075
Even in the face of adversity, I maintain my composure.	.573	-.282	.094	.364	-.016	.255	-.024
Because I know when to respond to a situation and when not to, I am an emotionally balanced individual.	.348	-.040	.187	.466	.267	.033	-.295
I accept responsibility for my acts, whether positive or negative.	.404	-.106	.609	-.079	-.175	.038	.080
I'm not easily irritated by things or people.	.354	-.061	.434	.404	.110	-.140	-.001
When I'm angry at someone, I can control myself.	.503	-.193	.113	-.174	-.040	.193	-.080
I focus my energies on creative projects related to my interests.	.619	-.426	-.272	-.034	.036	-.054	-.014

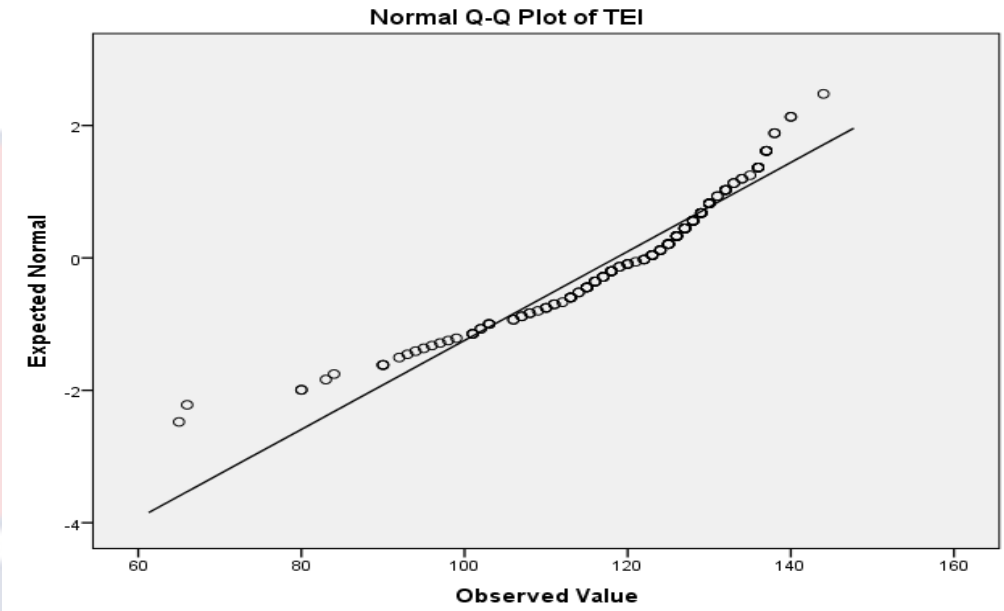
I focus my energies on creative projects related to my interests.	.673	-.404	-.307	-.016	-.017	.201	.099
My future objectives are quite obvious to me.	.685	-.316	-.249	-.048	.014	.096	-.075
My career is progressing in the expected way.	.704	-.416	-.264	-.020	.002	.093	-.055
When I think about my objectives while I work toward them, I get excited.	.613	-.363	-.387	-.040	-.004	.228	-.073
In the face of adversity, I persist in pursuing my objectives.	-.198	.363	.271	.031	.204	.630	.055
I can detect if the individuals in my immediate vicinity are becoming irritated.	.492	.339	-.076	.266	.240	-.333	-.282
I am capable of comprehending how others feel.	.518	.298	.223	-.006	-.080	.099	-.153
People choose to be around me because of the way I treat them.	.494	.156	.212	.016	-.071	-.188	.297
I get along well with others, whether at home or away from home.	.680	.109	.197	-.257	-.181	-.003	.173
Because we are all human, I am concerned about what happens to others.	.565	.309	-.064	-.225	.070	-.027	.275
I can tell when a person's mood shifts throughout a conversation with them.	.661	.175	-.045	.078	.329	-.306	-.131
I'm able to express compassion to someone who is in need.	.636	.254	.012	-.206	-.079	.066	.108
It's easier for me to convey my deepest feelings with others.	.330	.084	.274	-.500	.111	-.083	-.444
Because I'm outgoing and enjoyable to be around, it's easier for me to establish friends.	-.091	-.048	.131	.143	.566	.254	.374

