# EFFECTS OF EMOTIONAL INTELLIGENCE SKILLS TRAINING ON ACADEMIC SELF EFFICACY AMONG SENIOR SECONDARY SCHOOL STUDENTS IN TARABA STATE, NIGERIA

**By**

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# DECLARATION

I declare that the work entitled "Effects of Emotional Intelligence Skills Training on Academic Self Efficacy among Senior Secondary School Students in Taraba State, Nigeria" has been written by me in the Department of Educational Psychology and Counselling. The information derived for the literature has been duly acknowledged in the text and the list of references provided. No part of this thesis had previously been used for another degree or diploma at any University

**Ahmad BABA MUHAMMAD** _____ **SEPTEMBER, 2014**

# CERTIFICATION

This thesis entitled "EFFECTS OF EMOTIONAL INTELLIGENCE SKILLS TRAINING ON ACADEMIC SELF EFFICACY AMONG SENIOR SECONDARY SCHOOL STUDENTS IN TARABA STATE, NIGERIA" by Ahmad BABA MUHAMMAD meets the regulations governing the award of Master's Degree (Educational Psychology) of Ahmadu Bello University, Zaria, and is approved for its contribution to knowledge and literary presentation.

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# DEDICATION

This thesis is dedicated to my Parents Hajiya Aishatu Ahmad Mafindi and late, Alhaji Muhammad Baba Kagana

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I wish to acknowledge the contributions of my supervisors Dr. H. A. Tukur and Professor E.F. Adeniyi, for not only helping me to conceptualise, implement and successfully complete the work but helping me whenever I needed their help, guiding me at the appropriate times and having confidence in me, indeed they are truly mothers. I will forever remain grateful to them.

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# ABSTRACT

*This study investigated the effect of emotional intelligence Skills training on academic self-efficacy among senior secondary school students in Taraba state, Nigeria. This study employed a quasi-experimental, non-equivalent control group, pre-test – post-test design. The population of this study was 73,651 secondary school students out of which120 students were purposively sampled and used for the study.The instrument used for data collection was, Academic Self Efficacy Scales (ASES).Data were analysed using mean, standard deviation andt-test. The findings reveals that Emotional intelligence skills training had effect on Academic self-efficacy of the respondents in favour of the experimental group (t=24.618, P=.000); Emotional intelligence skills' training was effective in improving academic self-efficacy of secondary school students as can be observed in the difference between Pre-test and Post-test (t=37.946, P=.000). The difference is in favour of Post-test; And There was no gender difference in the effect of emotional intelligence skills training on academic self-efficacy of respondents; hence the training had similar effect for both male and female (t=1.114, P=.270). It was recommended that School Principals, counsellors, Psychologist and Subject teachers should be exposed to Emotional intelligence skills (emotional self-awareness, self-management, social-awareness and relationship management) in re-addressing students with academic problems.*

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## OPERATIONAL DEFINITION OF TERMS

For the purpose of this study, the following terms have been operationally defined as follows:

***Emotional Intelligence Skill Training:*** is the training given to students to reason about one self and emotions of others, and to produce information that will enhances ones' feelings, actions and thought processes. Emotional intelligence skills in this study include: emotional self-awareness; self-management; social-awareness and relationship management.

***Academic Self- Efficacy:*** is the students' belief or judgement of their capability or competence to organise and execute a given academic task.

# CHAPTER ONE

# INTRODUCTION

## 1.1 Background to the Study

Education, no doubt, remains the most outstanding development priority area in the world today. The core purpose of education, unquestionably, is human development. Other things being equal, an educated person who is well or relevantly positioned in the socio-economic, cultural and political milieu is expected to be a valuable asset to the society than another individual who is illiterate and perhaps ignorant. This simple fact explains why researchers and scholars, all over the world, continue to do research into ways of improving human knowledge and development. Debates on education and human development more generally can hardly be a boring exercise. The socio-political, economic and technological developments, which bring about a high frequency of innovations and reforms, have all combined to make discussions or debates on education and human development trendy, exciting and unending (Ogundokun & Adeyemo, 2010). This may partly influences learning and achievement in schools.

However, achievement can be said to be the outcome of instruction. Ogundokun and Adeyemo (2010) also stated that achievement is the end product of a learning experience. Attaining a high level of academic Achievement is what every parent or guardian as well as teacher wishes for their children, wards and students. Schools and teachers are generally graded qualitatively by achievement based on the performance of their students. In Nigeria, education is considered the most important instrument for change and national development. However, of all the problems facing Nigeria's education system, none is more agonizing and persistent as the poor academic performance of students, especially of secondary schools, at the external examinations conducted by the West African Examination Council (WAEC) and

National Examination Council (NECO). And this has resulted in frustration, high drop-out rates and inability of students to gain admission into tertiary institutions. In spite of numerous efforts made by researchers, educators and policy makers to tackle this problem, academic performance of students is still a task that needs tobe improved, but students may also take emotional intelligence training to excel in school.

Literature suggest that emotional intelligence plays a key role in determining success in life and it becomes more and more important as people progress up the career ladder and academic success. (kolb & Hanley-Maxwell, 2003; Richburg & Fletcher, 2002). Goleman (1995) argues that emotional intelligence, social intelligence and luck also play a big role in a person's success. While IQ gets hired, emotional, EQ gets you promoted. Research has shown that, what separates successful people from less successful counterparts is not necessarily IQ but rather EQ, with key skills to success more likely to found in the latter rather than the former. For instance, Snary and Vaillant, (1985) underline the limitation of IQ in prediction one's success at work and life in general over forty years longitudinal investigation with 450 boys in Massachusetts, USA. They found that the strongest predictors of success were characteristics such as being able to handle frustration, control emotions and get along with other people. There results show that paying constant attention to the course of own moods and emotions is not always productive for the individual. This is particularly so when attention to feelings is not followed by sufficient capacity to understand their causes, motives, and consequences, or to repair them (Salguero, palomera, & Fernandez-Berrocol, 2011). Individual who attend to their emotions excessively without adequate clarity of the emotional state could develop an emotional spiral that would generate a ruminative and self-focused process that may rather than relieve their negative mood that result to low academic self-efficacy and provoke academic difficulties or failure. The role of self-efficacy in the cognitive functioning of students becomes even more important in an information rich world

where individual needs to become empowered for lifelong learning. Claims for the primacy of self-efficacy have been supported by a host of research. In particular, meta-analyses of research on self-efficacy serve to underline its influence. Meta-analyses use statistical measures and strict criteria of validity and reliability to synthesise a number of studies into one overall set of findings, and are therefore an excellent gauge of the state of knowledge in a field at a given time. In 1991, a meta-analysis of 39 studies between 1977 and 1988 found that higher self-efficacy can lead to higher academic performance and persistence (Multon, Brown, & Lent, 1991).

Goleman (1995) outlines four main emotional intelligence constructs. That is: self-awareness is the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions; Self-management which involves controlling one's emotions and impulses and adapting to changing circumstances; social awareness which includes the ability to sense, understand, and react to other's emotions while comprehending social networks; and relationship management which entails the ability to inspire, influence, and develop others while managing conflict.

## 1.2 Statement of the Problem

Presently, information technology has made the world a global village where traditional or conventional ways of living are in transitional phase. Due to urbanization and liberalization, adolescents are in a dilemma where they find themselves unfit and unfilled. Rapid changes in family life, pressures of peers and society, present day life style and academic challenges among others are the factors that lead to increase in competition, stress and anxiety among secondary school students. Generally secondary school students are thus not able to cope with the humiliation and negative emotions in their academic lives. When an

individual is in the wave of positive or negative emotions, his behaviour is totally controlled and directed by that emotion. Engaging Secondary School Students emotionally is the key to strengthening their dispositions toward critical thinking which in turn leads to a rational and reasonable emotional life, the link between thinking and emotions is essential in academic achievement.

Substantial amount of research has established the connection of self-efficacy to academic achievement and the research consistently demonstrated that academic self-efficacy enhances secondary school students' performance and academic success. Psychological and affective state sometimes produces profound feelings of disappointment, frustration and self-worthlessness. Which in fact reinforce emotional problems that provoke low academic self-efficacy which leads to academic difficulty and academic failure;since it has to do with emotions, emotional intelligence skills training might minimize such negative feelings and bust the academic self-efficacy of secondary school students, which eventually pave a way to academic success.Therefore, the problem of this research was to investigate the effects of Emotional Intelligence skills Training on Academic Self-Efficacy among secondary school students in Taraba State, Nigeria.

## 1.3 Objectives of the Study

The objectives of the study are to:

1. Find out the differences between post-test scores on Academic Self Efficacy of Secondary School Students exposed to Emotional Intelligence skills training and those in control group.
2. Find out the differences between pre-test and post-testscoreson Academic Self Efficacy of Secondary School Students exposed to Emotional Intelligenceskills training.

3. Determine the differences in Academic Self Efficacy scores of male and female students exposed treatment.

## 1.4 Research Questions

The following research questions guided the study:

1. What are the differences between post-test mean scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training and those in control group
2. What are the differences between pre-test and post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skillstraining?
3. What are the differences in Academic Self Efficacy scores of male and female students exposed to treatment?

## 1.5 Hypotheses

The following null hypotheses guided the study:

1. There is no significant difference in thepost-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training and those in control group.
2. There is no significant difference between pre-test and post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training.
3. There is no significant difference in Academic Self Efficacy scores of male and female students exposed treatment.

## 1.6 Basic Assumptions

For the purpose of this study the following assumptions were made:

1. Training in emotional intelligence skills (self-awareness, self-management, social-awareness and Relationship management)can improve academic self-efficacy of secondary school students.
2. Training in emotional intelligence skills may increase academic self-efficacy among male and female students in the treatment group.

## 1.7 Significance of the Study

The findings of this study will add to theory building on emotional intelligence and academic self-efficacy. The findings will further provide an insight into the feelings of the people. It is also essential tools for self-insight and self-control (the ability to recognise and regulate ones' moods).It helps the students with the ability to cope with stress, depression and aggressive behaviours. The findings will also help the society in determining outcome of the individuals to adjust and adapt to environmental circumstances that disturbed them. The findings will help educators and curriculum planners, on the new skills such as emotional self- awareness, self- management, and social-awareness and relationship management when fully utilised and inculcated into the curriculum in order to ascertain the objective of nation educational systems.

