UNIVERITY OF CAPE COAST

# THE INFLUENCE OF EMOTIONAL INTELLIGENCE ON THE ACADEMIC PERFORMANCE OF TEACHER TRAINEES IN THE CENTRAL REGION OF GHANA

BY

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DECLARATION

**Candidate's Declaration**

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

Candidate's Signature..... Date..23rd July 2019

Name:...PRISCILLA COMMEY MINIAH.....

**Supervisors' Declaration**

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

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## ABSTRACT

Over the years there has been a decline in the academic performance of children, particularly in the public schools in Ghana. It has also been unclear whether the poor academic performance of children in Ghana is an outcome of the absence of Emotional Intelligence (EI) on the part of teachers who are supposed to be inculcated with this value whilst undergoing training in the colleges of education. As a result, this study sought to examine the influence of training on emotional intelligence and the academic performance of teacher trainees in the Central Region of Ghana. Six hundred and forty-eight respondents were earmarked for the study. However, 109 respondents withdraw from the study, making the total number of respondents 539. This gave a response rate of 83.2 percent. Multi-stage sampling technique was used to select the region, colleges of education and year group. Quasi-experimental design was adopted as the research design, while questionnaire was employed as the instrumentation to elicit primary data. Multivariate Regression and the Multivariate Analysis of Variance were employed as the methods for data analyses and presentation. Findings from the study portrayed that the EI training positively influenced the academic performance of teacher trainees in Mathematics, but not in English Language. The study therefore suggested that EI training should be incorporated into the curriculum of colleges of education in Ghana in order to boost the EI of teacher trainees as a whole.

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# DEDICATION

To my son Eldad Papa Mintah, whose "challenge" has compelled me to learn to be emotionally intelligent.

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| | |
|---|---|
| EI | Emotional Intelligence |
| SPSS | Statistical Product and Service Solutions (Version 16) |

# CHAPTER ONE

# INTRODUCTION

## Background to the Study

Education undoubtedly is the most outstanding development priority area in the world today. This is because human development is the core purpose of education. Every form of education contributes to making one a valuable asset. Owing to how sacrosanct education is, Yunus, Mustafa, Nordin and Malik (2015) note that researchers and scholars across the world, have continued to inquire into ways of improving human knowledge and development. This quest has made research, discussions or debates on education and human development exciting and unending (Yunus et al., 2015).

Education in Sub-Saharan Africa is generally seen as the most important factor for change in national and economic development (Connolly, Kavanagh & Viswesvaran, 2007). Nevertheless, the writers argue that the educational system in Africa is plagued with its own challenges. One of such challenges is the poor academic performance of students. In Nigeria for instance, Ogundokun and Adeyemo (2010); Nwadinigwe and Azuka-Obieke (2012) report that students performed poorly in the West African Senior Secondary Certificate Examination (WASSCE), as an outcome of poor or the absence of emotional development on the part of students and teachers.

Day and Carroll (2004) postulate that in as much as the effective management of emotions or emotional development is an important aspect of human behaviour, it equally has a bearing on one's academic performance. This is by virtue of the fact that investigations in the field of personality indicate that emotional maturity, social skills, as well as intelligence brings

adjustment and success to one's life (Day & Carroll, 2004). One of such successes is high or brilliant academic performance of students as observed by Setareh, Zahra and AzamMoradi (2014); Sharma (2008) among University students in Iran who were found to be emotionally intelligent.

Petrides, Frederickson and Furnham (2004) posit that emotions, being the most significant and influential component of personality, plays a sacrosanct role in one's well-being. This is because, emotions help individuals to make important decisions. Emotions also enable individuals to facilitate their attitudes and behaviours towards the attainment of their goals. Therefore, healthy emotions give clarity in perception, thinking and analyzing everyday life situations and will invariably contribute to high academic performance (Petrides et al., 2004). Conversely, Conte (2005) argues that emotions can also negatively impact one's behaviour, if they are not appropriately dealt with or fulfilled. Unfulfilled emotions tend to adversely affect the creativity and academic success of students. Furthermore, an unhealthy emotional state can also culminate in the development of different psychological problems, which significantly influences one's personal, social, occupational and academic life (Conte, 2005).

Bastian, Burns and Nettelbeeck (2005) propel that an emotionally intelligent person can manage his or her feelings in a better way and cope with stresses, with the effective ability to solve problems. The writers add that an emotionally intelligent person is one who is capable of managing one's feelings and emotions in various facets of life. Such a person is consequently more adjusted and successful, in various areas of professional and educational fields (Bastian et al., 2005). Salovey, Brackett and Mayer (2007) state that

Emotional Intelligence (EI) refers to the processes involved in the recognition, use, understanding and management of one's own and other emotional states to solve emotion-laden problems and to regulate behavior. Bar-On, Maree and Elias (2007) summarize what they call emotional-social intelligence as the following competencies:

> *"The ability to recognize and understand emotions and to express feelings nondestructively; the ability to understand how others deal and relate with them cooperatively; the ability to manage and control emotions effectively; the ability to manage change and the emotions generated by change, and to adapt and solve problems of a personal and interpersonal nature; and the ability to generate positive affect and be self-motivated."* (Bar-On et al., 2007, p xiv).

Gray (2004) explains that emotional intelligence is a comprehensive term which incorporates the intricate aspects of both emotion and intelligence. Lyons and Schneider (2005) adds that emotion and cognition can be integrated to influence performance on a variety of tasks such as academic, career, business and home-related tasks. However, Olatoye, Akintunde and Yakasai (2010) lament that the education that students in schools receive today focuses much on the cognitive aspect and seldom gives importance to the management of emotions. However, the writers note that people are beginning to come to terms with the fact that education should help an individual to solve the challenges of life and make successful adjustment. Olatoye et al. (2010) argue further that an emotionally competent teacher for example, is likely to emphasize on responsible behaviour on the part of his/her students. Thus, a

teacher who has full control over his/her emotions can arouse emotional intelligence in pupils as well. Therefore, an emotionally sound teacher is the heart and soul of any educational program (Olatoye et al., 2010).

Upadhyaya (2013) cautions that whenever students and teachers are at the threshold of entering the career of teaching, it is incumbent that they understand their levels of emotional intelligence, which plays a pivot role in their survival and fitness in the teaching profession. The writer also observes that Bachelors of Education teacher trainees, often times have a good level of emotional intelligence, compared to their counterparts who had obtained solely secondary school education. The latter group of teacher trainees often possesses average emotional intelligence (Upadhyaya, 2013).

Walsh-Portillo (2011) asserts that contemporary intelligence and success are not viewed as the same way as they were before. For example in countries like America, new theories of intelligence have been introduced and are gradually replacing the traditional theory of success being contingent on one's Intelligence Quotient (IQ) (Mavroveli, & Sanchez-Ruiz, 2011). Now it has been established that IQ accounts for only 20 percent of a person's success in life. The balance of 80 percent of life success can be attributed to emotional intelligence in this case Emotional Quotient (EQ) (Walsh-Portillo, 2011). Kakkar (2014) compliments that emotions can be useful in terms of directing attention and facilitating certain kinds of cognitive processes and therefore are better predictors of success and wellbeing of a person, as compared to IQ, which is only a minor predictor of success in life.

Humphrey, Curran, Morris, Farrell and Woods (2007) state that emotional well-being is a predictor of academic performance. This is because

emotional processing is an important component of rational thought, which is indispensable for academic success (Humphrey et al., 2007). Yusuf and Adigun (2010) note that in Ghana, much research emphasis has been laid on the relationship between the emotional intelligence and academic performance of school and college students, while teacher trainees have been relegated to the background on this subject. As a result, it is unknown what actually accounts for the poor academic performance of teachers trainees in the country (Yusuf & Adigun, 2010).

**Statement of the Problem**

Yusuf and Adigun (2010) bemoaned that there was a decline in the academic performance of children, particularly in the public schools in Ghana. This was a major concern to stakeholders, policy makers and parents in general. However, Yusuf and Adigun (2010) remarked that measures were taken by the Government of Ghana at various levels of education (from the basic to tertiary levels) to enhance students' academic performance. This was achieved by improving and equipping school infrastructure, as well as training qualified teachers. Nonetheless, Prabha (2015) noted that in the educational systems of most countries including Ghana, these considerations alienated the emotional intelligence of teachers, which is an indispensable component of teachers' training for enhanced academic performance of students.

It is therefore unclear whether the poor academic performance of students in Ghana, is as an outcome of the absence of EI on the part of the teachers who are supposed to be inculcated with this value whilst undergoing training in the training colleges (Prabha, 2015) or whether poor school infrastructure/less endowed family background/poor parental care of children

(Yusuf & Adigun, 2010) are the factors that actually account for the poor academic performance of students in Ghana. These doubts provoke investigations on how the EI of teacher trainees can influence their academic performance, as well the academic performance of students.

Costa and Faria (2014) presupposes that when a teacher trainee is emotionally intelligent, it will contribute to an excellent academic performance and translate into brilliant academic performances for his or her students. Conversely, if a teacher trainee is not emotionally intelligent, it will culminate in negative academic performance and translate into poor academic performances for students (Costa & Faria, 2014). If at all, students' poor academic performance in Ghana is attributed to the absence of or inadequate EI of teachers or teacher trainees, then what can be done to rectify the situation?

Furthermore, studies conducted by Ogundokun and Adeyemo in Nigeria (2010); Olatoye et al. in Nigeria (2010); Walsh-Portillo in America (2011); Nwadinigwe and Azuka-Obieke in Nigeria (2012); Prabha in India (2015) have examined the relationship between the emotional intelligence and academic performance of secondary school, college, university and polytechnic students without taking into cognizance the emotional intelligence of teachers or teacher trainees, who are the trainers of most students before they can attain tertiary education. There is therefore the need to address this lacuna in the body of knowledge on EI and academic performance, which this study also seeks to accomplish.

**Objectives of the Study**

Generally, the study sought to examine emotional intelligence and academic performance among teacher trainees in two Colleges of Education in Ghana.

Specifically, the study sought to:

1. Examine the relationship between EI and teacher trainees' performance in English Language and Mathematics;
2. Ascertain the relationship between the demographic factors of teacher trainees and their EI;
3. Determine if there were differences in the post test scores on the achievement tests in Mathematics and English Language between the experimental and control groups;
4. Investigate if there were differences in the components of EI between the experimental and control groups;
5. Recommend measures by which the EI of teacher trainees can be enhanced

**Research Questions**

The following research questions guided the study

i. How does EI influence teacher trainees' performance in English Language and Mathematics?
ii. What is the relationship between teacher trainees' demographic variables (sex, age groups, and marital status) and their levels of EI?

**Research Hypotheses**

The following hypotheses were tested:

**Hypothesis one**

$H_o$: There is no difference in the emotional intelligence of teacher trainees in the experimental group and teacher trainees in the control group.

$H_1$: Teacher trainees in the experimental group will score higher on emotional intelligence than teacher trainees in the control group

**Hypothesis two**

$H_o$: Achievement test scores in English Language and Mathematics will not differ between teacher trainees in the experimental group and teacher trainees in the control group.

$H_1$: Teacher trainees in the experimental group will score higher on achievement tests in English Language and Mathematics than trainees in the control group.

**Hypothesis three**

$H_o$: Obtained scores on the various components of EI will not differ between teacher trainees in the experimental group and teacher trainees in the control group.

$H_1$: Teacher trainees in the experimental group produced higher scores for the various components of EI as opposed to their counterparts from the control group.

**Significance of the Study**

The study shall serve as a guide to students, teachers, psychologists, counselors and researchers. Students in the training colleges and other tertiary institutions shall be enlightened on measures to contain emotional stress and relate with different types of individuals in an academic and work environment. This will have positive implications for their school performance, career and other aspects of their personal lives in the future. Students will also draw inspiration from the study on mechanisms to contain stress in the future, should they be weighed down by family, social and academic responsibilities.

Through the study, teachers or lecturers in the tertiary institutions can be informed on how best to review the present educational curriculum with the aim of mainstreaming emotional intelligence skills as one of the core components in the curriculum of colleges of education and universities. Through the study, the body of knowledge on emotional intelligence and academic performance shall equally be supplemented.

Psychologists and counselors will also not be exempted as some of the beneficiaries of the study because their knowledge horizon on emotional intelligence can be enriched. With such enrichment, they can counsel students, teachers and even policy makers on how best they can develop their emotional intelligence.

Researchers will also stand to benefit because the body of knowledge on emotional intelligence and academic performance will be supplemented. From the study, they can also explore areas for future research.

**Delimitation**

The study is limited to level 200 students of two Colleges of Education in the Central region of Ghana. The variables considered were academic achievement and emotional intelligence scale. The scale covered aspects of emotional intelligence namely: Self-awareness and expression; Social awareness and interpersonal relationship; Emotional management and regulation; Relationship management and self-motivation.

**Limitations**

Research in the area of emotional intelligence is relatively new (beginning from the early 1990s) with most of the work done in the area, definitional in nature. Literature available indicates that it is only recently that research has moved constructively on impact of emotional intelligence on students and individuals and their performances but there are few instruments available for measuring emotional intelligence. It could have been much more successful if there were instruments constructed based on cultural settings bringing in social-cultural factors among others.

Moreover, the main components of emotional intelligence are not linked specifically to specific area of performance. In this work in particular, I could not directly associate specific components to specific area of respondents' performances.

Also, the study primarily focused on only two colleges of education in the central region of Ghana. This might affect any issues of generalisation. The study would have been more reliable if it was conducted in the whole colleges of education in the country.

Further, the main instrument for data collection was questionnaire. Questionnaire has low response rate and the possibility of teachers' responses being biased could not be ruled out. These weaknesses associated with the use of questionnaire could negatively influence the validity of the conclusions drawn from the study.

**Operational Definition of Terms**

**Emotional intelligence** shall be discussed in line with the Mayer-Salovery-Caruso Emotional Intelligence Test (MSCEIT) regarded as the ability of an individual to perceive, use, understand and manage emotions (Mayer & Salovey, 1997; Mayer, Salovey & Caruso, 2002).

**Academic performance** will be explained in terms of the Grade Point Average (GPA) system (Karbach, Gottschling, Spengler, Hegewald & Spinath, 2012; Huber &Kipman, 2012).

**Organisation of the Study**

The study is organized into five chapters. Chapter One covers the background to the study, statement of the problem, objectives of the study, hypotheses, research questions, significance and scope of the study. The operational definition of terms and organization of the study complements Chapter One.

Chapter Two harmonizes theoretical, empirical and conceptual discussions on emotional intelligence and academic performance. The chapter is divided into sections to address the association between demographic characteristics such as sex, age, marital status and emotional intelligence; effects of emotional intelligence on academic performance.

Chapter Three is a hybrid of methodological components of the study, which comprises of research paradigms on emotional intelligence and academic performance, the research design, description of study institutions, population, sample, sampling techniques, instruments of data collection, fieldwork and methods of data analysis.

Chapter Four discusses the demographic characteristics of students (sex, age groups, marital status, and occupation) and its relationship with their level of emotional intelligence; students' understanding of emotional intelligence; causes and effects of emotional instability among students. Finally, the academic performances of students who are emotionally intelligent are compared to students with emotional disability. Chapter Five, the final chapter, provides the summary, conclusions and recommendations of the study.

# CHAPTER TWO

# LITERATURE REVIEW

## Introduction

This chapter focused on the theoretical and empirical perspectives of emotional intelligence. There was detailed literature review with specific reference to the specific objectives of the study. Demographic factors like sex, age and marital status on emotional intelligence were reviewed. The impact of emotional intelligence on academic performance was also given a detailed account.

## Emotional Intelligence

Emotional intelligence (EI) is the ability of an individual to recognize and manage his or her emotions and that of others (Salovey & Mayer, 1989). EI can also be recognized as an inner trait that one possesses naturally in managing emotions (Bar-On, 1997). Goleman (1998) originally used the term EI in their published work and defined it as: A form of intelligence that involves the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions.

Bar-On (1997) posited that EI is an array of emotional and social abilities, which includes five components namely: intrapersonal, interpersonal, adaptability, stress management, and general mood. Goleman's (1998) model outlines four main constructs of EI: self-awareness, self-management, social awareness and relationship management. Self-awareness consists of emotional self-awareness (Goleman 2011a); accurate self-assessment (Deniz, Tras & Aydogan, 2009); self-confidence (Elfenbein, 2008).

Self-management comprises of self-control (Goleman, 1995); trustworthiness (Goleman, 1998); conscientiousness (Goleman, 2006); adaptability (Goleman, 2011a); achievement orientation (Goleman, 2011b) and initiative (Bar-On, 2011). Social awareness embodies empathy (Barchard, 2003); organization awareness (Bar-On, 2004) and service orientation (Bastian, Burns & Nettelbeck, 2005). Relationship management encapsulates influence (Bar-On, 1997); leadership (Goleman, 1995); developing others (Goleman, 1998); communication (Hasson, 2012); change catalyst (Brackett, Mayer & Warner, 2004); conflict management (Conte, 2005); building bonds (Goleman, 2006), teamwork and collaboration (Gregory, 2007).

Brody and Hall (2000) state that it is a known fact that every human being has emotions and since everyone is expected to be intelligent in an aspect or the other, it is very necessary that an individual develops his or her emotions. Thus, it is very imperative to note that individuals searching themselves and developing their emotional intelligence will help them to deploy and maximise their own talents and potentials.

Ashkanasy and Dasborough (2003) emphasize that emotions are personal and subjective experiences caused by the complex interplay between physiological, cognitive and situational variables. Mandal (2014) define emotions as the process by which motivational potential is realized or read out when activated by challenging stimuli. In other words, emotions are mechanisms of carrying information about motivational systems, as they have immense power to alter perception, memory and thought processes of an individual to achieve specific goals.

Different emotions produce different types of response and have different outcomes. For example, anger generates pulse of energy strong enough for vigorous action; love generates a general state of calm; contentment facilitates cooperation; happiness inhibits negative feelings and fosters an increase in available energy; sadness brings a drop in energy and enthusiasm (Levenson, Ekman, & Friesen, 1990). Barchard (2003) concludes that this shows that emotions can either be helpful or detrimental. Therefore, they need to be recognized and regulated especially among teacher trainees who by extension would be teaching children. This may have motivated Becker (2003) to say that the ability of an individual to sense, understand and effectively apply the power and acumen of emotions as a source of human energy, information, connection and influence is called Emotional Intelligence (EI).

In the 1900s traditional definitions of intelligence emphasized cognitive aspects predominately emphasizing on memory and problem-solving (Bastian, Burns & Nettelbeck, 2005). Conte (2005) for instance observed that traditional types of intelligences in this case IQ does not fully explain cognitive ability. It is against this background that some researchers in the field of intelligence study, begun to recognize the importance of the non-cognitive aspects. E.L. Thorndike for example, used the term social intelligence to describe the skill of understanding and managing other people (Conte, 2005).

History has it that the earliest roots of emotional intelligence can be traced to Charles Darwin's work on the importance of emotional expression for survival and adaptation (Leuner, 1966). David Wechsler in 1940 described

the influence of non-intellective factors on intelligent behavior, and further argued that our models of intelligence would not be complete until we could adequately describe these factors (Greenspan, 1989).

In 1983, Howard Gardner's Theory of Multiple Intelligences introduced the idea of multiple intelligences which included both interpersonal intelligence (the capacity to understand the intentions, motivations and desires of other people) and intrapersonal intelligence (the capacity to understand oneself, to appreciate one's feelings, fears and motivations) (Salovery & Mayer, 1990).The first use of the term EI is usually attributed to Wayne Payne's doctoral thesis, A Study of Emotion: Developing Emotional Intelligence from 1985. Thereafter, the term EI appeared in Leuner (1966); Greenspan (1989) also put forward an EI model; followed by Salovery and Mayer (1990) and Daniel Goleman (1995).

Orme (2001) opines that EI involves tuning into emotions, understanding them and taken appropriate actions. In a holistic sense, EI incorporates the important aspects of interpersonal and intrapersonal relationships, adaptability, moods and stress management skills, which have a profound effect on the academic performance of students. It is the self-perceived ability to identify, assess, and control the emotions of oneself, of others, and of groups (Martin & Hafer, 2009). Synonymously, Lynn, Harvey and Nyborg (2009) also argue that EI is the ability to perceive emotions, to access and generate emotions, so as to assist thought, to understand emotions and emotional meanings, and to reflectively regulate emotions, in order to promote better emotional and intellectual growth. This postulation unearths four related skills of EI namely: perceiving emotions, using emotions to

facilitate thinking, understanding emotions, and managing emotions (Lynn et al., 2009). Brackett, Rivers and Salovery (2011) add that EI from this perspective refers specifically to the cooperative combination of intelligence and emotion.

Bar-on (2011) explains that EI is a collection of skills and abilities that equips a person for adaptation with his or her environment and achievement of success. Bar-on's EI Model encapsulates fifteen components which are: emotional self-awareness, decisiveness, self-honor, self-actualizing, independent, sympathy, interpersonal communications, responsibility, problem solving, the measurement of reality, resilience, pressure tolerance, impulsive control, happiness, optimism (Bar-On, 2011). Makewa, Role and Otewa (2012) believe that persons who benefit from high emotional intelligence have more talent to obtain information and have more enjoyable life.

More importantly, Becker (2003) presents a composite picture of an individual with high EI. The writer opines that most centrally, an individual with high EI can better perceive emotions, use them in thought, understand their meanings and manage emotions better than an individual with little or no EI. Thus, solving emotional problems likely requires less cognitive effort for the former type of individual. The person also tends to be somewhat higher in verbal, social and other intelligences, particularly if the individual scores higher in the understanding emotions portion of EI. The individual tends to be more open and agreeable than others. Thus, a high emotionally intelligent person, is drawn to occupations involving social interactions such as teaching

and counseling more than to occupations involving clerical or administrative clerks (Becker, 2003).

Additionally, a high emotionally intelligent person, relative to an individual with low EI is less apt to engage in problem behaviors and avoids self-destructive, negative behaviors such as smoking, excessive drinking, drug abuse or violent episodes with others (Brackett, Mayer & Warner, 2004). Again, the high EI person is more likely to have possessions of sentimental attachment around the home and to have more positive social interactions, particularly if the individual scored highly on emotional management. Such individuals may also be more adept at describing motivational goals, aims and missions (Brackett et al., 2011).

Navabinejad (2003) canvasses that EI is a form of social intelligence and a suitable predictor of general functioning. It also entails one's ability to manage his or her and others' feelings and emotions, distinguish between them and use information to direct one's thinking and practice. Moreover, Williams and Barry (2003); Kafetsios (2010); Parker (2010) regard EI as having scientific features of a rational intelligence such as conceptual, correlation and developmental criteria.

The conceptual criterion position holds that EI reflects mental functioning, not the salient methods of behaving or sagacity free-skills or self-respect only. In other words, it measures abilities related to emotion (Williams & Barry, 2003). The correlation criterion view suggests that EI includes a set of abilities, which are dependent and related to other mental skills, described by other kinds of proved intelligence (Kafetsios, 2010). The developmental

criterion perceives that EI develops along with age and experience from childhood to adulthood (Parker, 2010).

Naghavi, Marof and Mariani (2010); Kafetsios (2010); Naghavi and Redzuan (2011) add that considering the evolutional aspects of EI three mental abilities of adolescents are significant namely: conception, appraisal and expression of emotion; emotions regulation and management; emotion utilization. The conception, appraisal and expression of emotion mental ability is the ability to identify and understand one's and others' emotions based on situational and expressional cues and emotional meanings which are in accordance with culture (Naghavi et al., 2010). The emotion regulation and management ability is one's ability to compatibly deal with opposite or negative emotions using self-regulation methods that improve the extent or duration of such emotions, the ability to create joyful conditions for others, as well as concealing one's negative emotions to avoid harming others' personal feeling (Kafetsios, 2010). Emotion utilization is the ability to plan flexibly and use emotions in problem solving (Naghavi & Redzuan, 2011).

Salovey and Mayer (1990) define EI as the ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions. They believe that any task is loaded with information, affective information and understanding and regulating it would help individuals to solve problems and regulate behavior (Salovey & Mayer, 1990). They also conceptualized a set of skills which they believed would assist a person in regulating his or her emotions which are: appraisal and expression of emotion, regulation of emotion and utilization of emotion.

In terms of the appraisal and expression of emotion, a person who is able to accurately perceive his or her emotions will also be able to respond to his or her emotions accurately, and in turn will be better in expressing them to others (Brackett & Mayer, 2003). Such a person will be able to understand the emotions in others as well. This allows him or her to adapt to the situation and have better social skills. These skills are a part of EI, as it requires the processing of emotional information in oneself and in others (Brackett & Mayer, 2003).

Boyatzis and Sala (2004) explain that emotions can be triggered and regulated according to a person's will, when he or she is adept at consciously perceiving those factors which have a feel good effect and those which do not. This ability also sharpens one's senses towards perceiving the emotions of others and effectively adapting himself or influencing others as the situation demands. However, Boote and Beile (2005) observe that the regulation of emotions can sometimes have a negative bearing, as people may try to manipulate others to meet their own demands.

The utilization of emotions demands flexible planning, creative thinking, redirected attention and motivation. This ability is included in the construct because, people with emotional intelligence should be at an advantage in solving problems adaptively (Salovey & Mayer, 1990). The writers explain further that an awareness of one's emotional state helps one to plan his or actions, think creatively, redirect focus and motivate oneself to get the best out of any situation.

Mayer and Salovey (1997) define EI as the ability to perceive accurately, appraise, and express emotion; the ability to access and or generate

feelings when they facilitate thought; the ability to understand emotion and emotional knowledge; and the ability to regulate emotions to promote emotional and intellectual growth. Based on this definition, a four branch model was proposed by Mayer and Salovey (1997). The four branches move from basic psychological processes to more complex ones, as the writers believe that an emotionally intelligent person had the ability to progress through these four levels and master most of them faster than others with lower EI. These four branches are perception, appraisal and expression (Mayer & Salovery, 1997; Bar-On, 2000); emotional facilitation of thinking (Bar-On, 1997); understanding and analysing emotions (Goleman, 1998); reflective regulation of emotions to promote emotional and intellectual growth (Goleman, 2006).

Perception, appraisal and expression is an ability to identify emotions in oneself, in others, express them accurately and further discriminate between honest and dishonest expressions of feelings (Mayer & Salovery, 1997; Bar-On, 2000). Emotional facilitation of thinking sharpens the thought process as emotions direct attention towards important information and the emotions can be used to classify the information for better judgment and memory (Bar-On, 1997). Emotionality helps people to have multiple perspectives. A happy mood leads to optimistic views and a bad mood culminates in pessimistic thoughts. An awareness of these moods swing, assists a person in approaching a problem in specific ways with better reasoning and creativity (Bar-On, 1997).

Understanding and analysing emotions is based on employing emotional knowledge, in order to identify the subtle relationships and

differences between similar emotions. For instance, loving and liking, and also interpret the meanings of these emotions (Goleman, 1998). In understanding and analyzing emotions, an individual also has the ability to identify complex emotions occurring simultaneously (love and hate, fear and surprise) and also perceive the transition from one emotion to another (when anger turns to satisfaction or anger results to shame) (Goleman, 1998).

Reflective regulation of emotions to foster emotional and intellectual growth is the ability to be open to emotions, whether good or bad and thus have the power to voluntarily attach or detach from an emotion (Goleman, 2006). An individual also has the competence to reflect on his or her own and others' emotions and thus be able to manage emotions in himself or herself, as well as others (Gayathri & Meenakshi, 2013).

**Components of Emotional Intelligence**

Goleman's (1998) outline four main constructs of EI: self-awareness, self-management, social awareness and relationship management. Mayer and Salovery (1997) note that there are four branches of EI: perception, appraisal and expression; emotional facilitation of thinking; understanding and analysing emotions; and finally, reflective regulation of emotions. In this write up, the components were from the various writers in the direction of how they were adapted for the development of the study's questionnaire.

**Self-Awareness and Expression**

Self-awareness and expression is the ability to recognize one's emotions and their effects on oneself and other people. It involves using what one knows about his or her emotions, in order to manage them and motivate oneself (Goleman, 2011). Self-awareness and expression also involves

nonverbal perception and expression of emotion in the face, voice and related communication channels (Martin & Hafer, 2009). Martin and Hafer (2009) add that limited emotional literacy can culminate in misperceptions of feeling in one's self and others.

In order to correctly perceive feelings in oneself and others, it is imperative to have words for those feelings, otherwise known as a feeling lexicon (Martin & Hafer, 2009). This is because a large and more complex feeling vocabulary allows one to make finer discriminations between feelings, to communicate better with others about their internal affective states and to engage in discussions about their personal experiences with the world (Hanify & Joibari, 2010).

Additionally, Hanify and Joibari (2010) suggest that everyone experiences emotions and therefore in order to be aware of them, it is incumbent to access them by naming them, as words give meaning to our world, and through them we gain understanding. The writers recommend further that maintaining a daily log of one's feelings facilitates an increase in emotional quotient. As an outcome, with time, one's feeling language will become more differentiated and therefore more precise (Hanify & Joibari, 2010).

In being aware of one's emotions, Kafetsios (2010) expounds that certain factors must be taken into cognisance that can either influence or decrease an emotion. These factors are personality, day of the week and time of the day, weather, stress, social activities, sleep, exercise, age, gender, organizational and cultural influences. Lishner, Swim, Hong and Vitacco (2011) explain that personality predisposes people to experience certain

morning. Thus, workplace interactions will probably be more positive from mid-morning onward and also later in the week (McIntyre, 2010).

Aside the day and time of the week, Murphy (2006) observes that many people believe their emotion is tied to the weather. However, the writer disapproves that weather has little effect on emotions, as often times one may associate things as causal when in fact there is no true relationship. Naderi, Asgari and Roushani (2010) add that illusory correlation explains why one may tend to think that nice weather improves their emotions. Illusory correlation occurs when one associates two events but in reality there is no connection (Naderi et al., 2010). Rather than associating the weather factor to emotions, Naghavi, Marof and Mariani (2010) argue that stress affects emotions. For example, the writers explained that students have higher levels of fear before an exam, but their fear dissipates once the exam is over. Moreover, at work, stressful daily events such as a nasty email, an impending deadline, being reprimanded by one's boss can negatively affect one's emotions.

Furthermore, social activities have been found to play a positive role in peoples' emotions. For someone, social activities may increase positive moods and to another, social activities may have little effect on negative moods (Palmer, Gignac, Monocha & Stough, 2005). Research conducted by Parker, Hogan, Eastabrook, Oke and Wood (2006) suggest that physical (skiing or hiking with friends), informal (going to a party), or epicurean (eating with others) activities are more strongly associated with increases in positive mood than formal (attending a meeting) or sedentary (watching television with friends) events. Social interactions have also been found to have long-term

health benefits. One study of longevity executed by Petrides, Perez-Gonzalez and Furnham (2007) for example found that being in the company of others as opposed to social isolation was one of the best predictors of how long someone can live.

Added to social activities, sleep has also been found to affect emotions (McIntyre, 2010). The writer reports that undergraduates and adult workers in America who are sleep-deprived bemoan greater feelings of fatigue, anger, and hostility. Less sleep or poor sleep quality can put one in a bad mood because, it impairs decision making and makes it difficult to control emotions. A study by Austin, Evans, Magnus and O'Hanlon (2007) also suggest that poor sleep the previous night can also impair one's job satisfaction the next day, because he or she may feel fatigued, irritable, and less alert (Austin et al., 2007).

Aside, good quality sleep, exercise enhances emotions (Animasahun, 2010). Although the effects of exercise on emotions are consistent, they are not terribly strong. So, exercise may help put someone in better emotions, but does not create a miracle. Besides exercise, Arteche, Chamorro-Premuzic, Furnham and Crumpm (2008) found that age can influence one's emotions. The writers discovered that negative emotions seem to occur less as people get older from the ages of 18 to 94 years. Periods of highly positive moods lasted longer and bad moods faded more quickly for older individuals, as opposed to younger individuals. Thus, emotional experience tended to improve with age so that as one gets older, one experiences fewer negative emotions (Arteche et al., 2008).

Additionally, Carr (2009) opines that one's gender could provide explanations for emotional expressions. The writer for example asserts that women show greater emotional expression than men; experience emotions more intensely; display more frequent expressions of both positive and negative emotions, except anger. In contrast to men, women also report more comfort in expressing emotions. Women are also better at reading nonverbal and paralinguistic cues than men (Carr, 2009).

The different ways in which men and women have been socialized could account for the gender differences in emotional expression (Chang, 2007). Men are taught to be tough and brave and therefore showing emotion is seen to be inconsistent with a man's image. Women, in contrast, are socialized to be nurturing. This may account for the perception that women are generally warmer and friendlier than men. For instance, a woman is expected to express more positive emotions on the job (shown by smiling) than a man does (Connolly, Kavanagh & Viswesvaran, 2007).The gender differences in emotional expression could also be explained by the fact that women may have more innate ability to read others and present their emotions than do men (Carr, 2009). Women may also have a greater need for social approval and, so, a higher propensity to show positive emotions, such as happiness (Castro-Schilo & Kee, 2010).

Aside gender differences, Craig, Tran, Hermens, Williams, Kemp, Morris and Gordon (2009) argue that organizational influences have equally been known to play a role in enabling one to decipher the perception of emotions. This is by virtue of the fact that every organization defines boundaries that identify which emotions are acceptable and the degree to

which an employee may express them. If for instance you cannot smile and appear happy, you are unlikely to have much of a career working at a Disney amusement park (Craig et al., 2009).

On the other hand, cultural influences examine the degree to which one may experience and interpret emotions across cultures (Dehshiry, 2006). In China, for example, people report that they experience fewer positive and more negative emotions than those in other cultures, and whatever emotions they do experience are less intense than what other cultures report (Deniz, Tras & Aydogan, 2009). Compared to Mainland Chinese, Extremera and Fernández-Berrocal (2009) unearth that Taiwanese are more like Americans in their experience of emotion. On the average, Taiwanese report more positive and fewer negative emotions than their Chinese counterparts. In general, people in most cultures appear to experience certain positive and negative emotions, but the frequency of their experience and their intensity does vary to some degree (Extremera et al., 2009).

Holistically, people from all over the world interpret negative and positive emotions the same way. For instance, negative emotions such as hate, terror and rage, are regarded as dangerous and destructive, while positive emotions such as joy, love, and happiness are seen to be good (Durlak, Weissberg, Dymincki, Taylor & Schellinger, 2011). However, Hasson (2012) suggests that this universal approach to the study of emotions is incorrect because there may be subtle differences in the degree to which individuals can tell what emotions people from different cultures are feeling based on their facial expressions. For example, Chinese students living in the United States for an average of 2.4 years were better at recognizing the facial expressions of

American citizens than the facial expressions of Chinese citizens. Hasson (2012) suggested that this could be by virtue of the fact that the Chinese were constrained in speaking the American English and therefore relied more on the nonverbal communication of the Americans.

In terms of the emotional self-awareness of children, Petrides, Perez-Gonzalez and Furnham (2007) comment that parents can help children become aware of their emotions by giving the emotion names and then encouraging them to talk about how they are feeling. By giving a child an emotional label, he or she is able to develop a vocabulary for talking about his or her feelings. Parker (2010) notes that children can also be enabled to become aware of their emotions by helping them to identify feelings in themselves and others.

Moreover, Mavroveli and Sanchez-Ruiz (2011) add that children can be taught different ways by which they can respond to specific feelings, conflicts, or problems. One of such ways is by a parent talking about his or her feelings with his or her children. A parent can also explain to his or her children different ways by which he or she deals with specific feelings. Mavroveli and Sanchez-Ruiz (2011) add that in emotional self-awareness, children can also be taught to identify and express their emotions in ways that their parents' family and friends find acceptable.

**Social Awareness and Interpersonal Relationship**

As opposed to self-awareness and expression, social awareness and interpersonal relationship extends one's emotions to include understanding other people's emotions (Lynn, Harvey & Nyborg, 2009). Hasson (2012) expansiates that when conducting business in a foreign country, the ability to correctly recognize others' emotions can facilitate interactions can culminate

in less miscommunication. Otherwise, a slight smile that is intended to communicate disinterest may be mistaken for happiness (Hasson, 2012). The norms for the expression of emotions also vary across cultures (Setareh, Zahra & AzamMoradi, 2014). Absolutely, for instance, Muslims see smiling as a sign of sexual attraction, so women have learned not to smile at men (Seyyed & Seyyed, 2014).

Rust (2014) also observes that in collectivist countries people are more likely to believe that emotional displays have something to do with their own relationship and the person expressing the emotion, while people in individualistic cultures do not think that another's emotional expressions are directed at them. For example, in Venezuela (a highly collectivistic culture), someone seeing an angry expression on a friend's face would think that the friend is mad at her, but in America (a very individualistic culture), a person would generally not attribute an angry friend's expression to something she or he had done (Rust, 2014).

In humans, emotion influences thought and behavior in many ways (Lavalekar, Kulkarni & Jagtap, 2010). For example, at the neurological level, emotion influences thought and behavior for example, through the malfunction of certain brain areas, which not only destroys or diminishes the capacity to have or express certain emotions, but also has a similar effect on the capacity to make sound decisions (Lavalekar et al., 2010) as well as on the capacity to learn new behavior (Kafetsios, 2010). Joseph and Newman (2010) add that brain areas important for emotions are also important for classical cognition and instrumental learning. At the level of cognition, a person's belief about something is updated according to the current emotion, which is used as

information about the perceived object. This emotion makes the belief resistant to change (Joseph & Newman, 2010).