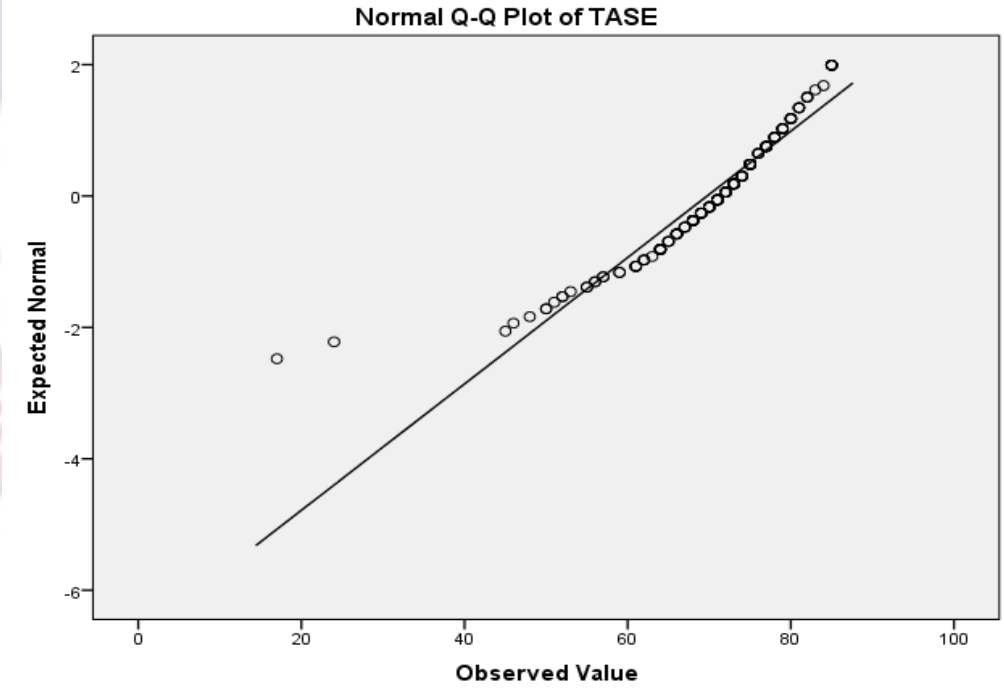
"I can talk someone down when they are upset because I demonstrate maturity in my dealings with people"	.486	.130	-.003	-.385	.340	.008	-.132
"It is easier for me to make friends because I'm sociable and fun to be with"	.492	.243	.231	-.466	.153	.180	.068
"I know other people depend on me so I'm careful the way I behave in situations and circumstances"	.519	.074	-.083	.009	.209	-.387	.477

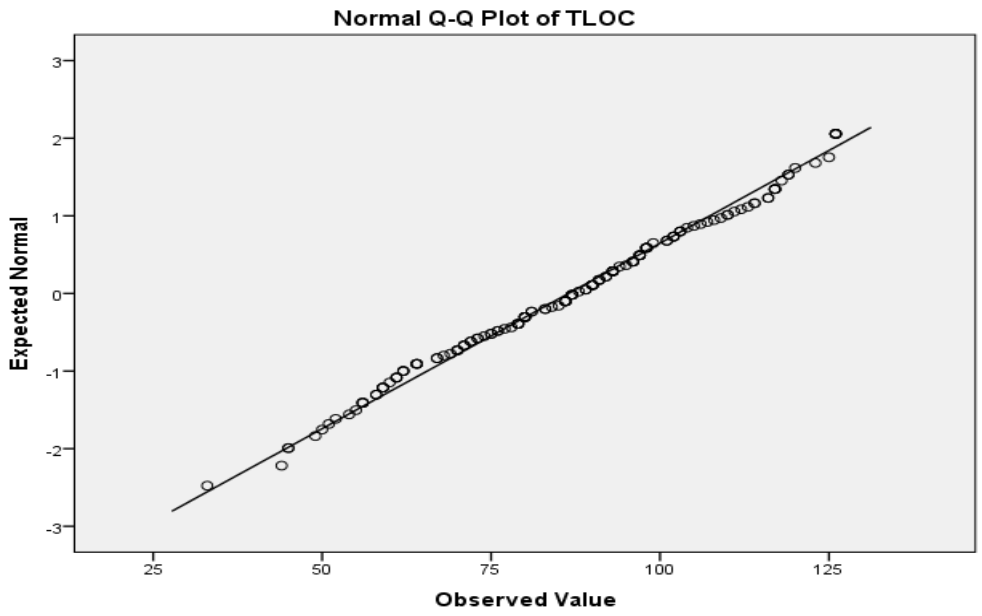
Extraction Method: Principal Component Analysis.
a. 7 components extracted.