Furthermore, the findings of this study through its emotional intelligence skills will aid school achievement in term of better handling of mutual relationship and perceived feelings both in one-self and others.Finally, the findings of this study will serve as a missing link for future researchers on emotional intelligence and academic self-efficacy of the students.

## 1.8 Scope and Delimitation of the Study

The scope of this study was to examine the effects of Emotional Intelligence skills Training on Academic Self Efficacy covering Secondary School Students in Taraba State, Nigeria. There are eight(8) educational zones in Taraba state, namely: Bali, Donga,Gembu, Jalingo, Karim, Takum, Wukari and Zing. The study was delimited to four Emotional Intelligence skills namely: Emotional self-awareness, Self-Management, Social awarenessand RelationshipManagement, This study was also delimited to only one (1) educational zone i.e. Jalingo education zone,was used for this study. The study is limited to Secondary School Students (SS II) only. These are considered as the most important emotional intelligence skills that Secondary School Students would need to learn in order to enhance theirAcademic Self Efficacy.

# CHAPTER TWO

# REVIEW OF RELATED LITERATURE

## 2.1 Introduction

This chapter reviewed relevant works related to the present study. Literature review was conducted under the following headings and sub headings:

**Conceptual Frame work**

Emotional Intelligence

Academic Self-Efficacy

**Theoretical Framework**

Goleman's Performance Model of Emotional Intelligence

Salovey and Mayer: Ability Model of Emotional Intelligence

Bar-On: Mixed Model of Emotional Intelligence

Bandura's Social Learning Theory

**Empirical Studies**

**Summary**

## 2.2 Conceptual Framework

In this section, two concepts have been discussed. These are: the concept of emotional intelligence and concept of academic self-efficacy.

### 2.2.1 Concept of Emotional Intelligence

The term Emotional Intelligence (E.I.) refers to the ability to identify, use, understand and manage emotions and emotional information (Gayathri & Vimal, 2013). It is a form of social 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 own thinking and action (Wannamaker, 2005). According to Mayer (2005), it is the ability to reason about ones'emotions and provide emotional information to enhance thought process.Emotional intelligence is a person's ability to process information about emotions accurately and effectively and consequently to regulate emotions in an optimal manner (Goleman, 2005). However, emotional intelligence includes self-control, zest (passion) and persistence, ability to motivate oneself, ability to understand and regulate one's own emotions, and an ability to read and deal effectively with other people's feelings. It is a form of social 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 own thinking and action. (Wannamaker, 2005)Nelson and Low as cited in Vela (2003), opines that emotional intelligence is a confluence of developed skills and abilities to:

1. Accurately know one self, feel valuable and behave responsible as a person of worth and dignity;
2. Establish and maintain a variety of effective, strong and healthy relationships;
3. Get along and work well with others, and

4. Deal effectively with demands and pressures of daily life and work.

It is also the ability to identify, assess, and control the emotions of oneself, of others, and of groups (Parveen, Malik & Aziz, 2012). Meanwhile, according to Bradberry and Greaves (2009) emotional intelligence is your ability to recognize and understand emotions in yourself and others, and your ability to use this awareness to manage your behaviour and relationships.Emotional Intelligence skills are affective skills that are used in the competencies of interpersonal communication, personal leadership, self-management and intrapersonal development (Vela, 2003).

Emotional Intelligence skillsis the training given to students to reason about one self and emotions of others, and to produce information that will enhances ones' feelings, actions and thought processes. Emotional intelligence skills in this study include: emotional self-awareness; self-management; social-awareness and relationship management.

### 2.2.2 Concept of Academic Self-Efficacy

Self-efficacy refers to people's judgment of their own capabilities to organize and execute courses of action required to attain designated types of performances (Bandura, 1986). According to Bandura (1997), self-efficacy strongly influences the choices people make, the effort they expend, and how long they persevere in the face of challenge. Much research shows that self-efficacy influences academic motivation, learning, and achievement (Bong, 2001; Pajares, 1996). Self-efficacy beliefs influences task choice, effort, persistence, resilience, and achievement (Bandura, 1997; Britner & Pajares, 2006).

Academic self-efficacy refers to individuals' convictions that they can successfully perform given academic tasks at designated levels (Schunk, 1991). Academic self-efficacy is

defined as students' belief in their abilities to activate and regulate motivation and cognitive resources needed to attain a desired educational goal (Bandura, 1995). Academic self-efficacy is also defined and measured within the context of a specific behaviour and situation, i.e., domain specific, rather than general traits or global self-concepts (Maddox, 1995; Pajares, 1996; Zimmerman & Schunk 2003).Hence, academic self-efficacy is the totality of individual belief and choice for successful performance of a given academic task or situation.

## 2.3 Emotional Intelligence

The strong appeal of concepts like 'Emotional Intelligence' reflects a shift in social attitudes generally, as well as in education. Fifty years ago, the idea that abstract rationality was the epitome of human intelligence was still widely accepted. The law courts acted as if reasoned argument between clever men was the best way to get at the truth, while public and grammar schools esteemed analytical discussion, based on sound knowledge, above all other forms of 'intelligence'. Indeed, it seemed as if there were no other forms. Now these assumptions are under attack from many quarters. Those learned legal deliberations have resulted all too often in grievous miscarriages of justice. Feminist and other philosophers have argued that the guise of 'objectivity' is often a mask for patriarchal and other forms of self-interest. Widely-read accounts of neuroscience, such as neurologist Antonio Damasio's best seller Descartes' Error, have shown that emotion is the constant counterpart of reason not its antagonist. Soap operas and reality TV pose (seemingly) endlessly fascinating questions about what is 'emotionally intelligent' behaviour and what is not. Taking advantage of counselling and psychotherapy no longer carries the risk of social stigma that it did. And the idea that Emotional Intelligence counts for more in life than intelligence quotient (IQ) has achieved almost mythic status.

The interest in Emotional Intelligence within education has been fuelled by other concerns and observations as well. The idea that 'academically inclined' is the same thing as 'intelligent' is seen to denigrate non-academic talents and interests to the detriment of individuals and their communities. Yet at the same time much is made of the fact that role models of 'success' in our society frequently did badly at school. In school, young people's emotions are much more present in classrooms and playgrounds than they used to be. For example:

- With what sociologists call the 'decline of deference' (and what teachers simply label as 'bad behaviour'); pupils and students bring more of their complicated emotional selves into the classroom with them.
- Living with the consequences of 'inclusion', teachers are sometimes faced with challenging behaviour and displays of strong emotion that they struggle to know how to deal with.
- Many teachers are familiar with research on bullying which shows that bullies are often incapable of empathy: they are simply unable to imagine how their victim feels and teachers are interested in what might be done to remedy this lack of imagination.
- In multicultural classrooms, teachers may find that they have to learn new ways of reading unfamiliar emotional signals. An avoidance of eye contact may be a symbol of respect for authority in one culture, yet feel to a teacher more like 'dumb insolence', and mistaken interpretations can be costly.

Many teachers have the strongly-held view that there is more to learning than the traditional curriculum, based on the 'acquisition of knowledge, skills and understanding', allows for. They are dissatisfied with models of education that merely supplement the old-

fashioned academic preoccupation with a narrowly economic or utilitarian one. Whether they admit to stress or not, teachers understand how important emotions, and the way they deal with them in their own lives, can be. And they feel that, if there are things to be learnt about how to be emotionally adept, then education should be helping young people to learn them. All in all, the case for bringing Emotional Intelligence into education seems an irresistible one.

**Brief history of Emotional Intelligence**

In 1966, a German psychiatrist named Leuner wrote an article called 'Emotional Intelligence and emancipation' in which he hypothesised that the reason some women wilfully rejected the social roles and responsibilities that were expected of them was because of their 'low Emotional Intelligence'. As a cure, he prescribed a combination of LSD-induced hallucinatory 'trips' and psychotherapy.

Since that inauspicious start, both the idea of Emotional Intelligence, and the term itself, have come a long way. In 1983, Harvard developmental psychologist Howard Gardner published a book called Frames of Mind in which he argued that the dominant forms of intelligence associated with linguistic, logical and mathematical ability should be supplemented by five (later seven) others. The new intelligences included (as well as musical, spatial and kinaesthetic intelligences), interpersonal and intrapersonal intelligence. Interpersonal intelligence was defined as 'the ability to understand people, what motivates them, how they work, how to work cooperatively with them'; while intrapersonal intelligence involved 'access to one's own feeling life', and 'the capacity to form an accurate, veridical model of oneself, and to be able to use that model to operate effectively in life'. By picking out human abilities like emotional self-awareness, empathy and social skills, placing them

alongside the traditional virtues of literacy and numeracy, and giving them the high-status designation of 'intelligences', Gardner legitimised their claim on teachers' time and attention.

In 1990, researchers Jack Mayer, Peter Salovey and their colleagues published two articles that introduced the term 'Emotional Intelligence' into mainstream American psychology. And then, in 1995, came psychology journalist Daniel Goleman's best seller Emotional Intelligence. Goleman brought together the existing body of Emotional Intelligence research with an introduction to how emotion works in the brain, and added some practical examples of how 'Emotional Intelligence' was being cultivated in schools and workplaces around the USA. In this 1995 version, Goleman cherry-picked bits of both Gardner's and Mayer and Salovey's definitions to put together his own version of Emotional Intelligence, comprising knowing one's emotions, managing one's emotions, motivating oneself, recognising emotions in others, and handling relationships skilfully.

By 1998, however, in the follow-up working with Emotional Intelligence, Goleman had decided to go for the kitchen-sink approach. Now Emotional Intelligence expanded to include, amongst many other things, 'self-confidence', 'trustworthiness', 'initiative', 'optimism' 'political awareness', 'leadership' and 'influence and negotiation skills'. Almost everything we might possible want in, to use Goleman's phrase, a 'successful person' is there, in other words except the traditional educational concerns of literacy, numeracy, analytical thinking and knowledge about the world. Given many educators' dissatisfaction with the extent to which schools were in thrall to these latter concerns, it is easy to see why 'Emotional Intelligence' struck such a chord. On the one hand the phrase offered a tantalising and eye-catching oxymoron. 'Emotional' pointed at some of the human qualities most

conspicuously missing from the mainstream curriculum, while ‘intelligence’ seemed to borrow the credibility of earlier, apparently scientifically-based, uses of the word. No longer was a concern with ‘feelings’ something rather suspect, marginal or ‘touchy-feely’; it now had an air of intellectual legitimacy, and scientific clout, of its own. ‘Emotional Intelligence’ sounded simultaneously respectable, subversive and intriguing. It was a winner.