Moreover, Jafari and Ghomi (2010) argue that emotions play a role in the regulation of the amount of information processing. For instance, emotion is related to the continuous checking of the environment for important stimuli (Jafari, & Ghomi, 2010). On the other hand, Hanify and Joibari (2010) opine that positive moods favor creative thoughts as well as integrative information processing, while negative moods favor systematic analysis of incoming stimuli. Deary, Penke and Johnson (2010) add that when information is emotionally arousing, attending to that information could play an even more substantial role especially when it has the potential for bringing changes in the environment. By so doing, attention allows people to select a subset of information and grant it priority for processing (Deary et al., 2010). Brackett et al. (2011) expatiate that the sudden appearance of a fearful face in the periphery for instance, probably indicates an impending threat or danger, which could warrant immediate attention. This goes to suggest that even in a classroom situation such expression (such as fearful face) in a pupil's face can direct the teacher to give immediate attention to the person.

Aside the role of emotions in information processing, emotions also regulate the behavior of others. For instance, the expression and subsequent recognition of emotion is important to communicate disapproval of the actions of others. This is particularly evident in parent-child relations (Austin et al., 2007). Similarly, Arteche, Chamorro-Premuzic, Furnham and Crump (2008) argue that parents use emotional expression to guide the behavior of infants. This emotional expression can either express reward or punishment when

directed to the infant. Karbach, Gottschling, Spengler, Hegewald and Spinath (2012) explain that when a parent for example, expresses a smile (happy face) this can be interpreted by the infant as a positive affect. On the contrary, if the parent expresses fear, this can be interpreted by the infant as a negative affect. A neutral face on the other hand can be considered as affectless (Karbach et al., 2012).

**Emotional Self-Management and Regulation**

Roushani (2001) opines that emotional self-management and regulation refer to the abilities to circumvent feelings or reframe appraisals in order to reassure oneself or achieve equanimity. Castro-Schilo and Kee (2010) argue that an adult can model emotional regulation skills for children for example, by verbalizing the course of actions they can take in order to calm down or cope with certain feelings (Castro-Schilo & Kee, 2010). Having feelings and being able to recognize emotions in others and in oneself is a necessary, but an insufficient step towards helping children achieve social and emotional competence (Jafari & Ghomi, 2010). The writers suggested that adults also need to assist children in developing and becoming fluent with the skills of emotional regulation such as calming down, controlling anger and impulse and engaging in problem-solving such as generating solutions to interpersonal problems that will culminate in positive feelings (Jafari & Ghomi, 2010).

Goleman (2011) cautioned that managing and regulating emotions demands personal and social competence. Personal competence entails self-awareness and self-management, while social competence entails social awareness and relationship management. Self-awareness is the ability to

recognize one's emotions and their effects on oneself and other people. It involves using what one knows about his or her emotions, in order to manage them and motivate oneself. Self-management builds on self-awareness by using one's self-control to ensure that one's emotions do not control him or her regardless or in spite of the situation (Goleman, 2011a).

Goleman (2011b) states further that self-awareness comprises of three elements namely: emotional self-awareness, accurate self-assessment and self-confidence. Emotional self-awareness demands that an individual accepts that he or she has an inbuilt reluctance to admit certain negative feelings (Bar-On, 2011). The writer propels that this acceptance can only be feasible when an individual recognizes the behaviours that ensue negative emotions rather than potentially admitting the emotions. Lishner et al. (2011) state that after an individual who is emotionally self-aware has taken into cognizance adverse behaviours, he or she will ensure to minimize such behaviours to the point where it will not affect him or her or adopt positive behaviours that will minimize the effects of adverse emotions. Thus, an individual who is emotionally self-aware can explore and manage his or her strengths and weaknesses, as well as those of others (Lishner et al., 2011).

Deniz et al. (2009) describe persons who possess accurate self-assessment as people who: have been able to identify their strengths and weaknesses; are reminiscent and capable of learning from experiences; are receptive to candid feedback and new perspectives; are able to show a sense of humor and perspective about themselves; have taken keen interest in continuous learning and self-development.

The final competency of self-awareness, which is self-confidence (Elfenbein, 2008), is the ability to ground oneself, so that one can be secured and self-assured in whatever situation one may find himself or herself. People who are self-confident, demonstrate traits of certainty about their values and capabilities, a strong presence, a high level of self-assurance, the willingness to express an unpopular opinion, the ability to make quick decisions even in precarious and pressurized circumstances, the belief that they can control the direction of their lives. Therefore, the more an individual is self-confident, the more he or she can influence his or her future (Eleby, 2009).

The second component of personal competence, which is self-management is composed of six facets of skill attributes, which are self-control (Goleman, 1995); trustworthiness (Goleman, 1998), conscientiousness (Goleman, 2006), adaptability (Goleman, 2011a), achievement orientation (Goleman, 2011b) and initiative (Bar-On, 2011). Self-control is the ability to remain composed in whatever state your emotions are. People with this form of competence congruously manage their impulsive feelings and distressing emotions. They ensure positivity and stay unflappable even in trying moments (Goleman, 1995).

Trustworthiness, on the other hand, refers to people who are true to their words or better still, ensure that they execute their promises. People with this form of competence act ethically and are above reproach; are reliable and authentic and therefore are easily trusted by people; admit their mistakes and confront unethical actions in others; take tough and principled decisions even if they are unpopular (Goleman, 1998).

Goleman (2006) explains that when an individual is conscientious he or she is circumspect, vigilant and assiduous. Such an individual is trustworthy, hold himself or herself accountable for meeting his or her objectives, ensure chronology and circumspection in doing their work or carrying out their functions. Adaptability (Goleman, 2011a) on the other hand is the ability to fit oneself into changes or follow trends of events. People with such competence are able to multitask effectively and are flexible in how they see and organize their events. Goleman (2011b) states that achievement orientation requires an individual to show concern for working towards a self-imposed and defined standard of excellence. As a result, people with this form of competence establish challenging goals for themselves; measure their own performance against these goals; actively seek out information to accomplish goals and use their time efficiently (Goleman, 2011b).

Bar-On (2011) posits that initiative demands people to be at the forefront of problem solving and conflict resolution, as well as taking actions to forestall problems from cropping up in the first place. Initiative taking further demands that people explores new ideas from a variety of ideas. This requires dovetailing information from diverse sources of information. Huber and Kipman (2012) add that taking initiative also requires an individual to delve into the root causes of problems in order to come up with perennial solutions to problems. This demands deep seated thinking in order to establish such solutions.

As opposed to personal competence, which is centered on solely managing and regulating personal emotions, social competence extends one's emotions to include understanding other people's emotions. This is known as

social awareness (Ashkanasy, & Dasborough, 2003). In order to be branded as a socially aware individual, a person must demonstrate empathy (Barchard, 2003); organization awareness (Bar-On, 2004) and service orientation (Bastian et al., 2005). To empathize with others is the ability to understand and re-experience others' feelings. People who empathize: actively listen to what others say and observe their non-verbal signs; appreciate other views or opinions; focus on accomplishing goals, while ensuring that they are not at loggerheads with others; understand where emotional boundaries start and end (Barchard, 2003). Conversely, organizational awareness is the ability to observe and study the current of emotions and political realities in groups or organizations. This form of competence demands that people should have an understanding of the rationale behind a group or organization for instance and know how to accomplish goals within an organization formally and informally (Bar-On, 2004).

Service orientation on the other hand builds on the empathy an individual may have with others by assisting them in their personal development and satisfaction. This form of competence demands that an individual meticulously questions others, in order to ascertain issues that may be affecting others personal performance. When such information is provided, it enables the service orientated individual to best counsel others on ways to improve their performance (Bastian et al., 2005).

The second facet of social competence, which is relationship management is about sustaining strong, effective and lasting relationships by managing one's and other emotions such that it does not generate conflicts or even if it does, the ability to manage conflicts that might ensue relationships is

equally relationship management (Bar-On, 1988). The prerequisites for relationship management are influence (Bar-On, 1997); leadership (Goleman, 1995); developing others (Goleman, 1998); communication (Hasson, 2012); change catalyst (Brackett, Mayer & Warner, 2004); conflict management (Conte, 2005); building bonds (Goleman, 2006), teamwork and collaboration (Gregory, 2007).

Influence is the extent to which one is able to persuade others to execute a course of actions or take a decision. Thus, people with influence are able to offer a concise explanation of issues to others and by so doing, are able to persuade them to take a particular course of action. Influential people also offer support to others and gain support from others. By so doing, they become an epitome of trustworthiness (Bar-On, 1997). Goleman (1995) posits on the other hand that leadership is the competence of being at the forefront of a team and issuing directives, which team members are prepared to accept and work with the leader to accomplish goals. People with leadership potentials lead by example and by so doing, inspire others to achieve goals or a vision. They are also fond of effectively delegating tasks and expect feedbacks from the delegated tasks, thereby fostering accountability (Goleman, 1995).

As opposed to leadership which concentrates on being at the helm of affairs, developing others is all about working with others and assisting them to unearth their potentials by observing and providing them with opportunities to fully develop their potentials (Goleman, 1998). Gornefski (2004) notes that it takes someone with leadership potentials to fully develop others. Someone who is devoid or deficient of leadership capabilities cannot have the capacity to bring up others (Grewal & Salovey, 2005). People with the capacity to

develop others are able to identify and reward attainments, as well as the strengths of individuals. They are regularly challenge and offer new opportunities for development to the people whom they are train, thereby providing constructive feedback to support and encourage the development of their trainees (Grewal & Salovey, 2005).

Communication demands persuasiveness, precision, clarity, chronology and objectivity (Hasson, 2012). People who are equipped with communication skills, relentlessly adapt to emotional contexts; focus on accomplishing objectives by acknowledging others' opinions and easily empathize with others (Hasson, 2012). A change catalyst is someone who explores and initiates new ideas and approaches, as a measure of accomplishing set objectives (Brackett et al., 2004). People who are change catalysts, are not hesitant to challenge the status-quo. They easily recognize blockades and seek for solutions to uplift them. They also easily champion the course of change (Jausovec & Jausovec, 2005).

Compared to the change catalyst, which is concerned with creating a revolution in an organization or institution, conflict management on the contrary is concerned with recognizing, pre-empting or managing areas of conflict, even when change is concerned, to a positive resolution (Conte, 2005). An individual who possesses conflict management skills tackles conflict by ascertaining the knowledge and strengths of the conflict; reading the underlying emotions within groups; being open-minded and willing to welcome different perspectives (Livingstone & Day, 2005).

Added to conflict management as a prerequisite for relationship management, is the building bond strategy. This strategy permits the building

of a wide variety of mutually beneficial relationships (Goleman, 2006). People who can build bonds are widely respected and liked; generate a broad personal network that incorporates colleagues, professionals, contacts and friends; keep others appropriately informed (Lynn et al., 2009). Furthermore, teamwork and collaboration (Gregory, 2007), which is another relationship management competency, refers to the natural aptitude in creating a cohesive team. People with this form of competence ensure that objectives are congruously defined and understood by all; behave in a way that is worth emulating by others and demonstrate that they value all contributions (Lavalekar, Kulkarni & Jagtap, 2010).

Further still, in understanding emotions, Mavroveli and Sanchez-Ruiz (2011) emphasize the need to build not only the social competence of adults, but also the social competence of children. The writers stressed that children should be made to recognize and discuss their feelings as well as the feelings of others, in order to contribute to the development of their communication skills and enable them to empathize with others (Mavroveli &Sanchez-Ruiz, (2011). Naghavi and Redzuan (2011) suggest that this strategy can be activated by presenting stories to children that will enable them to identify and discuss emotions that have been expressed by characters in the stories. Thus, this method demands the use of emotional vocabulary or language such as anger, pain, blissful, in order to describe the kinds of emotions that have been expressed by characters in the stories (Naghavi & Redzuan, 2011).

Another modality for developing the social competence of children is by educating them on how to express their feelings appropriately (even in distressed situations) and how others can express their feelings towards

circumstances, as well as making them to comprehend that expressing feelings is imperative for a sense of well-being (Daus & Ashkanasy, 2003). Day and Carroll (2004) counsel that enabling children to recognize early warning signs of feelings and the actions that can accompany them, empowers them to control their emotions and behave decently in difficult or stressful situations. Again, the writer comments further that helping children to develop an understanding that strong feelings can build up and equally overwhelm is also very important. In helping children to develop emotional intelligence, Daus and Ashkanasy (2005) have caution that children should be made to understand that when they encounter setbacks in life, it is sacrosanct for them to develop resilience, in order to confront and overcome these setbacks, since they constitute part of life. Additionally, social competence in children also requires that they should be educated on the need to build and sustain their self-esteem by emphasizing on their ability to deal with criticisms, whether true or untrue because, criticisms are inevitable in life (Dehshiry, 2006).

Mavroveli and Sanchez-Ruiz (2011) caution further that after a parent has explained the modalities by which he or she deals with emotions, the parent can teach the child different ways to deal with feelings by using real-life examples; discussing common situations that a child might remember or that happens frequently; using children's books to talk about feelings.

Apart from the use of real-life examples, children can also be taught new strategies to use when feeling emotions that may be expressed inappropriately such as anger, frustration and sadness. Examples of such strategies are telling the child to take a deep breath when frustrated or angry, getting an adult to help resolve a conflict, asking for a hug when sad and

finding a quiet space to calm down when distressed (Mavroveli & Sanchez-Ruiz, 2011). Lishner, Swim, Hong and Vitacco (2011) enjoin that children should equally be given the room to come up with ways by which he or she can deal with his or her feelings. They should also be given the opportunity to practice the new strategies for identifying and expressing emotions appropriately every chance they get (Lishner et al., 2011).

**Relationship Management and Self-Motivation**

Relationship management and self-motivation is about sustaining strong, effective and lasting relationships by managing one's and other emotions such that it does not generate conflicts or even if it does, the ability to manage conflicts that might ensue relationships is equally relationship management (Bar-On, 1988).

Emmerling and Goleman (2003) argue that experiencing strong emotions such as anger, sadness, fear, anxiety, are inevitable, as they are conventional part of being human. Nevertheless, in spite of these human tendencies, Goldenberg, Matheson and Mantler (2006) caution that we can always develop ways to manage rather than react to these emotions by identifying and naming what we feel. This measure can help us to differentiate between different feeling states and therefore enhance the understanding of our emotions and our relationship with people.

Conversely, Hall and Mast (2008) suggest that additional mechanism by which humans can manage their relationships is for them to understand why they have a particular feeling about a person or people. This can be accomplished by tracing the source of their feeling. For instance, if it is anger, it is best for the human to identify what drove or is driving the anger against a

person or people. Perhaps it could be some form of hurt, perceived rejection or disappointment (Hall & Mast, 2008).

As supplementary mechanisms to manage relationships Arteche, Chamorro-Premuzic, Furnham and Crump (2008) add that humans can understand their feelings by paying attention to issues like naming the event or action that prompted the emotion, noticing how the person concerned interpreted the situation, noticing some of the physical sensations being experienced by the person (Arteche et al., 2008).

Other issues that can facilitate the understanding of people's feelings include noticing how the human concerned, behaved in response to having strong feelings and noticing how others respond to the individual, as well as the after-effects of the individual's emotions (Castro-Schilo & Kee, 2010). In the latter case, Hanify and Joibari (2010) stated that the individual can observe how others behave towards him or her after he or she has expressed strong emotions. For example, the individual can observe if other friends have withdrawn or distance themselves from him or her after he or she has spoken or behaved aggressively.

Ashkanasy and Dasborough (2003) canvass that taking care of oneself such as eating well, getting some sleep, doing some exercise, avoiding drugs and alcohol are other ways by which humans can curtail the impact of strong emotions. Accepting one's emotions, rather than judging them as good or bad (Barchard, 2003); demonstrating equanimity by slowing down in moments of anger and listening to others rather than talking (Bastian, Burns & Nettelbeck, 2005); thinking through thoroughly about something before responding (Ciarrochi, Hynes & Crittenden, 2005) and talking to a health care

professional about one's feelings (Connolly, Kavanagh & Viswesvaran, 2007) are auxiliary measures of dealing with strong emotions and managing relationships.

Craig, Tran, Hermens, Williams, Kemp, Morris and Gordon (2009) explained further that emotional distress or strong feelings can sometimes by caused by sickness, illness or disease, especially in cases where the disease can create some form of disability and spur people to detach themselves from the person concerned. In such cases, the victim may feel frustrated, relegated to the background, depressed and lonely, thereby culminating in feelings of aversion and apathy towards life and its endeavours.

Deniz, Tras and Aydogan (2009) used the example of persons living with Motor Neurone Disease (MND) to further explain emotional distress attached to sickness or illness. The writers explain that living with the MND creates varied emotional challenges and changes that may be difficult to cope with. Examples of emotional challenges pegged to the MND are anger; anxiety/panic; denial from self, family, relatives and friends; fear; frustration; grief; isolation; sadness and shock of being diagnosed of the disease in the first place.

Nonetheless, Extremera and Fernández-Berrocal (2009) caution that rather than entertaining these feelings for life, it is best to identify them and their likely causes. This measure will enable the victim to seek for ways to manage these feelings and therefore feel more in control of the situation and be able to relate with others conveniently without a feeling of distress, sympathy, frustration and antagonism with oneself.

Researchers have prescribed mechanisms by which persons with the MND can manage emotional challenges associated with the disease. Examples of some of these mechanisms are the victim venting out his or her anger to someone who can have the patience to listen to him or her. This strategy Gornefski (2004) explains, can sometimes help to curtail destructive feelings. Again, distracting oneself for a while by doing something relaxing, closing one's eyes and imagining a place of safety and calm, are additional measures that can be adopted by the victim to enable him or her to cope with the disease (Grewal & Salovey, 2005). Moreover, confronting denial can allow the victim to be more proactive (Jausovec & Jausovec, 2005) and putting in place plans in advance that will enable the victim to deal with the future can help him or her overcome the feeling of fear and therefore be able to relate with others conveniently (Livingstone & Day, 2005).

Being patient with oneself and allowing the healing process to unfold naturally and gradually can enable the victim overcome the feeling of grief, while making and sustaining contact with people the victim cares about can enable him or her overcome isolation (Meyer & Fletcher, 2007). Additionally, the victim can talk about his or her feelings of sadness with those who are close to him or her, in order for them to encourage him or her, as this can enable the victim to overcome sadness and the victim ensuring that he or she does not pressurize himself or herself can be helpful to contain the feeling of shock (Petrides, Perez-Gonzalez, & Furnham, 2007).

**Trait Emotional Intelligence**

Petrides and Furnham (as cited in Murphy, 2008) view trait El as cross-situational consistencies in behaviour that are part of personality, and

assessed with self-report inventories that measure typical behaviour. Trait El, otherwise known as emotional self-efficacy, is defined as "a constellation of behavioural dispositions and self-perceptions concerning one's ability to recognize, process, and utilise emotion-laden information" (Petrides, Frederickson & Furnham, 2004, p. 278). Trait El is therefore seen as combining elements of personality theory such as empathy, impulsivity and assertiveness as well as combining elements of Thorndike's social intelligence and Gardner's personal intelligences (Petrides et al., 2004).

Trait EI concerns people's self-perceptions of their emotional abilities and skills, personality characteristics and behavioral dispositions that influence their ability to cope successfully with environmental demands and pressures (Petrides, 2011). According to Petrides and his colleagues (Petrides, Pita, & Kokkinaki, 2007), the construct can alternatively be labeled as trait emotional self-efficacy; it is located at the lower levels of personality hierarchies, and it is measured via self-reports. Various theoretical models have been proposed to account for the nature, the structure and the component dimensions of trait EI and questionnaires have been designed to measure the construct(s) within each theory (e.g., Goleman, 2001; Petrides & Furnham, 2001; Petrides, Pérez-González, et al., 2007; Wong & Law, 2002).

Trait EI is defined as a constellation of emotional self-perceptions located at the lower levels of personality hierarchies and measured via the trait emotional intelligence questionnaire (Petrides, Pita, & Kokkinaki, 2007). Trait EI is the only operational definition in the field that recognizes the inherent subjectivity of emotional experience.

Trait EI theory has several advantages relative to other approaches. First, it acknowledges the subjective nature of emotional experience (Robinson &Clore, 2002), thus circumventing a series of problems plaguing other models. Second, it integrates the construct into mainstream theories of differential psychology rather than treating it as a novel entity detached from accumulated scientific knowledge. Third, it is not tied to specific proprietary tests, but rather it is general and provides a platform for the interpretation of data from any questionnaire of EI or related constructs. Fourth, it is readily extendable into cognate areas (e.g., social intelligence) rather than restricted to a single idiosyncratic model. Trait EI theory enjoys widespread empirical support and consistently replicated findings from numerous studies that are theoretically driven, methodologically sophisticated, and independently conducted. (Petrides, 2010).

The role of Trait Emotional Intelligence on students' academic performance has already been well-studied (Eysenck 1997; Dennis 2004; Petrides et al. 2004; Slobodskaya et al. 2005), while its significance to students' emotional and behavioural difficulties still remains to be answered. At the same time, research emphasis on students' impairment underscores the effect of Trait Emotional Intelligence on children's and young people's prosocial skills and positive behaviour.

**Bar-On's Trait Model**

Bar-On's model of emotional intelligence is a trait emotional intelligence theory with ultimate focus on the potential for an individual's success rather than success itself. It is also process oriented rather than outcome oriented (Bar-On, 2002). He posits that emotional intelligence can be

learned and developed over a period of time through training, programming and therapy (Stys and Brown, 2004). The Bar-On model differs from Goleman's model in that it includes stress management and general mood components like optimism and happiness. Apart from these, he incorporates reality testing which asserts how far a person is aware of the gap between the actual meaning and his construed meaning of a given situation, and also impulse control which is an ability to control oneself from reacting to a situation in a reckless manner.

**Ability Emotional Intelligence**

Ability EI, also known as cognitive-emotional ability, refers to one's actual ability to recognize, process, and utilize emotion-laden information (Petrides, Frederickson, &Furnham, 2004). Ability El is defined as "one's actual ability to recognize, process, and utilise emotion-laden information" (Petrides et al., 2004a, p. 278). The information-processing model views emotions as a source of information about the world, the self and others that the mind can process and utilise to construct adaptive emotional responses, thought and behaviour (Murphy, 2008). Ability El is seen as a cognitive-emotional ability (Petrides&Furnham, 2003), or a form of information processing. El that is related more to traditional intelligence, and thereby measures maximal behaviour using performance tests (Petrides &Furnham, 2000a).

Ability EI can be classified into four branches, which are ability to perceive accurately, appraise, and express emotions; the ability to access and/or generate feelings when they facilitate thought; the ability to understand emotions and emotional knowledge; and the ability to regulate emotions to

promote emotional and intellectual growth (Rode et al., 2008). The ability-based model views emotions as useful sources of information that help one to make sense of and navigate the social environment. The model proposes that individuals vary in their ability to process information of an emotional nature and in their ability to relate emotional processing to a wider cognition. This ability is seen to manifest itself in certain adaptive behaviours.

When Mayer and Salovey defined emotional intelligence as an ability to monitor one's own and others' feelings and emotions, to discriminate among them and to use this information to guide one's thinking and actions, they believed that any task which is loaded with information (affective information) understanding and regulating it would help the individual to solve his or her problems and regulate his or her behavior (Salovey & Mayer, 1990). They conceptualized a set of skills which they believed would assist a person in regulating his emotions. They identified three broad skills – appraisal and expression of emotion, regulation of emotion and utilization of emotion –which were further classified as:

**Appraisal and Regulation of Emotion**

In self (verbal and non-verbal perception) and others (non-verbal perception and empathy) – a person who is able to accurately perceive his emotions will also be able to respond to his emotions accurately, and in turn will be better in expressing them to others. At the same time, he should be able to understand the emotions in others as well. This allows him to adapt to the situation and have better social skills. These skills are a part of emotional intelligence as it requires the processing of emotional information in oneself and in others.

**Regulation of Emotion**

In self and others – emotions can be triggered and regulated according to a person's will, when he is adept at consciously perceiving those factors which have a feel good effect and those which do not. This ability also sharpens his senses towards perceiving the emotions of others and effectively adapting himself or influencing others as the situation demands. As the authors themselves acknowledge, this can sometimes have a negative bearing as people may try to manipulate others to meet their own demands – good or bad.

**Utilization of Emotions**

Flexible planning, creative thinking, redirected attention and motivation – this ability is included in the construct because, people with emotional intelligence should be at an advantage in solving problems adaptively (Salovey & Mayer, 1990). An awareness of his emotional state helps him plan his actions, think creatively, redirect his focus and motivate himself to get the best out of any situation. The initial conceptualization focused on perceiving and regulating emotions. As Mayer and Salovey (1997) fingered out that this was incomplete without thinking about emotions, they redefined the theory as theory emotional intelligence as the ability to perceive accurately appraise and express emotions, the ability to access or to generate feelings when they facilitate thought, the ability to understand emotion and emotional knowledge and ability to regulate emotions to promote emotional and intellectual growth (Mayer & Salovey, 1997). Based on this definition, a four branch model was proposed – the four branches moving from basic psychological processes to more complex ones. They also believe that an emotionally intelligent person had the ability to progress through these four

levels and master most of them faster than others with lower EI. The four branches each were further subdivided into four sets of skills.

**Perception, Appraisal and Expression of Emotion**

This is an ability to identify emotions in oneself, in others, express them accurately and further discriminate between honest and dishonest expressions of feelings.

**Emotional Facilitation of Thinking**

This sharpens the thought process as emotions direct attention towards important information and the emotions can be used to classify the information for better judgment and memory. Emotionality helps people to have multiple perspectives. A happy mood leads to optimistic views and a bad mood to pessimistic thoughts. An awareness of these mood swings assists a person in approaching a problem in specific ways with better reasoning and creativity.

**Understanding and Analysing Emotions**

It is based on employing emotional knowledge: to identify the subtle relationships and differences between similar emotions – eg. Loving and liking, and also interpret the meanings of those emotions. The person also has the ability to identify complex emotions occurring simultaneously (love and hate, fear and surprise, etc.) and also perceive the transition from one emotion to another (when anger turns to satisfaction or anger leading to shame).

**Reflective Regulation of Emotions to Promote Emotional and Intellectual Growth**

It is an ability to be open to emotions good or bad and thus having the power to voluntarily attach or detach from an emotion. The person also has the

competence to reflect on his own and others' emotions and thus be able to manage emotions in himself and others. (Gayathri & Meenakshi, 2013). Mayer and Salovey (1990) perceive emotional intelligence as a form of pure intelligence representing our potential for achieving mastery of specific abilities in this domain.

To establish emotional intelligence as a pure intelligence, Mayer, Caruso, Salovey (1999) used three criteria: conceptual, correlational and developmental. Conceptually, any intelligence must reflect actual mental performance rather than preferred behaviour patterns, self-esteem, or non-intellectual attainments (Carroll, 1993; Mayer & Salovey, 1993). Secondly, from a correlation perspective, a new "intelligence" should describe a set of closely related abilities that are similar to, but distinct from, mental abilities described by existing intelligences (Prentice, 2008).

EI as an ability appears to be the most comprehensive and empirically valid measure of EI (Daus & Ashkanasy, 2005), on the other hand EI defined as a trait has been shown to relate strongly to important life criteria, and has potential value as the concept is based on a recognition of the importance of multiple aspects of personality that relate to emotion (Goldenberg et al., 2006). Petrides et al., (2004) argue that as trait EI encompasses behavioural tendencies and self-perceived abilities rather than actual cognitive abilities, it belongs in the realm of personality. Ability EI, on the other hand, should be considered as belonging primarily in the domain of cognitive ability as it is allegedly encompasses actual abilities surrounding the use, understanding, management and perception of emotions.

According to Qualter, Gardner, Pope, Hutchinson, and Whiteley (2012), Ability EI theory provides a framework within which to study the role of emotions in predicting academic performance (Mayer, Salovey, & Caruso, 2008). Successful academic performance includes being able to identify emotional stressors (Lyons & Schneider, 2005), a process which ability EI can facilitate by providing emotion-related knowledge and capabilities such as emotion perception and emotional understanding. Further, skills such as effective management of one's emotions foster emotional resilience allowing individuals to adapt to stressful situations or crises, which, if unresolved, may hinder their academic performance.

Trait EI may also be important for academic performance and success, primarily because emotional self-efficacy is an important aspect of this construct (Kirk, Schutte, &, Hine, 2008; Petrides & Furnham, 2003; Petrides, Fredrickson, & Furnham, 2004; Petrides, et al., 2007; Petrides, Sangareasu, Furnham, & Fredrickson, 2006; Qualter et al., as cited in Qualter et.al., 2012).

The ability model, as defined by Mayer, Salovery and Caruso (2004) describes a competency or ability to accurately perceive and identify one's own emotions as well as the emotions of others, and to use this knowledge to make informed, socially appropriate and desirable responses. They suggest that the ability model implies that EI ability can be taught through training and measured in terms of competencies by standard measures similar to the traditional intelligence tests. The ability EI model is typically assessed by the Multifactor Emotional Intelligence Scale (MEIS) or by the more recent Mayer- Salovery-Caruso Emotional Intelligence Test (MSCEIT) (Mayer et al., 2004). The MEIS and MSCEIT are measures of ability to perceive,

understand, manage, and use emotion in a positive, productive manner. Mayer and colleagues assess EI as a skill or ability rather than as a self-report of perceived emotional competence.

In contrast, trait models are assessed via self-report and are designed to measure emotional abilities and positive social behaviors (Conte, 2005). The oldest measure of trait EI is the Emotional Quotient Inventory (EQ-i; Bar-On, 1997), a self-report measure of traits related to emotional and social knowledge that influence an individual's ability to cope effectively. The EQ-i includes five domains: intrapersonal skills, interpersonal skills, adaptability, stress management and general mood (Bar-On, 1997). A second self-report measure of trait EI, the Emotional Competency Inventory (ECI), which is based on Goleman's (2006) model of emotional intelligence and purports to assess abilities or competencies in four domains or clusters namely: self-awareness, self-management, social awareness, and relationship management.

**Distinction between Trait EI and Ability EI**

A key difference between the ability and trait models is the manner in which they are assessed. Although ability models are assessed in a manner somewhat similar to that used in common intelligence tests, there are important differences (Chang, 2007). Questions are designed and then given to experts and a large sample of the population. Thereafter, correct answers are determined via consensus. This is different than cognitive intelligence testing, which arrives at an objectively defined absolutely correct answer, not a correct answer through consensus.

Individuals given the ability EI measure are then asked to identify their answers and are given an ability score based on the number of correct answers

achieved. This is in contrast to self-report trait EI measures that ask individuals to use a scale (a scale of 1 to 5) to rate themselves on a number of statements such as "I typically like to work alone." There are no correct or consensus answers. Instead, an individual's pattern of answers is scored, and then a profile is usually obtained. The answers are entirely subjective ratings given by the individual him or herself, and thus may not represent the way others see him or her (Connolly, Kavanagh & Viswesvaran, 2007).

The different ways in which these EI models are assessed have direct bearing on the other types of constructs with which they are correlated and the types of EI that are being measured. For example, Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT), which assesses ability EI, appears to be distinct from trait EI both conceptually and empirically. The MSCEIT is only minimally correlated with trait measures of EI such as the EQ-i and ECI (Mayer et al., 2004), and actually shows higher correlations with traditional measures of intelligence (Conte, 2005), academic success as measured by Grade Point Average (GPA) (Mayer, et al., 2004), coping styles, and emotion regulation (Brackett, et al., 2004; Bastian et al., 2005).

The MSCEIT is also only minimally correlated with measures of personality (Mayer et al., 2002; Brackett et al., 2004; Conte, 2005). On the other hand, measures of trait EI such as the EQ-i and ECI appear to overlap heavily with the constructs of personality and coping style. Moreover, despite claims of these types of EI measures being associated with improved outcomes, the EQ-i was shown to be a poor predictor of success as measured by GPA (Conte, 2005). Although some researchers suggest that higher scores on the ECI are associated with greater effectiveness in the workplace

(Emmerling& Goleman, 2003), other researchers suggest that ECI overlaps too much with measures of personality and motivation to be a useful and distinct construct (Van der Zee, Thijs, &Schakel, 2002; Petrides et al., 2004; Conte, 2005). This has led several critics of the EI concept to suggest that EI contributes little to our knowledge beyond what decades of research on the concepts of cognitive intelligence, personality and coping has already shown (Chang, 2007; Connolly et al., 2007; Humphrey, Curran, Morris, Farrell & Woods, 2007; Meyer & Fletcher, 2007; Petrides, Perez-Gonzalez &Furnham, 2007).

**Mixed Emotional Intelligence**

Another model of emotional intelligence that has been identified is the mixed EI model. This model does not classify EI as an intelligence but rather as a combination of intellect and various measures of personality and affect (Petrides & Furnham, 2001). Bar-On's (1997) mixed model defines EI as an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures. Elfenbein (2008) notes that mixed model definitions of EI are the source of many EI criticisms because: they appear to define EI by exclusion as any desirable characteristic not represented by cognitive ability (Matthews, Zeidner& Roberts, 2002; Zeidner, Matthews, & Roberts, 2004; Locke, 2005; Murphy, 2006; Elfenbein, 2008); they are too redundant with personality traits to justify a distinct construct (Daus &Ashkanasy, 2003;Conte, 2005;Van Rooy, Dilchert, Viswesvaran, & Ones, 2006). As a result, Daus and Ashkanasy (2005) conclude that only ability EI models are worth studying or

at least that mixed models are profoundly flawed through the absence of empirical bases and overly broad conceptualization.

In summary, there are two senses in which the term emotional intelligence has been used: as a narrow, theoretically specified set of constructs pertaining to the recognition and control of personal emotion (called ability-based EI) ; as an umbrella term for a broad array of constructs that are connected only by their non-redundancy with cognitive intelligence (called mixed based EI) (Jafari & Ghomi, 2010). Despite the aforementioned differences common critiques of the theoretical construct of EI (especially trait EI) and the measures used to assess it state that EI is not much more than another measure of personality. In particular, EI overlaps substantially with the main tenets and constructs of the Five Factor Model (FFM) of personality (Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness), and thus EI adds little to our knowledge base after controlling for FFM (Tett, Fox, & Wang, 2005).

The writers also advance that similar criticisms have been made regarding ability EI and its high correlation with coping and emotion regulation. Moreover, proponents of EI, particularly of trait EI, cite the inherent cultural bias of current EI measures as a problem because it is difficult to understand the results of an EI measure outside of its Western cultural context. This is particularly important to multicultural college and university campuses where inappropriate uses of EI measures could lead to erroneous conclusions about the EI capabilities of a significant number of students (Gregory, 2007).

**Measuring Emotional Intelligence**

In terms of the measurement of the four branches of MSCEIT, Branch One, perceiving emotions is measured through faces and pictures tasks. Faces task asks respondents to identify feelings based upon facial expressions. Pictures task requires respondents to indicate various emotions that are being expressed in images and landscapes (Martin & Hafer, 2009). Branch Two, using emotions to facilitate thought is measured through sensations and facilitation tasks.

Branch Three, understanding emotions is measured through changes and blend tasks. Changes Task measures respondents' knowledge of emotional chains and the possible emotions transition in given situations. Blends Task measures respondents' ability in analysing mixture of emotions and dissembling complex feelings into parts of simple emotions. (Jafari & Ghomi, 2010). Branch Four is measured through emotion management and social management tasks. Emotion management task measures the ability of incorporating one's emotions into decision making, while the social management task measures the respondents' ability to incorporate emotions into decision making that involves other people (Animasahun, 2010; Naderi et al., 2010).

Mayer, Salovey and Caruso (2002) stated that EI meets standards for traditional intelligence. These standards are three broad criteria namely: operationalization, correlation and age. The writers posit that EI test items can be operationalized in such a fashion that there are more or less correct answers. Again, EI shows specific patterns of correlations similar to those of known intelligences. Notably, the mental tasks describe a factorially unified

domain. Additionally, EI correlates with other intelligences, but only modestly. Finally EI develops with age (Mayer et al., 2002).

Still in line with the MSCEIT, Dehshiry (2006) suggests that for a test of EI to be considered true tests of intelligence they must have answers that can be evaluated as more or less correct. However, several methods can be employed to determine the correctness of an answer. One of such methods uses the general consensus of test-takers. The general consensus identifies the optimal answer to many EI questions. Eleby (2009) comments that this makes sense because emotions are evolved signals and the majority of the group appreciates the meaning of most of these messages. Therefore, if a person selects an alternative chosen by 75 percent of the group, the individual's score is incremented by .75 and so on. The group of course can be wrong. For that reason, it is important to examine possible alternatives to such a scoring procedure (Lynn, Harvey & Nyborg, 2009).

A second method for evaluating the correctness of test responses is by an expert criterion in which experts judge the correct answers to a test (Eleby, 2009). Furthermore, in terms of ecological validity, Mavroveli and Sanchez-Ruiz (2011) argue that written and visual items about emotional information are intrinsically ecologically valid (the ability for a test to generalize situations in real life) to the extent that some emotional information is communicated through writing and photographs.

**Academic Performance**

Emotional Intelligence (EI) influences success in academic and professional studies, as well as academic performance (Petrides, Furnham & Mavroveli, 2007). Students who are emotionally intelligent are perceived by

their peers and colleagues as friendly and non-antagonistic (Ford & Smith, 2007). This improves the relationship between peers and contributes to intellectual development which culminates in superior academic performance. EI helps in prioritizing thinking, behavior, and lifestyle which aids in academic performance (Brackett, Rivers & Salovey, 2011).