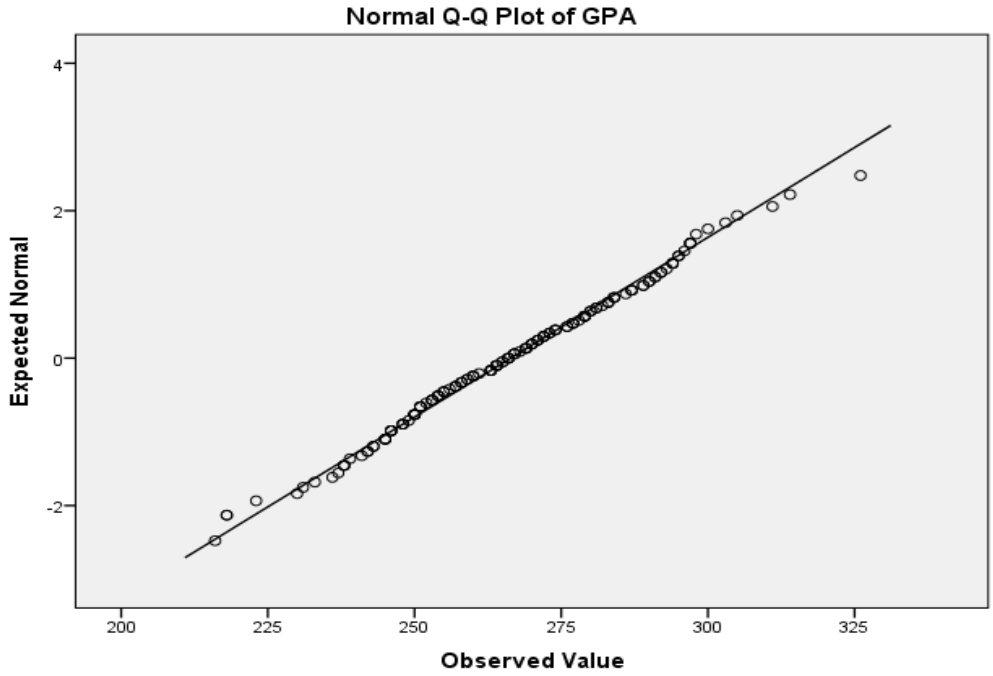
APPENDIX D

NORMALITY TEST









APPENDIX E

INTRODUCTORY LETTER

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

Telephone: 0332091697
Email: dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

28th April, 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION
MR. FRANCIS BRITWUM

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

Mr. Britwum is researching on the topic:

"EMOTIONAL INTELLIGENCE, ACADEMIC SELF-EFFICACY AND LOCUS OF CONTROL AS PREDICTORS OF ACADEMIC ACHIEVEMENT OF COLLEGE OF EDUCATION STUDENTS IN GHANA."

He has opted to collect data at your section for his Thesis work. We would be most grateful if you could provide him the opportunity and assistance for the study. Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

Thank you.

Yours faithfully,

Florence Essuon (Ms.)
Administrative Assistant
For: **HEAD**

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/vs/21-53 Date: 24th May, 2021

Your Ref: .....

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY

The bearer, Francis Britwum, Reg. No. EF/EPY/19/0006 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:

Emotional intelligence, academic self-efficacy and locus of control as predictors of academic achievement of College 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)

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

APPENDIX G

LETTER FOR COLLEGE OF EDUCATION STUDENTS TEST SCORES

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

Telephone: 0332091697
Email:deps@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

03/02/2021

Dear Sir/Madam,

TO WHOM IT MAY CONCERN: FRANCIS BRITWUM

I wish to introduce Francis Britwum with student number (EF/EPY/19/0006). He is a PhD candidate in the Department of Education and Psychology, University of Cape Coast.

He is in the process of developing his proposal and requires some information from the Institute of Education.

His thesis title is 'Emotional intelligence, academic self-efficacy and locus of control as predictors of academic achievement of students in the Colleges of Education, Ghana.

Kindly assist him with this request.

Yours faithfully,

HEAD
DEPT OF EDUCATION & PSYCHOLOGY
UNIVERSITY OF CAPE COAST
CAPE COAST

Dr. Mark Owusu Amponsah

(Head)