It remains uncertain whether there is anything to Emotional Intelligence that psychologists working within the fields of personality, intelligence and applied psychological research do not know already. Matthews, Zeidner and Roberts, Emotional Intelligence: Science and Myth. Some people, in their enthusiasm, seem to think that humankind did not become aware that people have different social and emotional attitudes and capabilities until 1995. Luckily for us, psychologists (not to mention the poets, playwrights and artists of the last 3,000 years) have not been quite so slow on the uptake. In 1920, pioneering psychologist E.L. Thorndike distinguished between what he called ‘scholastic’, ‘mechanical’ and ‘social’ intelligence, the latter being ‘the ability to understand and manage people and act wisely in social contexts.’ In the 1960s another famous student of intelligence, J.P. Guilford, identified forms of intelligence that involved processing information about one’s own internal states and moods as well as those of other people. And we have already noted the seminal influence on the burgeoning Emotional Intelligence field of Howard Gardner’s Frames of Mind. As with much of psychology, we often find ourselves rediscovering what has gone before, rather than making ground-breaking discoveries for the first time. Emotional Intelligence often lumps together so many different characteristics that overall it becomes indistinguishable from tests of ‘personality’. Tried and tested questionnaires have for a century or more assessed qualities such as hostility, aggression, impulsiveness, positive emotions, straightforwardness and self-discipline, to name just a few. So it is not surprising that

empirical studies reveal that tests of general 'personality' correlate highly with tests of Emotional Intelligence. Tests of Emotional Intelligence are currently being developed which are more precise, and some of these do seem to be measuring something new. But for the moment we have to agree with the view of John Mayer, one of the originators of the term 'Emotional Intelligence': 'The overlap of the mixed (Emotional Intelligence) scales with traditional personality traits is so high that nothing new is measured by such self-report approaches relative to existing scales.'

**Teaching Emotional Skills**

It is important to teach children and adolescents using EI programs which explicitly include and highlight emotional skills based on the ability to perceive, understand and regulate emotions, as outlined in the Mayer and Salovey model (Grewal & Salovey, 2005; Mayer & Salovey, 1997). Teaching these skills depends on giving priority to practice, training and improvement, and not so much on verbal instruction. The main thing is to exercise and practice emotional skills, enabling them to become just one more adaptive response within a person's natural repertoire. Are these types of EI exercises effective? Yes, studies do exist, albeit not many, which support the effectiveness of specific training programs in the emotional skills that make up EI (Lopes & Salovey, 2004). Specifically, among educational programs carried out in the U.S. under the label of SEL, very promising results were seen (Weissberg & O'Brien, 2004).

Emotional Intelligence departs from traditional conceptions of intelligence in two ways. First, as we have seen, it values different ways of being bright. It asserts that understanding someone else's point of view, or knowing how to deal with stress, are forms of intelligence, just as useful indeed, quite possibly more so than being able to solve logical

brainteasers fast under pressure. The second difference is just as important. Where many versions of IQ theory focus on its fixed, even inherited, character, Emotional Intelligence focuses on the extent to which emotional competence can be developed. Whereas a child of 'low (intellectual) ability' tends to be seen as a prisoner of their genes, Emotional Intelligence is of interest to so many teachers because they believe they can do something to help.

What kinds of activities and practical ideas are schools making use of, in order to try to expand young people's Emotional Intelligence? There are many publications that seek to disseminate such ideas, including Julia Bird and Lynne Gerlach's very useful review, Promoting Emotional Health and Well-being. There follows just a selection of school and classroom techniques that are being used, some general and some quite specific, to illustrate the approach.

- Circle Time, in which young people are able to share emotionally, charged issues that concern them, and are coached in positive ways of listening and responding to each other.
- Explicit lessons on 'social, emotional and behavioural skills', during Citizenship time, for example, making use of role play and other techniques.
- Students or pupils 'checking in' in the morning, during the taking of the register, for example, by responding with a number or a colour that corresponds to their level of alertness or their mood.
- Training some young people in 'negotiation' or 'conflict resolution' skills, which they make use of in dealing with playground disputes.
- Setting quizzes that encourage emotional reflection and self-knowledge ('how optimistic are you?').

- Teaching explicit techniques such as ‘calming’ or ‘stilling’ that enable children to stop and think in the heat of the moment and so avoid inflaming situations. (In one method, youngsters are taught the sequence ‘Stop! Keep calm! Take five deep breaths! Praise yourself for doing well!’) At an organisational level, school managers are being encouraged to adopt policies and procedures that create an ‘emotionally literate’ climate or ethos.For example, one UK LEA issues this guidance to its schools on what an emotionally intelligent school (and LEA) looks and feels like. It:

• listens to those it serves;

• provides many opportunities for face-to-face contact;

• shares ideas and vision;

• takes emotional literacy of candidates into account when making appointments; and

• (ensures that) there is a range of different personal skills and qualities in the team

The same document explains that leadership in an Emotional Intelligence organisation involves encouraging all members to pursue Emotional Intelligence policies, and ‘walking the talk’, i.e. modelling the skills and attitudes of emotional literacy in their own conduct and dealings with both staff and students.

**The Importance of Emotional Intelligence Skills**

Much of the literature on Emotional Intelligence relates to what we might call explicit methods of teaching: specific lessons and activities that are purpose-built to focus in on the world of emotions. However, developmental studies of children's early life at home shows that their emotional education tends to happen implicitly or indirectly, through observation, modelling, reinforcement and casual conversation. Indeed, where parents do use more formal 'teaching' methods, they are frequently less effective. The effectiveness of Emotional Intelligence interventions needs to be viewed against the backdrop of these implicit forms of learning. Children's 'emotional apprenticeship' takes place by watching how other people deal with their emotions. When uncertain how to respond emotionally to a new person or event, babies and toddlers take their cue from the facial expression and tone of voice of the people they trust – parents obviously, but also, very effectively, older brothers and sisters. Whether deliberately or inadvertently family members act as powerful role models that steer the child's emotional development. Studies of children in the Second World War showed that it was not the events they witnessed that affected their development; it was the way the adults around them reacted to those events. Being around an adult who continually loses it is bad for a child's own emotional development.

And how adults react to the child's own emotions is also crucial. Mothers who respond calmly to their child's anger or distress grow emotionally robust youngsters. Mothers who either do not respond who deal with an emotion by ignoring it or who respond emotionally back perhaps reacting to their child's inconsolable distress with panic or irritation tend to breed children who are more aggressive, less tolerant of stress, and less sociable. As children get older, so the talk that goes on around emotional displays and events

comes to play a significant role. In addition, two aspects of parenting style seem to produce emotionally intelligent children: setting clear limits within which there is freedom to play; and creating family routines that are structured, but not rigid.

Children's emotional apprenticeship continues when they arrive at play-group or school. Whatever their conscious attitude towards Emotional Intelligence, teachers take over these modelling and reinforcing functions. Emotional Intelligence education probably depends at least as much on the way teachers publicly respond to their own shifting moods and stresses, and the way they deal with these children, as it does on set-piece discussions or activities. One can see why these more personal channels of emotional education might have been down-played, but if they are, powerful opportunities to influence the development of Emotional Intelligence are being missed. It may also be that the emotional messages conveyed through these implicit channels sometimes run counter to those that are being espoused and discussed more consciously in the classroom.

A central concern for teachers is the effect of emotions on learning. Emotional Intelligence writers commonly recycle a number of familiar observations. They remind us that it is hard for students to concentrate on their schoolwork if they are tired, hungry, scared or angry. So sleep, breakfast, an anti-bullying policy or an anger-management course are all good ideas. There is much that is hard to disagree with, though it is hardly news. But underneath the truisms lie some more interesting issues. It is commonly assumed that to learn, students have to 'feel good about themselves' or 'have good self-esteem'. The Emotional Literacy Handbook, published by Antidote, for example, quotes approvingly the slogan 'Feel good, Learn good!', and takes that to imply, also, that 'not feel good' means 'not learn good'. But while an anxious student may be learning less of what you would like, that

does not mean they are learning nothing at all. Emotions do not block learning, they direct it. Students who are feeling apprehensive angry, sad or in love are all learning different things. Indeed, we sometimes learn things better when we are in an emotional state. People remember emotionally-laden stories better than they do neutral ones. And if the part of the brain that registers fear, the amygdala, for example, is blocked by a specific drug (propanolol), then the advantage of the evocative material is lost. Neuroscientists have also shown that a certain level of stress hormone in the brain actually improves memory. And so on. The simple generalisation that the less 'negative emotion' we are feeling, the better will be our memory and learning, just isn't true. Conversely, 'feeling good' can sometimes lead to worse learning. Australian research has found that when we are happy, we are more creative, but less careful, in the way we think and perceive; while feeling a little bit apprehensive or irritated makes us more critical, and also makes us more attentive to detail. For example, judgements of other people's performance contain more errors and distortions when people are in a good mood! So different emotional tinges to learning lead us to attend and think in different ways, and which is 'best' depends not on some half-baked, sentimental idea, but on what the job is. (It would be very interesting, and perfectly possible, for teachers to play with this idea in their lessons).People with very low scores on Emotional Intelligence tests are indeed more likely to be involved in substance abuse, more at risk of eating disorders, more likely to suffer from panic attacks, have a greater tendency to violence, and have more severe problems in relationships. At the lowest levels on the scale, the inability to differentiate and articulate emotions becomes an identified psychiatric condition with its own label: 'alexithymia'. In school, amongst students with low IQ, those with higher Emotional Intelligence, as judged by self-report questionnaires, perform considerably better than do those with lower Emotional Intelligence. However, the correlations are evident only at the

lowest levels of intelligence, be it IQ or EQ. The fact that you seem to need a certain amount of Emotional Intelligence to function does not necessarily mean the more of it the better. Goleman (1995) argues that emotional intelligence, social intelligence and luck also play a big role in a person's success. While IQ gets hired, emotional, EQ gets you promoted. Research has shown that what separates successful people from less successful counterparts is not necessarily IQ but rather EQ, with key skills to success more likely to found in the latter rather than the former. For instance, Snary and Vaillant, (1985) underline the limitation of IQ in prediction one's success at work and life in general over forty years longitudinal investigation with 450 boys in Massachusetts, USA. They found that the strongest predictors of success were characteristics such as being able to handle frustration, control emotions and get along with other people.