Going by achievement literature, there does not appear to be one specific or universal definition of academic performance (Strenze, 2007). Adeyemo (2007) explains that academic performance is generally regarded as the display of knowledge attained or skills developed in school subjects. It is performance in school subjects as exhibited by an individual. In the school setting, it is referred to as the exhibition of knowledge attained or skills developed in school subjects. Test scores or marks assigned by teachers are indicators of this performance. It is the school's evaluation of the pupils class work as quantified on the basis of marks or grades. These marks assigned by school could either be high or low, which means that academic performance could either be good or bad (Adeyemo, 2007).

Academic performance is a multidimensional construct composed of the skills, attitudes, and behaviours of a learner that contribute to academic success in the classroom (Kobrin, Patterson, Shaw, Mattern, & Barbuti, 2008). It is a satisfactory and superior level of performance of students as they progress through and complete their school experience (Poropat, 2009). The implication of this definition is underscored by research which repeatedly demonstrates that the vast majority of students who withdraw from school, do so for no reason other than poor academic performance (Poropat, 2009).

Academic performance measures Total Continuous Assessment (TCA) and Final Examination (FE) marks, in averaged percentages with marks ranging from 0 to 100 percent (Brackett et al., 2011). Kaplan, Satterfield and Kington (2012) add that academic performance refers to the goals which teachers hope their students to attain such as: to read at grade level or above; to do well in Sciences, Mathematics and Technology; to persist for high school and university graduation; to be appropriately identified and served for any special needs; obtain good grades; have access to and do well in academically challenging courses such as Mathematics, Science and English Language; have opportunities to apply their knowledge while the students are in school (through work-based learning or service-learning); follow a coherent course sequence leading to postsecondary education; take standardized and college entrance exams and obtain competitive scores (Kaplan et al., 2012).

Academic performance further connotes making thoughtful guided decisions about college attendance and financing enrolment in college that have no need for remedial education in college, sustaining financial aid and fulfilling work in a chosen career (Makewa, Role & Otewa, 2012). A variety of ways have been used to measure academic achievement such as report card grades, grade point averages, standardized test scores, teacher ratings, other cognitive test scores, grade retention and dropout rates (Ford & Smith, 2007).

This notwithstanding, Elliot (2007) has noted that although the importance of academic performance is rarely questioned, reaching unanimity regarding its measurement has been elusive (Elliot, 2007). This is because measuring academic performance can occur at multiple levels and serves multiple purposes (Satterfield, Swenson, & Rabow, 2009). For example,

classroom teachers often conduct formative and summative tests to evaluate student mastery of course content and provide grades for students and parents. State tests are designed primarily to measure progress at the school or school level (Olatoye, Akintunde & Yakasai, 2010). Graduation tests are used to determine whether a student has mastered the minimum content and competencies required to receive a high level of education. Each of these kinds of assessments engenders significant questions related to test design, types of decisions supported by the results, alternative assessments, and accommodations (Prabha, 2015).

Ford and Smith (2007) posited that academic performance on standardised tests has received great attention in discussions of students' academic performance, teachers' evaluations of performance as indicated in course grades represent a common metric of student performance. Course grades are often more directly tied to the day-to-day business of teaching and learning than are annual standardized test scores (Ford & Smith, 2007).

In Ghana, the Institute of Education of the University of Cape Coast (UCC) organises standardised tests for all Colleges of Education annually. Students' Continuous Assessment (CA) forms forty percent, while sixty percent represents the scores from the standardized tests. Grades serve a number of important functions. Petrides et al. (2007) note that course grades communicate information to students and parents about students' mastery of course content. In most African colleges, Adekola (2008) observes that a passing grade is also the criterion for a course contributing to accumulated credit for graduation. Grades also provide information for consideration in college admissions.

The dominant measures of academic performance nonetheless, are grades and especially Grade Point Average (GPA) (Kobrin, Patterson, Shaw, Mattern & Barbuti, 2008). Nevertheless, despite their common use, their reliability and validity have been questioned owing to factors such as grade inflation, which is the tendency to provide higher grades for the same substantive performance at different levels of study, or at different periods in time (Brackett et al., 2011). Walsh-Portillo (2011) notes that grade inflation can be problematic when it curtails comparability between grades that are subsequently integrated into GPA.

Coll and Stewart (2008) add that problems with the reliability of GPA would tend to affect the temporal stability of the measure as well as its correlations with other variables. Yet, meta-analytic correlations have between GPA at secondary and tertiary levels of education have revealed the reliability of GPA overtime (Coll & Stewart, 2008). Giambo (2010) reports that GPA have been consistently correlated with other variables such as intelligence and has also been found to be a significant predictor of occupational criteria such as work performance, as well as occupational status and prestige. Walsh-Portillo (2011) however maintains that although there are problems with grades and GPA, they remain useful measures of academic performance. The writer furthermore observes that EI is a stronger determinant of academic performance and success in life (Walsh-Portillo, 2011).

**Empirical Studies**

The empirical studies cover studies that have carried out by researchers explaining the relationship between EI and demographic characteristics such as age, marital status, gender, teachers and students. They

also include other studies that have been conducted in other parts of the world on EI and academic performance

**Emotional Intelligence and Age**

According to Conte (2005) there are many assumptions about emotional intelligence and age. One of such assumptions is that older people are more aware, wise, and restrained than younger people. Van Rooy et al. (2006) regard age as one of the socio-demographic variables most relevant to the evolution of EI, as well as to the evolution of other types of intelligence. The theoretical model of EI as an ability argues that it is a genuine intelligence, based in part on the observation that it increases with age and experience (Kafetsios, 2004; Extremera et al., 2006).

Studies analyzing how MSCEIT changes with age have given contradictory results. Some studies have found older individuals to perform significantly better on all branches of the MSCEIT, with correlations ranging from .10 to .30 (Mayer et al., 1999; Extremera et al., 2006). Other studies, in contrast, have found significant correlations in all MSCEIT branches except perception and emotional facilitation (Kafetsios, 2004; Goldenberg et al., 2006), or they have failed to find any significant relations between age and MSCEIT dimensions (Farrelly & Austin, 2007). Still other studies have even found a negative correlation between age and emotional perception (Day & Carroll, 2004; Palmer et al., 2005), which is consistent with a meta-analysis reporting that older people have problems at recognizing emotions (Ruffman, Henry, Livingstone, & Phillips, 2008). Although these results are conflicting, together they indicate the relevance of age for the development and evolution

of EI not only as a factor associated with EI, but also as a potential mediator of the relation between gender and EI (Kaplan et al., 2012).

Furthermore, Kaplan et al. (2012) observe that often times whenever EI tests are conducted, older groups on the scale score higher than younger groups. For instance, respondents in their late forties and early fifties receive high mean score. Based on a research observation carried out by Kaplan et al. (2012) there was a similar increase in EI with age in children and adults. This confirms Goleman's (1998) assertion that the influence of age proposes that EI goes up with age, at least up to the fifth decade in life.

**Emotional Intelligence and Marital Status**

Mayer, Roberts and Barsade (2008) argue that the process and outcomes of emotional intelligence development also contain many elements known to reduce stress for individuals and therefore interpersonal relationships by moderating conflict, promoting understanding and relationships, and fostering stability, continuity and harmony. EI is also strongly linked to concepts of love and spirituality.

Serrat (2009) propelled that marital satisfaction depends upon the individuals' expectations, needs and desires in their marriage. It refers to the degree of satisfaction between couples. Thus, many experts believe that emotional intelligence or at least some of its aspects have the ability to develop a more satisfying marriage. Going by Serrat (2009), when a person gets angry, he or she needs to use advanced emotional skills and high level of empathy and self – control as well as having a deep understanding of other people's needs and emotions. Interestingly, these skills are quite similar to the components of EI. Therefore, people who are not able to manage their

emotions, struggle with their inner conflicts and cannot use their abilities to do an efficient and focused job (Serrat, 2009).

Soleymani and Mohammadi (2009) point out that having some emotional skills, being calm, moderating conflicts, listening and sympathy can increase the possibility of solving disagreements between couples over different issues such as child training, sexual relationships, financial problems and other home issues. Moreover, Lavalekar, Kulkarni and Jagtap (2010) posit that studies conducted reveal that couples with higher scores on EI had higher scores for empathic perspective taking, self-monitoring in social situations, social skills, cooperative behaviour, close and affectionate relationships and greater marital satisfaction. On the other hand, values, communication, commitment, decision-making, emotional intimacy, sexual relationships and forgiveness had the strongest impact on marital satisfaction (Schramm & Harris, 2011).

Mirfardi, Edalati and Redzuan (2010) also note that satisfied couples were those who did not avoid discussion of relationship problems and who rated their partners high in EI. Thus, couples of high EI would engage more in effective and less in ineffective conflict resolution styles and have unsuccessful arguments less frequently with their partners. Satisfied couples tend to use constructive problem-solving strategies. They rarely use destructive strategies like escalation of conflict or withdrawal. Dialogue is the strategy connected with satisfaction in a most positive manner. Loyalty to oneself is a significant positive predictor of male satisfaction. Therefore, higher emotional intelligence is a stronger predictor for higher marital satisfaction (Mirfardi et al., 2010).

**Emotional Intelligence and Gender**

With regard to gender, Grewal and Salovey (2005) state that a review of literature on emotions and EI gives a clear idea of the significant differences between men and women in aspects related to the emotional world. In particular, the emotional dimension of human beings has traditionally been linked to a greater extent with the female gender, which experiences positive and negative emotions more intensely than the male gender (Grewal & Salovey, 2005).

Lumley, Gustavson, Partridge and Labouvie-Vief (2005) observed that biological as well as social factors have been invoked to explain gender differences in emotions. The biological explanation proposes that women's biochemistry is better prepared to consider one's own emotions and those of others as an important element in survival. In support of this idea, certain areas of the brain dedicated to emotional processing can be larger in women than in men (Livingstone & Day, 2005) and cerebral processing of emotions differs between men and women (Jausovec & Jausovec, 2005; Craig, Tran, Hermens, Williams, Kemp, Morris, & Gordon, 2009).

The explanation centered on social aspects indicates that whereas women receive an education biased towards the emotional, men are taught to minimize certain emotions related to sadness, guilt, vulnerability and fear (Sánchez, Fernández-Berrocal, Montañés, & Latorre, 2008). In addition, women spend more time socially in contact with the emotional world (Joseph & Newman, 2010) and are more preoccupied with maintaining the positive tone of their and others' emotions in order to prevent the deterioration of

interpersonal relations and to construct satisfying social networks (Lishner, Swim, Hong & Vitacco, 2011).

Conversely, the extreme male brain theory of autism, proposed by Baron-Cohen, relies on biological and social arguments to posit that the brains of men and women are structured differently (McIntyre, 2010). Going by this theory, the feminine brain is predominantly structured to feel empathy, while the masculine brain predominantly seeks to understand and construct systems. In this way, Baron-Cohen argues that the cognitive and behavioral systems of men and women are functionally distinct (McIntyre, 2010).

Both biological and social explanations have received support from a diverse range of empirical studies of emotion, which show greater emotional abilities in women. These studies (Brody & Hall, 2000; Ciarrochi, Hynes, & Crittenden, 2005; Hall & Mast, 2008) conclude that women have greater emotional knowledge than men. Women express positive and negative emotions more fluently and more frequently; have more interpersonal competencies, and are more socially adept than men (Brody & Hall, 2000; Ciarrochi, Hynes, & Crittenden, 2005; Hall & Mast, 2008). As a result, members of the scientific community and the general population believe, from a very early age, that women are more emotional than men (Craig et al., 2009).

Indeed, a study of EI such as the MSCEIT (Mayer, Salovery, & Caruso, 2002) that is an ability test, as well as studies that include gender in their analysis have assumed women to be superior in emotional abilities than men (Extremera, Fernández-Berrocal, & Salovery, 2006; Farrelly & Austin, 2007; Extremera & Fernández-Berrocal, 2009; Deary, Penke & Johnson, 2010). While these studies portray women to be superior in EI, they have also

produced conflicting results about the specific EI dimensions on which women perform better than men namely: perception, facilitation, understanding and management. Supplementary studies (Day & Carroll, 2004; Lumley, Gustavson, Partridge, & Labouvie-Vief, 2005; Palmer, Gignac, Monocha & Stough, 2005; Extremera et al., 2006; Extremera & Fernández-Berrocal, 2009) have also found women to be superior on all dimensions of the MSCEIT.

In addition to this disagreement about the dimensions of EI on which women perform better than men, the magnitude of women's superiority ranges from one study to another. The size of gender differences in EI has been reported to be small (Day & Carroll, 2004; Livingstone & Day, 2005; Lumley et al., 2005) or medium (Palmer et al., 2005; Farrelly & Austin, 2007). A meta-analysis of EI that included gender differences concluded that women obtained higher scores than men on all EI dimensions with an effect size ranging from .29 to .49 (Joseph & Newman, 2010). Thus, the review indicates without doubt that the female gender possesses more and better emotional abilities.

Nevertheless, Craig et al. (2009) observe that studies examining the relation between gender and EI treat it more in an indirect or collateral way than as an analytical variable in and of itself. The results from such studies have suggested that the relation between gender and EI deserves analysis in its own right (Craig et al., 2009). However, McIntyre and Edwards (2009) criticize this approach on grounds that it converts gender into a causal explanation of the mechanisms of psychological functioning in general, and of emotional functioning in particular. The writers caution that it is important to remember that gender, as an explanatory factor of behavior, always operates in

complex interactions with other factors, demographic as well as socio-cultural (McIntyre &Edwards, 2009).

Gornefski (2004) propels that boys and girls learn different lessons in controlling their emotions. Parents mostly talk to their daughters, rather than sons about emotions (except for anger). Compared to sons, parents give more information about feelings to their daughters. Minuchin (2005) opines that since girls get mastery over language faster than boys, this causes them to be more experienced in precisely expressing their feelings and more skillful in using words to name emotional reactions and replace words for physical reactions than boys. The writer also opines that boys for whom emotions expression has not been emphasized, are probably unaware of theirs and others emotional states to a large extent. Parker (2010) states that in the age of 10 years, the percentage of girls who show open aggression like boys when they get angry is almost equal. Nonetheless, in the age of 13 years, there is meaningful difference between the two sexes. Compared with boys, girls get more skill in artistic aggressive techniques such as collective banning, revengeful gossiping and indirect avenging.

Sanaei (1991) observes that often time's females get meaningfully higher scores than males in emotional intelligence, but emotional intelligence is a more distinguished predictor in men's life. Men's lower score of EI (principally), inability to understand emotions and using them to facilitate thinking are associated with negative consequences such as taking alcoholic and illegal drugs, deviated behavior and weakness in relation with friends (Sanaei, 1991). In this specimen, EI had a meaningful relation with male students' inadaptable and negative behaviors, but no such relation was found

for females (Sanaei, 1991; Kring & Mallinckrodt, 1994). Although Goleman (1995) considered males and females to have their own personal profiles of strengths and weaknesses for EI capacities, studies conducted by Mayer, Caruso and Salovery (1999) and Mayer et al. (2002) indicate that women score higher on measures of EI than men.

Going by Kafetsios (2004), females are superior solely on the branch of perception of emotion and experiential. For example, females are more accurate on decoding facial expression than males. Yet, as overall Emotional Quotient (EQ) scores, there is no significant difference between genders. Arteche, Chamorro-Premuzic, Furnham, and Crump (2008), also argue that there is no significant association between overall emotional quotient and genders, but there are significant correlations only when facets of EQ are considered such as females scoring higher on interpersonal facet. Craig et al. (2009) explain that females are better in emotional skills and emotional-related perceptions. Stumm, Chamorro-Premuzic, and Furnham (2009) posit that females provide higher estimates of their interpersonal and intrapersonal intelligence compared to males. In estimating parents' EQ, Stumm et al (2009) also observe that mothers are the emotional managers of the family, as they tend to spend more time taking care of children.

Hosseini and Rao (n.d) in their study observed that Pearson chi-square test revealed a significant difference between emotional intelligence and gender (n=266) =9.809 p=.044 and also emotionality with gender (n=266) =17.441p=.004. Further, the data was analyzed by using a Mann-Whitney U test which revealed a significant difference between male and female employees' emotional intelligence. The test scores for male is (Md=127.43)

and female is (M=145.99); conditions are U=6.700, Z=-.-1.847, p=.030. As the p value is less than 0.05, there is a significant difference between genders. These results further indicate that EI varies among gender.

**Emotional Intelligence and Teachers**

Singh (2015) explored the EI level of teachers in relation to certain demographical variables. The results showed that the group under study possessed average EI. The gender and experience of the teacher did not make any differential influence on their EI. Nonetheless, significant difference was found in the EI of teachers in relation to their area and marital status. The mean of the EI of male and female teachers was found to be 40.26 and 38.56 respectively. The values of standard deviation of male and female students were 3.50 and 2.13 respectively. The obtained t-value for these two groups was 1.69, which was less than the table value 2.03 and not significant at 0.05 with 33 as the degree of freedom (df). Thus, there was no significant difference in the EI of male and female teachers. Therefore, the hypothesis, there is no significant difference in the EI of male and female teachers was retained.

Still on the studies conducted by Singh (2015), the means of the EI of married and unmarried teachers were 40.26 and 37.22 respectively. The value of SD of married and unmarried teachers were 2.98 and 1.87 respectively. The obtained t-value (2.85) for these two groups was more than the standard value (2.03), which was not significant at 0.05 with 33, as the df. There was therefore no significant difference in the EI of married and unmarried teachers. The hypothesis, there was no significant difference in the EI of married and unmarried teachers educators was accepted (Singh, 2015).

Kumar and Muniandy (2012) explored the level of EI among lecturers from a polytechnic in Malaysia and at the same time explored the influence of demographic profiles towards those levels. Demographic profiles such as gender, age group, occupational grade, working experience in the current job and prior working experience in the industry were selected. The Genos Emotional Intelligence Inventory (Concise version) was distributed to all the academic departments and the total number of respondents were 162. Findings showed that the overall level of EI was average. The findings proved that the levels of EI among the lecturers improved with age, teaching experience, grade and education, whereas gender and prior working were not contributing factors.

**Emotional Intelligence among Secondary and Tertiary Students**

Ogundokun and Adeyemo (2010) employed a survey approach to examine the moderating influence of EI, age and academic motivation on the academic achievement of secondary school students from Oyo state in Nigeria. The participants in the study were 1563 (male=826, female=737) students. Their age ranged between twelve years and seventeen years with a mean age of 15.96 years. Two valid and reliable instruments were used to assess EI and academic motivation, while achievement tests on English Language and Mathematics were used as a measure of academic achievement. Descriptive statistics and inferential statistics (Pearson's Product Moment Correlation and Hierarchical Regression) were used to analyze the data.

The results showed that EI, age and academic motivation were potent predictors associated to academic achievement. The study had implications for the curriculum developers to integrate EI into the school curriculum of

secondary school students. The study recommended that teachers, counseling and educational psychologists should encourage the development of a strong achievement motivation in the students through the provision of appropriate counseling intervention programmes and an enabling environment. By so doing, the academic performance of the students could be improved barring all other teaching-learning obstacles (Ogundokun & Adeyemo, 2010).

Nwadinigwe and Azuka-Obieke (2012) randomly selected 156 students from three senior secondary schools in Lagos-Nigeria, in order to ascertain the impact of EI on the academic achievement of students in these schools. The schools were randomly assigned to two treatment conditions namely: EI training techniques and control group. Questionnaire and achievement test were employed to generate data for the study. Two research hypotheses were formulated to guide the study. The hypotheses were tested using Analysis of Covariance (ANCOVA) and Pearson product moment correlation coefficient statistics. The study revealed that there was a positive relationship between EI skills and academic achievement. Explicitly, developing EI skills of a student will culminate in the enhancement of his or her academic achievement. Thus, there was the need to inculcate the development of EI skills into the school curriculum. This was considered important because of its impact in improving the academic achievement of students (Nwadinigwe & Azuka-Obieke, 2012).

Rust (2014) conducted a pilot study and adopted a descriptive approach using measures of central tendency (mean, median and standard deviation) to investigate the possible relationships between the academic performance of sixth grade math students and the EI of their corresponding

teachers in Cherokee County schools in America. Although no significant findings were established, the data provided a useful starting point for future queries into this construct. Data were collected from fifteen sixth grade math teachers and matched with existing student data, which were provided by the school district. The EQ-I and the achievement test were employed as the methods for data collection (Rust, 2014).

Similarly, Prabha (2015) like Rust employed a descriptive paradigm of measures of central tendency to establish the correlation if any between EI and academic achievement at the higher education level in Puducherry in India. A sample of 310 first year degree students from various subjects and colleges (government and private) were involved in the research process. The academic achievement scores of first year university exams and emotional intelligence scales prepared by Anukool Hyde, Sanjyot Pethe and Upindar Dhar (India) were used for instrumentation. The research data collected from the 310 students were analysed and interpreted after studying their mean, median and standard deviations. Thereafter, One Way Analysis of Variance technique was used to study the significant differences among the various groups of students in relation to their academic achievement. The results highlighted a positive correlation between EI and academic achievement, further justifying the greater need and importance of EI as a contributing and influencing factor of academic progress, achievement and success (Prabha, 2015).

Olatoye, Akintunde and Yakasai (2010) studied the extent to which the level of creativity and EI influenced the level of academic achievement of Higher National Diploma (HND) business students of Polytechnic students in the South Western States of Nigeria. They used three instruments namely: the

Student Cumulative Grade Point (SCGPA); Wong and Law Emotional Intelligence Scale (WLEIS) and Nicolas Holt Creativity Test (NHCT) to collect data on EI, creativity and the academic achievement of a sample of 235 subjects. Analysis from the findings showed that there was a very low negative, no significant relationship between creativity and CGPA scores ($r = -.004$, $p > .05$). There was no significant difference between male and female students' academic achievement, creativity and EI. The writers concluded that an emotionally intelligent student in the Polytechnic system was likely to be creative, but not likely to be a high academic achiever. The study called on the polytechnic management to ensure creativity and an EI friendly school environment (Olatoye et al., 2010).

Walsh-Portillo (2011) determined if higher academic performance was positively correlated to higher EI among traditional age male and female college students who enrolled in an Introduction to Business course at a large multi-campus state college in Florida. The EQ-I comprising 133 items was used to assess students' EI. Ex-post Facto and Quasi-Experimental designs were adopted for the study. The Quasi-Experimental Design was included to further determine if EI could be increased through the inclusion of a curricular component on EI. Four groups of students ($N$=111) participated in the three-phase study over two semesters. The first phase (pre-intervention) was limited to students with an established GPA and an attempted-to-completed credit hour ratio within the institution ($N$=82). Results showed a slight positive correlation between the two factors and the students' EI pretest assessment score (Walsh-Portillo, 2011).

Walsh-Portillo's (2011) study further involved establishing a control and an experimental group in two semesters to compare the attainment of overall EI scores as measured by the EQ-I. The third phase of the study examined four measures of academic success (GPA, the attempted-to completed credit hour ratio, grade in the business course, and persistence in college), in order to determine if these factors were positively correlated with the students' posttest EQ-I scores. Walsh-Portillo's (2011) study also included a research question to determine if significant differences in overall EQ-i scores existed between male and female students during the three phases.

Findings from the Walsh-Portillo's (2011) study indicated that; there was a slight positive correlation in the pre-intervention stage between EI and traditional measures of academic success specifically, GPA and the attempted-to-completed credit hour ratio. The curricular intervention made a significant difference at the $p < .05$ level, with .5 effect size in one semester, but failed to meet that threshold in the following semester with the second pair of groups. At the post-intervention phase, the four measures of traditional academic success yielded a low positive correlation with the students' EI assessment scores showing significant gains in their overall EQ-i scores.

Contrary to Walsh-Portillo, who adopted a hybrid of Expost-Facto and Quasi-Experimental Approaches to conduct research, Setareh, Zahra and Azam Moradi (2014) did not employ any research design to structure their research but simply used instrumentations such as the EI questionnaire, social skills inventory and family communications scale to examine multiple relationships between EI, social skills and self-esteem with academic achievement of deaf or hard of hearing high school students in Isfahan in Iran.

Results from the study indicated that there was a meaningful and positive relationship between EI and academic achievement, while there was no meaningful relationship between social skills and academic achievement. Again this study discovered that there was a positive and meaningful relationship between family communications and academic achievement. This study further unearthed that personal factors and family communications must be considered in the academic achievement of students (Setareh et al., 2014).

Compared to Setareh et al. (2014) who did not use any research design to structure their study, Yunus, Mustafa, Nordin and Malik (2015) used a survey method involving 67 students in the University of Technology Mara in Malaysia to compare part-time distance learning students and full-time students' EI, psychological well-being and life satisfaction. The findings revealed that there was a significant difference in EI between the part-time and full-time students. However, there were no significant differences in psychological well-being and life satisfaction between the two groups of students.

In a Portuguese Secondary School in Portugal, Costa and Faria (2014) examined the predictive validity of EI over students' academic achievement. EI was assessed by a self-report and a performance ability based measure. Within a 3-wave longitudinal design, 380 students with a mean of 15.4 and standard deviation of .71, completed an Emotional Skills and Competence Questionnaire of 42 items as well as a Vocabulary of Emotions Test comprising 35 items. Students' Portuguese and Mathematics grades were collected as their Grade Point Average (GPA) at the end of each academic level. Path analysis results showed that although both types of EI predicted

students' academic achievement, they exerted a higher influence in the prediction of 10th grade students' achievement. Moreover, the performance measure exhibited higher predictive power over the self-report one. Multi-group analyses indicated that some paths in the GPA model differed by gender, while those in the Mathematics model differed by school type. Thus, the findings suggested the importance of fostering students' EI in the academic context as a strategy of enhancing academic success (Costa & Faria, 2014).

Song, Huang, Peng, Law, Wong and Chen (2010) considered the debate about whether EI had incremental validity over and above traditional intelligence dimensions. Their study was carried out in a large university in Shanghai in China to propose that EI and General Mental Abilities (GMA) differed in predicting academic performance and the quality of social interactions among college students. Using two college student samples, the writers discovered that EI and GMA each had a unique power to predict academic performance and GMA was the stronger predictor. However, the results also showed that EI and not GMA, was related to the quality of social interactions with peers. Again, Song et al. (2010) used the 16-Item Wong and Law EI Scale (WLEIS) to evaluate the EI level of the respondents. The GMA was measured using the English Version Wonderlic Personnel Test (WPT). The GPA was used to represent the academic performance of the respondents, while peer's liking was used as an indicator of the quality of the social interaction of the respondents.

Codier and Odell (2014) undertook an exploratory and descriptive study at a university in the South Central Region of the United States to

explore the relationship between measured EI ability and GPA of first year nursing students. The respondents were 72 undergraduate student nurse volunteers. EI was measured using the Mayer-Salovey-Caruso EI Test Version 2, an instrument for quantifying EI ability. Pre-admission GPA was reported by the university's record department. The results disclosed that total EI (r=24) scores and one sub-score experiential EI (r=.25) correlated significantly (>.05) with GPA. Therefore, the study provided evidence for some relationship between GPA and measured EI ability. Nonetheless, the findings demonstrated lower than average, range scores in several EI scores.

**Conceptual Framework**

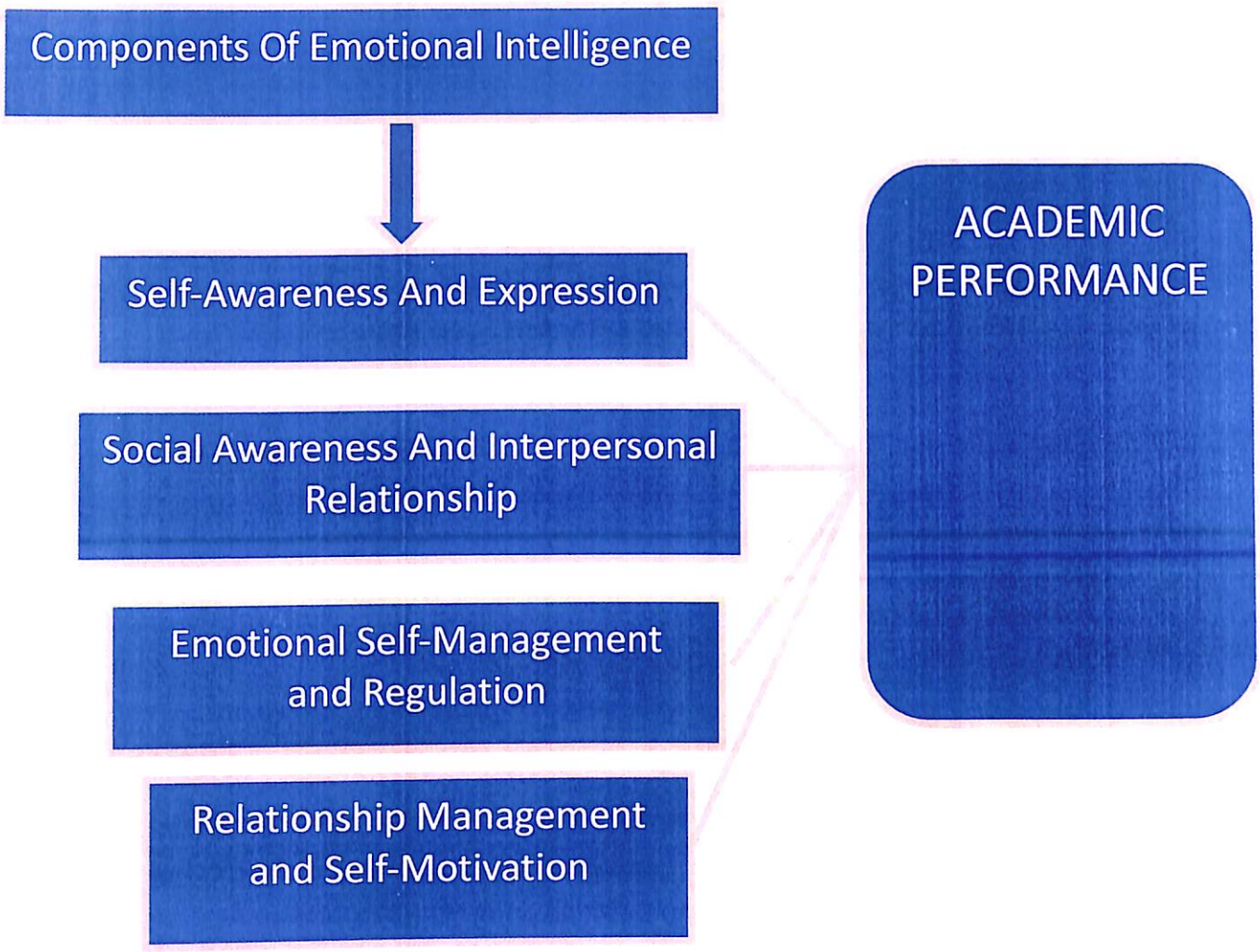


**Figure 1: Relationship between Emotional Intelligence and Academic Performance**

Source: Field Data, 2017

The study's framework is a diagrammatic harmonization and presentation of the variables underpinning the study namely: self-awareness and expression; social awareness and interpersonal relationship; emotional self-management and regulation; relationship management and self-motivation and academic performance.

Figure 1 shows that EI comprises of self-awareness and expression; social awareness and interpersonal relationship; emotional self-management and regulation; relationship management and self-motivation. Self-awareness and expression, which is the ability to be aware of and express one's emotions,

creates social awareness and interpersonal relationship, which is the capacity to recognise other's emotions, as well as establish meaningful relationships with them. Social-awareness and interpersonal relationship further creates relationship management and self-motivation because when a teacher trainee for example, is able to recognize others emotions, he or she can successfully manage them and establish profitable relationships with them. By so doing, the trainee can motivate and develop himself or herself.

Aside creating social awareness and interpersonal relationship, self-awareness and expression also creates emotional self-management and regulation because when a teacher trainee is aware of his or her emotions, he or she can manage or regulate them. Relationship management and self-motivation is also an outcome of emotional self-management and regulation because if a trainee is able to manage his or emotions, the probability that he or she will be able to relate profitably with others will be high.

**Chapter Summary**

Holistically therefore, when a teacher trainee possesses self-awareness and expression; social awareness and interpersonal relationship; emotional self-management and regulation; relationship management and self-motivation, then he or she excel academically. A teacher trainee who is also emotionally intelligent can contribute positively to the development of the EI and academic performance of his or her students, when the trainee is eventually absorbed as a full-fledge teacher by the Ghana Education Service (GES). Conversely, a trainee who is deficient of the attributes of EI will perform poorly at school. Thus, a trainee who is not emotionally intelligent cannot contribute positively to the development of the EI and hence the

academic performance of students, when he or she eventually becomes a full-fledge teacher with the GES.

The quasi-experimental design, which is a quantitative approach, was adopted in the current study in order to determine the actual impact of EI on the academic performance of the teacher trainees. Ascertaining the impact of EI on academic performance could not have been feasible if a qualitative approach was used. Inferential statistics such as the Chi-Square Test of Independence and Analysis of Covariance were used as the methods for data analysis. A combination of multistage sampling (probability sampling) and purposive sampling (non-probability sampling) were employed as the sampling techniques. Similar to the reviewed studies, EI was measured with questionnaires, while academic performance was measured with Grade Point Average.

# CHAPTER THREE

# RESEARCH METHODS

## Introduction

This chapter examines the study's methodological components, which are namely: the study design, description of the study area, population, sampling and sample size, instrumentation and data collection procedures, as well as the methods for data analysis.

## Research Design

According to De Vos (as cited in Sasu, 2017), a research design is a comprehensive plan or blueprint of how a research study is conducted. Polit and Beck (2004) point out that choosing a good research design should be directed by principal consideration which is embedded in the question: Will the research design do the best possible job of providing trustworthy answers to the research questions under investigation.

In view of the aforesaid, the Quasi-Experimental design was employed to structure or design the study. The Quasi-Experimental design is a quantitative research design which does not include the use of random assignment (Plano & Creswell, 2008). Researchers who employ this designs rely instead on other techniques to control (or at least reduce) threats to internal validity. They do not control for all confounding variables and so cannot completely rule out some alternative explanations for the results they obtain. Thus, they take whatever variables and explanations they have not controlled for into consideration when they interpret their data (Plano & Creswell, 2008).

The Quasi-Experimental design engages two groups in research namely: the experimental and control groups. The experimental group is exposed to a treatment or an intervention, while the control group does not undergo any treatment. Group differences with respect to the dependent variable are noted before the exposure of the experimental group to the treatment. If after the application of the treatment to the experimental group and participants in the group have experienced no changes on the dependent variable, it connotes that there are observed differences on the dependent variable between participants in the experimental and control groups. Nonetheless, if there are changes on the dependent variable, after the exposure of the treatment group to the experiment, it implies the treatment or intervention has an effect on the dependent variable (Creswell & Plano, 2011).

In the current study, Komenda College of Education and Foso College of Education in the Central Region of Accra were selected as the experimental and control groups respectively. Komenda College of Education was exposed to the treatment (talks and seminars on EI), while Foso College of Education was not exposed to the treatment. The independent variable of the study was EI, while the dependent variable was academic performance.

**Study Area**

Komenda College of Education is a mixed or co-educational College of Education located in the Central Region of Ghana in the Komenda-Edina-Eguafor Municipal Area. Komenda College of Education was established out of the barracks left by the fleet Air Arm of the British Navy after the Second World War. The legacy was then leased to the Methodist Church of Ghana in 1947 to be used as a training college. Three strands adopted by the founding

fathers were academic excellence, service to God and service to mankind. The college's motto is Bepowso Kurow Hyeren, meaning a city set on a hill shines forth.

Foso College of Education (the University of Assin) was opened in 1965 with 240 students and 9 teaching staff. The students were made up of 120 Post Middle 4 year and 120 Post 'B' 2 Year Certificate 'A' groups. Their motto is "Character, Wisdom and Knowledge." The college strives to become a Centre of Excellence for training quality teachers whose orientation is holistic and consistent with national aspirations and development (Transforming Teacher Education and Learning, 2018).

**Population**

Teacher trainees' in the Foso and Komenda Colleges of Education constituted the respondents of the study. The population of respondents is shown in Table 1.

**Table 1: Population of Respondents**

| Years | Foso | Komenda | Total |
|---|---|---|---|
| Two | 321 | 327 | 648 |

Source: Field data, 2017

**Sample Size and Sampling Procedures**

According to Amedahe (2000), sampling encompasses the process of selecting a portion of the population to represent the entire population. A specified sample enables the researcher to study a relatively smaller number of units in place of the target population and to obtain data that are representative of the target population (Sarantakos, 2005). Accordingly, multi-stage sampling technique was used in selecting the region, the college and the year group to

be used for the study. The Central region was conveniently selected through the convenient sampling method. This was because the Central Region was part of the population that was close to hand. In addition, Komenda College of Education and Foso College of Education were purposively selected. This sampling technique was used because Komenda College of Education and Foso College of Education are the only co-educational colleges of education in the region.

With respect to the two selected training colleges (that is, Komenda College of Education and Foso College of Education), Komenda was earmarked as the experimental group because, conveniently it was closer to the University of Cape Coast where the researcher can have access to resource people to help with the intervention. On the other hand, Foso was selected as the control group due to the fact that it was equally closer to the university and has similar characteristics to the experimental group, geographically and academically.