**Emotional intelligence and academic performance**

The ability to pay attention to their emotions, experience feelings with clarity and be able to recover from negative states of mind will be a decisive influence on students' mental health, and this psychological balance in turn is related to and ultimately affects academic performance. Persons with limited emotional skills are more likely to experience stress and emotional difficulties during their studies, and consequently will benefit more from the use of adaptive emotional skills that allow them to cope with these difficulties. EI may act as a moderator of the effects of cognitive skills on academic performance (Pérez & Castejón, 2007; Petrides, Frederickson & Furnham, 2004).

Academic achievement is the major concern of educational policy makers of every country. It has been accepted that environment both inside and outside the school in which the child grows has a great influence on the academic achievement of the students. Among

them, socio economic status, social phobia, anxiety, learning disabilities, parent styles, learning styles, classroom climate etc. are some such variables. So care should be taken to increase the rate of achievement and find out the hindrances that decrease the achievement rate. Emotion is the basis of all interests and motivations and so is directly related to all human performances and achievements. Emotions are source of motivation, source of enjoyment source of strength and endurance to body. Constant emotional tension may cause poor health like lack of sleep, restlessness, headache, chronic fatigue, insomnia, lack of appetite. Hence an attempt is made to relate emotional intelligence with academic achievement. Academic achievement of the learner is the primary concern of all types of educational endeavours.

Kulhens, in Mishra (2012), reported that emotional tensions affect the efficiency of the individual, shifts of moods and inconsistency in behaviour. It also affects the memory, increase in forgetting, the individual cannot reason, think and concentrate on a problem. Constant emotional pressure disturbs learning ability. Fear and anger cause the most powerful effect on thought process moodiness, irritability etc. They bring changes in our attitude towards life. Researchers have shown that such emotional disturbances result in poor academic achievement of the students. Namrata in Mishra (2012) found in her study that high achievers tended to be emotionally stable and un-frustrated in comparison to low achievers. Emotional weaknesses cause various physical and mental health problems that directly have its impact on academic achievement of children. Our education is imparting information and knowledge to a certain area that is career oriented. Emotional aspect is lacking in our education system. The academic achievement is deteriorating nowadays. The means and ways through which academic achievement could be increased is the need of the hour. Studies have shown the interrelationship between academic achievement and other

social-psychological variables. Students are not found to be able to perceive, identify, assess, manage and control emotions. Emotional weaknesses obstruct development of children's abilities, capacities and affect their performances. A student or child must know what emotions are, their importance and role in life. They must be able to channelize their negative emotions in right direction so that they may achieve success in each and every field of life.

## 2.4 Academic Self-efficacy

### Self-efficacy and Achievement

According to Bandura, perceived self-efficacy refers to beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments (Bandura, 1997). Self-efficacy is one component of Social Cognitive Theory, a learning theory which identifies determinants governing thought, motivation, and human action. Self-efficacy beliefs are mediated through a variety of processes (cognitive, motivational, affective, and selective) which translate them into specific actions or behaviours (Bandura, 1997). Therefore, it is not as if self-efficacy acts independently, or in a vacuum, to influence peoples' lives, decisions, and behaviour; nonetheless, it does seem to be particularly amenable to influence. Four sources of influence on self-efficacy include: enactive mastery experiences, vicarious experiences, verbal persuasion, and physiological and affective states (Bandura, 1997). These sources of self-efficacy are worthy of particular attention, since they are the primary way in which students' achievements may be enhanced.

Although Bandura's theory of self-efficacy is strongly supported by research and clearly leads to positive outcomes for individuals, we must still be aware of cultural exclusiveness. Some may feel that self-efficacy theory has an overly Western, individualistic

bias. This is an important consideration for learning who work with international students: cultural and ideological dominance should always be resisted. Bandura does acknowledge the important role of culture, but argues that "in cross-cultural analyses, efficacy beliefs contribute to the productivity of members of both collectivistic and individualistic cultures" (Bandura, 1997). It is just the outcomes and modes of operation that differ: interventions designed to improve self-efficacy can help all students as long as they take account of cultural background as well as individual experiences (Lightsey, 1999).

Broadly, then, self-efficacy is important to performance and wellbeing within the lives of individuals. However, life comprises of variety of areas, since self-efficacy is a domain-specific trait, it is necessary to narrow our focus towards academic self-efficacy in relation to leaning. According to Bandura (1997), the role of self-efficacy in the cognitive functioning of students becomes even more important in an information rich world where individual needs to become empowered for lifelong learning. Claims for the primacy of self-efficacy have been supported by a host of research. In particular, meta-analyses of research on self-efficacy serve to underline its influence. Meta-analyses use statistical measures and strict criteria of validity and reliability to synthesise a number of studies into one overall set of findings, and are therefore an excellent gauge of the state of knowledge in a field at a given time. In 1991, a meta-analysis of 39 studies between 1977 and 1988 found that higher self-efficacy can lead to higher academic performance and persistence (Multon, Brown, & Lent, 1991). More recently, Robbins et al. (2004) conducted a meta-analysis of 109 articles with the explicit aim of bringing together educational and psychological literature to explore the educational persistence and motivational theory models of academic achievement. The main finding was that the nine broad constructs of psychosocial and study skills factors all had a strong relationship with retention, and a weaker but still significant relationship with

performance measured as GPA; academic self-efficacy was the best predictor for both outcomes (Robbins et al., 2004).

There is little doubt that academic self-efficacy is central to success in a range of performance areas. Higher academic self-efficacy is strongly associated with improved performance, retention, and persistence in the face of adversity (among other benefits). Elias and MacDonald (2007) cite nine separate studies supporting this contention, and Schunk (2003) provides a similarly thorough summary of research along these lines. These are obviously desirable outcomes for students, and for institutions in an environment of Quality Assurance and Key Performance Indicators.

Given the above-identified importance of self-efficacy for student performance, a somewhat alarming pattern for educators is the well-documented decrease in academic self-efficacy over a student's educational lifespan. A longitudinal study of 412 children from 1988 to 2004 found a "progressive decline as students advance through the educational system". This is a finding which has been reinforced by other researchers as well. This is potentially as demoralising as the finding that through their tertiary career most students demonstrate a decline in their deep approach to learning (Schunk & Pajares, 2002). Nonetheless, we must be very wary of framing our activities in terms of "lack" that requires remediation (Stirling & Percy, 2005). Rather than seeking remediation, it is possible to include academic self-efficacy within an academic literacies approach. In their seminal article, Lea and Street (1998) suggested that attention to student learning should focus on academic development within an entire social and institutional context, taking into account relationships with other students, teachers and the institution. This fits nicely with Social Cognitive Theory, which puts emphasis on individual cognitive processes as well as the social and cultural context in which

learning takes place. This is also a way of stepping back from the practice of packaging skills for speed and efficiency and critically reflecting on the role of the learning adviser, as recommended by Crozier (2005). It is essential to note that emphasising Bandura's notion of self-efficacy is not to imply that Learning Advisers are currently only engaged in skills development or remedial activities. Of course we must continue to resist top-down pressures which cast our activities as remedial through the "pathologisation of difference" (Stirling & Percy, 2005). Recommending a focus on academic self-efficacy should not construct students as having "problems" and being in "need" of "services" (Stevenson & Kokkin, 2007). Rather, the aim of this approach is twofold: firstly, it is to incorporate the insights from a rich body of Social and Educational Psychology literature to help inform one aspect of what we do. Secondly, and more importantly, it is to help empower students to inhabit a social role as agents (not just subjects) within the institutional discourses of secondary and tertiary education. When building student's capacity to negotiate these subjectivities, several aspects of self-efficacy need to be considered.

## 2.5 Theoretical Framework

### 2.5.1 Goleman's Performance Modelof Emotional Intelligence

Daniel Goleman, a psychologist and science writer who has previously written on brain and behaviour research for the New York Times, discovered the work of Salovey and Mayer in the 1990's. Goleman's model outlines four main emotional intelligence constructs. The first, self-awareness, is the ability to read one's emotions and recognize their impact while using gut feelings to guide decisions.

The second construct is Self-management which involves controlling one's emotions and impulses and adapting to changing circumstances. The third construct is social awareness which includes the ability to sense, understand, and react to other's emotions while comprehending social networks. The forth construct is relationship managementwhich entails the ability to inspire, influence, and develop others while managing conflict (Goleman, in Stys & Brown 2004).

Goleman includes a set of emotional competencies within each construct of emotional intelligence. Emotional competencies are not innate talents, but rather learned capabilities that must be worked on and developed to achieve outstanding performances. Goleman posits that individuals are born with a general emotional intelligence that determines their potential for learning emotional competencies. The organization of the competencies under the various constructs is not random; they appear in synergistic clusters or groupings that support and facilitate each other (Stys & Brown 2004).

It was based on this model; the treatment in this work was carried out. Table 2.1 illustrates Goleman's conceptual model of emotional intelligence and corresponding emotional competencies. The constructs and competencies fall under one of four categories: the recognition of emotions in oneself or others and the regulation of emotion in oneself or others.

**Table 2.1: Emotional Intelligence Competencies**

| | SELF<br>Personal Competence | OTHER<br>Social Competence |
|---|---|---|
| **RECOGNITION** | **Self-Awareness** | **Social Awareness** |
| | Emotional Self-Awareness | Empathy |
| | Accurate Self-Assessment | Service Orientation |
| | Self-Confidence | Organizational Awareness |
| **REGULATION** | **Self-Management** | **Relationship Management** |
| | Self-Control | Developing Others |
| | Trustworthiness | Influence |
| | Conscientiousness | Communication |
| | Adaptability | Conflict Management |
| | Achievement Drive | Leadership |
| | Initiative | Change Catalyst |
| | | Building Bonds |
| | | Teamwork and Collaboration |

Goleman (2001)

### 2.5.2 Salovey and Mayer: An Ability Model of Emotional Intelligence

Peter Salovey and John Mayer first coined the term "emotional intelligence" in 1990 (Salovey& Mayer, 1990) and have since continued to conduct research on the significance of the construct. Their pure theory of emotional intelligence integrates key ideas from the fields of intelligence and emotion. From intelligence theory comes the idea that intelligence involves the capacity to carry out abstract reasoning. From emotion research comes the notion that emotions are signals that convey regular and discernable meanings about relationships and that at a number of basic emotions are universal (Mayer, Salovey, & Caruso, 2002). They propose 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. They then posit that this ability is seen to manifest itself in certain adaptive behaviours (Mayer, Salovey, & Caruso, 2000).