Second year students were purposively selected from the colleges as they have more experienced in the training college environment than the first year students. They were also not graduating students like their counterparts in the third year. Thus, there was easier access to them than the third year students. In view of these, the 327 second year students in Komenda College and the 321 second year students from Foso College were purposively selected. This gave a sum total sample of 648 respondents (Table 2).

All second year students in the Komenda College were purposively selected for the intervention for the purpose of the quasi-experimental study. This is by virtue of the fact that in a quasi-experimental study all participants

can be used for the study. Thus, purposive sampling was adopted for the study. Webber (2009) defines purposive sampling as judgmental sampling, as researchers purposely choose subjects who, in their opinion are thought to be relevant to the research topic. In this case, the judgment of the investigator is more important than obtaining a probability sample. The process of sampling in this case will involve identification of the informants and arranging times for meeting them (Webber, 2009).

**Table 2: Sample of Respondents**

| Schools | Foso |
|---|---|
| Foso | 321 |
| Komenda | 327 |
| Total | 648 |

Source: Field data, 2017

**Instrumentation**

Questionnaire was employed to elicit primary data. This instrument was developed taking into cognizance the MSCEIT (1997) and Baron-On's (2004) EI Inventory. Whereas, the MSCEIT engages participants in the types of tasks that are thought to employ the four abilities (perceiving, using, understanding and managing emotions) of EI, Bar-On (2004) argues that EI and emotional skills develop over time, change throughout life, relate to one's potential for performance, are process-oriented, and can be improved through training.

The adapted questionnaire for the study was developed under the four main components of EI namely: emotional self-awareness, emotional self-management, emotional social awareness and emotional relationship

management with 37 items. The scoring guide had five ranks namely: Never (representing 1); Rarely (representing 2); Some of the times (representing 3); Most of the times (representing 4); All of the times (representing 5). Participants indicated how much each statement applied to them by circling the numbers of their choices.

On the word of Johnson and Christensen (2004), a questionnaire is a self-report data collection instrument that each research participant fills out as part of a research study. The use of questionnaire in a research study is advantageous whenever the sample size is large enough to make it uneconomical for reasons of funds or time to observe or interview every subject (Osuola, 2001). In addition, it is easy to administer to a group of respondents, friendly to be completed and fast to be scored. Further, it takes relatively less time for research participants to respond (Osuola). Regardless of the strength of a questionnaire, response biases are more likely to occur when it is administered to respondents. It also has a low response rate (Creswell, 2012).

Questionnaire was selected as the research instrument because the study was quantitative in nature. Moreover, the use of a questionnaire permits for broad geographical sampling and it can be used to cover a large sample as well (Osuola, 2001; Amedahe, 2002). With respect to the large number of teacher trainees estimated for the sample size, using an instrument other than a questionnaire would make access to such large number of teacher trainees difficult.

**Pre-Testing of the Instrument**

The questionnaire was pilot tested in Wesley College of Education Kumasi in the Ashanti Region of Ghana to ascertain the reliability and validity of the instrument. This College of Education was chosen because it had similar characteristics with the target population in terms of the sex (co-educational institutions), age and educational backgrounds. Wesley College of Education was also not exposed to any intervention of this kind. Therefore, their responses could be relied on.

Since a pilot test is meant to identify any anomalies that may crop up prior to the actual data collection, the initial 42 items were restructured and reduced to 37 items. This was so because it was detected that some of the questions were not "friendly" to the "Ghanaian English Language" and others were also ambiguous. The individual items were ranked under the components of EI.

Subsequently, reliability was tested for each of the categories, using Cronbach's alpha (α). The first component (self-awareness and expression) showed high internal consistency (α = .844). This level of internal consistency was also seen for the second component (social awareness and interpersonal relationship; α = .777) and the third component (emotional management and regulation; α = .800). The internal consistency for the fourth component (relationship management and self-motivation) was also high (α = .866). The item-total correlations for each of the items under the various components were at least generally moderate. The square multiple correlations were generally good for all the items under each component. That is, the squared multiple correlations confirmed that variance was at least moderately

explained throughout. The overall reliability coefficient of the various items on the instrument was high ($\alpha = .87$).

**Ethical Considerations**

Ethical issues are of great importance when one is aiming at a conducting research successfully. In this research, ethical issues that were taken into consideration include informed consent, anonymity and confidentiality. Informed consent gives the prospective respondents the opportunity to accept or decline from engaging in a particular research (See Appendix C). It defines the need for respondents to understand the main purpose, objectives and potential harm that would inform their decision whether to participate in the study or not (Seidman, 2006). In this research, the purpose of the study was carefully discussed and reviewed with the participants before their involvement in the study.

Anonymity of study respondents was also taken into account during in this study. Oliver (2010) have postulated that, in research, anonymity is a vital ethical issue since it gives respondents the chance to have their identity concealed. As a result, to ensure anonymity of information, codes were used to identify respondents instead of their names. This was to prevent possible victimization of respondents where certain responses may be viewed as unpalatable to other stakeholders. A detailed explanation for the purpose of the study was given to the respondents before involving them in this study.

In addition to the ethical considerations, effort was made to ensure confidentiality of the responses from the respondents. That is, the respondents were told that their responses would be kept confidential and that no third

party known to them would have access to the information they would provide.

**Data Collection Procedures**

A letter of introduction was taken to the Komenda College of Education to obtain permission to conduct the experimental study. A visit was scheduled to meet the Vice Principal (Academics) on how to organize the pre-test, administering the questionnaire on EI and onward intervention programme, as well as the organization of the post-tests. Ethical clearance from the Institutional Review Board gave the researcher the opportunity to give participants the chance to opt out of the study if they so wished.

The whole exercise lasted for a period of ten weeks. One week each was used for the pre-test and post-test. The intervention programme was carried over a period of eight weeks.

The treatment consisted of an hour and thirty minutes' question and answer seminar on the main components of EI (emotional self-awareness, emotional self-management, emotional social awareness and emotional relationship management). The intervention was done every other week within the eight weeks. The intervention was developed from a Personnalized Leadership Development Programme on self-awareness workshop (The Leadership Trust, 2012).

The first seminar purposed to introduce teachers' trainees to EI and how they can recognize their own emotions. Trainees were exposed to a large and more complex feeling vocabulary that allowed them to make finer discriminations between their feelings. This maiden seminar also exposed participants to non-verbal and verbal perceptions and expression of emotions

in the face, voice and other related communication channels (Martin & Hafer, 2009). There were open discussions on how to use words to name emotions regardless of gender differences in emotional expressions.

The second seminar centered on skills to help one manage his or her own recognized emotions. This involved facilitating one's emotions and using one's emotions to assist thinking. The seminar also concentrated on equipping participants to be able to recognize their own emotions and understand others emotions (Lynn, Harvey & Nyborg, 2009). The expression and subsequent recognition of emotions in the view of Austin et al. (2007) is evident in parent-child relation and by extension in teacher-pupil relationship.

The third seminar reflected on the capacity to analyze emotions, appreciate their probable trends over time and understand their outcomes. Thus, one would be able to verbalize a course of action, calm down and help him or herself to take important decisions. Goleman (2011b) notes that individuals must admit that they have an in-built reluctance to admit negative feelings. It is imperative that one uses what he or she knows about his or her emotions and be able to manage his or her strengths and weaknesses, as well as that of others.

The fourth seminars zeroed on recognizing others' emotions and helping them manage it. It was also geared towards developing ways to manage rather to react to every emotion. Participants were recognized and motivated to trace sources of their emotions and eliminate sources of negative emotions as much as possible. Craig et al. (2009) explained that emotional distress or strong feelings can sometimes be caused by illnesses and in such cases, victims can be helped by doing something relaxing or taking steps to get

medical assistance needed, thereby eliminating the negative emotions the illness caused.

In all a total of 299 experimental participants were regular at all seminars. The control group was engaged on talks on personality development and personality disorders. A total of 240 participants were engaged in this. Two educational psychologists from the University of Cape Coast were the main resource persons for the seminar. The resource persons concentrated on the Personnalized Leadership Development Programme on Self-Awareness Workshop; and Emotional Intelligence Training by The Leadership Trust (2012b, 2012a).

**Table 3: Intervention on Dimensions of EI**

| Weeks | Seminar types |
|---|---|
| Week 2 | Seminar on Self-Awareness |
| Week 4 | Seminar on Self-Management |
| Week 6 | Seminar on Social Awareness |
| Week 8 | Seminar on Relationship Management |

Source: Field data, 2017

The 60-item multiple choice in English and Mathematics were obtained from a standardized test from the Institute of Education, University of Cape Coast. The 60-item multiple choice in English and Mathematics were administered to students for thirty minutes. After the eight weeks of intervention, the post-test was also conducted. The same sixty multiple choice questions in Maths and English were administered in the last week of the study. In controlling extraneous variables like comparison and sharing of ideas on interventions with other college mates, a different College of

Education in another town Foso was chosen. The control group (Foso College of Education) was given a seminar on "personality development and disorders" during the period of the intervention for the experimental group (Komenda College of Education). To minimize cases of experimental mortality, the pretest was done exactly a week after college had reopened from a long recess and the post test was done a week to students' examination. This notwithstanding, some students were absent from the pre and post-tests.

**Data Processing and Analysis**

After the data collection period, the data that was collected from respondents were processed and anlysed to find answers to the research questions and hypotheses. The Statistical Package for Social Sciences (SPSS, version 16) was the main software used to help in the analysis of the research data depending on the appropriate statistical tools.

The process of the data analysis involved identifying the scale of measurement associated with the data. Moreover, codes were assigned to each completed questionnaire and administered tests for identification purposes during data entry. This was done to ensure match between data entered into the statistical software and the actual questionnaire that the data came from.

To minimise errors in data entry and other aspects of data processing, editing and scrutinizing the data to check non-completion of questionnaire items. Teacher trainees were the units of analysis for this study.

After data were entered into the SPSS software, Multivariate Regression was adopted to investigate the influence of EI on teacher trainees' performance in Mathematics and English Language. Analysis of Variance (ANOVA) was employed to analyse the relationship between trainees'

demographic variables and their EI levels. The Multivariate Analysis of Variance (MANOVA) was used to examine the significant difference in the post-test scores of Mathematics and English between the control and experimental groups. The MANOVA was again earmarked to ascertain whether or not a significant difference existed in the components of EI between the experimental and control groups.

**Chapter Summary**

The research design that was used for the study was the Quasi-Experimental research design. The design engages two groups in research namely experimental and control groups. The study was conducted using teacher trainees in the Foso and Komenda Colleges of Education in the Central region of Ghana. Some possible limitation associated with the study included its focus on only two colleges of education in Ghana. This might affect issues of generalisation. The study would have been more reliable if it was conducted in the whole Ghana. Further, the main instrument for data collection was questionnaire. Questionnaire has low response rate and the possibility of teachers' responses being biased could not be ruled out. The weaknesses associated with the use of a questionnaire could affect the validity of the conclusions drawn from the study. In addition, the use of questionnaire did not permit eliciting information-from respondents through probing. All the same, looking at the nature of the current questionnaire was deemed the most appropriate instrument.

# CHAPTER FOUR

# RESULTS AND DISCUSSIONS

## Introduction

This chapter discusses the results of the study to reflect the research questions and hypotheses. The results were discussed in three sections to cover the: (a) relationship between EI and trainees' performance in English and Mathematics; relationship between respondents' demographic factors (gender, age groups and marital status) and their level of emotional intelligence; (b) differences in the post test scores of the achievement tests between the experimental and control groups; (c) differences in the post test scores of the EI test between the experimental and control groups. About 648 training college trainees from the Komenda (327) and Foso Colleges (321) of Education were earmarked for the study. However, owing to none responses and absentee trainees, the number of trainees reduced to 539. This gave a response rate of 83.2 percent.

## Demographic Variables of Respondents

Respondents' demographic variables consisted of frequencies and percentages of their gender, age groups, marital statuses and schools (Komenda, the experimental group and Foso, the control group).

## Gender

Gender was examined in terms of the number of males and females. Table 4 shows that of the 539 respondents, provided responses. Of this number of respondents, 90.7 percent were females, while 9.3 percent were males. This meant the gender of respondents was not evenly distributed. Overall, the female teacher trainees outnumbered their male counterparts.

**Table 4: Distribution of Respondents' Gender**

| Gender | Frequency | Percentage (%) |
|---|---|---|
| Male | 50 | 9.3 |
| Female | 489 | 90.7 |
| Total | 539 | 100 |

Source: Filed Data, (2017)

**Age groups**

The results on the distribution of respondents' age groups is presented in Table 5. The findings revealed that the respondents fell within four age groups namely: 15 to 20 years; 21 to 25 years; 26 to 30 years; 31 to 35 years. Out of the 539 respondents, the results portray that 15 to 20 years was the major age group, as many (65.7%) of the respondents were within this ages. About 28.9 percent of the respondents were between 21 to 25 years. The percentage of respondents who fell within the age category of 26 to 30 is 4.6. Only 0.8 percent of the respondents were between 31 to 35 years. Overall, the results show that the majority of respondents were teenagers as most of them were between 15 to 20 years.

**Table 5: Distribution of Respondents' Age Groups**

| Age groups | Frequency | Percentage (%) |
|---|---|---|
| 15-20 | 354 | 65.7 |
| 21-25 | 156 | 28.9 |
| 26-30 | 25 | 4.6 |
| 31-35 | 4 | 0.8 |
| Total | 539 | 100 |

Source: Filed Data, (2017)

**Marital status**

The results disclose that the respondents were either married or single, and this information is presented in Table 6. The majority (95%) of respondents out of the 539 respondents were single as indicated in Figure 4. Only 5 percent were married. Explicitly, there were more single than married teacher trainees.

**Table 6: Distribution of Respondents' Marital Status**

| Marital Status | Frequency | Percentage (%) |
|---|---|---|
| Single | 512 | 95 |
| Married | 27 | 5 |
| Total | 539 | 100 |

Source: Filed Data, (2017)

**Respondents' schools**

Table 7 presents results on the number of teacher trainees per school. The schools of teacher trainees (respondents) were analysed in terms of the number who belonged to Komenda College of Education (the experimental group) and those who belonged to Foso College of Education (the control group). Komenda College of Education registered the highest number of teacher trainees (55.5 percent) as opposed to 44.5 percent of the respondents who belonged to Foso College of Education. Thus, there were more respondents in the experimental group than control group.

**Table 7: Distribution of Respondents' Schools**

| Respondents' Schools | Frequency | Percentage (%) |
|---|---|---|
| Foso (Control group) | 299 | 44.5 |
| Komenda (Experimental group) | 240 | 55.5 |
| Total | 539 | 100 |

Source: Filed Data, (2017)

**Emotional Intelligence and Academic Performance in English Language and Mathematics**

EI was measured using four dimensions namely: self-awareness, self-management, social awareness and relationship management. Primary data on teacher trainees' scores in Mathematics and English Language were collected. As a measure to investigate the relationship between EI and trainees' scores in Mathematics and English Language, it was hypothesized that:

H1: EI significantly predicts trainees' performance in English Language and Mathematics.

Multivariate Regression was employed to analyze this relationship. The results in Table 8 depicts that though the Beta value ($\beta$ = .187) for self-awareness was the highest for trainees' performance in Mathematics, yet the corresponding (p = .217) was insignificant (as it was < .05). The other dimensions of EI namely: self-management, social-awareness and relationship management registered insignificant values (p=.445; p=.523; p=.611) respectively. Thus findings from the multivariate regression analysis indicated that none of the dimensions of emotional intelligence significantly predicted students' performance in Mathematics (Table 8).

**Table 8: Parameter Estimates for the Relationship between EI and Trainees' Performance in Mathematics and English**

| Dependent Variable | Parameter | B | Std. Error | T | Sig. | 95% Confidence Interval | | Partial Eta Squared |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Lower Bound | Upper Bound | |
| MATHS SCORES | Intercept | 60.241 | 4.126 | 14.599 | .000 | 52.135 | 68.347 | .285 |
| | SA | .187 | .151 | 1.235 | .217 | -.110 | .484 | .003 |
| | SM | -.105 | .137 | -.764 | .445 | -.375 | .165 | .001 |
| | SocA | .067 | .104 | .639 | .523 | -.138 | .272 | .001 |
| | RM | -.064 | .125 | -.509 | .611 | -.309 | .182 | .000 |
| ENGLISH LANGUAGE SCORES | Intercept | 66.081 | 3.871 | 17.072 | .000 | 58.477 | 73.685 | .353 |
| | SA | .061 | .142 | .432 | .666 | -.218 | .340 | .000 |
| | SM | -.162 | .129 | -1.256 | .210 | -.415 | .091 | .003 |
| | SocA | .224 | .098 | 2.288 | .023 | .032 | .416 | .010 |
| | RM | -.186 | .117 | -1.585 | .113 | -.415 | .044 | .005 |

Source: field data, 2017

The results of trainees' scores in English and their components of EI reveals that all the (p= .666; p=.210; p=.113) were insignificant. However, of all the components, social awareness significantly predicted performance in English Language ($\beta$ = .224, p = .023, partial eta square = .010) (Table 8). The impact of social awareness on trainees' performance in English Language can be evaluated using the Partial Eta Squared. The latter represents the proportion of the variance in the dependent variable (English Language scores) that can

be explained by the independent variable (social awareness). The value in this case is .010, which represents only 1.0 percent of the variance in trainees' performance in English Language explained by social awareness. Thus, generally, levels of emotional intelligence of the students of the colleges of education did not significantly influence or predict their academic performance in both subjects (Table 8).

**Demographic Factors of Respondents and Level of Emotional Intelligence**

Prior to the analysis of how related respondents' demographic variables were to their level of EI, a test for normality was ran to ascertain whether the Analysis of Variance was the appropriate statistic tool to be used to examine such a relationship.

In this section, there were two variables namely: the independent and dependent variables. The independent variables were three (gender, age groups and marital status), while the dependent variable constituted the pre-test scores on EI. The independent variables were categorical constituting two or more between groups, while the dependent variable was continuous or numerical. In view of the kinds of variables involved, the Between-Groups ANOVA was used to compare means for the different categories of demographic variables. This form of test statistic is a parametric test.

Pallant (2001) suggests that before the utilization of any parametric test, it is imperative to conduct a normality test in order to assess the normality of the distribution of scores for the dependent variable. In view of this, a normality test was conducted to ascertain the normality of the distribution of the EI pre-test scores for the different demographic factors beginning with gender as shown in Table 9.

The findings in Table 5 show that the significant values (.000, .000) for females were both insignificant, since they violated the assumptions for normality, with cut-off p-values of > .05. Going by Pallant (2001) one of the assumptions for normality for every test statistic is that the significant or p-value must be greater than .05. When the significant value is less than this cut off value, then one of the assumptions for normality has been violated. However, males registered significant p-values of (.200. .345) <.05.

**Table 9: Normality test of Emotional Intelligence Pre-Test Score for the Gender Demographics**

| Demographics | EI Pre-Test Scores | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
| Gender | Statistic | df | Sig. | Statistic | df | Sig. |
| Male | .108 | 50 | .200 | .974 | 50 | .345 |
| Female | .069 | 489 | .000 | .988 | 489 | .000 |

Source: Field data, 2017

Furthermore, the actual shape of the distribution of the histogram for males in Figure 2 depicts that the EI pre-test scores for this group was normally distributed. This could be seen from the symmetrical shape or distribution on the histogram (Figure 2).

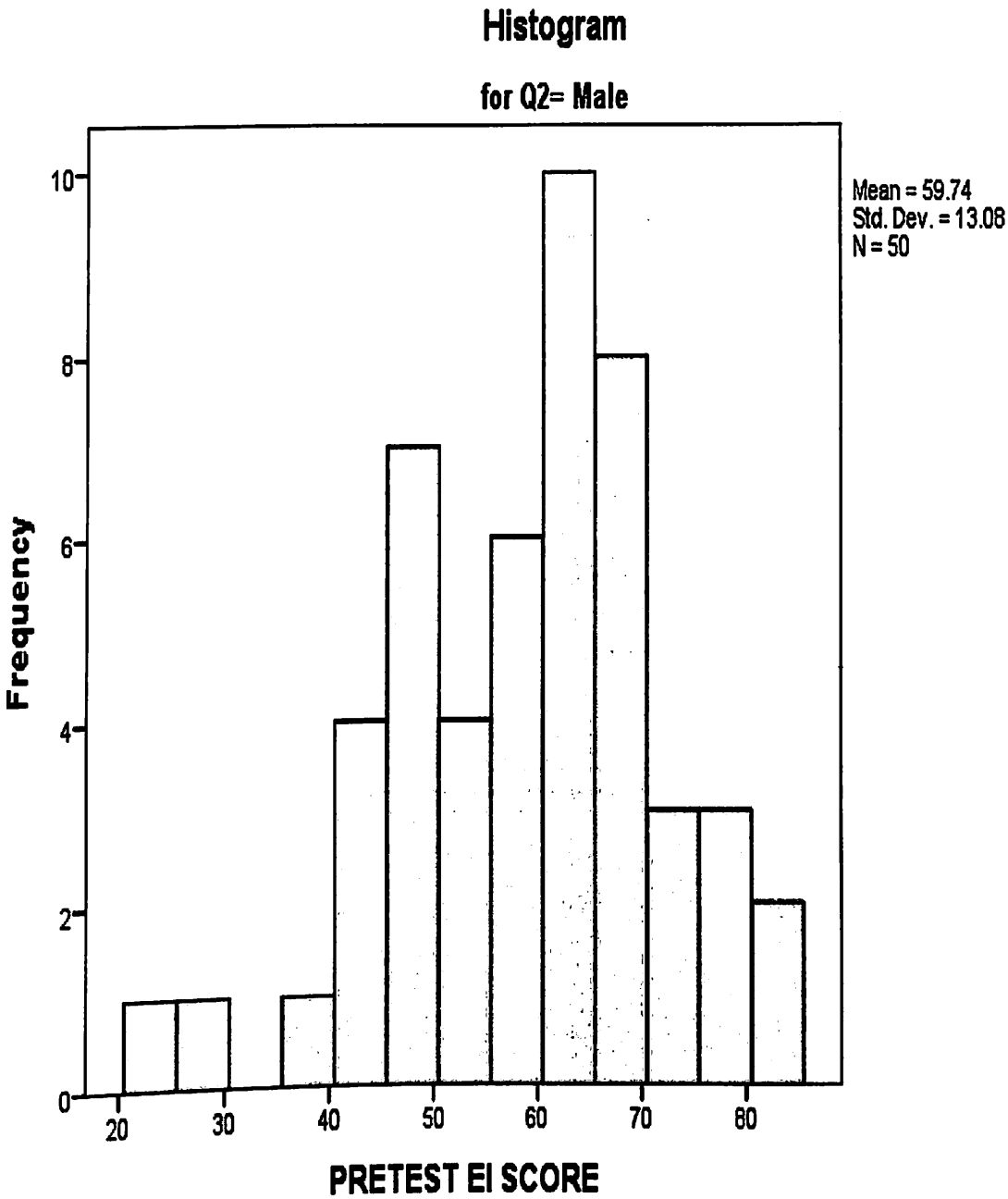


**Figure 2: Histogram on the EI Pre-Test Score for Males**

Source: Field data, 2017

Besides, the shape of the histogram for the distribution of the EI pre-test scores for females (Figure 3) was also symmetrical. This meant the scores were normally distributed across the histogram.

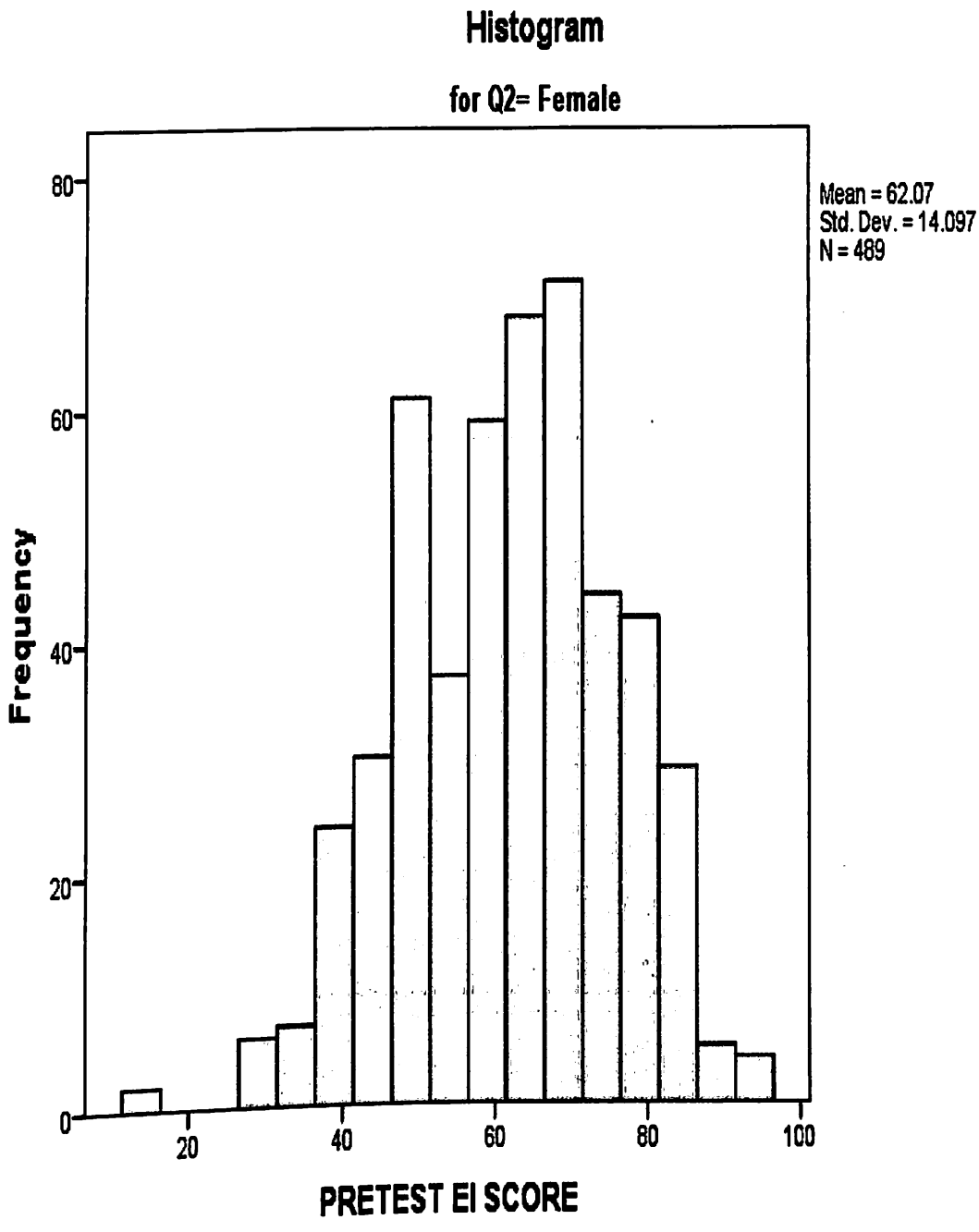


**Figure 3: Histogram on the EI Pre-Test Score for Females**

Source: Field data, 2017

Results from the histograms were supported with results from Normal Probability Plots (NQ-Q). An inspection of the plot for males (Figure 4) reveals that the line was reasonably straight. Going by another assumption for normality, for scores or the dependent variable to be considered normally

distributed, the line on the NQ-Q Plot must be reasonably straight (Pallant, 2001).

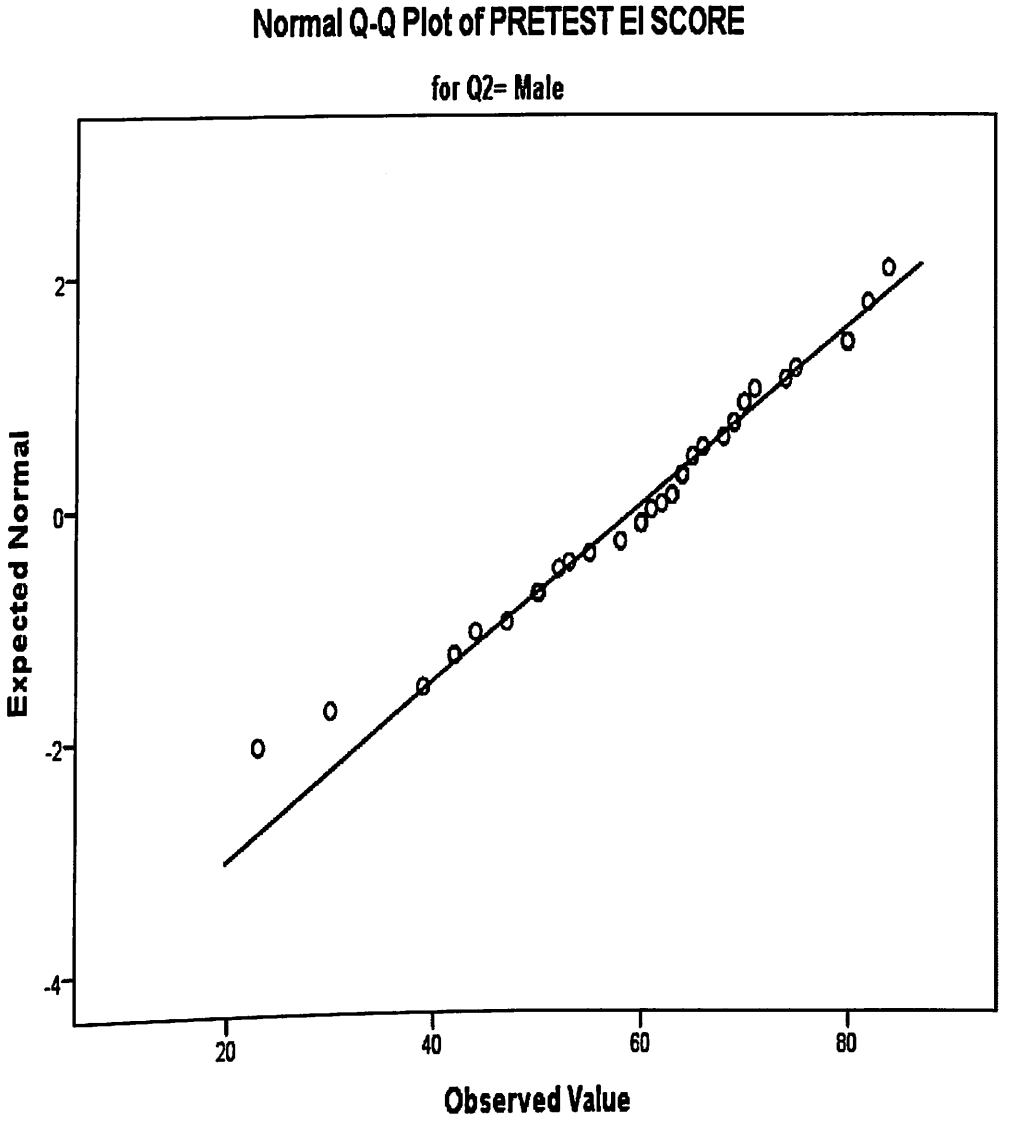


**Figure 4: Normal Probability Plot on the EI Pre-Test Score for Males**

Source: Field data, 2017.

Similarly, the line on the NQ-Q of the EI pre-test score for females was also reasonably straight (Figure 5).

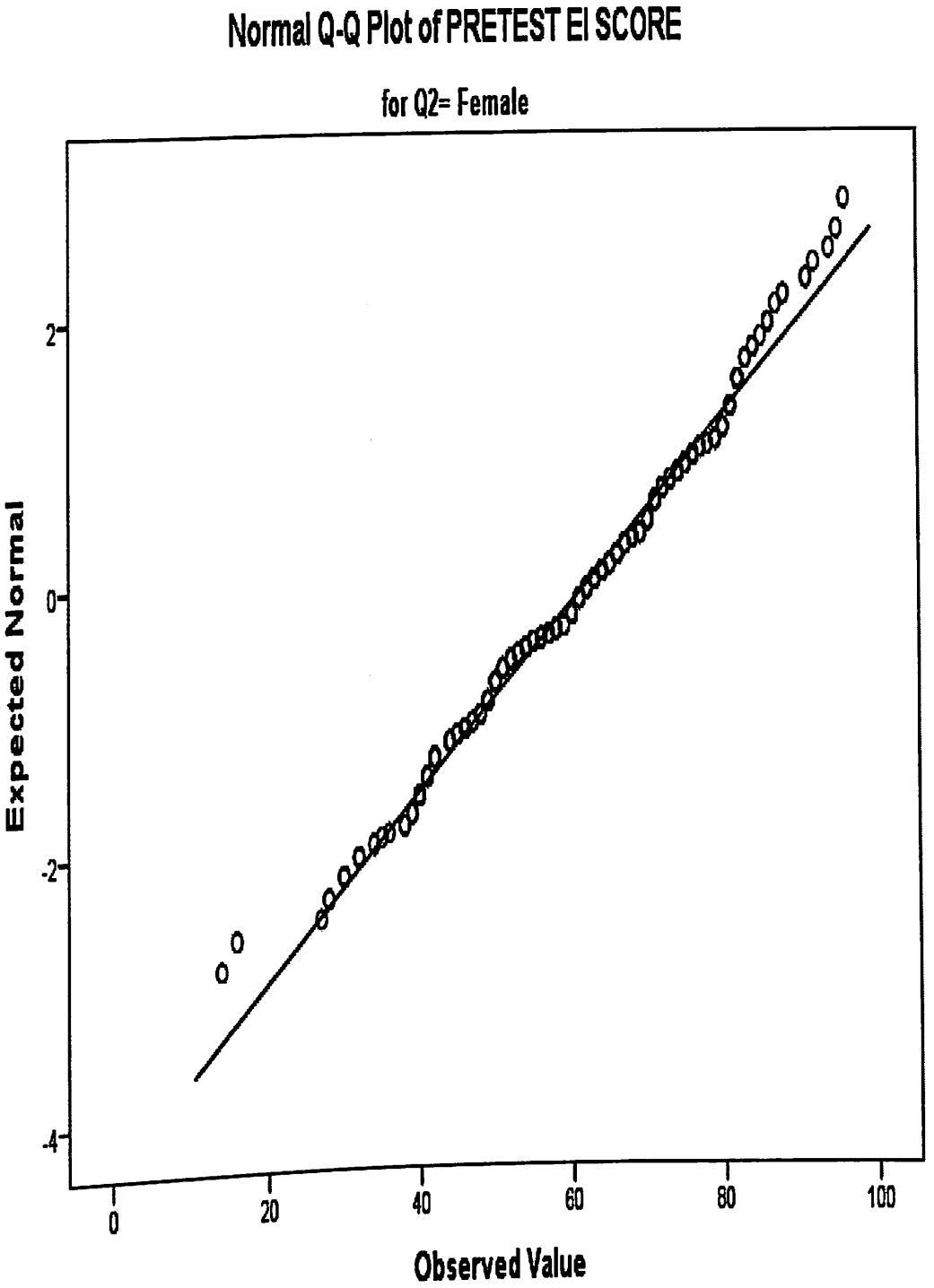


**Figure 5: Normal Probability Plot on the EI Pre-Test Score for Females**

Source: Field data, 2017

Table 10 presents findings on the normality test between the age demographics and respondents' pre-test EI score. The findings depict that the

p-values for all age groups were significant with the exception of respondents were ages fell within the range of 15-20 years (.000, .001) and 21-25 years that recorded a Kolmogorov-Smirnov p-value of with cut-off p-values (.039) > .05. Hence, it is only these two age groups that did not satisfy this assumption for normality.

**Table 10: Normality Test between Respondents' Age Demographics and EI Pre-Test Score**

| Demographics | EI Pre-Test Scores | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
| Age groups | Statistic | df | Sig. | Statistic | df | Sig. |
| 15-20 | .089 | 354 | .000 | .985 | 354 | .001 |
| 21-25 | .073 | 156 | .039 | .990 | 156 | .333 |
| 26-30 | .137 | 25 | .200 | .923 | 25 | .061 |
| 31-35 | .278 | 4 | .072 | .876 | 4 | .324 |

Source: Field data, 2017

Additionally, the pre-test scores for age 15-20 years respondents were normally distributed on the histogram (Figure 6). Moreover, the scores of the EI pre-test for the 21-25 age group respondents were also normally distributed (Figure 7). This notwithstanding, Figure 8 portrays that the scores of the test for teacher trainees who fell within the age range of 26-30 years were not normally distributed, as the scores were negatively skewed (clustered to the right). Figure 9 presents test scores for trainees aged 31-35 years. The findings disclose a normal distribution of scores across respondents who fell within this age range.

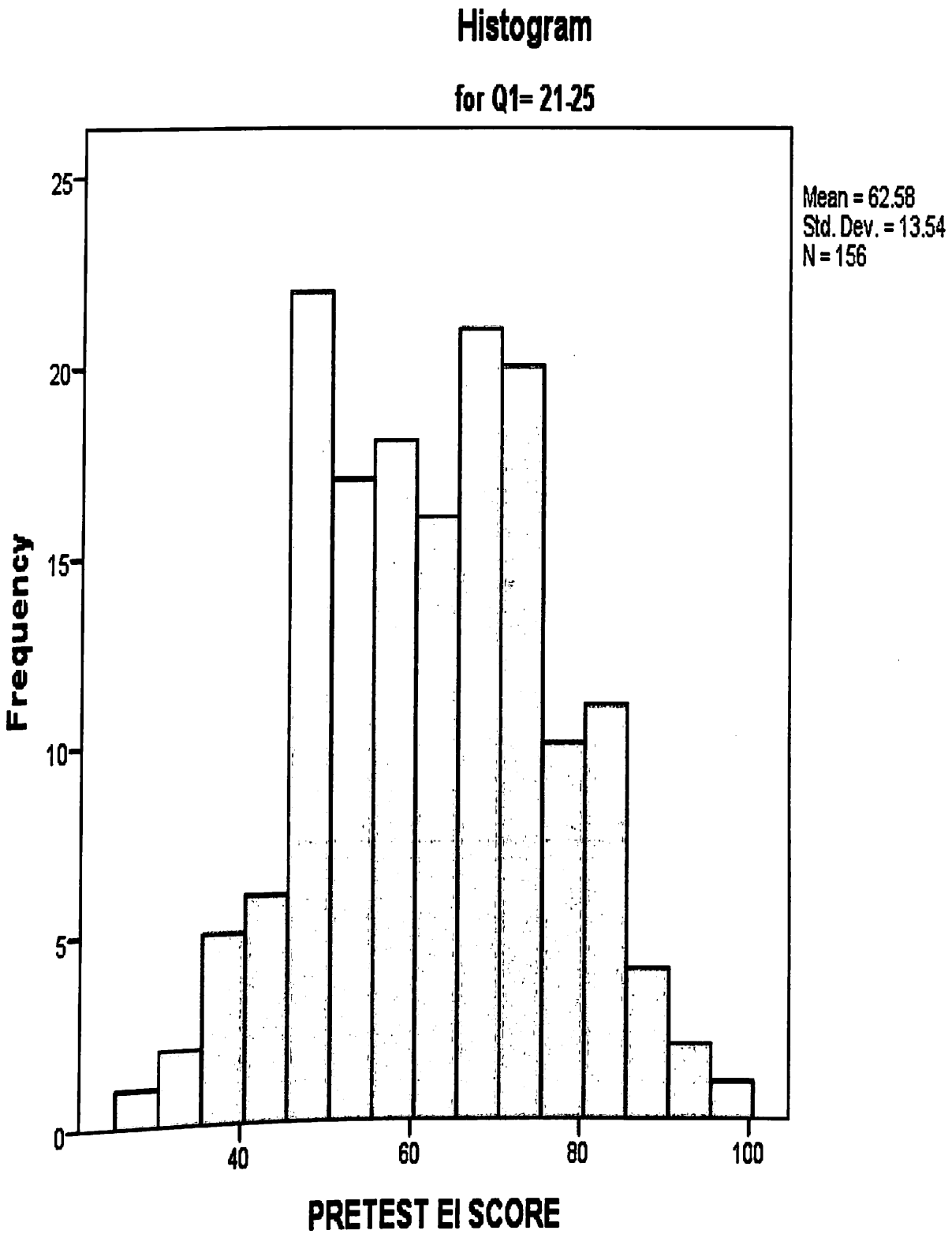


**Figure 6: Histogram on the EI Pre-Test Scores for Respondents Aged 15-20 Years**

Source: Field data, 2017

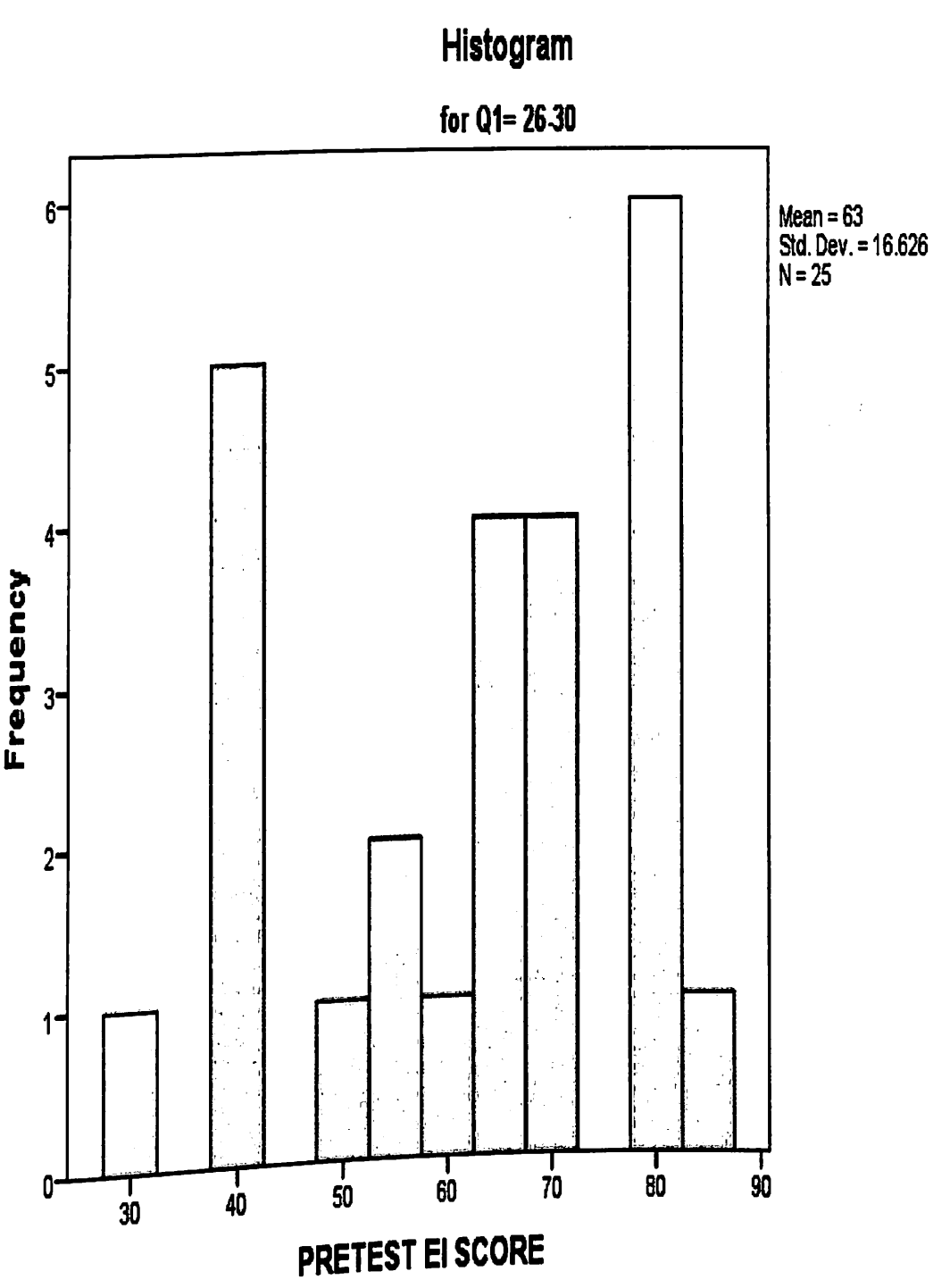


**Figure 7: Histogram on the EI Pre-Test Scores for Respondents Aged 21-25 Years**

Source: Field data, 2017.

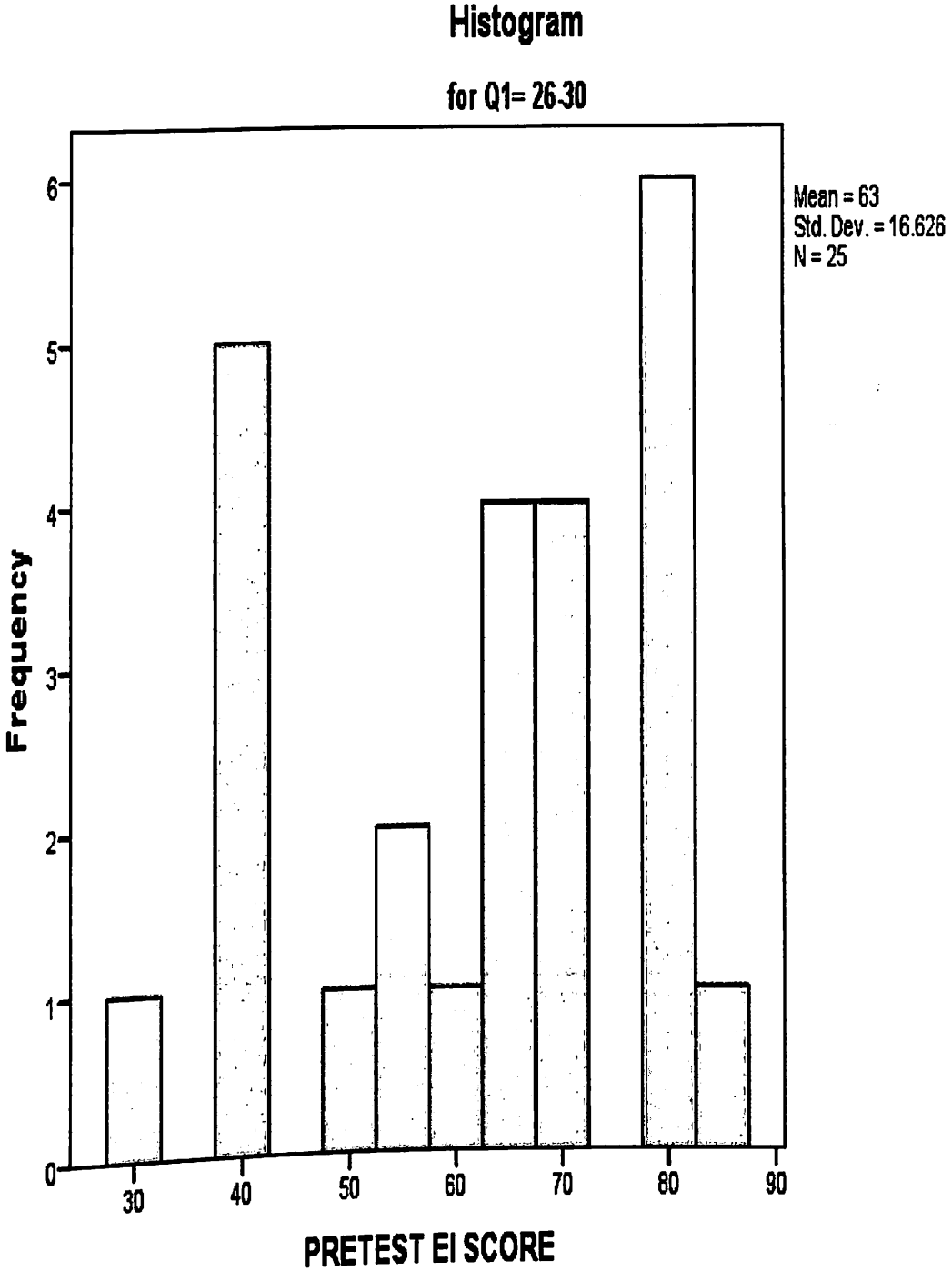


**Figure 8: Histogram on the EI Pre-Test Scores for Trainees Aged 26-30 Years**

Source: Field data, 2017

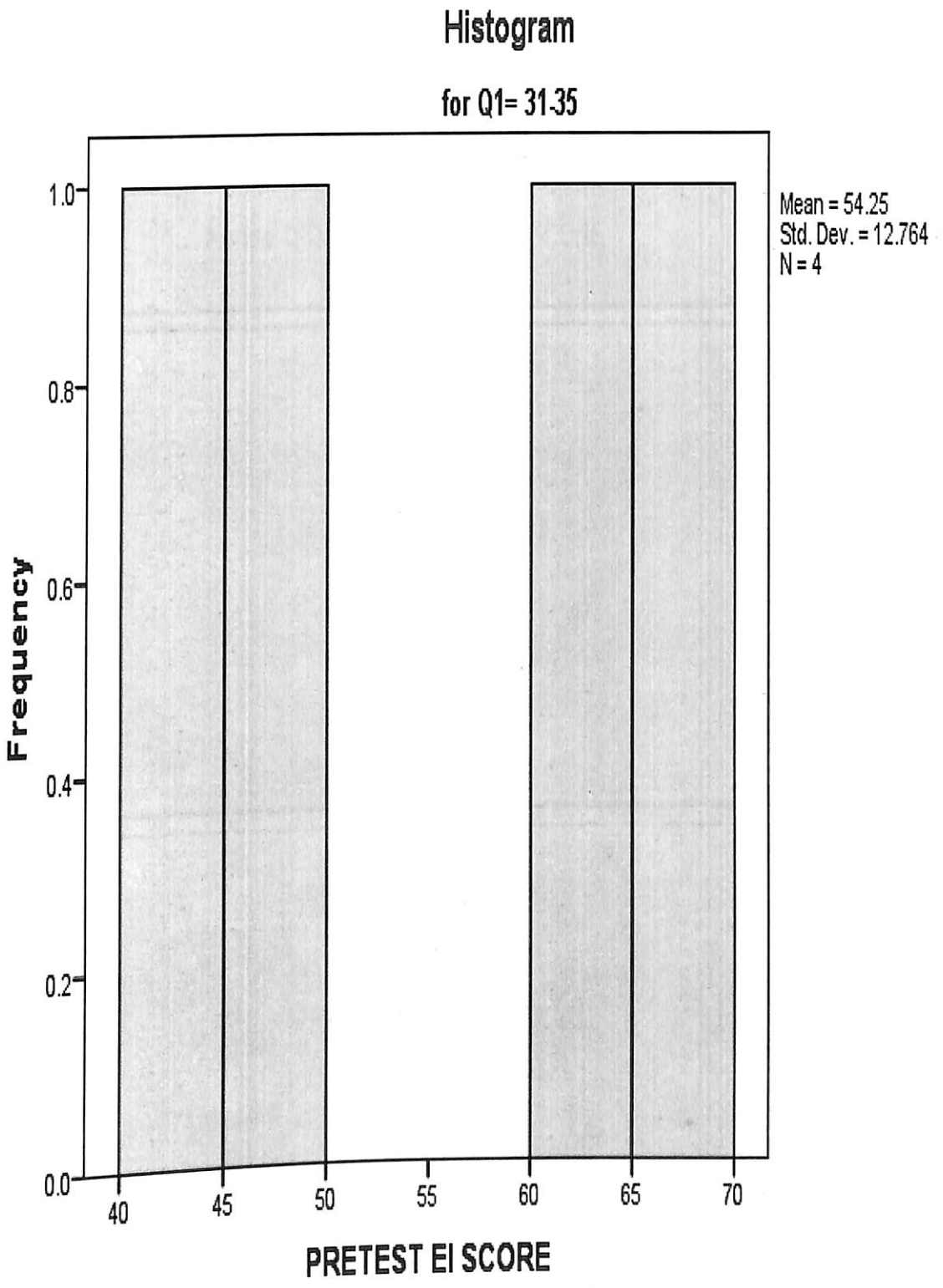


**Figure 9: Histogram on the EI Pre-Test Scores for Trainees Aged 31-35 Years**

Source: Field data, 2017

The Normal Probability Plots (NQ-Q) amplified findings from the histograms. An inspection of the plots for all the age groups (Figure 10, 11, 12 and 13) respectively discloses that the lines were reasonably straight.

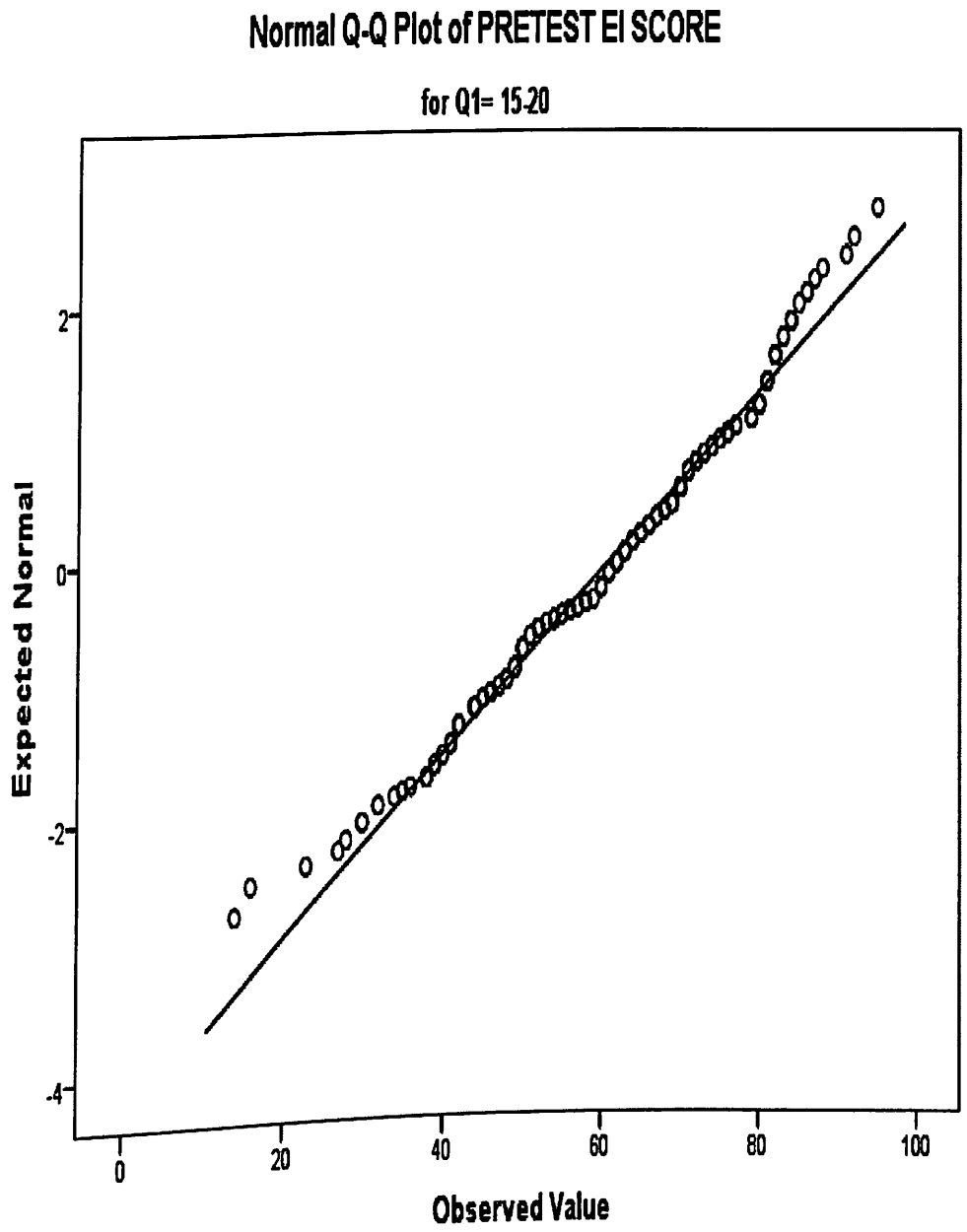


*Figure 10:* Normal Probability Plot on the EI Pre-Test Scores for Trainees Aged 15-20 years

Source: Field data, 2017

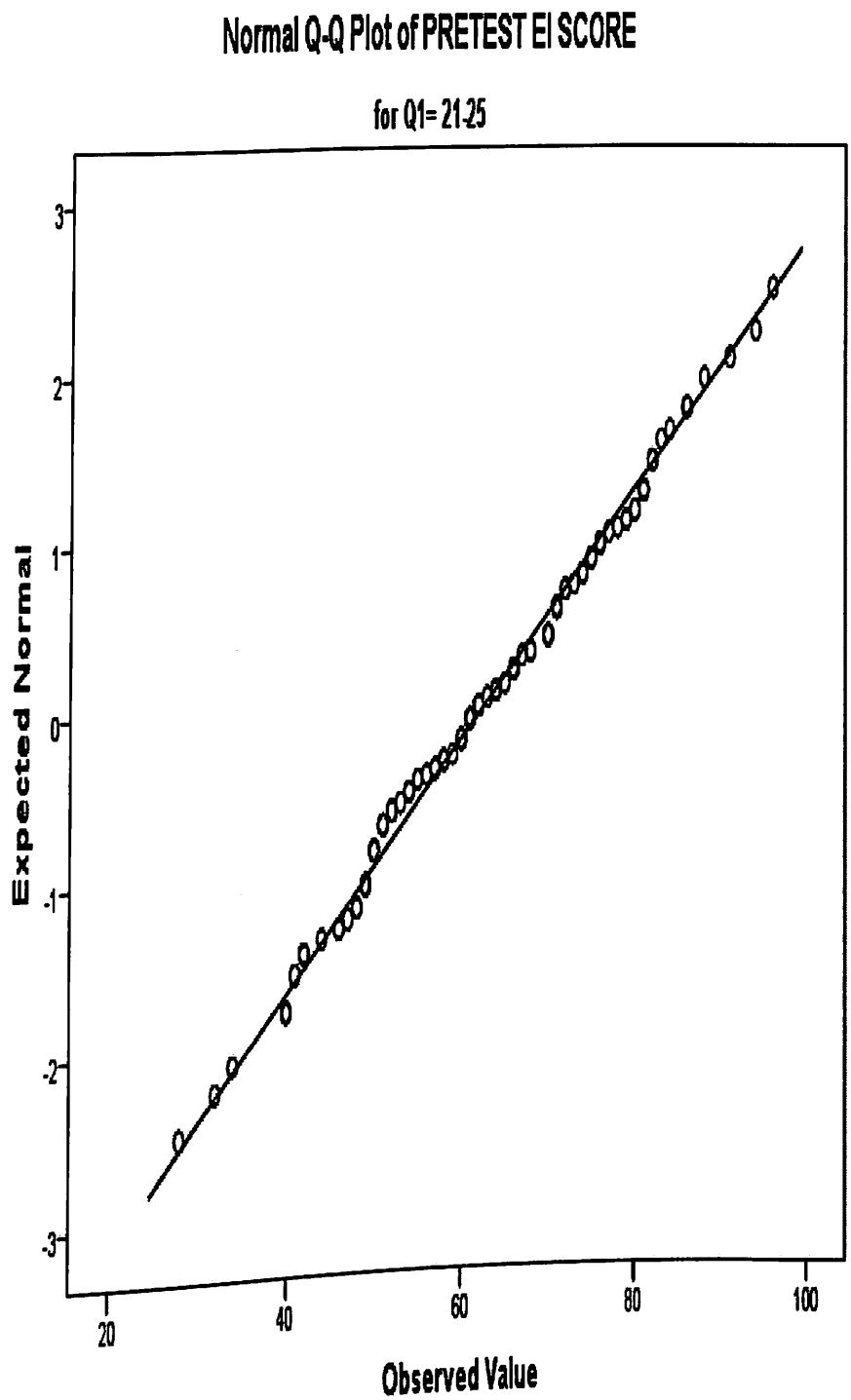


**Figure 11: Normal Probability Plot on the EI Pre-Test Scores for Trainees Aged 21-25 Years**

Source: Field data, 2017

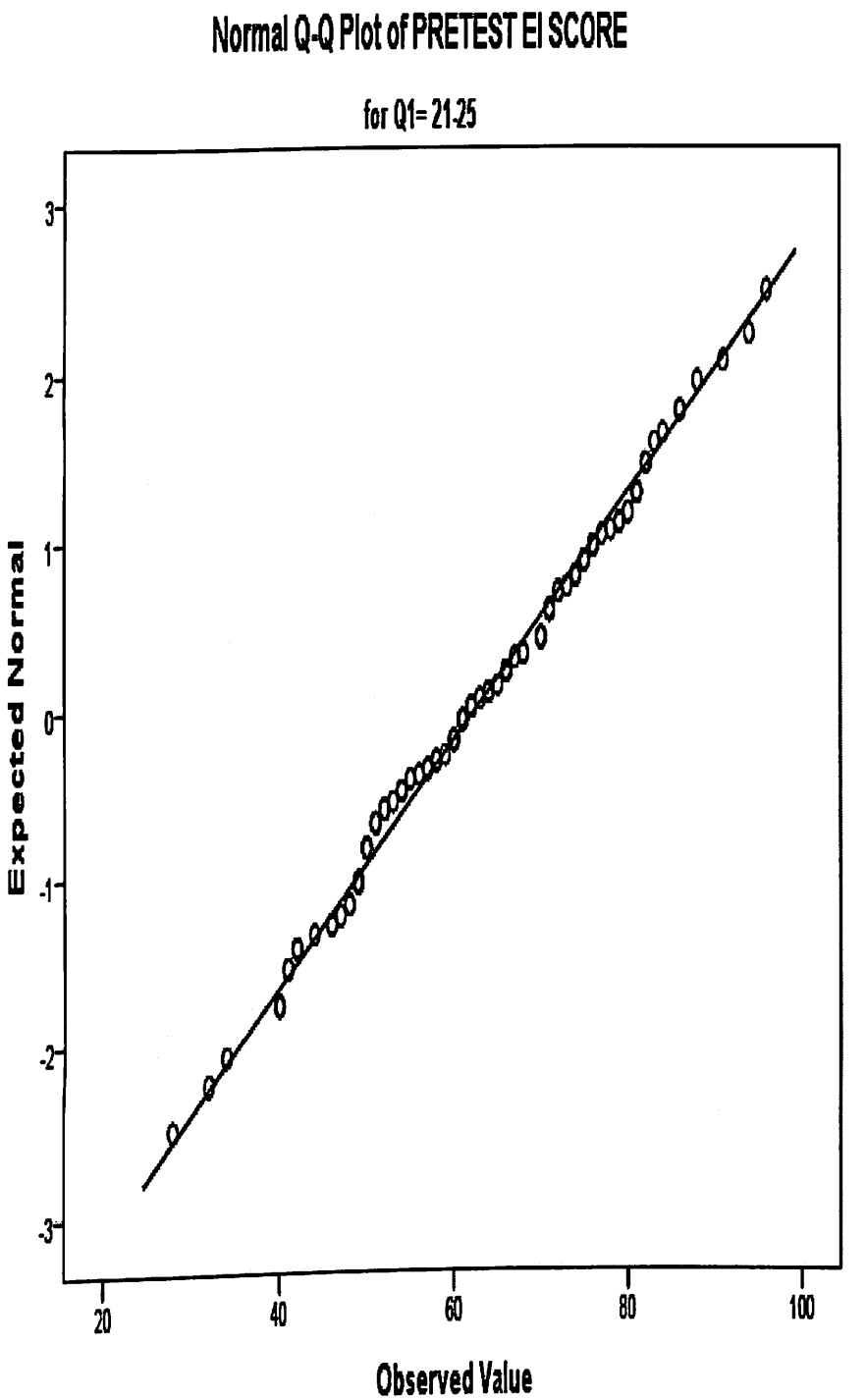


**Figure 11: Normal Probability Plot on the EI Pre-Test Scores for Trainees Aged 21-25 Years**

Source: Field data, 2017

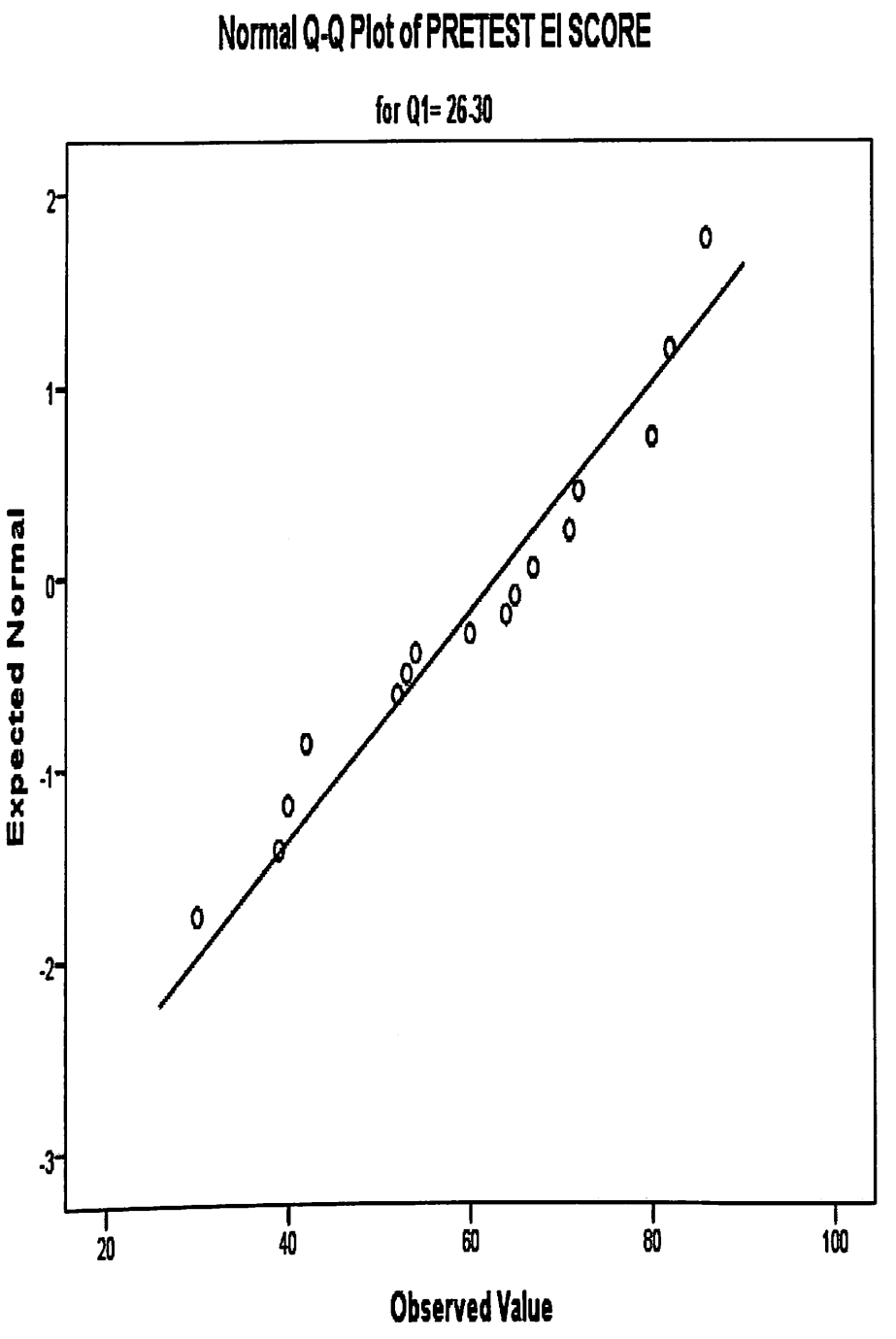


**Figure 12: Normal Probability Plot on the EI Pre-Test Scores for Respondents Aged 26-30 Years**

Source: Field data, 2017

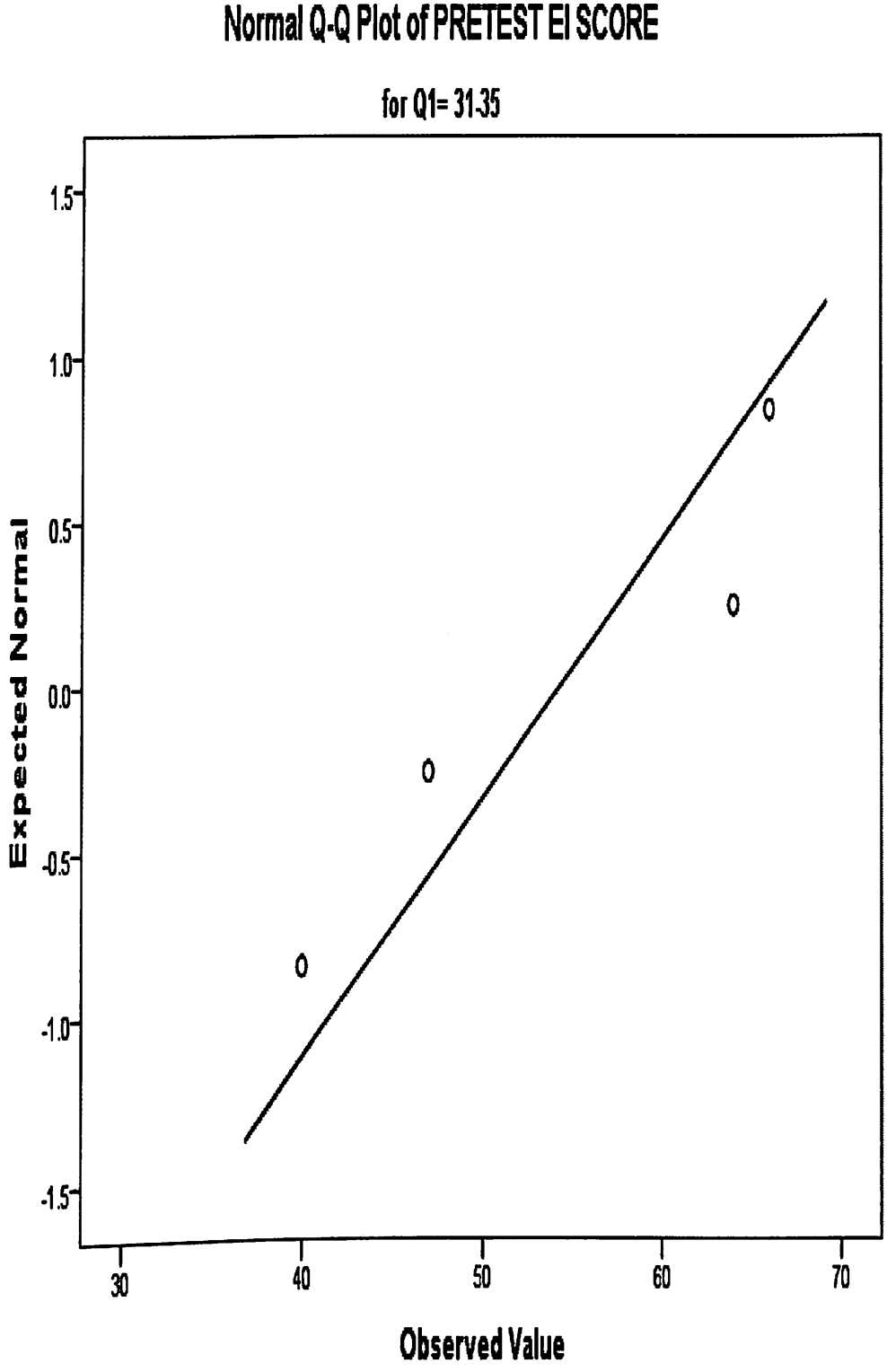


**Figure 13: Normal Probability Plot on the EI Pre-Test Scores for Respondents Aged 31-35 Years**

Source: Field data, 2017

The normality test results for marital status and teacher trainees' pre-test EI scores depicts that the Kolmogorov-Smirnov and Shapiro Wilk p-values (.000, .000) < .05 for trainees who were single, violated one of the assumptions for normality. On the other hand, the p-values for the scores of their counterparts who were married were significant (.439, .200) > .05, which implied that they were normally distributed (Table 11).

**Table 11: Normality Test for Respondents' Marital Status and EI Pre-Test Scores**

| Demographics | EI Pre-Test Scores | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
| Marital statuses | Statistic | df | Sig. | Statistic | df | Sig. |
| Single | .072 | 512 | .000 | .988 | 512 | .000 |
| Married | .129 | 27 | .200 | .963 | 27 | .439 |

Source: Field data, 2017

The results on the histograms as illustrated in Figure 14 shows that the scores were normally distributed across single teacher trainees, as opposed to the scores that were recorded by their married counterparts were not normally distributed as illustrated in Figure 15. The scores in the latter were negatively skewed.