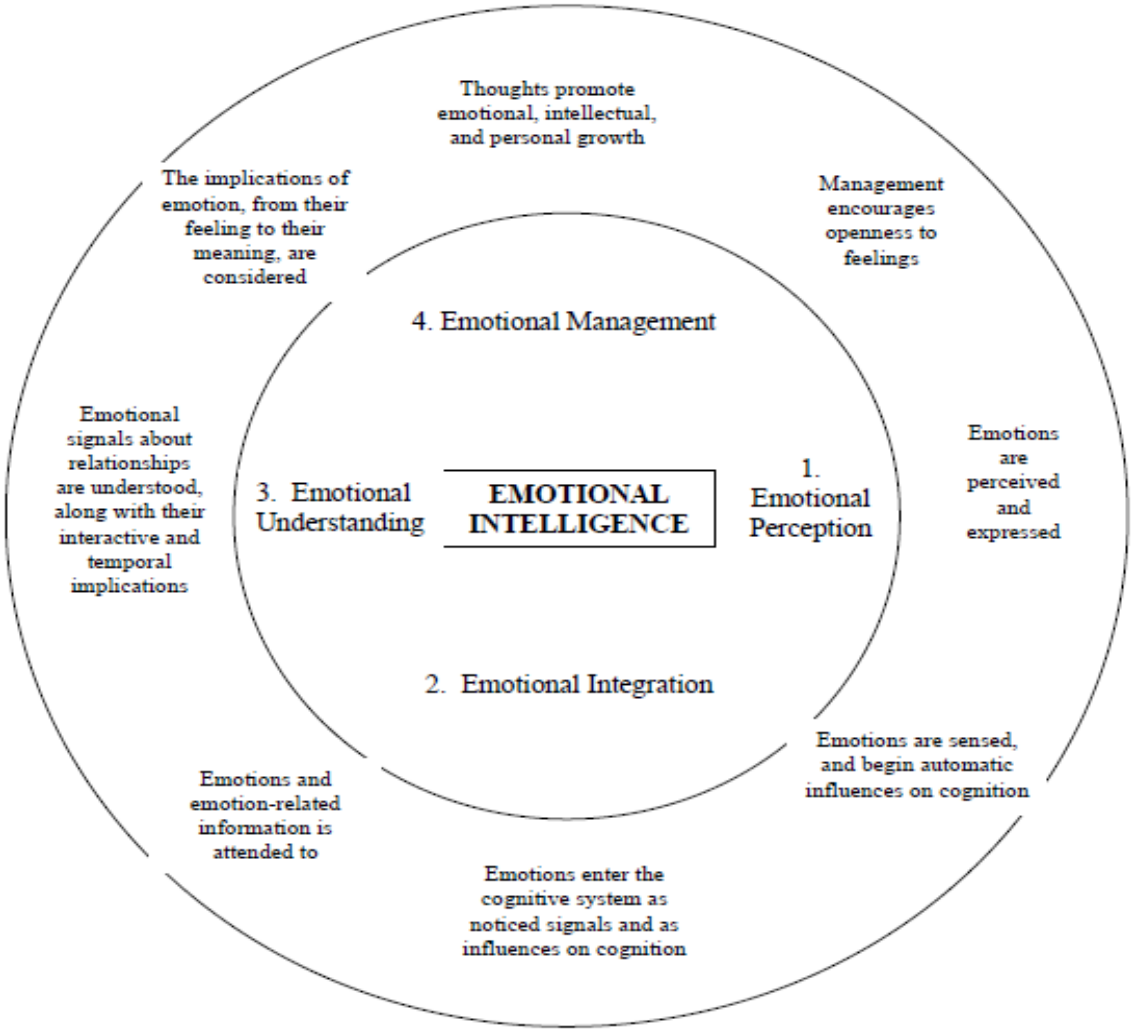
Mayer and Salovey's conception of emotional intelligence is based within a model of intelligence, that is, it strives to define emotional intelligence within the confines of the standard criteria for a new intelligence (Mayer, Salovey, Caruso, &Sitarenios, 2003). It proposes that emotional intelligence is comprised of two areas:

a. Experiential (ability to perceive, respond, and manipulate emotional information without necessarily understanding it) is divided into twobranches that range from basic psychological processes to more complex processes of integrating emotion and cognition:
    i. *Emotional perception* is the ability to be self-aware of emotions and to express emotions and emotional needs accurately to others. Emotional perception also includes the ability to distinguish between honest and dishonest expressions of emotion.
    ii. *Emotional assimilation* is the ability to distinguish among the different emotions one is feeling and to identify those that are influencing their thought processes.
b. Strategic (ability to understand and manage emotions without necessarily perceiving feelings well or fully experiencing them) is divided into twobranches that range from basic psychological processes to more complex processes integrating emotion and cognition:
    i. *Emotional understanding* is the ability to understand complex emotions (such as feeling two emotions at once) and the ability to recognize transitions from one to the other.

ii. *Emotion management* is the ability to connect or disconnect from an emotion depending on its usefulness in a given situation (Mayer &Salovey, 1997).

A depiction of this four-branch model is illustrated in Figure 2.1 below, which outlines the four branches and the corresponding stages in emotion processing associated with each branch.

**Figure 2.1: Four-Branch Model of Emotional Intelligence**




Mayer and Salovey's (1997)

### 2.5.3 Bar-On: A Mixed Model of Emotional Intelligence

Bar-On (2002) developed one of the first measures of emotional intelligence that used the term "Emotion Quotient". Bar-On's model of emotional intelligence relates to the *potential* for performance and success, rather than performance or success itself, and is considered process-oriented rather than outcome-oriented. It focuses on an array of emotional and social abilities, including the ability to be aware of, understand, and express oneself, the ability to be aware of, understand, and relate to others, the ability to deal with strong emotions, and the ability to adapt to change and solve problems of a social or personal nature (Bar-On, 1997). In his model, Bar-On outlines 5 components of emotional intelligence: intrapersonal, interpersonal, adaptability, stress management, and general mood. Within these components are sub-components, all of which are outlined in Table 2.2. Bar-On posits that emotional intelligence develops over time and that it can be improved through training, programming, and therapy (Bar-On, 2002).

**Table 2.2: Bar-On's Model of Emotional Intelligence**

| Components | Sub-Components |
|---|---|
| Intrapersonal | Self-Regard |
| | Emotional Self-Awareness |
| | Assertiveness |
| | Independence |
| | Self-Actualization |
| Interpersonal | Empathy |
| | Social Responsibility |
| | Interpersonal Relationship |
| Adaptability | Reality Testing |
| | Flexibility |
| | Problem Solving |

| | |
|---|---|
| Stress Management | Stress Tolerance<br>Impulse Control |
| General Mood Components | Optimism<br>Happiness |

Bar-On, (2002)

Bar-On hypothesizes that those individuals with higher than average E.Q.'s are in general more successful in meeting environmental demands and pressures. He also notes that a deficiency in emotional intelligence can mean a lack of success and the existence of emotional problems. Problems in coping with one's environment is thought, by Bar-On, to be especially common among those individuals lacking in the subscales of reality testing, problem solving, stress tolerance, and impulse control. In general, Bar-On considers emotional intelligence and cognitive intelligence to contribute equally to a person's general intelligence, which then offers an indication of one's potential to succeed in life (Bar-On, 2002).

With the recent flow in research concerning emotional intelligence, Goleman's performance model, Mayer's emotional intelligence model and Bar-On's mixed model of emotional intelligence as illustrated in Table 2.3. Bar-On's model has been popularized as a mixed model approach that blends emotional intelligence with other characteristics such as motivation, relationship development and an individual's well-being. An example of this model is the Bar-On model based on personality theory and an individual's well-being. The second model defined as a model of emotional intelligence as a theory of performance was created by Daniel Goleman. The third model, an ability model, concerning emotional intelligence is defined as an intelligence that involves emotion is explained by Mayer,

Salovey, and Caruso. The three different approaches emerged in defining models of emotional intelligence as depicted in Table 2.3.

**Table 2.3: Characteristics Emotional Intelligence from the 3 models**

| **Bar-On Mixed Model** | | **Goleman Performance Model** | | **Mayer, Caruso and Salovey Ability Model** | |
|---|---|---|---|---|---|
| (1) Intrapersonal EQ | Awareness, Assertiveness, Self-Regard, Self-actualization, Independence | (1) Intra-awareness | Accurate self-assessment, Self-Control | (1) Ability to perceive emotions accurately- Emotional Awareness | Emotions in faces, music and designs |
| (2) Interpersonal EQ | Empathy, Interpersonal relationships, Social Responsibility | (2) Self-regulation | Self-Control Trustworthiness Consciousness Adaptability Innovation | (2) The ability to use emotions to facilitate thought | Accurately relating emotions to other basic sensations. Using emotions to shift perspectives. |
| (3) Adaptability EQ | Reality Testing Flexibility Problem solving, | (3) Motivation | Achievement Drive Commitment Initiative Optimism | (3) The ability to understand emotions and their meanings | Ability to analyze emotions in parts. Ability to understand likely transitions from one feeling to another. Ability to understand complex feelings in stories. |
| (4) Stress Management EQ | Stress tolerance, Impulse control | (4) Empathy | Understanding others Developing others Service orientation Leveraging diversity Political Awareness | 4) The ability to manage emotions | Ability to manage emotions in the self. Ability to manage emotions in others |
| (5) General Mood EQ | Happiness, Optimism | (5) Social Skills | Influence Communication Conflict Management, Leadership, Change catalyst, Building bonds, Collaboration and cooperation, Team capabilities | | |

Wannamaker (2005)

### 2.5.4 Bandura's Social Cognitive Theory

Self-efficacy beliefs are an important aspect of human motivation and behavior as well as influence the actions that can affect one's life. Regarding self-efficacy, Bandura (1995) explains that it "refers to beliefs in one's capabilities to organize and execute the courses of action required to manage prospective situations" (p. 2). More simply, self-efficacy is what an individual believes he or she can accomplish using his or her skills under certain circumstances. Self-efficacy has been thought to be a task-specific version of self-esteem (Lunenburg, 2011). The basic principle behind Self-Efficacy Theory is that individuals are more likely to engage in activities for which they have high self-efficacy and less likely to engage in those they do not (Van der Bijl&Shortridge-Baggett, 2002).