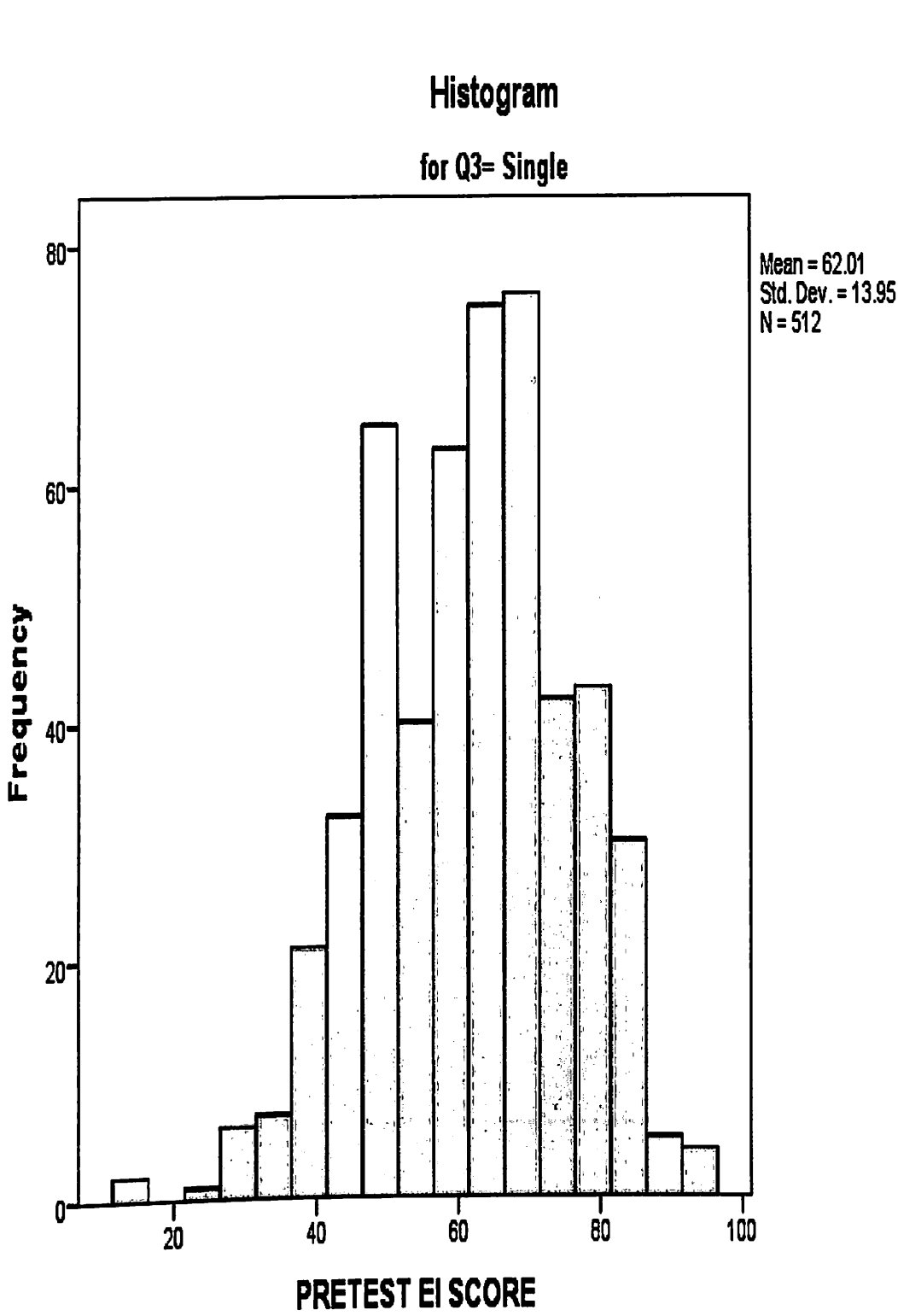


**Figure 14: Histogram on the EI Pre-Test Scores for Single Teacher Trainees**

Source: Field data, 2017

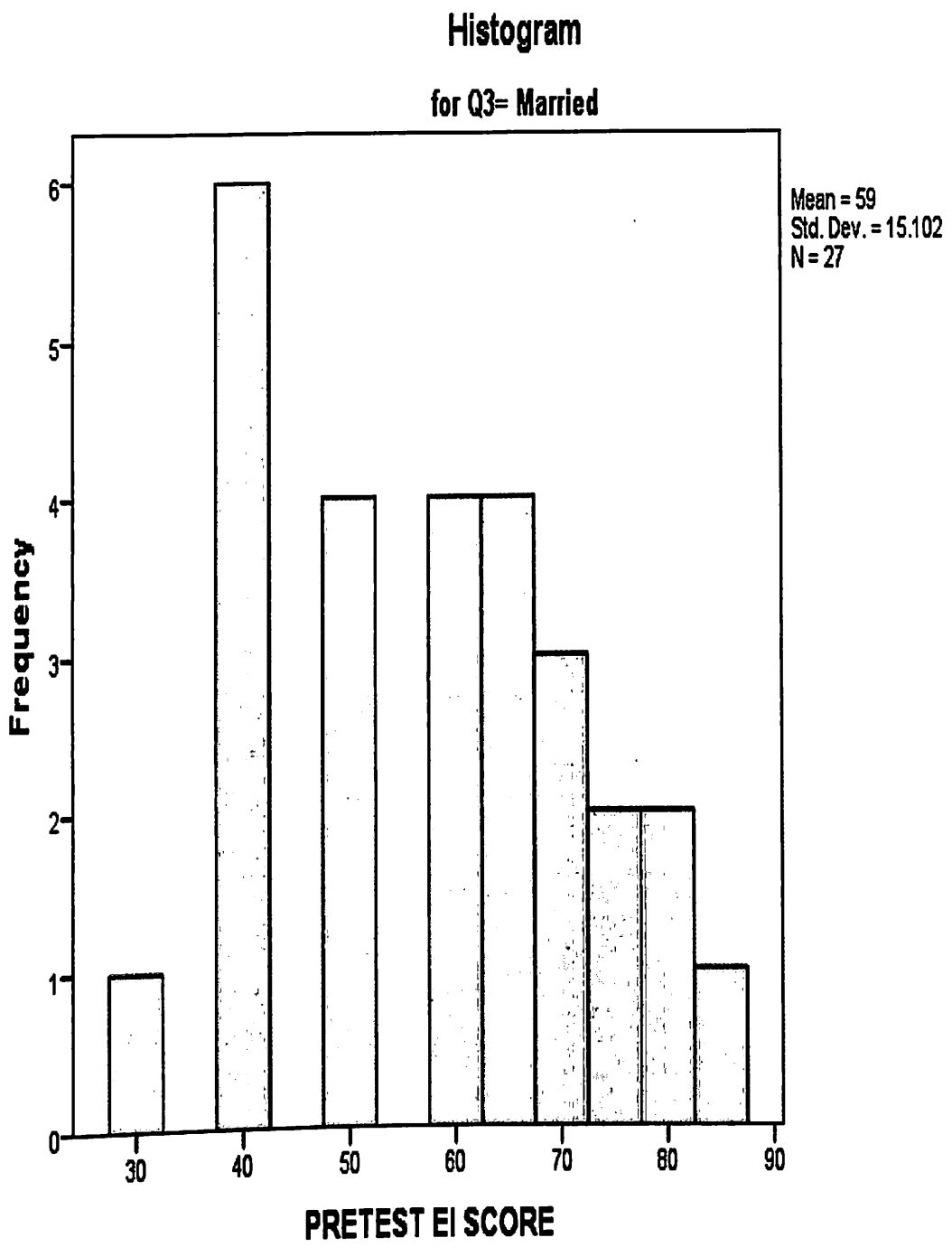


**Figure 15: Histogram on the EI Pre-Test Scores for Married Teacher Trainees**

Source: Field data, 2017.

The results as presented in Figures 16 and 17 illustrate that the NQ-Q scores for single and married respondents produced reasonably straight lines.

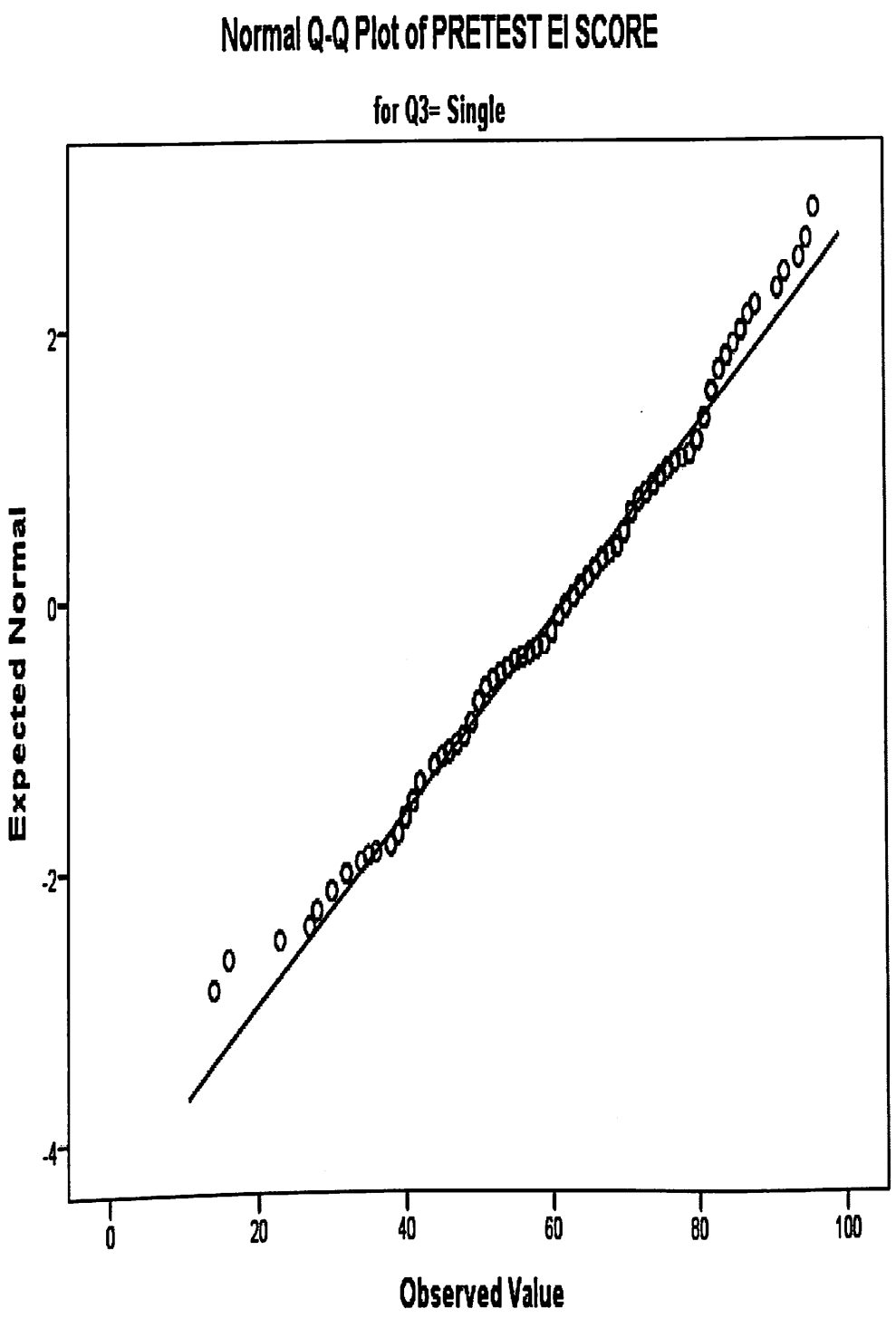


**Figure 16: Normal Probability Plot on the EI Pre-Test Scores for Single Teacher Trainees**

Source: Field data, 2017

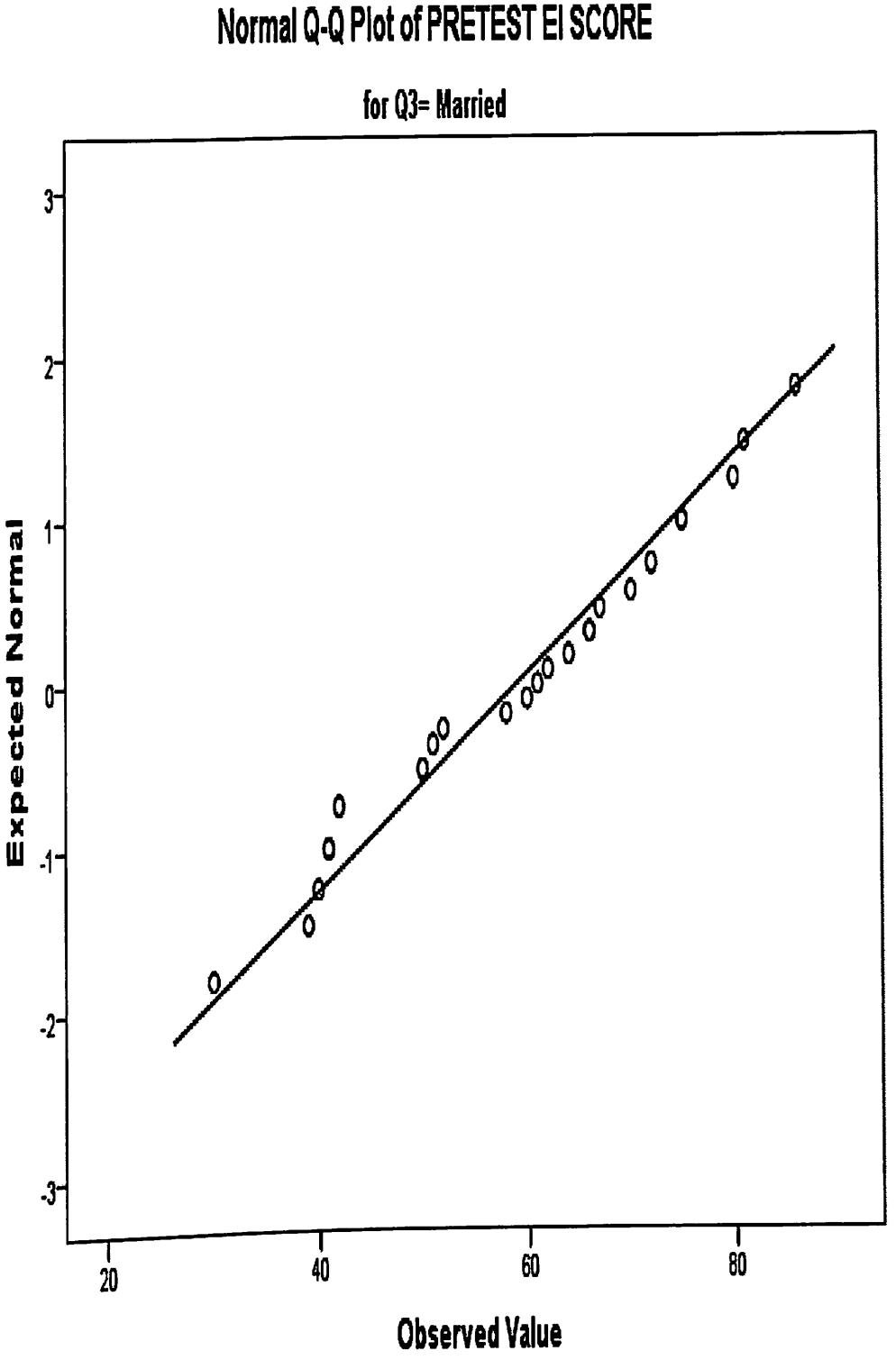


**Figure 17: Normal Probability Plot on the EI Pre-Test Scores for Married Teacher Trainees**

Source: Field data, 2017.

The test for normality was employed owing to the intended use of the Analysis of Variance (ANOVA) to compare the pre-test EI mean scores across the various categories of demographics (gender, age groups and marital statuses). Holistically, the results reveal that most of the assumptions for normality were not violated. Hence the ANOVA was employed for the analysis.

As a mechanism to answer the research question regarding the influence of demographic variables on EI, the Between-Groups ANOVA was used to find out if there were significant differences between the EI pre-test mean scores for the different categories of demographic variables. The tables present the descriptive statistics of the EI pre-test scores across the demographic categories. The ANOVA analysis is presented thereafter.

It was hypothesised that:

$H_1$: There were significant differences in the pre-test mean scores on EI among males and females respondents; single and married respondents; various age groups of respondents.

**Table 12: Descriptive Statistics on Respondents' Gender and Pre-Test EI Scores**

| GENDER | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower Bound | Upper Bound |
| Male | 58.275[a] | 4.808 | 48.829 | 67.721 |
| Female | 57.174 | 2.778 | 51.715 | 62.633 |

Source: Field data, 2017

Table 12 presents the mean EI of male and female respondents. The EI for males (58.28, SE = 4.81) and females (57.17, SE = 2.78) seemed to be quite similar, and both were very low, as the score range for the EI scale ranges from 37 to 185, with a mid-point being 111. This therefore suggests that the mean scores for both male and female respondents were really low.

In terms of age, the EI for respondents who were between 15 to 20 years (60.75, SE = 1.94); 21 to 25 years (62.81, SE = 3.12); 26 to 30 years (55.94, SE=5.21); 31 to 35 years (50.67, SE= 7.44) were equally very low (Table 13).

**Table 13: Descriptive Statistics on Respondents' Age Groups and Pre-Test EI Scores**

| AGE GROUPS | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower Bound | Upper Bound |
| 15-20 | 60.750[a] | 1.935 | 56.949 | 64.552 |
| 21-25 | 62.805[a] | 3.124 | 56.667 | 68.944 |
| 26-30 | 55.941[a] | 5.209 | 45.707 | 66.175 |
| 31-35 | 50.667[a] | 7.440 | 36.050 | 65.284 |

Source: Field data, 2017

The mean EI for married and single respondents are presented in Table 14. Both are again very low, considering the score range on the EI scale. However, single respondents had a slightly higher score (60.46, SE = 2.81) than the married (54.63, SE = 4.01).

**Table 14: Descriptive Statistics on Respondents' Marital Statuses and Pre-Test EI Scores**

| MARITAL STATUS | Mean | Std. Error | 95% Confidence Interval | |
|---|---|---|---|---|
| | | | Lower Bound | Upper Bound |
| Single | 60.455[a] | 2.809 | 54.936 | 65.975 |
| Married | 54.626[a] | 4.013 | 46.742 | 62.511 |

Source: Field data, 2017

The Three-Way Between-Subjects ANOVA, with three independent demographic variables, was conducted to investigate whether the EI mean scores differed across the demographic categories. The Levene's Test shows there was equality of error variance of EI across the groups as illustrated in Table 15 with a p-value (.209) > .05.

**Table 15: Levene's Test of Equality of Error Variances**

Dependent Variable: Pretest EI SCORE

| F | df1 | df2 | Sig. |
|---|---|---|---|
| 1.321 | 11 | 497 | .209 |

Source: Field data, 2017

One of the assumptions underlying Analysis of Variance is that the Homogeneity of Variances (the variance of the dependent variable across the various groups of independent variables) must not be violated. This must be depicted by an alpha value greater than .05. Thus, an alpha value less than .05 suggests that the test for Homogeneity of Variances is not equal, which presupposes that it has been violated (Pallant, 2001).

Table 16 depicts that the mean pre-test EI scores did not differ significantly across categories of any of the demographic variables as evident with main effect for age groups (F (3, 497)= .91, P=.437 > .05); gender (F (1, 497)= .09, P=.767 > .05); marital status (F (1, 497)=.51, P=.475 > .05). Hence, the EI scores were same for males and females; all age groups of teacher trainees; as well as single and married trainees.

A close look at the interaction effect (*) between age (*) gender portrays that (P=.124 > .05), which meant the effect was insignificant. Implicitly, there was no significant difference in the effect of teacher trainees' age groups on their EI mean scores for male and female trainees. Likewise, interaction effect between age (*) marital status showed further that there was no significant effect (P= .974 > .05) between the two variables (Table 16). This also meant there was no significant difference in the effect of age groups on EI scores between single and married teacher trainees. Significant values greater than .05 depicts no significant relationship or difference between independent and dependent variables, while significant values less than .05 depicts a relationship or difference between variables (Pallant, 2001). Thus, there was no relationship between teacher trainees' demographic factors and their levels of EI.

The results disapprove Lumley, Gustavson, Partridge and Labouvie-Vief's (2005) biological explanation that women are more emotionally intelligent than the male folk by virtue of women's biochemistry which is better prepared than men to consider their own emotions as well as others as an important element in survival. The results do not also conform with Livingstone and Day's (2005) opinion that emotional processing is larger in

women than in men. The variance of the study's results with the opinions of these writers could be due to the manner in which the male and female respondents were raised by their families (family background), the kinds of career, educational and social exposures and interactions they may have had in life. All these factors may have influenced their EI and not gender.

**Table 16: Tests of Between Subjects Effects**

(Dependent Variable: Pretest EI SCORE)

Tests of Between-Subjects Effects

Dependent Variable: PRETEST EI SCORE

| Source | Type III Sum of Squares | Df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 1820.608[a] | 11 | 165.510 | .831 | .609 | .018 |
| Intercept | 84539.434 | 1 | 84539.434 | 424.280 | .000 | .461 |
| Age groups | 543.023 | 3 | 181.008 | .908 | .437 | .005 |
| Gender | 17.511 | 1 | 17.511 | .088 | .767 | .000 |
| Marital status | 101.659 | 1 | 101.659 | .510 | .475 | .001 |
| Age * Gender | 835.750 | 2 | 417.875 | 2.097 | .124 | .008 |
| Age * Marital status | 43.815 | 3 | 14.605 | .073 | .974 | .000 |
| Gender * Marital status | .000 | 0 | . | . | . | .000 |
| Error | 99029.235 | 497 | 199.254 | | | |
| Total | 2051746.000 | 509 | | | | |
| Corrected Total | 100849.843 | 508 | | | | |

Source: Field data, 2017.

The findings on gender and emotional intelligence showed further that both male and female teacher trainees could manage their emotions and therefore contradicts Sánchez, Fernández-Berrocal, Montañés and Latorre (2008) and Lishner, Swim, Hong and Vitacco (2011) arguments on emotional intelligence between the male and female folk. Sanchez et al. (2008) argued that women are socialized to express their emotions, while men are socialized to minimize certain emotions such as sadness, guilt, vulnerability and fear. On the other hand, Lishner et al. (2011) argued that women can manage their emotions more than their male counterparts because often times, they are preoccupied with maintaining the positive tone of their and others' emotions in order to prevent the deterioration of interpersonal relations and to construct satisfying social networks (Lishner et al., 2011).

Earlier, Brody and Hall's (2000); Ciarrochi, Hynes and Crittenden's (2005); Hall and Mast's (2008) postulated that women have more interpersonal competencies, and being more socially adept than men. The findings do not therefore justify these postulations. EI may not necessarily be determined by one's gender, but other factors such as one's personal experiences and exposure, family background are auxiliary factors that may explain one's EI.

Therefore, the respondents' ability to resolve differences among people as a mechanism of EI was not hinged on their gender differences, as one's tendency to resolve conflicts is contingent on the ability to empathize with others. Respondents' abilities to establish solid working relationships with their study peers as another strategy of EI was not reliant on their gender, as one's ability to build and manage solid human relations is premised on the

decision to work on one's temperament, sideline human or individual differences, accept others for who they are, learn to listen more to them and learning to talk less.

The respondents' tendency to sideline stress was therefore not contingent on their gender variances, as one's tendency to manage stressful people and situations is dependent on the ability to empathize with others and be aware of one's emotions. Bar-On (1988) argues that one's ability to manage relationships as a form of EI is not contingent on gender but on the ability to manage one's, as well as other emotions such that it does not generate conflicts or even if it does, the ability to manage conflicts that might ensue relationships is what is pertinent in relationship management. Goldenberg, Matheson and Mantler (2006) add that relationship management as a form of EI is all about developing ways to manage rather than react to emotions. This can be achieved by identifying and naming what we feel, as this can enhance the understanding of our emotions and our relationship with people.

Furthermore, Hall and Mast (2008) caution that managing relationships is also about human beings understanding why they have a particular feeling about a person or people. This can be accomplished by tracing the source of their feeling. For example, it is best for the human to identify what drove or is driving anger against a person or people. Perhaps it could be some form of hurt, perceived rejection or disappointment (Hall & Mast, 2008).

The study therefore does not buy into the earlier assumptions of Mayer et al. (1999) and Goleman (1998) that age plays an evolutionary role in EI.

Goleman (2011) for example negates that self-awareness is not about an individual's age, but it is about an individual's ability to recognize his or her emotions and their effects on himself or herself as well as others. Recognizing one's emotions and their effects on the individual concerned and others involves using what one knows about his or her emotions, in order to manage them and motivate oneself.

Emotional self-management may not necessarily be influenced by age, as other factors such as one's level of emotional self-awareness, emotional social consciousness and relationship management could play a much more greater role than age in influencing one's level of emotional self-management. Roushani (2001) and Castro-Schilo and Kee (2010) posit that emotional self-management is simply the ability to manage or cope with feelings in order to reassure oneself or achieve equanimity.

The ability to manage or cope with feelings is contingent on one's personal and social competence (Goleman, 2011). Personal competence entails self-awareness and self-management, while social competence entails social awareness and relationship management (Goleman, 2011a). Self-awareness is the ability to recognize one's emotions and their effects on oneself and other people, while self-management builds on self-awareness by using one's self-control to ensure that one's emotions do not control him or her regardless of a situation (Goleman, 2011a).

Conversely, social awareness extends one's emotions to include understanding other people's emotions (Ashkanasy, & Dasborough, 2003), while relationship management is about sustaining strong, effective and lasting relationships by managing one's and other emotions such that it does not

generate conflicts or even if it does, the ability to manage conflicts that might ensue fruitful relationships is equally relationship management (Bar-On, 1988).

Other factors such as the manner in which people were raised or socialized by their parents, relatives or cultures, personal exposure to, as well as interactions and experiences with other people from countries or cultures could determine an individual's level of emotional social consciousness and not necessarily his or her age or age group. It is for this reason Hasson (2012) explains that when conducting business in a foreign country, the ability to correctly recognize others' emotions can facilitate interactions and culminate in less miscommunication. Otherwise, a slight smile that is intended to communicate disinterest may be mistaken for happiness (Hasson, 2012). This presupposes that personal exposure to and interactions with people from different cultures play a role in enhancing one's level of emotional social consciousness.

A team of writers propose that emotional relationship management is not determined by age but by a number of factors such as influence (Bar-On, 1997); leadership (Goleman, 1995); developing others (Golem-an, 1998); communication (Hasson, 2012); change catalyst (Brackett, Mayer & Warner, 2004); conflict management (Conte, 2005); building bonds (Goleman, 2006), teamwork and collaboration (Gregory, 2007).

Influence is the extent to which one is able to persuade others to execute a course of action or take a decision. By so doing, the individual concerned becomes an epitome of trustworthiness (Bar-On, 1997). Leadership is the competence of being at the forefront of a team and issuing directives,

which team members are prepared to accept and work with the leader to accomplish goals (Goleman, 1995). People with leadership potentials lead by example and by so doing, inspire others to achieve goals or a vision. They are also fond of effectively delegating tasks and expect feedbacks from the delegated tasks, thereby fostering accountability (Goleman, 1995).

Compared to leadership, developing others is all about working with others and assisting them to unearth their potentials by observing and providing them with opportunities to fully develop their potentials (Goleman, 1998). Conversely, communication demands persuasiveness, precision, clarity, chronology and objectivity (Hasson, 2012). A change catalyst is someone who explores and initiates new ideas and approaches, as a measure of accomplishing set objectives (Brackett et al., 2004).

Conflict management on the contrary is concerned with recognizing, pre-empting or managing areas of conflict, even when change is concerned, to a positive resolution (Conte, 2005). The building bond strategy permits the building of a wide variety of mutually beneficial relationships (Goleman, 2006), while teamwork and collaboration refers to the natural aptitude in creating a cohesive team (Gregory, 2007).

The ability for an individual to manage his or her emotions cannot be determined or predetermined by his or her marital status, as emotional management demands the nurturing of certain emotional skills such as calmness, conflict moderation, listening and sympathy (Soleymani & Mohammadi, 2009). Additionally, the writers point out that having these skills can increase the possibility of solving disagreements between couples over different issues such as child training, sexual relationships, financial problems

and other home issues and not the other way round (where an individual's marital status will enable him or her to manage his or her conflicts or emotions congruously).

Austin et al. (2007) on the other hand, argue that more sleep or good sleep quality is one of the factors that can determine an individual's emotional self-awareness as a form of EI. When an individual rest or sleeps sufficiently, he or she becomes more alert of whatever may be happening to him or her when he or she wakes up from sleep. In a state of alertness, he or she can make good decisions. Conversely, when an individual has less rest or poor sleep quality, his or her emotions are affected. Such an individual can develop a bad mood that eventually impairs decision making (McIntyre, 2010).

Moreover, Lavalekar, Kulkarni and Jagtap (2010) opine that other skills that necessitate the development of emotional self-management are empathy, self-monitoring in social situations, social skills, cooperative behaviour, close and affectionate relationships. Possessing these skills culminates in greater marital satisfaction. Other values that determine emotional self-management are communication, commitment, decision-making, emotional intimacy with one's spouse and forgiveness. These values have a strong impact on marital satisfaction (Schramm & Harris, 2011).

Relationship management is about understanding, accepting and managing others' emotions (Ashkanasy & Dasborough, 2003). This can be attained not by virtue of one's marital status but by virtue of learning how to accept one's emotions, rather than judging them as good or bad (Barchard, 2003); demonstrating equanimity by slowing down in moments of anger and listening to others rather than talking (Bastian, Burns & Nettelbeck, 2005);

thinking through thoroughly about something before responding (Ciarrochi, Hynes & Crittenden, 2005) and talking to a health care professional about one's feelings (Connolly, Kavanagh & Viswesvaran, 2007).

The said measures proposed by the writers can tremendously contribute in managing relationships. Again, the ability to cater for oneself in order to minimize strong emotions and relating profitably with people is also key in relationship management (Ashkanasy & Dasborough, 2003). The writers canvass that taking care of oneself such as eating well, getting some sleep, doing some exercise, avoiding drugs and alcohol are other ways by which humans can curtail the impact of strong emotions in order to develop a sound mind to relate and work profitably with people.

**Difference in Mathematics and English Performance between Experimental and Control Groups**

A test for normality was also conducted for objective three to investigate whether the Multivariate Analysis of Variance (MANOVA) was the suitable statistic technique to employ and ascertain whether or not a difference existed in the post-test performance of Mathematics and English Language between the experimental and control group teacher trainees.

The independent variables which were composed of two groups (experimental and control group participants), while the dependent variable were two in number, which were participants' post-test performance in Mathematics and their performance in English Language. The independent variable was categorical with only two groups, while the dependent variables were continuous and two in number. By virtue of the kinds of variables involved, the MANOVA was adopted to compare teacher trainees' post-test

performance in Mathematics and English Language of those who belonged to the experimental group and those who belonged to control group.

As a strategy to investigate the normality of the distribution of post-test scores in Mathematics and English Language for the different groups of participants, a normality test was conducted as disclosed in Table 17. The results depict that the Kolmogorov-Smirnov and Shapiro Wilk alpha values for the performance of both group of participants in Mathematics and English Language were all below .05. This violated one of the normality assumptions.

**Table 17: Normality Test of Post-Test Scores in Mathematics and English Language for Experimental and Control Group Participants**

| | EI Post-Test Scores | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
| Groups (English) | Statistic | df | Sig. | Statistic | df | Sig. |
| Foso | .072 | 240 | .004 | .962 | 240 | .000 |
| Komenda | .066 | 299 | .003 | .983 | 299 | .002 |
| Groups (Maths) | | | | | | |
| Foso | .119 | 240 | .000 | .982 | 240 | .004 |
| Komenda | .096 | 299 | .000 | .983 | 299 | .001 |

Source: Field data, 2017

Figure 18 further depicts that the distribution of post-test English scores on the histogram for the control group teacher trainees was symmetrical (normal). This could be seen from its even distribution from left to right.

However, the distribution of English scores for the experimental group trainees were asymmetrical (Figure 19). They were positively skewed (from the right to left). The bars are clustered to the left of the histogram. Figure 20 shows that for Mathematics, the post-test scores for the control group are evenly distributed, while for the experimental group, Mathematics scores are unevenly distributed as illustrated in Figure 21. They were positively skewed.

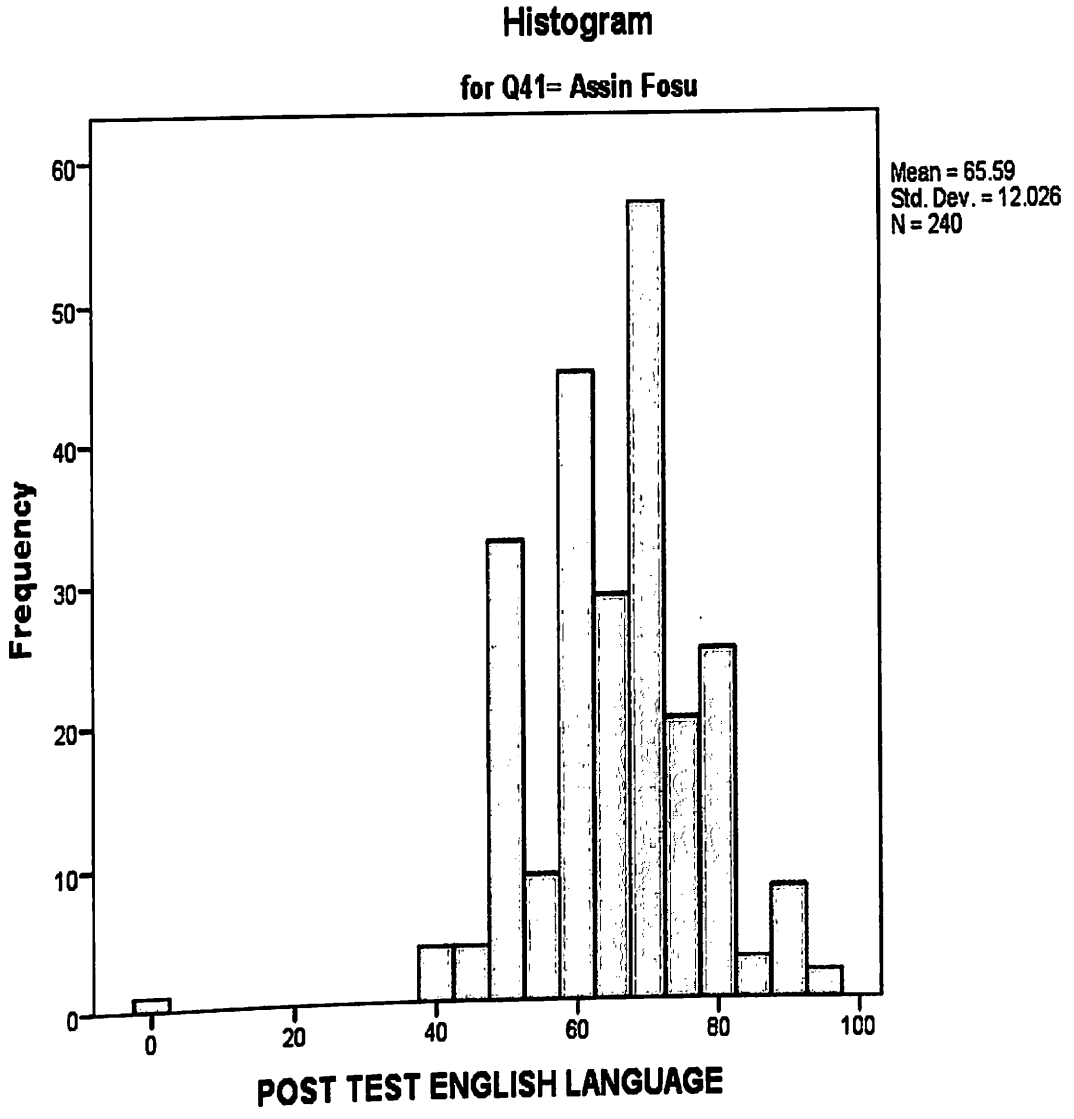


**Figure 18: Histogram on English Post-Test Scores for the Control Group Teacher Trainees**

Source: Field data, 2017

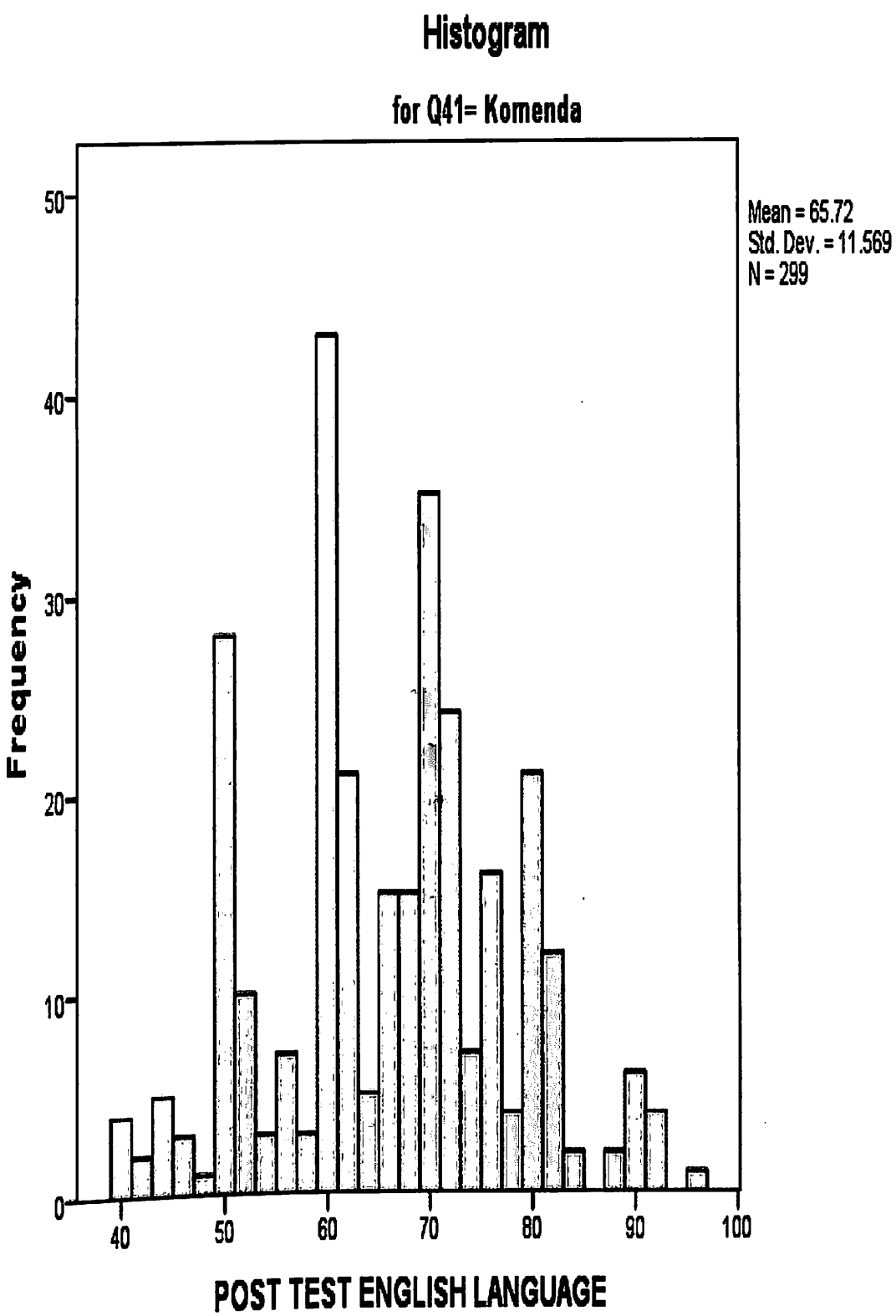


**Figure 19: Histogram on English Post-Test Scores for the Experimental Group Teacher Trainees**

Source: Field data, 2017.