In the theoretical framework developed by Bandura (1986), the concept of perceived self-efficacy occupies a central place.

> *"Perceived self-efficacy is defined as people's judgments about their capabilities to organize and execute courses of action required to attain designated types of performance. It is concerned not with the skills one has but with judgments of what one can do with whatever skills one possesses. Judgments of personal self-efficacy are distinguished from response-outcome expectations. Perceived self-efficacy is a judgment of one's capability to accomplish a certain level of performance; whereas outcome expectation is a judgment of the likely consequence such behaviour will produce.… Efficacy and outcomes judgments are differentiated because individuals can believe that a particular course of action will produce certain outcomes, but they do not act on that outcome belief because they question whether they can actually execute the necessary activities". (p. 391-392).*

Bandura conceives self-efficacy beliefs (SEB) as another important facet of the self-system which is circumscribed to self-referent thoughts that determine psychological functioning. Self-referent thoughts are translated into appropriate courses of action required for accomplished performance; and self-perceptions of efficacy and how people judge their capabilities determine both their motivation and behaviour. In Bandura's view, there is a

marked difference between the skills a person possess, the beliefs about the possessing sub skills and being able to use them well under diverse circumstances. For example, two persons with similar skills, let's say, two manufacturing employees, may perform poorly, adequately, or extraordinary, depending on their self-referent thoughts on their cognitive, social, and behavioural sub skills that they must organize into courses of action to reach their work-related goals. Competent functioning –for example at work- requires both skills and self-beliefs of efficacy to use the own skills in a competent manner. Initiation and regulation of transactions with work environment are, subsequently, in part governed by what employees think they can do to cope with work-related demands.

Previous definition has striking theoretical implications in terms of the concept of human accomplishments and well-being. While a strong sense of efficacy may improve human accomplishment and personal well-being in many ways, a weak sense of efficacy could promote a mediocre accomplishment as well as a less fortunate physical and psychological quality of life and well-being. High self-efficacious individuals tend to approach difficult tasks as a challenge to be mastered rather than a threat that must be avoided. On the contrary, those who easily disengage from difficult tasks, which are normally perceived as a threat, have a low sense of self-efficacy and serious self-doubts about their potential.

High SEB promote a deeper involvement in activities conducing to goal attainment, whereas low SEB downgrade the level of aspirations and compromise with the goals that have been selected to pursue. In the face of difficulties, that is, when dealing with highly demanding transactions, high self-efficacious individuals reinforce and maintain their efforts longer, and they quickly recover their sense of efficacy after having experienced setbacks or

breakdowns. On the whole, high self-efficacious subjects attribute their own failures to a lack of effort, insufficient information, or deficient skills that are acquirable. In coping with threatening situations, they select direct ways of action instead of evasive strategies, in order to exercise control over the situation. As a result of an efficacious outlook of transactions and interactions with the environment, they get personal accomplishments, and consequently they reduce stress and diminish vulnerability to develop depressive symptoms.

Conversely, individuals who have serious doubts about their own capabilities concentrate on their personal deficits, on the difficulties they will encounter and on the adversity they have to face, instead of executing plans of action with the aim of performing successfully. In other words, they seem to be worse people to copeduring hard times. In the face of difficulties low self-efficacious individuals give up quickly and are low to recover their sense of self-efficacy after the experience of failure or setbacks. These persons lose promptly the faith in their capabilities, since they attribute their own insufficient performance to a lack of aptitude in executing the tasks, instead of a lack of effort or information. Bandura (1995) sustains that low self-efficacious individuals are easily the victim of stress and its consequences such as depression.The basic idea behind the Self-Efficacy Theory is that performance and motivation are in part determined by how effective people believe they can be (Redmond, 2010; as cited in Redmond& Willis, 2013).

**Sources of Self-Efficacy**

Bandura (1977) outlined four sources of information that individuals employ to judge their efficacy, and they are: performance outcomes (performance accomplishments), vicarious experiences, verbal persuasion, and physiological feedback (emotional arousal). These components help individuals determine if they believe they have the capability to

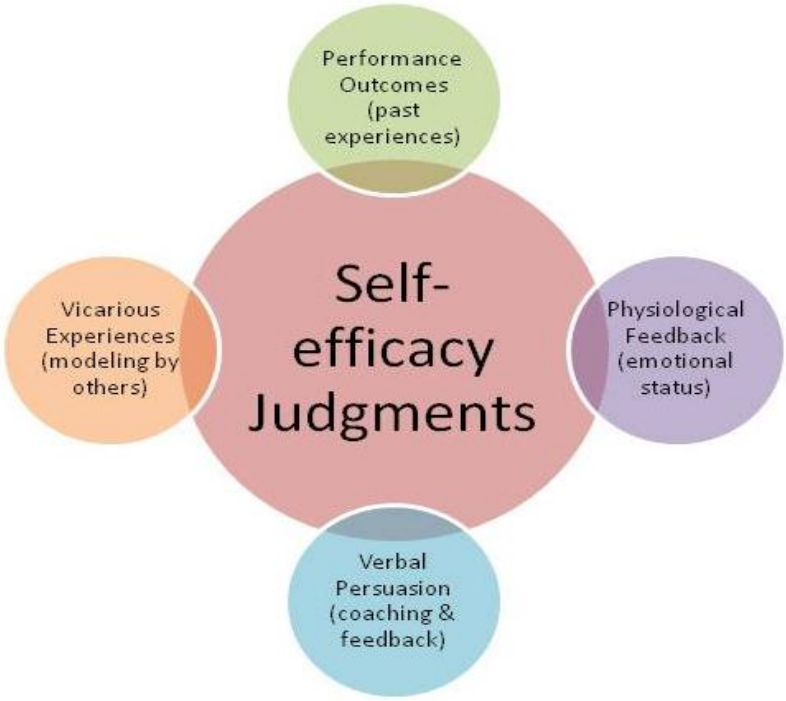
accomplish specific tasks. Williams and Williams in Redmond& Willis (2013) note that "individuals with high levels of self-efficacy approach difficult tasks as challenges to master rather than as threats to be avoided" (p. 455).

1. **Performance Outcomes**– According to Bandura, as cited in Redmond& Willis (2013). Performance outcomes, or past experiences, are the most important source of self-efficacy. Positive and negative experiences can influence the ability of an individual to perform a given task. If one has performed well at a task previously, he or she is more likely to feel competent and perform well at a similarly associated task. For example, if one performed well in a training workshop they are more likely to feel confident and have high self-efficacy in another training workshop. The individual's self-efficacy will be high in that particular area, and since he or she has a high self-efficacy, he or she is more likely to try harder and complete the task with much better results. The opposite is also true. If an individual experiences a failure, self-efficacy is likely to be reduced. However, if these failures are later overcome by conviction, it can serve to increase self-motivated persistence when the situation is viewed as an achievable challenge.
2. **Carious Experiences**– People can develop high or low self-efficacy vicariously through other people's performances. A person can watch another perform and then compare his own competence with the other individual's competence. If a person sees someone similar to them succeed, it can increase their self-efficacy. However, the opposite is also true; seeing someone similar fail can lower self-efficacy. An example of how vicarious experiences can increase self-efficacy in the work place is through mentoring programs, where one individual is paired with someone on a similar career path who will be successful at raising the individual's self-efficacy beliefs. An example of how the opposite can be true is in a smoking cessation program, where, if individuals witness

several people fail to quit, they may worry about their own chances of success, leading to low self-efficacy for quitting (Redmond& Willis 2013).

3. **Verbal Persuasion–** According to Redmond& Willis (2013) self-efficacy is also influenced by encouragement and discouragement pertaining to an individual's performance or ability to perform; such as a manager telling an employee, "You can do it. I have confidence in you." Using verbal persuasion in a positive light leads individuals to put forth more effort; therefore, they have a greater chance at succeeding. However, if the verbal persuasion is negative, such as a manager saying to the employee, "This is unacceptable! I thought you could handle this project" can lead to doubts about one self-resulting in lower chances of success. Also, the level of credibility directly influences the effectiveness of verbal persuasion; where there is more credibility there will be a greater influence. In the example above, a pep talk by a manager who has an established, respectable position would have a stronger influence than that of a newly hired manager. Although verbal persuasion is also likely to be a weaker source of self-efficacy beliefs than performance outcomes, it is widely used because of its ease and ready availability.
4. **Physiological Feedback(emotional arousal) –** People experience sensations from their body and how they perceive this emotional arousal influences their beliefs of efficacy. Some examples of physiological feedback are: giving a speech in front of a large group of people, making a presentation to an important client and taking an examination All of these tasks can cause agitation, anxiety, sweaty palms, and/or a racing heart. Although this source is the least influential of the four, it is important to note that if one is more at ease with the task at hand they will feel more capable and have higher beliefs of self-efficacy (Redmond& Willis 2013).

**Figure 2.2: Self Efficacy sources of Information**




Redmond& Willis (2013)

**Dimensions of Self-Efficacy Beliefs: Level, Generality and Strength**

Self-efficacy beliefs vary on three dimensions that are important for their implications in analysing human functioning or performance, namely level, generality, and strength. The **level** dimension refers to self-judgments or perceived self-efficacy with regard to task's difficulty level, which may vary from simple tasks and extended to moderate ones, or even to the most tasking performance into a specific area or domain of functioning. The **generality** dimension concerns the fact that people may judge themselves to be efficacious only in certain domains of functioning or across a wide range of activities and situations. The other dimension is the **strength**, which determines whether a person will persevere in his/her coping efforts despite mounting difficulties. The stronger the perceived self-efficacy, the

more likely are persons to select challenging tasks, the longer they persist at them, and the more likely they are to perform them successfully (Bandura, 1986).