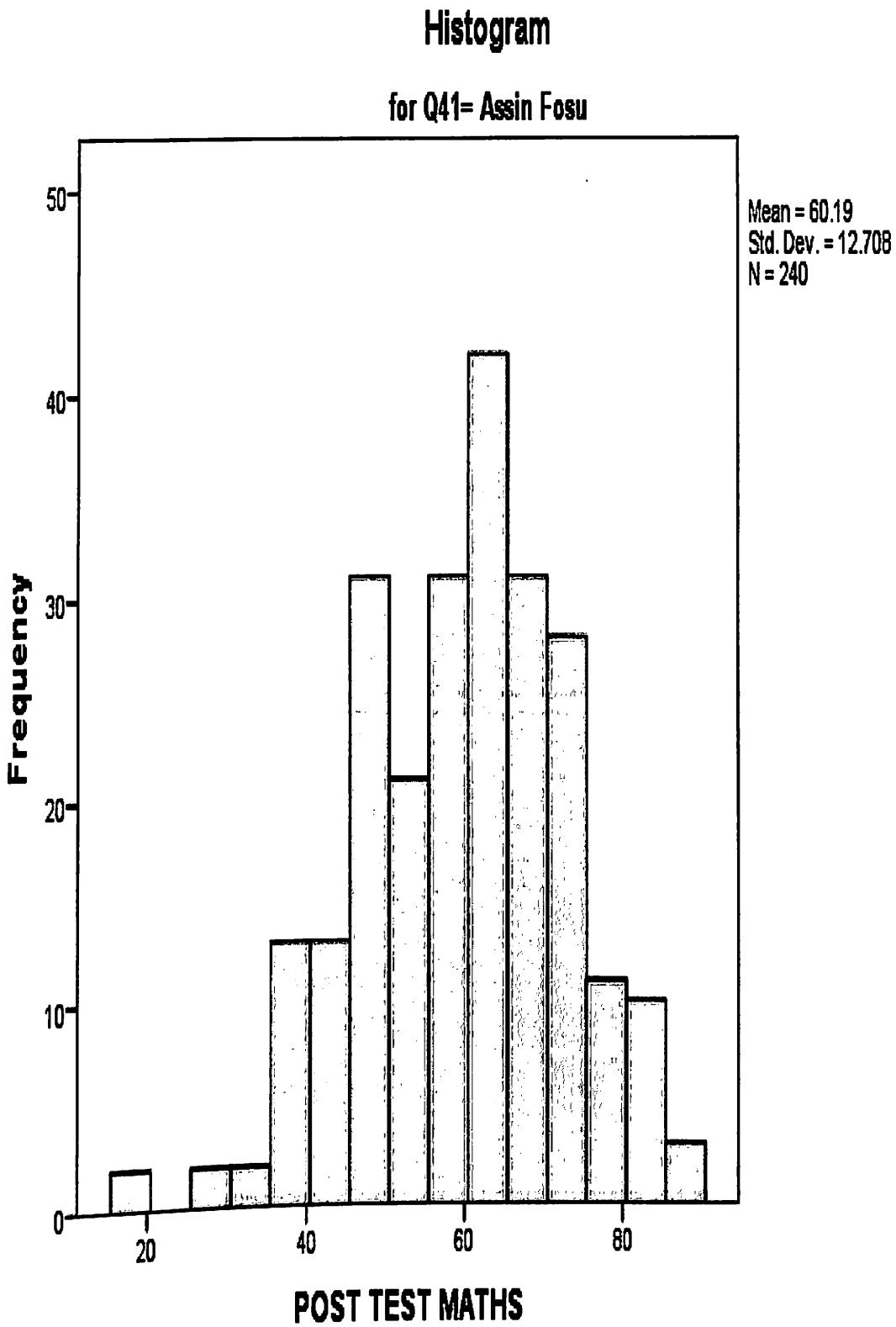


**Figure 20: Histogram on Mathematics Post-Test Scores for the Control Groutrainees**

Source: Field data, 2017.

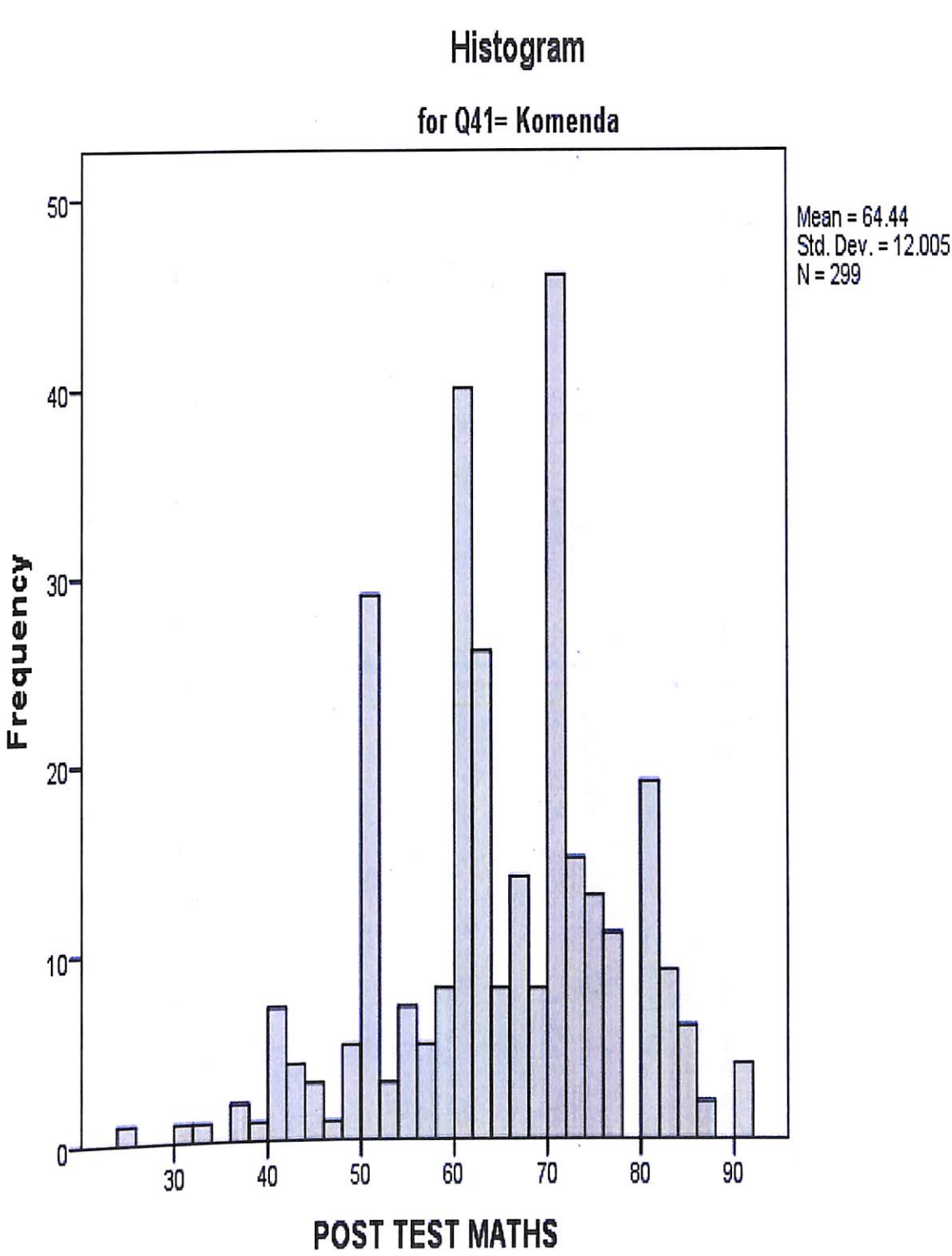


**Figure 21: Histogram on Mathematics Post-Test Scores for the Experimental Group Trainees**

Source: Field data, 2017.

To further amplify the findings from the histogram, results from the Normal Probability Plots (NQ-Q) were also presented. A close examination of the plots (Figure 22, 23, 24 and 25) for the experimental and control group participants' post-test scores in English and Mathematics reveal that the lines were reasonably straight. This presupposes that one of the normality test assumptions was not violated.

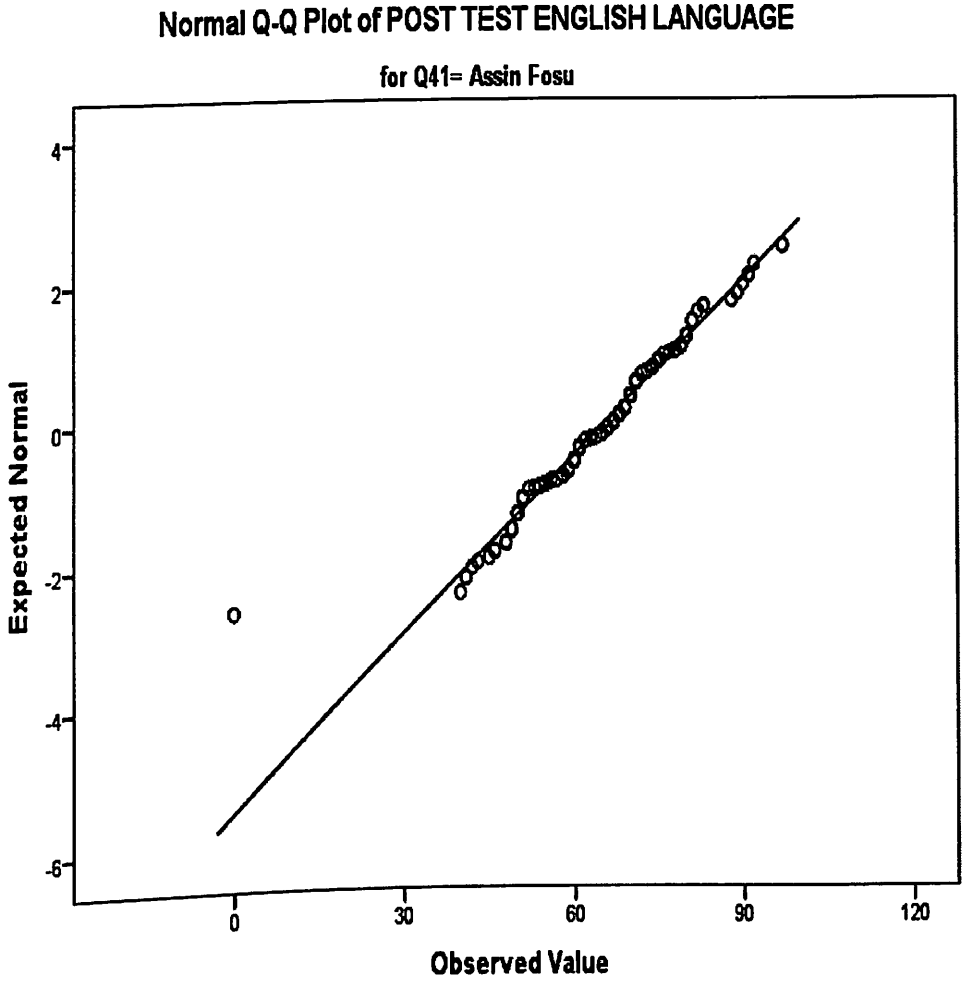


**Figure 22: Normal Probability Plot on English Post-Test Scores for the Control Group Respondents**

Source: Field data, 2017

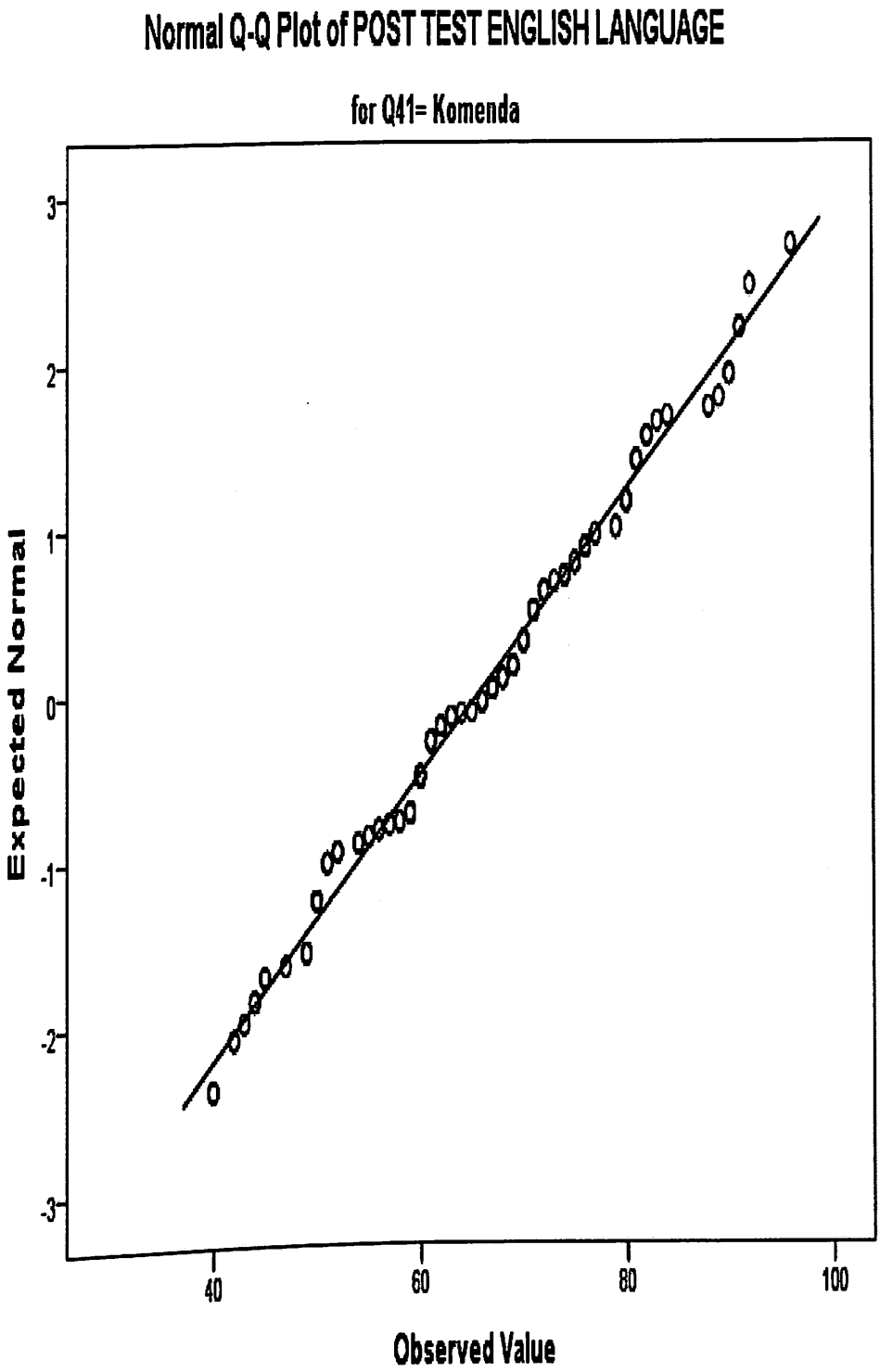


**Figure 23: Normal Probability Plot on English Post-Test Scores for the Experimental Group Respondents**

Source: Field data, 2017

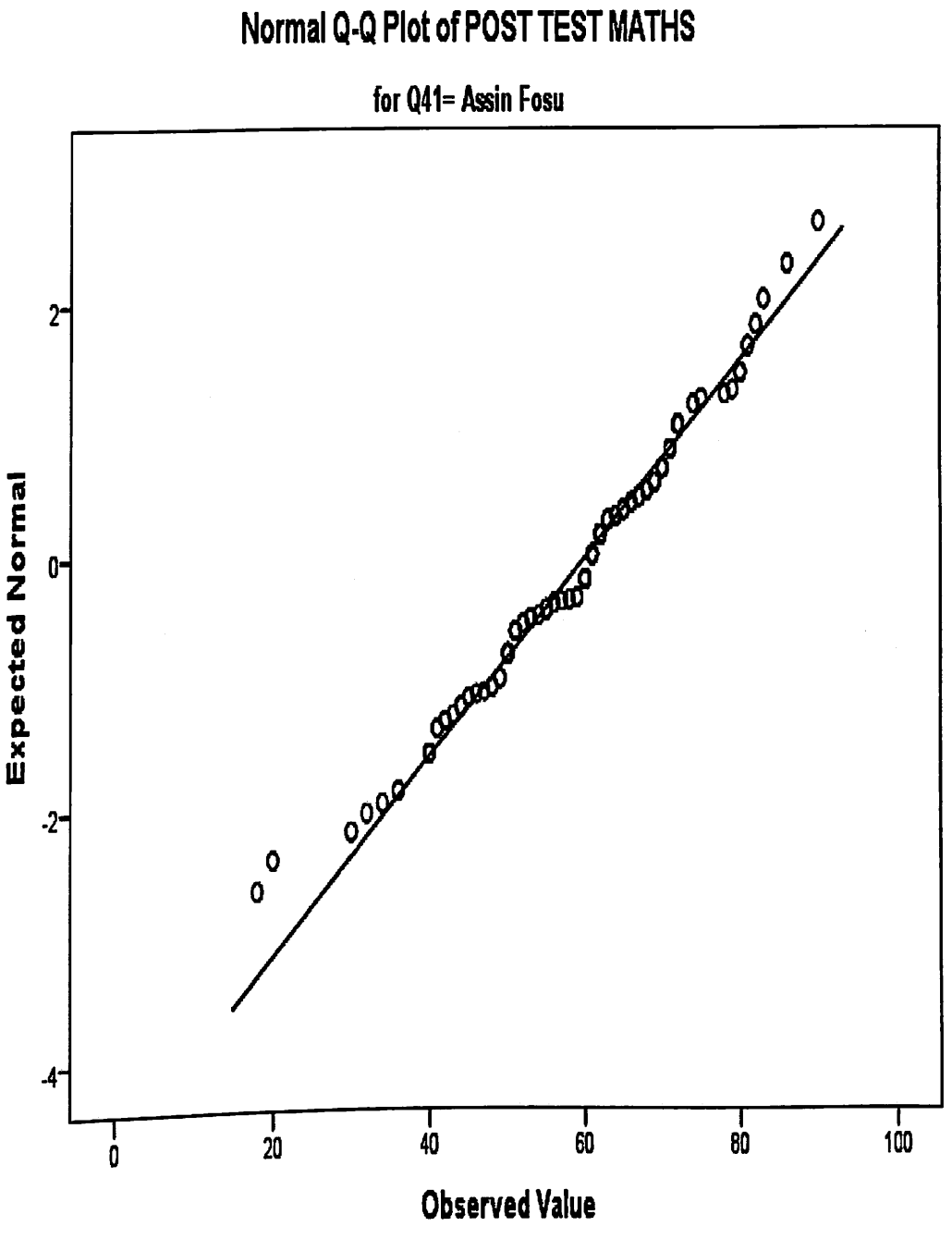


**Figure 24: Normal Probability Plot on Mathematics Post-Test Scores for the Control Group Participants**

Source: Field data, 2017

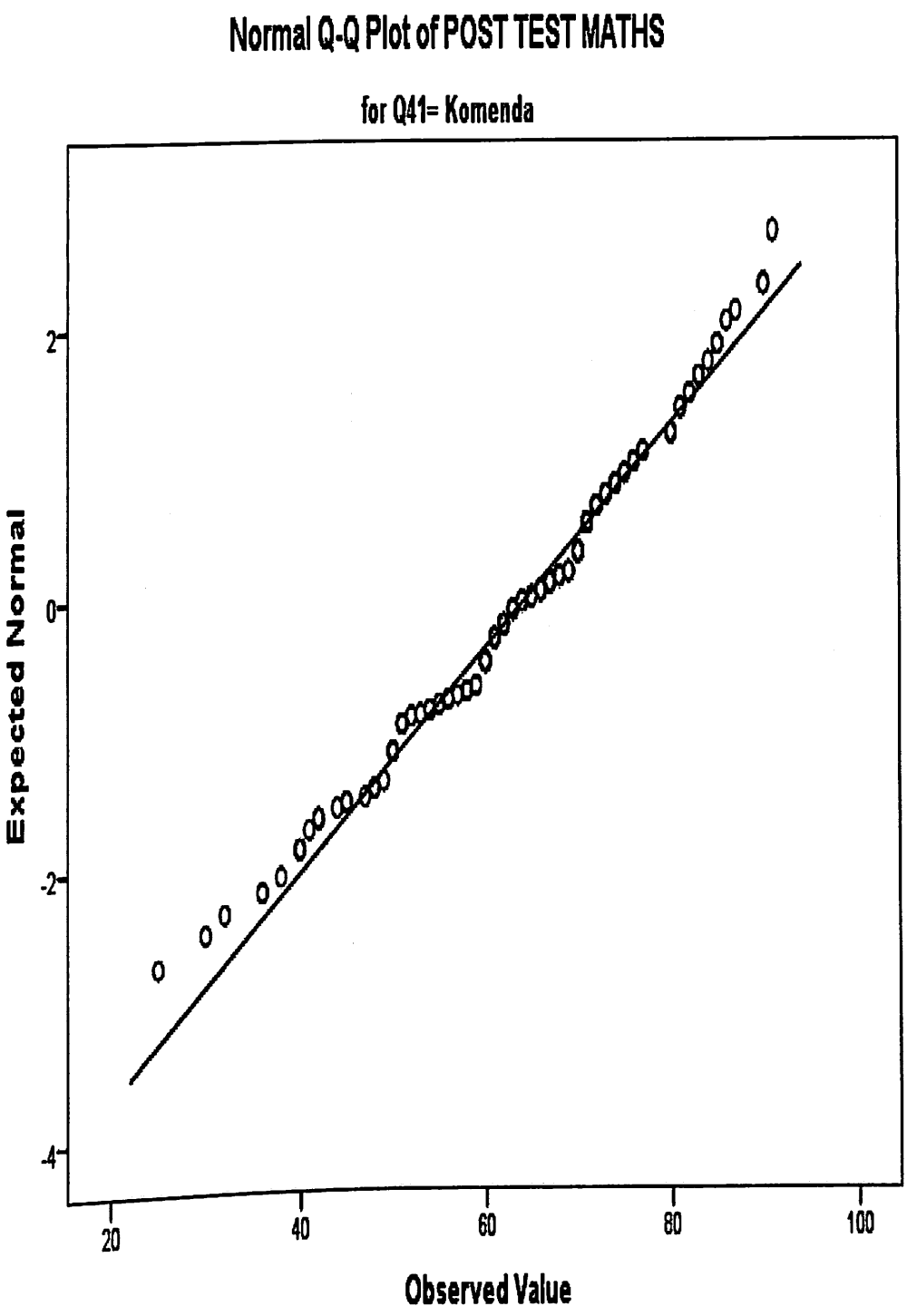


**Figure 25: Normal Probability Plot on Mathematics Post-Test Scores for the Experimental Group Participants**

Source: Field data, 2017

In a nutshell, the results from the test portray that most of the assumptions for normality were not violated. This therefore warranted the adoption of the MANOVA statistical tool for the analysis of the study's third objective

Objective Three sought to know whether or not there was a difference in the performance of trainee participants in the experimental and control groups in Mathematics and English Language.

**Table 18: Descriptive Statistics of the Performance of Trainee Participants in the Experimental and Control Groups in Mathematics and English Language**

| | SCHOOLS/GROUPS | Mean | Std. Deviation | N |
|---|---|---|---|---|
| POST TEST MATHS | Foso | 60.19 | 12.708 | 240 |
| | Komenda | 64.44 | 12.005 | 299 |
| | Total | 62.55 | 12.492 | 539 |
| POST TEST ENGLISH LANGUAGE | Foso | 65.59 | 12.026 | 240 |
| | Komenda | 65.72 | 11.569 | 299 |
| | Total | 65.66 | 11.764 | 539 |

Source: Field data, 2017

The findings in Table 18 show the mean scores on Mathematics and English for the experimental and control groups. The experimental group respondents from Komenda College registered mean performances of (64.44, 65.72) for Post Test scores in Mathematics and English respectively, while the College control group respondents from Foso had mean performances of (60.19, 65.59) for Post Test scores in Mathematics and English respectively.

The Mathematics performance score for the experimental group was marginally higher than that for the control group. The English scores however, seem to be equivalent for the control and experimental groups.

To ascertain whether there was a significant difference in the mean post test scores for Mathematics and English Language for the control and experimental groups, the multivariate analysis of variance was used because there was one categorical independent variable (experimental and control group/schools) and two dependent variables (Mean post test scores for Mathematics and English Language). In view of this, it was anticipated that:

$H_1$: Teacher trainees in the experimental group will score higher on achievement tests in English Language and Mathematics than trainees in the control group.

**Table 19: Box's Test of Equality of Covariance Matrices**

| | |
|---|---|
| Box's M | 1.977 |
| F | .656 |
| df1 | 3 |
| df2 | 95433335.541 |
| Sig. | .579 |

Source: Field data, 2017

Table 19 presents results on the homogeneity of variance-covariance matrices. The Box's test indicated that there was equality of covariance indicated across the experimental and control groups (M = 1.977; F = .656; P= .579). Going by Tabachnick and Fidell (1996), the rightful assumption for the homogeneity of variance-covariance matrices demand that the significant or probability value should be larger than .001. Therefore, when the value is

smaller than .001 then the assumption for the test for homogeneity is violated. In the case of the study, (P=.579) > .001, which implied the assumption for homogeneity was not violated.

Table 20 illustrates findings on the Levene Test of Equality of Variances. Values that are less than .05 violate the assumption of the test for equality of variances (Tabachnick & Fidell, 1996). Thus, (P=.621 & P=.814) for Post Test scores in Mathematics and English Language respectively, which were greater than .05. Implicitly, the assumption for the test of equality of variances was not violated.

**Table 20: Levene's Test of Equality of Error Variances**

| POST TESTS | F | df1 | df2 | Sig. |
|---|---|---|---|---|
| MATHS | .245 | 1 | 537 | .621 |
| ENGLISH LANGUAGE | .055 | 1 | 537 | .814 |

Source: Field data, 2017

Table 21 presents results of the Multivariate Tests. The Wilk's Lambda school effect statistic produced (V= .971; F = 7.92; P= .000 < .05; Partial Eta Square = .029). The p-value depicts a significant difference of post test scores for Mathematics and English Language between the experimental and control group schools, while the Partial Eta Square shows that the contribution of the experimental and control school interventions to the variance of post-test scores for Mathematics and English Language between teacher trainees is 2.9 percent (which is not large).

**Table 21: Multivariate tests**

| Effect | | Value | F | Hypothesis df | Error df | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| Intercept | Pillai's Trace | .982 | 14258.940 | 2.000 | 536.000 | .000 | .982 |
| | Wilks' Lambda | .018 | 14258.940 | 2.000 | 536.000 | .000 | .982 |
| | Hotelling's Trace | 53.205 | 14258.940 | 2.000 | 536.000 | .000 | .982 |
| | Roy's Largest Root | 53.205 | 14258.940 | 2.000 | 536.000 | .000 | .982 |
| School | Pillai's Trace | .029 | 7.920 | 2.000 | 536.000 | .000 | .029 |
| | **Wilks' Lambda** | **.971** | **7.920** | **2.000** | **536.000** | **.000** | **.029** |
| | Hotelling's Trace | .030 | 7.920 | 2.000 | 536.000 | .000 | .029 |
| | Roy's Largest Root | .030 | 7.920 | 2.000 | 536.000 | .000 | .029 |

Source: Field data, 2017

Though the Multivariate Tests depict significantly a difference in the post test scores for Mathematics and English Language between the experimental and control group schools, it does not depict where exactly the difference exists among the dependent variables (either post test scores for Mathematics or post-test scores for English Language). The Test of Between-Subjects Effects therefore illustrates where exactly the difference lies (Table 22).

**Table 22: Test of Between-Subjects Effects**

Tests of Between-Subjects Effects

| Source | Dependent Variable | Type III Sum of Squares | Df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| Intercept | POST TEST MATHS | 2068159.523 | 1 | 2068159.523 | 13619.825 | .000 | .962 |
| | POST TEST ENGLISH LANGUAGE | 2295560.056 | 1 | 2295560.056 | 16557.161 | .000 | .969 |
| School | POST TEST MATHS | 2408.324 | 1 | 2408.324 | 15.860 | .000 | .029 |
| | POST TEST ENGLISH LANGUAGE | 2.423 | 1 | 2.423 | .017 | .895 | .000 |
| Error | POST TEST MATHS | 81543.023 | 537 | 151.849 | | | |
| | POST TEST ENGLISH LANGUAGE | 74452.122 | 537 | 138.645 | | | |
| Total | POST TEST MATHS | 2192859.000 | 539 | | | | |
| | POST TEST ENGLISH LANGUAGE | 2398376.000 | 539 | | | | |

a. R Squared = .029 (Adjusted R Squared = .027)

b. R Squared = .000 (Adjusted R Squared = -.002)

Source: Field data, 2017

Going by Tabachnick and Fidell (1996), the Bonferroni Adjustment is used to determine the area of significance difference between groups in Multivariate Analysis. The adjustment prescribes that .05 should be divided by the number of dependent variables. In this study, there are two dependent variables namely: Post test scores for Mathematics and English Language (thus, .05/2= 0.025). Table 18 therefore discloses a significant difference between the experimental and control groups on Mathematics performance (F (1, 537) = 15.86; P=.000 < .025, Partial Eta Square = .029); but not on English Language performance, F (1, 537) = .017, P = .895 > .025).

The results consolidate Petrides, Furnham and Mavroveli's (2007) arguments that EI influences success in academic and professional studies and holistically, academic performance. This is because EI helps in prioritizing thinking, behavior, and lifestyle which aids in academic performance (Brackett, Rivers & Salovey, 2011). Students who are emotionally intelligent are perceived by their peers and colleagues as friendly and non-antagonistic. This improves their relationship among peers and contributes to their intellectual development which culminates in superior academic performance (Ford & Smith, 2007).

The incorporation of EI into the curriculum of schools could help boost students' performance not only in Mathematics but also in other subjects (Ogundokun & Adeyemo, 2010). In the writers' study in Oyo state in Nigeria to ascertain the moderating influence of EI, age and academic motivation on the academic achievement of secondary school students, they observed that the integration of EI into the school curriculum of secondary school students through the provision of appropriate counseling intervention programmes

would offer an opportunity for them to develop a strong achievement motivation. By so doing, the performance of students in all subjects could be improved and will therefore barre all other teaching and learning obstacles (Ogundokun & Adeyemo, 2010).

Similarly, Nwadinigwe and Azuka-Obieke's (2012) research in three senior secondary schools in Lagos-Nigeria to investigate the impact of EI on the academic achievement of students in these schools revealed that there was a positive relationship between EI skills and academic achievement. This meant developing the EI skills of students will culminate in an enhancement of their academic achievement. Nwadinigwe and Azuka-Obieke (2012) therefore suggested the need to inculcate the development of EI skills into the curriculum of senior secondary schools in Nigeria. This was seen to be instrumental because of its potential impact in improving the academic achievement of students.

In Prabha's (2015) study to ascertain the correlation between EI and academic achievement at the higher education level in Puducherry in India, the writer discovered that a positive correlation between EI and academic achievement existed. This further justified the greater need and importance of EI as a contributing and influencing factor of academic progress, achievement and success.

**Differences between Experimental and Control Groups on the Dimensions of Emotional Intelligence**

A normality test was conducted for the various components of EI to ascertain the congruousness of the adoption of the MANOVA as the statistical technique for the analysis of the fourth objective. The independent variables

were the groups consisting of the experimental and control groups, while the dependent variables were four in number, which were the components of EI namely: self-awareness, self-management, social awareness and relationship management.

Results from the normality test revealed that the Kolmogorov-Smirnov and Shapiro Wilk alpha values for all the EI components were less than .05, with the exception of the post EI total that registered an alpha value (.200 > .05). Thus, all the components violated one of the normality assumptions (Table 23).

**Table 23: Normality Test of EI Components**

| Demographics | EI Pre-Test Scores | | | | | |
|---|---|---|---|---|---|---|
| | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
| Components | Statistic | df | Sig. | Statistic | df | Sig. |
| Self awareness | .087 | 509 | .000 | .981 | 509 | .000 |
| Self management | .056 | 509 | .001 | .991 | 509 | .003 |
| Social awareness | .062 | 509 | .000 | .988 | 509 | .000 |
| Relationship management | .056 | 509 | .001 | .989 | 509 | .001 |
| Post EI Total | .027 | 509 | .200 | .993 | 509 | .015 |

Source: Field data, 2017.

The Kolmogorov-Smirnov and Shapiro Wilk values and statistics were further supported with findings from the histograms on the various EI

components as illustrated by the figures. The results depicted that all the components were evenly distributed (Figure 26, 27, 28, 29, 30).