## 2.6 Empirical Studies/ Review of Related Studies

In an early study with university students, Schutte and Malouff (2002) provided beginning university students with information and skills training related to emotional intelligence as part of an introductory university class. The students who received emotional intelligence training scored significantly higher on trait or typical emotional intelligence at the end of the term and were more likely to complete their first year of university than control students with no intervention. The retention rate for the students in the emotional intelligence training group was 98%, while that of the students in the comparison group was 87%.

Parveen, *et al*. (2012), investigated emotional intelligence and academic achievement of male and females adolescent students of district of Budgam. The sample for the study was 200 adolescent higher secondary students [Male=100, Female =100]. For the measurement of emotional intelligence, Hayde's emotional intelligence scale was employed and for academic achievement, examination results of previous two classes of the sample subjects were taken as their academic achievement. The analysis of the data showed that there was no significant difference between male and female adolescent students on composite score of their emotional intelligence. It has also been found that male and female adolescents do not differ significantly on academic achievement.

Adeyemo&Ogunyemi (2010)investigated the interactive and relative effects of emotional intelligence and self-efficacy on occupational stress of University academic staff. It made use of simple random sampling in selecting 300 academic staff from all the eight

faculties of the institution. The study sample responded to three valid and reliable instruments. Emotional intelligence scale, General perceived self-efficacy scale and occupational stress scale. The results indicated that the two independent variables, when taken together, were effective in predicting occupational stress. Each of the variables contributed significantly to the prediction of occupational stress with self-efficacy making higher contribution to the prediction of occupational stress.

Mishra (2008) carried out a research titled: A Study of the Effect of Emotional Intelligence on Academic Achievement of Jaipur Senior Secondary Students. The researcher investigated the effect of Emotional Intelligence on Academic Achievement of senior secondary students. A sample of 1000 students was drawn adopting random-cum cluster sampling technique from Government senior secondary schools of Jaipur district, Rajasthan. Survey method was used to collect the data. The study revealed that there is a positive effect of emotional intelligence on academic achievement of total group students and especially girl students.

OgundokunandAdeyemo (2010) examined the moderating influence of emotional intelligence, age and academic motivation on academic achievement of secondary school students. The study adopted a survey research design. The participants in the study were 1563 (male = 826, female = 737) secondary school students from Oyo state, Nigeria. Their age ranged between12 years and 17 years with mean age of 15.96 years. Two valid and reliable instruments were used to assess emotional intelligence and academic motivation while achievement tests on English Language and Mathematics were used as a measure of academic achievement. Descriptive statistics, Pearson's product moment correlation and hierarchical regression were used to analyse the data. The result revealed that Emotional

Intelligence, Age and Academic Motivation were potential predictors of academic achievement.

Zajacova, Lynch, and Espenshade (2005), in their study on self-efficacy, tress, and academic success in college, investigated the joint effects of academic self-efficacy and stress on the academic performance of 107 non-traditional, largely immigrant and minority, college freshmen at a large urban commuter institution. The researchers developed a survey instrument to measure the level of academic self-efficacy and perceived stress associated with 27 college-related tasks. Both scales have high reliability, and they are moderately negatively correlated. Researchers estimated structural equation models to assess the relative importance of stress and self-efficacy in predicting three academic performance outcomes: first-year college GPA, the number of accumulated credits, and college retention after the first year. The results suggest that academic self-efficacy is a more robust and consistent predictor than stress of academic success.

Recent evidence has been provided by cross-cultural research suggesting the universality and uni-dimensionality of a sense of generalized self-efficacy. Schwarzer (2002) found that there is an optimistic sense of personal competence that exhibits variations in strength depending on the country and gender. This study which demonstrated the uni-dimensionality of the construct across 25 countries around the world-, showed that a sample of Costa Rican students were the ones who reported the highest rate in perceived general self-efficacy, whereas a sample of Japanese were the ones who perceived themselves as less efficacious.

Adeoye, H. and Emeke,E.A. (2010)investigated the impact of emotional intelligence and self-efficacy training on academic achievement in English Language of students in

Senior Secondary Schools. The sample consisted of 270 participants drawn from nine co-educational schools across three selected educational zones. Simple random sampling technique was used to select three schools from each zone among those that met the inclusion criteria set for the study. Adopting a pre-test, post-test, control group quasi-experimental design, one null hypothesis was tested at 0.05 level of significance. Using Emotional Intelligence Training Package (EIPTA), Self-Efficacy Training Package (SEPTA) and English Language Achievement Test (r=0.73), the administration of interventions lasted for eight weeks. Data were analysed using ANCOVA and the Duncan post hoc test to examine the impact of emotional intelligence and self-efficacy training on the achievement of senior secondary school students in English language. There was a significant main effect of treatment on students' academic achievement in English language ($F(2,269) = 364.447$, $P<0.05$). Students exposed to Emotional intelligence training ($x=42.81$) performed better in the English language achievement test than those in the Self-efficacy training group ($x=33.88$) and those in the Control group ($x=27.89$).

Hashemi (2011), in his study titled: Emotional Intelligence and Self-Efficacy: A Case of Iranian EFL University Students investigated the relationship between emotional intelligence and sense of self-efficacy belief. The research was set out to investigate this association based on theoretical contentions in the literature which demonstrated that self-efficacy is under the influence of several factors, one of which is the individual's emotional states. To empirically investigate the theorized relationship between self-efficacy and emotional intelligence, 97 EFL university students were selected according to convenience sampling from different universities in Iran. The participants were asked to complete the Bar-On EI test as well as the Learners' Self- Efficacy Survey. The findings of the study indicated

that there is a significant relationship between EFL learners' emotional intelligence and their self-efficacy beliefs.

Aremu and Moyosola (2012), experimentally investigated the effectiveness of Emotional Intelligence Training on teaching self-efficacy of career-frustrated teachers in Ondo State, Nigeria. The sample consisted of 60 randomly selected career-frustrated secondary school teachers (Male=48 & Female 42; Internal Locus of Control =24 & External Locus of control=36) in Ondo state. Teacher Sense of Efficacy Scale, Locus of control of Behaviour scale and demographic data form were administered to the teachers. Analysis of Covariance (ANCOVA) and Multiple Classification Analysis (MCA) were used to analyse the data. The results of the study showed that Emotional Intelligence Training effectively enhanced teaching self-efficacy of career-frustrated teachers. Locus of control significantly influenced teaching self-efficacyoftheexperimentalgroup,whilegenderwasnotsignificant.

A case study research was conducted on Assessment of the Emotional Intelligence of Sri Lankan High School Students by Jayawardenaand Jayawardena (2012). The study focussed to assess the Emotional Intelligence (EI) level of high school students. Specific objectives included assessing of EI sub constructs of students, and analysing the EI of respondents based on gender, and specific subject streams. Genos EI Inventory was used among 90 A-Level students (45 boys, and 45 girls) randomly selected from two Sri Lankan schools. EI level of respondents were further assessed based on gender and their subject streams. Mean values indicated a superior level of EI among boys, in comparison to girls. Science subject stream based students possessed a slightly superior level of EI in comparison

to Commerce, and Arts subject stream based students. High school adolescents have found it difficult to manage their emotional situations.

Similarly, Festus (2012), made a research determine whether there is a significant relationship between emotional intelligence and academic achievement of students in mathematics. To guide the study some research questions and hypotheses were generated. The research design for the study was correlation survey design. The instruments used for the study were the Emotional Intelligence Inventory and Mathematics Achievement Test. The Emotional Intelligence Inventory has reliability coefficient of 0.79 while the Mathematics Achievement Test has reliability coefficient of 0.94. The population for the study was the senior secondary school two students in public schools in the Federal Capital Territory, Abuja, Nigeria. Proportionate stratified sampling was used to select the sample (N=1160) for the study. The responses of the students to the instruments were scored andanalysed using mean and Pearson Product Moment Correlation. To test the level of significance of the correlation coefficient the t-test was used. The result showed that there was a significant low positive relationship between the emotional intelligence of SS2 students and their academic achievement in mathematics. The result also indicated that there was a significant low positive relationship between the emotional intelligence of SS2 male students, SS2 female students, urban school students, and rural school students, and their academic achievement in mathematics.

Ahmed and Elmasri(2012) conducted a study that was aimed to investigate the effect of Self-Awareness education on the self-efficacy and sociotropy autonomy characteristics of nurses in a psychiatric inpatient clinic at Zagazig University Hospitals. The sample was composed of 19 nurses who on the job. Three tools were used for data collection: nurses

characteristics data form, self-efficacy scale, and sociotropy autonomy scale. The study result indicated that the psychiatric nurses self-efficacy was improved at post educational program, a significant difference was observed between the pre-test and post-test mean scores for the total nurses autonomy and total nurses sociotropy ($P<0.05$). However the mean score of total Sociotropy autonomy didn't differ significantly at pre and post educational program ($P=0.488$), and a highly significant correlation was present between total of self-efficacy and total of sociotropy autonomy at pre and post educational program ($P<0.05$).

## 2.7 Summary of Literature Review

In the review of literature concepts of Emotional Intelligence and Academic Self-Efficacy were conceptualised. Goleman's Performance Model of Emotional Intelligence, Salovey and Mayer's Ability Model of Emotional Intelligence, Bar-On Mixed Model of Emotional Intelligence and Bandura's Social Learning Theory were also discussed.Also on studies on Emotional Intelligence and Academic Self-Efficacy were also reviewed.Most studies were done outside Nigeria. It was against this background that this study seeks to investigate so as to serve as the missing link and contribute to the existing literature on emotional intelligence, and academic self-efficacy.

# CHAPTER THREE

# METHODOLOGY

## 3.1 Introduction

This chapter presents the procedure for carrying out this study. Specifically, it describe the research design, area of study, population, sample and sampling technique, instrument for data collection, validity and reliability of the instrument, treatment procedure and method of data collection and analysis.