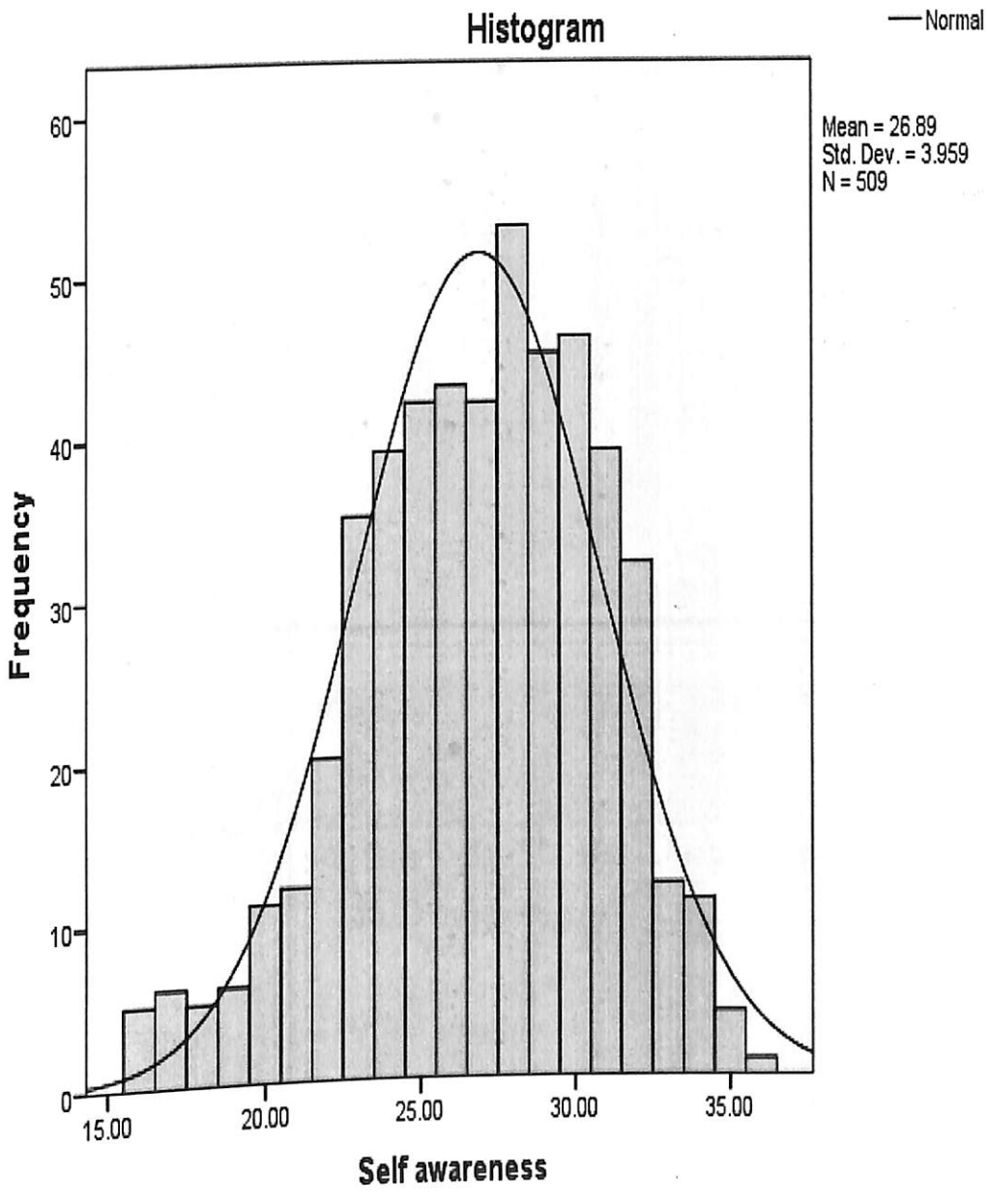


**Figure 26: Histogram on Self-Awareness**

Source: Field data, 2017

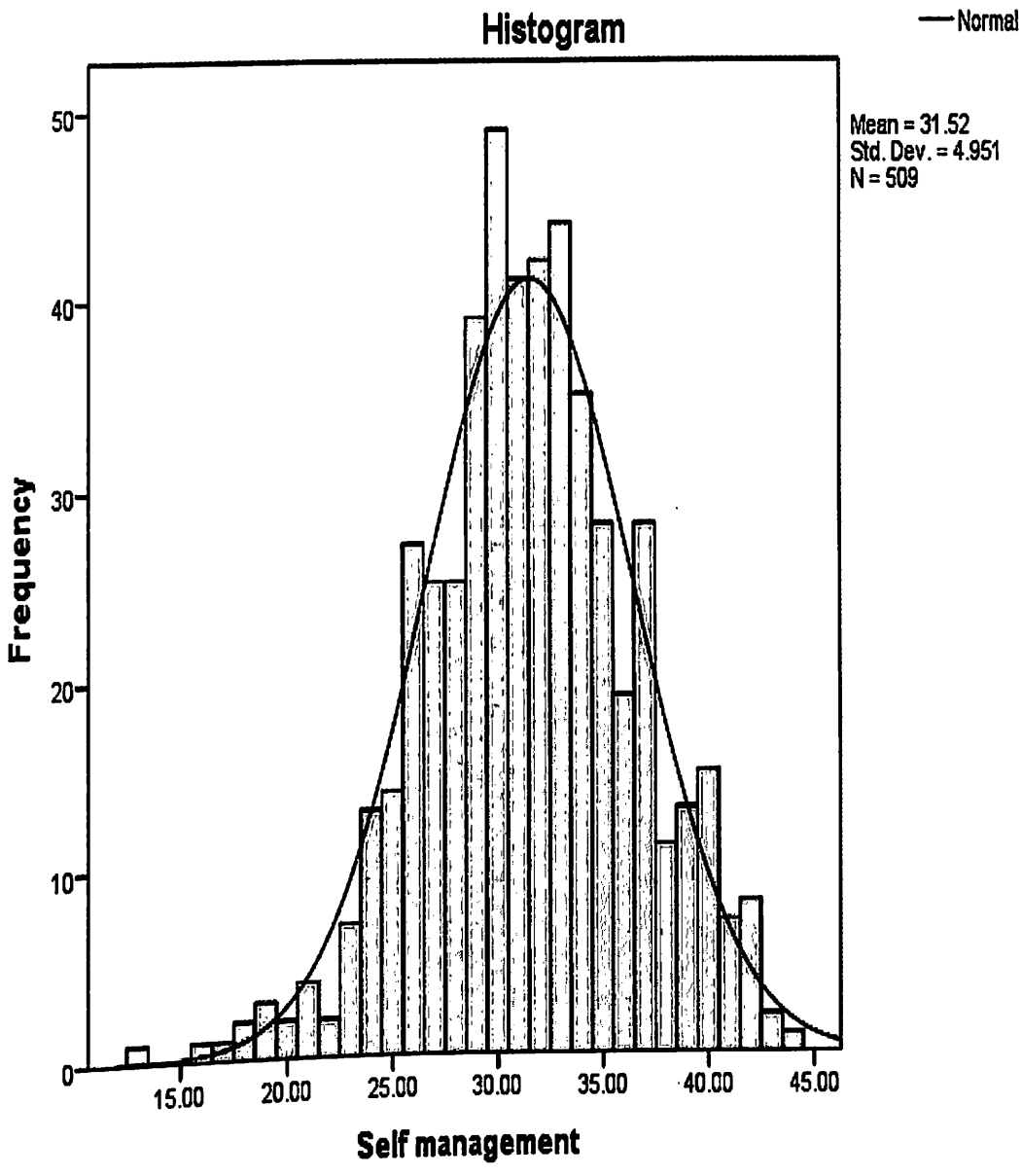


**Figure 27: Histogram on Self-Management**

Source: Field data, 2017

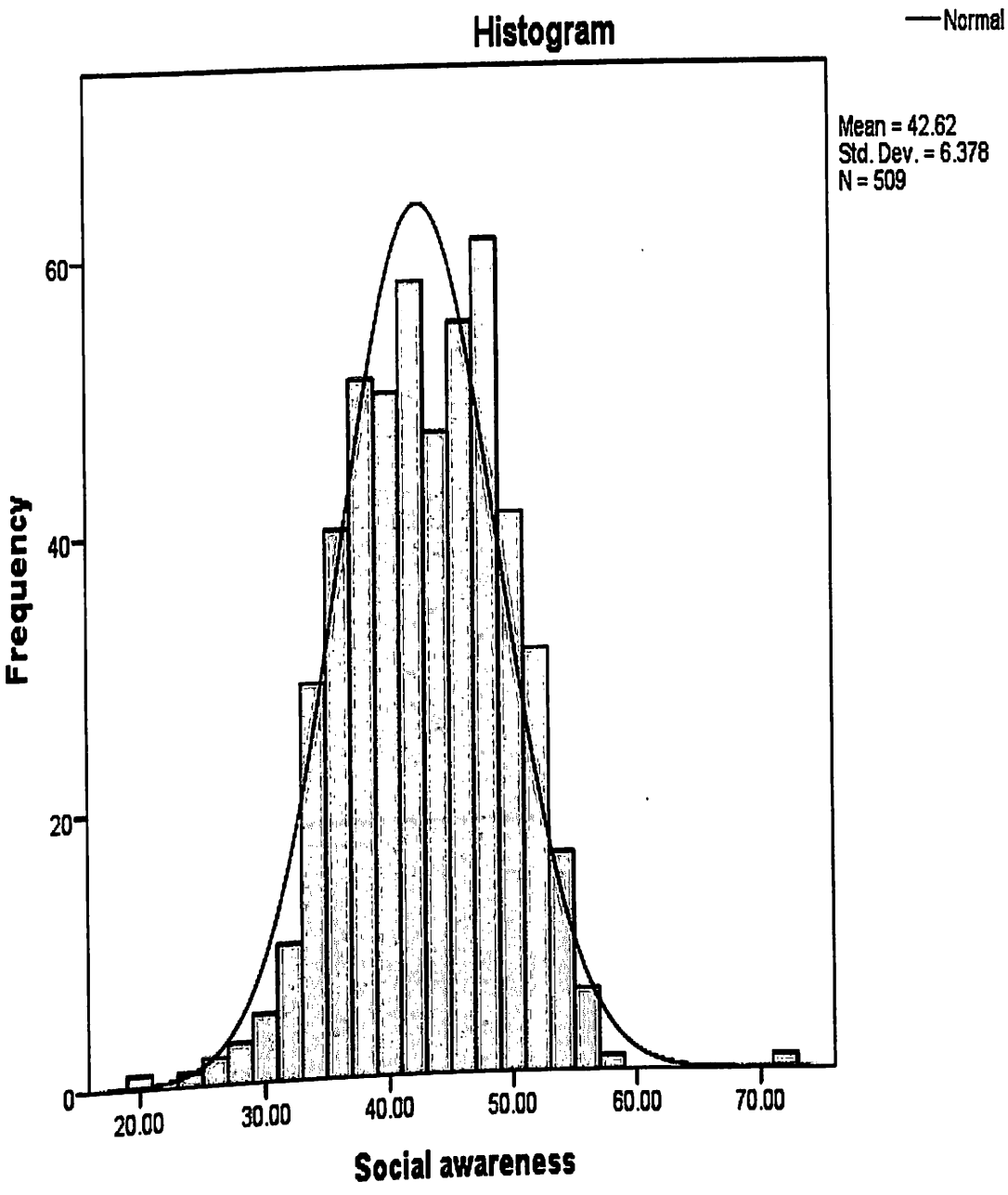


**Figure 28: Histogram on Social Awareness**

Source: Field data, 2017

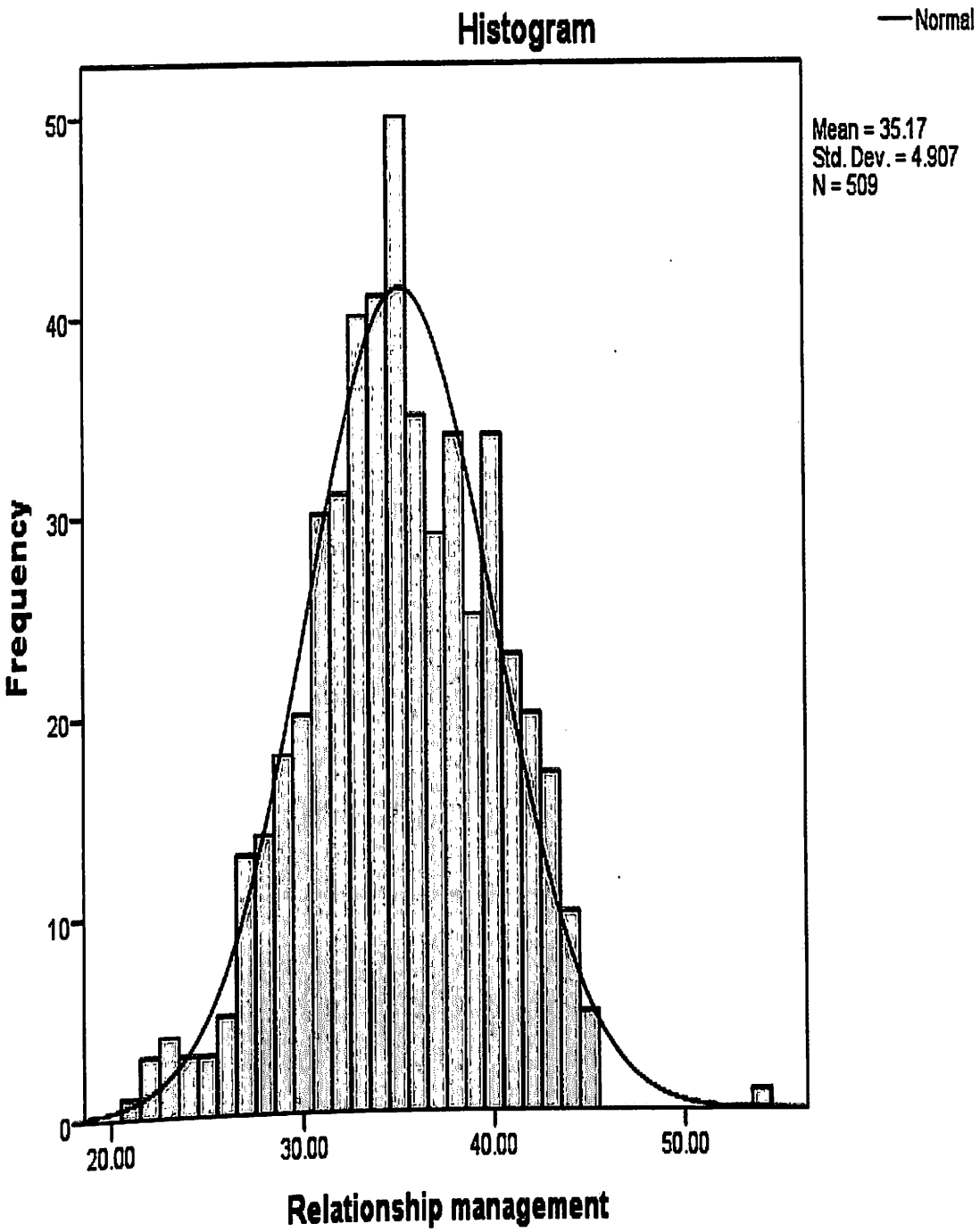


**Figure 29: Histogram on Relationship Management**

Source: Field data, 2017

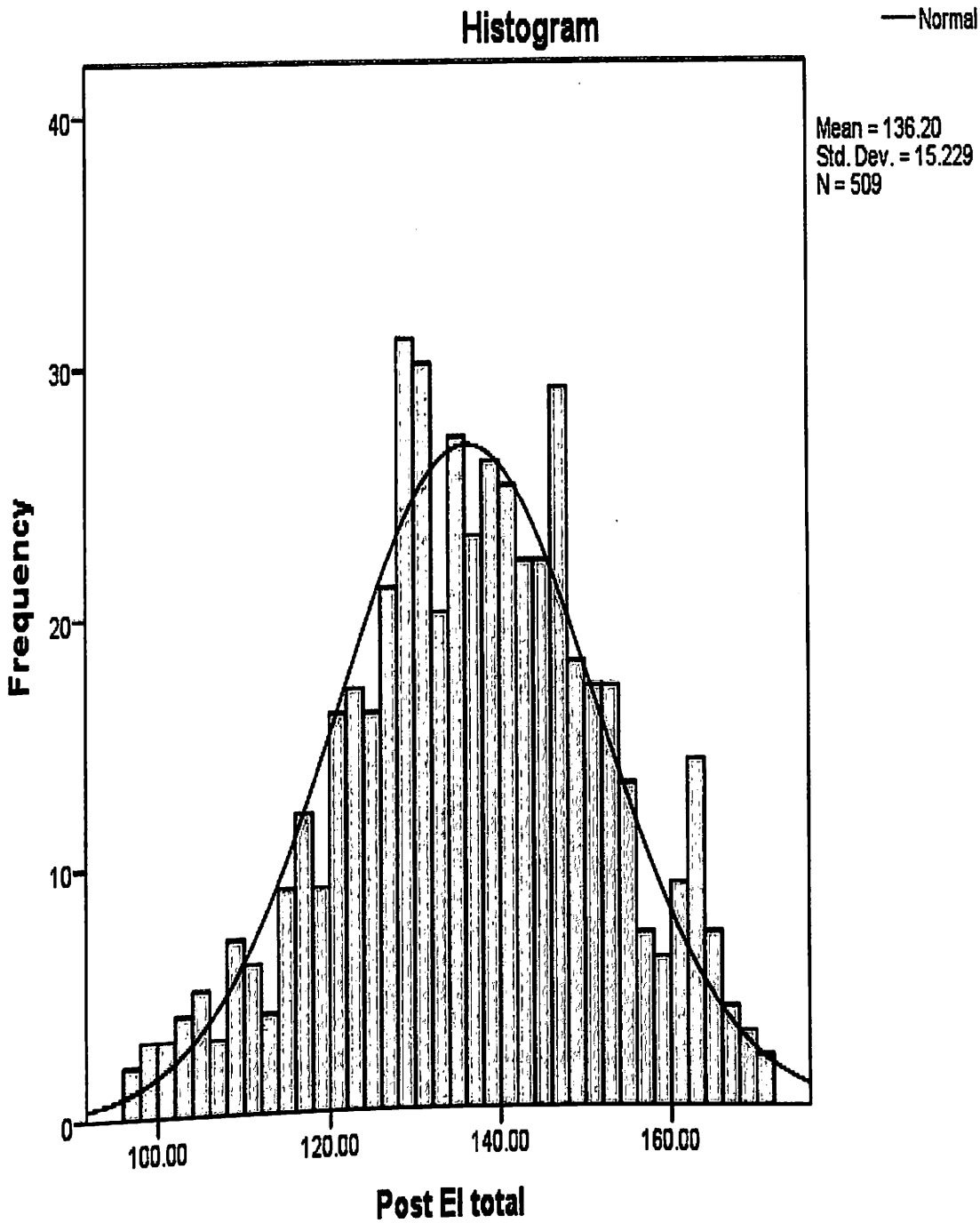


**Figure 30: Histogram on Post EI Total**

Source: Field data, 2017.

Generally, with the symmetrical distribution of the histograms for the various EI components, the MANOVA statistical technique was adopted, since the rest of the assumptions for normality were not violated with the exception of the Kolmogorov-Smirnov and Shapiro Wilk alpha values. In

view of this, objective four examined whether or not there were variances in the components of EI between the experimental and control groups.

**Table 24: Descriptive Statistics of the Dimensions of EI between the Experimental and Control Groups**

| | SCHOOLS/GROUPS | Mean | Std. Deviation | N |
|---|---|---|---|---|
| Self-awareness | Foso | 26.0458 | 4.70400 | 240 |
| | Komenda | 27.2375 | 4.00341 | 299 |
| | Total | 26.7069 | 4.36565 | 539 |
| Self-management | Foso | 30.6042 | 5.06749 | 240 |
| | Komenda | 32.0468 | 5.85832 | 299 |
| | Total | 31.4045 | 5.56172 | 539 |
| Social awareness | Foso | 41.4667 | 6.95705 | 240 |
| | Komenda | 43.3980 | 7.32643 | 299 |
| | Total | 42.5380 | 7.22192 | 539 |
| Relationship management | Foso | 34.5292 | 5.57482 | 240 |
| | Komenda | 35.4114 | 5.67533 | 299 |
| | Total | 35.0186 | 5.64268 | 539 |
| EI Total | Foso | 132.6458 | 17.49631 | 240 |
| | Komenda | 138.0936 | 18.74192 | 299 |
| | Total | 135.6679 | 18.38202 | 539 |

Source: Field data, 2017

The findings in Table 24 display the mean scores for self-awareness, self-management, social awareness and relationship management between the experimental and control groups. The experimental group participants from Komenda College registered higher mean scores (27.24, 32.05, 43.40 and 35.41) respectively for the various components of EI compared to their counterparts from Foso College who registered lower mean scores (Table 24).

Multivariate Analysis of Variance was adopted to test whether or not there were differences between the control and experimental groups on the various components of EI. It was therefore hypothesized that:

$H_1$: Teacher trainees in the experimental group obtained higher scores for the various dimensions of EI compared to their counterparts from the control group.

Table 25 illustrates findings on the Levene Test of Equality of Variances.

**Table 25: Levene's Test of Equality of Error Variances**

| Components | F | df1 | df2 | Sig. |
|---|---|---|---|---|
| Self-awareness | 5.942 | 1 | 537 | .015 |
| Self-management | 3.166 | 1 | 537 | .076 |
| Social awareness | .923 | 1 | 537 | .337 |
| Relationship management | .040 | 1 | 537 | .842 |
| EI Total | .333 | 1 | 537 | .564 |

Source: Field data, 2017

The Levene's test indicated that there was equality of variance for all the dimensions, as well as the composite emotional intelligence scores, with the exception of self-awareness that registered (P=.015 < .05). Thus, self-awareness violated the assumption for equality of variance (Table 25).

Table 26 display findings of the Multivariate Tests on the difference between the experimental and control groups on the constituents of EI. The multivariate test indicated that there was a main multivariate effect of the experimental treatment, on the various elements of EI. Table 26 presents results of the Multivariate Tests. The Wilk's Lambda statistic obtained F(4, 534) = 3.74, P = .005 < .05, Partial Eta Square = .027). The p-value portrays a significant difference between the experimental and control group schools on the diverse elements of EI. The Partial Eta Square reveals that 2.7 percent is the variance of the diverse constituents of EI explained by the experimental and control EI interventions between the schools.

**Table 26: Multivariate Tests**

| Effect | | Value | F | Hypothesis df | Error df | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| Intercept | Pillai's Trace | .983 | 7729.322 | 4.000 | 534.000 | .000 | .983 |
| | Wilks' Lambda | .017 | 7729.322 | 4.000 | 534.000 | .000 | .983 |
| | Hotelling's Trace | 57.898 | 7729.322 | 4.000 | 534.000 | .000 | .983 |
| | Roy's Largest Root | 57.898 | 7729.322 | 4.000 | 534.000 | .000 | .983 |
| School | Pillai's Trace | .027 | 3.739 | 4.000 | 534.000 | .005 | .027 |
| | **Wilks' Lambda** | **.973** | **3.739** | **4.000** | **534.000** | **.005** | **.027** |
| | Hotelling's Trace | .028 | 3.739 | 4.000 | 534.000 | .005 | .027 |
| | Roy's Largest Root | .028 | 3.739 | 4.000 | 534.000 | .005 | .027 |

Source: Field data, 2017

The Between-Subjects Effect showed that there were significant differences between the experimental and control groups on all the dimensions and the composite emotional intelligence, except relationship management (Table 29).

**Table 29: Test of Between-Subjects Effects**

| Source | Dependent Variable | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|---|
| Corrected Model | Self-awareness | 189.048[a] | 1 | 189.048 | 10.087 | .002 | .018 |
| | Self-management | 277.089[b] | 1 | 277.089 | 9.093 | .003 | .017 |
| | Social awareness | 496.598[c] | 1 | 496.598 | 9.675 | .002 | .018 |
| | Relationship management | 103.617[d] | 1 | 103.617 | 3.268 | .071 | .006 |
| | EI Total | 3951.281[e] | 1 | 3951.281 | 11.931 | .001 | .022 |
| School | Self-awareness | 189.048 | 1 | 189.048 | 10.087 | .002 | .018 |
| | Self-management | 277.089 | 1 | 277.089 | 9.093 | .003 | .017 |
| | Social awareness | 496.598 | 1 | 496.598 | 9.675 | .002 | .018 |
| | **Relationship management** | **103.617** | **1** | **103.617** | **3.268** | **.071** | **.006** |
| | EI Total | 3951.281 | 1 | 3951.281 | 11.931 | .001 | .022 |
| Error | Self-awareness | 10064.636 | 537 | 18.742 | | | |
| | Self-management | 16364.740 | 537 | 30.474 | | | |
| | Social awareness | 27563.372 | 537 | 51.328 | | | |
| | Relationship management | 17026.197 | 537 | 31.706 | | | |
| | EI Total | 177838.274 | 537 | 331.170 | | | |
| Total | Self-awareness | 394699.000 | 539 | | | | |
| | Self-management | 548225.000 | 539 | | | | |
| | Social awareness | 1003372.000 | 539 | | | | |
| | Relationship management | 678105.000 | 539 | | | | |
| | EI Total | 10102505.000 | 539 | | | | |

Source: Field data, 2007

The Bonferroni Adjustment suggests that relationship management was ($F(1, 537) = 3.268$; $P=.071 > .0125$, Partial Eta Square = .006). This meant no significant difference existed between the experimental and control groups on relationship management. Nonetheless, significant differences existed between the experimental and control groups for the other dimensions of EI. In this case, the adjustment prescribes ($.05/4=0.0125$) where four represents the dependent variables (self-awareness, self-management, social awareness and relationship management).

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## Introduction

This chapter presents the summary, conclusions and recommendations of the study, which examined emotional intelligence and academic performance among teacher trainees in Foso and Komenda Colleges of Education in the Central region of Ghana. Quasi-experimental design was adopted as the research design to structure the study. The research covered 648 teacher trainees in the two Colleges of Education, with a response rate of 83.2 percent.

## Summary

There is a decline in academic performance of the children in the public schools in Ghana. Government focuses on improving infrastructure among others but still these have not produced the desired results. Researchers have over the years written a lot on predicted academic performance among such predictors is EI. In Africa research on EI focus largely on secondary and university students. This work focused on teachers' trainees as the main population of the study to fill the gap.

The study mainly examined the influence of EI on the academic performance of teacher trainees in two colleges of education in the Central Region of Ghana. Quasi-experimental design was employed to design the study. A multistage sampling technique gave a sample size of 648 respondents. However, 109 non-respondents and participant withdrawal brought the number to 539. An adapted questionnaire under the four main components of EI was used to ascertain whether EI had influence on academic

performance. A pre-test was conducted prior to the intervention to assess entry levels of participants. Eight weeks was used for the intervention with the experimental and control groups.

The following were the findings:

There was no significant relationship between trainees' EI levels and their performance in Mathematics and English Language. Of all the components of EI, it is only social awareness that registered a significant relationship with trainees' performance in English Language. The insignificant relationship between trainees' levels of EI and their performance in Mathematics was depicted by the values (P=.217; P=.445; P=.523; P=.611) for self-awareness, self-management, social-awareness and relationship management respectively. The insignificant values for English were (P= .666; P=.210; P=.113) for self-awareness, self-management and relationship management respectively with the exception of social awareness that obtained (P = .023).

There was also no significant relationship between teacher trainees' demographic factors and their levels of EI. Implicitly, the trainees' gender (P=.767 > .05), age groups (P=.437 > .05) and marital status (P=.475 > .05) did not predetermine their levels of EI. Hence other factors such as their personal experiences, psychological maturity may have informed their EI.

There was a significant difference in the post test scores for Mathematics between the experimental and control teacher trainee groups (P=.000 < .025), but not for English language (P = .895 > .025).

There were significant differences (P=.002; P=.003; P=.002) in the scores for the various components (self-awareness, self-management and

social awareness) of EI respectively between the experimental and control group participants, with the exception of relationship management that obtained an insignificant p-value (P=.071).

**Conclusions**

Premised on the summary of the findings, it can be inferred that:

EI did not predict trainees' performance in Mathematics and English Language. Nonetheless, social awareness as a sole component of EI significantly predicted trainees' performance in English Language.

Teacher trainees' demographic variables (sex, age groups, and marital status) played no role in their levels of EI. The variables in no way influenced the EI of the trainees. In a nutshell, the findings depicted that the majority of respondents were emotionally sound without their demographic variables contributing to their levels of emotional soundness.

There was a significant difference in the post test scores on emotional intelligence between the control and experimental groups. By implication, the performance of respondents on EI in the experimental group outwitted the performance of their counterparts in the control group. Hence the EI test was a formidable tool in boosting the EI of teacher trainees in the Colleges of Education.

The post test scores on the achievement test in Mathematics between the control and experimental groups differed significantly. This meant the experimental group respondents who were exposed to the EI test performed outstandingly in Mathematics compared to their colleagues in the control group who were not exposed to the test. Therefore, the EI test is a sacrosanct instrument in stepping up the performance of teacher trainees in Mathematics.

However, there was no significant difference in the post test scores on the achievement test in English Language between the control and experimental group. Implicitly, the performance of the experimental and control group participants in English Language was similar. In spite of the exposure of the experimental group participants to the treatment (EI Test), no differences in the performance of the subject were registered with their counterparts who were not exposed to the treatment. Thus, the use of the EI test tool may not be instrumental in enhancing the performance of teacher trainees in subjects such as English Language.

The EI intervention influenced the respondents' levels of EI, since there were significant differences in the scores for the various dimensions (self-awareness, self-management and social awareness) of EI between the experimental and control group participants, with the exception of relationship management. Hence EI intervention influences EI.

**Recommendations**

It is very imperative to recommend possible ways that might help deal with the problem that necessitated this present study. Accordingly, based on the study's findings and conclusions, the following recommendations are made:

1. The administrative and teaching staff of the two Colleges of Education are encouraged to mount or incorporate a subject on EI into the curriculum of the colleges. The introduction of such a subject in the colleges of education will enable teacher trainees to be trained and acquire some fundamentals on EI that will have a positive bearing on

their academic performance and outlook of life or attitude towards life as a whole.

2. The administrative and teaching staff of the two Colleges of Education are also encouraged to teach and test teacher trainees in a manner that will enable them to think and analyse issues critically and technically or professionally as teachers. Results from the study portrayed that Mathematics demanded more EI owing to its technical nature. This accounted for teacher trainees who were exposed to the EI treatment to outsmart the performance of their counterparts in Mathematics, since their counterparts who were the control group participants were not exposed to the treatment. When the trainees are taught and tested critically by the college trainers in all the subjects this will certainly step up their levels of EI. Therefore, straightforward questions in tests, assignments and exams should be discouraged in the colleges.
3. The administrative and teaching staff of the two Colleges of Education are encouraged not to spoon-feed teacher trainees. This means in teaching the trainees, notes should not be dictated to them. Rather, lectures should be given to them and the trainees should be divided into groups with topics assigned to each group for research. In this case, the trainees will be compelled to source for reading materials from the library, internet, journals, newspapers and other secondary data sources, in order to compress and harness them for a presentation. This will enable them to be resourceful, think critically and logically, as well as build their self-confidence. Trainees who reproduce what

has been lectured in class should be given an average or less than average mark. This strategy will compel them to be resourceful.

4. The administrative and teaching staff of the two Colleges of Education could introduce internal and external exchange programmes in the colleges in order to promote more interaction between and among teacher trainees in other colleges of education within Ghana and outside Ghana. In this case, trainees from one college of education can go for study within or study abroad teacher training programmes within the country and outside the country. This will enrich the learning experiences of the trainees, as they will interact with their peers from other regions and districts in Ghana, as well as their peers from other parts of the world. In the course of such interactions, the trainees can learn more about cultures and other teaching methods that can enhance their careers as teachers in the future.
5. The administrative and teaching staff of the two Colleges of Education could also incorporate excursions annually into the teaching plan for the trainees, as a measure of applying the theories learnt in the classroom. By so doing, they will get to see and know the realities on the ground and better appreciate what they have learnt in the classroom.
6. Moreover, the administrative and teaching staff of the two Colleges of Education should also consider incorporating seminar presentations and more fieldworks into the curriculum of the colleges. It will enable the trainees to build their writing and reading skills, as well as self-confidence. Such exposure should create room for other trainees and

college trainers from diverse fields of specialization to ask the trainees questions. In the case of the fieldworks or better still teaching practice, the external supervisors of the trainees should be tasked to assess the trainees how well they conduct themselves emotionally during their fieldworks or practice.

7. Aside, the administrative and teaching staff of the college, teacher trainees on their part are also exhorted to read widely to broaden their horizon. They should not just limit themselves to learn solely what they are taught in class, as this will encourage them to be myopic. They should be encouraged even by their teachers to read newspapers, journals, educative books and listen to the news. All these extracurricular activities will boost their levels of EI.
8. In addition, teacher trainees should interact extensively with people from all walks of life and other cultures within Ghana and out of Ghana. This will enable them to learn more about cultures and therefore broaden their minds.
9. Teacher trainees are also encouraged to be inquisitive to learn more and not put up a non-chalet attitude especially on matters that broader on their intellect. In other words, they should not be ashamed to ask questions in and out of the classroom.

**Areas for Future Research**

Every good research problem should lead to the unearthing of other problems which will ultimately increase the body of knowledge in that area. Therefore, this study also identified areas that need further probing. Future research should focus on unravelling how specific components of EI affect

specific subject areas. Again, research should seek to explore in-service teachers' EI. Here, various levels of teachers' i.e. pre-tertiary and tertiary EI can be explored.

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# APPENDICES

## APPENDIX A

## QUESTIONNAIRE FOR RESPONDENTS

## UNIVERSITY OF CAPE COAST

## COLLEGE OF EDUCATION STUDIES

## DEPARTMENT OF EDUCATION AND PSYCHOLOGY

## QUESTIONNAIRE ON EMOTIONAL INTELLIGENCE

The main aim of this questionnaire is to elicit the necessary responses relevant to the purpose of this study. Any information provided by participants is for academic purpose only. In view of this, confidentiality of information provided is fully assured to respondents.

### SECTION A

This section collects data on the demographic variables of respondents

### INSTRUCTION

Please tick [√] the correct response where needed

1. Age [ ] 15 -20 [ ] 21 -25 [ ] 26 -30 [ ] 31- 35 [ ] 36-40
2. Gender Male [ ] Female [ ]
3. Marital Status Single [ ] Married [ ]

## SECTION B

This section assesses and scores how much each statement applies to you

## INSTRUCTION

Read each statement and decide how strongly the statement applies to YOU.

Score yourself 1 to 5 based on the following guide: 1 = Never, 2= Rarely, 3= Some of the times, 4= Most of the times, 5= All of the times

| QN | HOW MUCH DOES EACH STATEMENT APPLY TO YOU | Circle the number that shows how strongly the statement applies | | | | |
|---|---|---|---|---|---|---|
| 1. | I know when I am happy | 1 | 2 | 3 | 4 | 5 |
| 2. | I recognise when I am stressed | 1 | 2 | 3 | 4 | 5 |
| 3. | I am aware of my emotions | 1 | 2 | 3 | 4 | 5 |
| 4. | I can account for reasons that make me anxious | 1 | 2 | 3 | 4 | 5 |
| 5. | I know when I am being unreasonable | 1 | 2 | 3 | 4 | 5 |
| 6. | I can tell if someone has upset or annoyed me | 1 | 2 | 3 | 4 | 5 |
| 7. | I can let anger 'go' quickly so that it no longer affects me | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 8. | I am able to see things from the other person's viewpoint | 1 | 2 | 3 | 4 | 5 |
| 9. | I am excellent at empathising with someone else's problem | 1 | 2 | 3 | 4 | 5 |
| 10. | I can tell if someone is not happy with me | 1 | 2 | 3 | 4 | 5 |
| 11. | I can tell if a team of people are not getting along with each other | 1 | 2 | 3 | 4 | 5 |
| 12. | I can understand why people are being difficult towards me | 1 | 2 | 3 | 4 | 5 |
| 13. | I can understand if I am being unreasonable | 1 | 2 | 3 | 4 | 5 |
| 14. | I can understand why my actions sometimes offend others | 1 | 2 | 3 | 4 | 5 |
| 15. | I never interrupt other people's conversations | 1 | 2 | 3 | 4 | 5 |
| 16. | I see people as interesting in life | 1 | 2 | 3 | 4 | 5 |
| 17. | I love to meet new people and get to understand why they behave the way they do | 1 | 2 | 3 | 4 | 5 |
| 18. | I need a variety of course mates to make my studies interesting | 1 | 2 | 3 | 4 | 5 |
| 19. | I like to ask questions to find out what it is | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| | important to people | | | | | |
| 20. | I see working with difficult people as simply a challenge to win them over | 1 | 2 | 3 | 4 | 5 |
| 21. | I am good at reconciling differences with other people | 1 | 2 | 3 | 4 | 5 |
| 22. | I generally build solid relationships with those I study with | 1 | 2 | 3 | 4 | 5 |
| 23. | I can reframe bad situations quickly | 1 | 2 | 3 | 4 | 5 |
| 24. | I do not easily get angry | 1 | 2 | 3 | 4 | 5 |
| 25. | I can accommodate difficult people who annoy me | 1 | 2 | 3 | 4 | 5 |
| 26. | I can consciously alter my frame of mind or mood | 1 | 2 | 3 | 4 | 5 |
| 27. | I do not let stressful situations or people affect me once I have left class/school | 1 | 2 | 3 | 4 | 5 |
| 28. | I can suppress my emotions when I need to | 1 | 2 | 3 | 4 | 5 |
| 29. | I am able to motivate myself to do difficult tasks | 1 | 2 | 3 | 4 | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| 30. | I am able to prioritise important activities at school | 1 | 2 | 3 | 4 | 5 |
| 31. | I meet deadlines | 1 | 2 | 3 | 4 | 5 |
| 32. | I never waste time | 1 | 2 | 3 | 4 | 5 |
| 33. | I believe difficult things should be done first | 1 | 2 | 3 | 4 | 5 |
| 34. | I hold on to delayed gratification as a virtue | 1 | 2 | 3 | 4 | 5 |
| 35. | I believe in 'action now' | 1 | 2 | 3 | 4 | 5 |
| 36. | I can motivate myself even when I feel low | 1 | 2 | 3 | 4 | 5 |
| 37. | I motivate myself to be successful | 1 | 2 | 3 | 4 | 5 |

# APPENDIX B

# INTRODUCTORY LETTER


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

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

UNIVERSITY POST OFFICE
CAPE COAST, GHANA


Our Ref:

Your Ref:

22nd September, 2017

**The Vice-Principal**
**Komenda College of Education**
**Komenda**

**LETTER OF INTRODUCTION: MRS. PRISCILLA COMMEY-MINTAH**

We introduce to you the above mentioned name a Ph.D Educational Psychology student from the, Department of Education and Psychology UCC.

As part of their programme requirements, she is writing a theses titled:

*"Influence of Emotional Intelligence on the Academic Performance of Teacher Trainees in the Central Region of Ghana"*

Kindly accord her with the necessary assistance she may need.

Any information provided would be treated as strictly confidential.

Thank you.

Georgina Nyantakyiwaa Thompson
Principal Administrative Assistant
**for: HEAD**

# APPENDIX C

# CONSENT FORM

Dear Sir/Madam,

I am to conduct a research with the aim of investigating *"The influence of emotional intelligence on the academic performance of teacher trainees in the Central Region of Ghana"*. As a result, I write to seek your consent to willingly participate in this research. There is no penalty for not participating. Also, there are no foreseeable risks associated with this research.

I assure you that any information provided will be kept anonymous and treated as strictly confidential. You have the right to withdraw from the study if you wish to do so at any time without any form of punishment.

**Please complete the information below to document your agreement to participate in the research**

I _____ (your name) have been given sufficient information about the purpose of the research and the ethics involved. I understand that the information given will be used for the intended academic purpose. I also understand that I can withdraw from the research at any point in time I wish to.

_____ _____

Your signature Date

I have received this consent from the research participant and I will make sure information provided is kept confidential and anonymous.

_____ _____

Candidate's signature Date

# APPENDIX D

## ETHICAL CLEARANCE

**UNIVERSITY OF CAPE COAST**
**COLLEGE OF EDUCATION STUDIES**
***ETHICAL REVIEW BOARD***

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref: CES/ERB/CR/V011/005

Your Ref: .....

Date: April 7, 2016

.....
.....
.....


*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*
Dr. (Mrs.) L. D. Forde
*lforde@ucc.edu.gh*
0244786680


Dear Sir/Madam,

**ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STUDY**

The bearer, Priscilla Commey Mintah ..... Reg. No ~~ED~~/RSS/14/0001 is an ~~M.Phil~~/Ph.D student in the Department of Education and Psychology ....., College of Education Studies, University of Cape Coast, Cape Coast, Ghana. ~~He~~/She wishes to undertake a research study on the topic The influence of emotional intelligence on... the academic performance of teacher trainees in the Central Region of Ghana .....

The Ethical Review Board (ERB) of the College of Education Studies (CES) has assessed the proposal submitted by the bearer. The said 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 that may be needed to facilitate the conduct of the said research.

Thank you.
Yours sincerely.

Dr. (Mrs.) Linda Dzama Forde
(Secretary, CES-ERB)