## 3.2 Research Design

The research wascarried out using quasi-experimental design; Pre-test-Post-test control group. The quasi-experimental design involves the manipulation of one or more independent variables, but there was no random assignment of subjects to conditions (Kolo, 2003). This is because the study would cover fewer participants under control condition. The study took account of a pre-post-test design with both treatment group and a control group. This was considered appropriate because the research involves treatment and control groups respectively. The experimental group were exposed to Emotional Intelligence skills Training, whilethecontrol groupwas exposed to normal conventional classes. The design is symbolically presented as follows:

**Figure 3.1: Pre-test-Post-test Control Group Design**

| | | |
|---|---|---|
| $O_1$ | $X_1$ | $O_2$ |
| $O_3$ | | $O_4$ |

Key:

$O_1$ and$O_3$ refer to the observation before commencement of experiment (pre-test).
$O_2$ and $O_4$refer to the observation after commencement of experiment or treatment (post-test).

$\mathbf{X_1}$ refer to the treatment variable.

## 3.3 Population

The population of the study involved 73,651 students from 413 public senior secondary school students around the eight educational zones in Taraba state (Taraba State Post primary schools Management Board, 2013). The choice of the studentswas guided by the assumption that the students' have attained adolescence age,duringthe intervening period; the students have attained the formal operational stage of cognitive development. Hence they can be taught new kinds of thinking that are abstract; formal and logical.

## 3.4 Sample and Sampling Technique

The sample for this study consists of 120 senior secondary students (SSS2); that were drawn after Academic Self-Efficacy Scale was administered to the students as base line for the selection of the samples. All the students identified and used for this study were sampled from intact classes of senior secondary schools in Jalingo educational zone ofTaraba State.To come up with this sample, the researcher used purposive sampling technique for selection after identification; the subjects wererederived from two schools and divided into two groups of 60 each out of the 120 sampled subjects, 60 students were assigned to the experimental group, and 60 were also assigned to the control group respectively.

**Table 3.1 Distribution of Sample by Schools**

| Name of School | Sample | | Total |
|---|---|---|---|
| | Male | Female | |
| Government Day Senior Secondary School, Central | 30 | 30 | **60** |
| Government Day Senior Secondary School, Model | 30 | 30 | **60** |
| **Total** | **60** | **60** | **120** |

## 3.5 Instrumentation

The Academic Self Efficacy Scale(ASES)prepared specifically forsenior secondary school students, with eighteen items was developed and used to assess students' academic self-efficacy. The instrument items were developed with a guide from: Guide for constructing self-efficacy scale (Bandura, 2006) and Academic Self Efficacy Scale(Gore, 2006). All the Items in Academic Self Efficacy Scale were measured on a 5 point Likert scale; the students were expected to indicate whether they strongly agreed (SA), agreed (A), not sure (NS), disagreed (DA), or strongly disagreed (SD) to statements on the scale.Each response on the Academic Self-efficacy Scale (ASES)was score thus: Strongly Agreed (SA)=5, Agreed (A)=4, Not Sure (NS)=3, Disagreed (DA)= 2, and Strongly Disagreed (SD)=1, and the total scores ranges from 18-90. A mean score of <45 is regarded as low academic self-efficacy, while scores >67 is regarded as high academic self-efficacy. Scores in between 45-67 is regarded as moderate academic self-efficacy.

## 3.6 Pilot Testing

A pilot test was conducted on the instrument developed for data collection at Magami Government Day Secondary School, Jalingo to determine the psychometric properties of the instrument. Pilot testing is usually carried out on members of the relevant population, but not those who will form part of the final sample. This is because it may influence the later behaviour of the subjects if they have already been involved in the research (Huralambos & Holborn, 2000). Twenty instruments were distributed and duly returned, sorted and analysed to establish it reliability. The essence of pilot testing the instrument was to:

- Permit preliminary testing of the hypotheses that leads to testing more precise hypotheses in the main study

- Permit a thorough check of the planned statistical and analytical procedures, giving a chance to evaluate their usefulness for the data.
- Check the question clarity and respondents understanding of the instrument items.

## 3.7 Validity and Reliability of the Instrument

The face validity of the Academic Self-efficacy Scale (ASES) was established by the researcher's supervisors and other experts in the Educational Psychology and Counselling Department, Faculty of Education, Ahmadu Bello University, Zaria. They assessed and found it suitable for measuring the Academic Self Efficacy of Secondary School Students.To establish the reliability of the data collection instruments the researcher analysed the data collected from the pilot test result using Cronbach's alpha with reliability coefficient of 0.93 using SPSS v20 Statistical package was established.

## 3.8 Procedure for Data Collection

This work was carried out three phases as follows: pre-treatment, treatment and post-treatment phases. Before undertaking the research, the researcher obtained a letter of introduction from the Department of Educational Psychology and Counselling of Ahmadu Bello University, Zaria. Copies of the letter were delivered to the Principals of the selected schools for approval.

**PRE-TREATMENT PHASE**:

After the approval, the researcher and his research assistants (school counsellor) established a rapport with the selected students to familiarize themselves with the subjects to ascertain for instance, their academic problems they encounter in school. It was believed that helps the researcher in determining how best to motivate the subjects to acquire the emotional

intelligent skills training. Immediately after assigning the classes to treatment and control groups, the pre-tests were administered to them. In order not to disrupt the school programmes the emotional intelligent skills training done during free periods. The respondents were given 30 minute to complete the inventory. Academic Self-efficacy Scale (ASES) was administered and retrieved in the same day.

**TREATMENT PHASES:**

The Emotional intelligent skills training was carried out using the four component of emotional intelligence that was adopted from Goleman's performance model of emotional intelligence.

**Treatment Programmes**:

Emotional intelligent skills' training was carried out used for training the experimental group. Both the treatment and control groups received conventional teaching method in their normal class setting. Those in the treatment group received instructions on emotional intelligent skills training. All these will be done through the following processes; self-awareness, self-motivation, self-regulation, empathy, and handling relationships or adeptness in relationships. Control group were only exposed to the conventional normal class room teaching. The training sessions of the groups took place during the normal school hours and lasted for the period of six weeks where each session lasted 30 minutes twice a week.

**Treatment sessions**

**Session one**

i. The researcher welcomed the subjects cheerfully and showed appreciation for their cooperation.

ii. The researcher went ahead to explain the meaning, purpose and nature of emotional intelligence skills training to the subjects.

iii. A short but comprehensive drama on different emotional displays was performed by the students with the help of the research assistant. In the drama six students acted as teacher and students where they made wonderful performance that displayed the some basic emotions commonly displayed by teacher and students within the school. The play displayed some basic emotional triggers, feelings, reactions, signals and resolutions. The researcher encouraged the subjects to take role in the drama and deduct lessons from it.

iv. After the display the researcher asked the students to explain what they learnt from the drama and identify some emotions displayed in the drama.

v. The session was ended by summarising the lessons learnt from the drama and the students were encouraged to be emotionally conscious.

**Session Two**

i. The subjects were warmly welcomed by the researcher who always friendly with them.

ii. The session began by each student being given a piece of paper depicting different emotions titled “How do you feel today?” the pictures displayed the following emotions: Jealous, bored, proud, happy, excited, surprised, shy, tired, sad, angry, frightened and sorry. (see Appendix 2)

iii. The researcher asked the subjects to check-in with themselves, label their emotions at that moment and trace the root of the emotions.

iv. Discussions were made on emotional self-awareness and strategies to boost their self-awareness.

v. At this point students were allowed to ask questions or make comments. The session was ended with a take home assignment. "Observe and identify 3 emotional state you experienced within the weekend"

**Session Three**

i. The researcher welcomed the subjects cheerfully and showed appreciation for their cooperation.

ii. The subjects were encouraged to discuss their take home assignment given at previous with other members of the class. The discussions were very interesting.

iii. Discussions were made on accurate self-assessment for the subjects to assess and reflect on their strength and limits in any emotional state they found themselves.

iv. Subjects were allowed to reflect and discuss their strength and weaknesses when they some basic emotions.

**Session Four**

i. The researcher welcomed the subjects cheerfully and showed appreciation for their cooperation.

ii. At this point the researcher introduced the second skill which is self-management skill. The importance of the skill was discussed.

iii. Subjects were asked to mention some of their reactions during anger, jealousy, tiredness, excitement, happiness, and surprise. Based on their responses discussions were made on healthy and unhealthy emotional self-management.

iv. Summary was made to mark the end of the session.

**Session Five**

i. The subjects were warmly welcomed by the researcher who always tries to be friendly with them and introduces the session with a question "what can you do when you are tired?"

ii. Discussions were made on self-control (keeping disruptive emotions and impulses in-check), readiness to act on opportunities (initiative), optimism (persistence in pursuing goals despite obstacles and setbacks) and adaptability (flexibility in handling changes).

iii. Questions and comments from the subjects were entertained.

**Session Six**

i. The subjects were cheerfully welcomed and praised for their punctuality up to this stage. The researcher reminded the students of their previous discussion to serve as introduction to this session.

ii. Discussions were made on the third emotional intelligence skill which is social-awareness (awareness of others feelings, needs and concerns).

iii. Subjects were asked to observe what they learnt and always consider the implications of unhealthy self-management, because these competencies determine how well one can handle relationships.

**Session Seven**

i. The researcher welcomed the subjects cheerfully and showed appreciation for their cooperation.

ii. To continue with the social awareness skill, empathy (sensing others' feelings, perspectives and taking active interest in their concerns) was discussed at this session. Service orientation among students whenever they are charged with group work was also discussed

iii. The sitting arrangements of the class were changed so that students' empathy could be observed at the next session.

**Session Eight**

i. The subjects were warmly welcomed by the researcher was who always friendly with them.

ii. The researcher reminded the students what was learnt from the previous sessions especially, social awareness session.

iii. Discussion ware made on relation management (adeptness at inducing desirable response in other). The researcher explains how ones' behaviour impact on others and how behaviours of others impact on one self. Students' comments and questions were entertained.

**Session Nine**

i. The subjects were cheerfully welcomed and praised for their punctuality up to this stage.

ii. Discussion were made on how to observe and listen to emotional state of other as well as Deeping of their understanding of why carting behaviour arises and how to deal with them in more empathic manner

iii. Discussion ware also made on how to make interaction to other more rewarding and effective. Working with others towards shared goals was also discussed.

**Session Ten**

i. The subjects were cheerfully welcomed and praised for their punctuality up to this stage.

ii. Revisions were made on self-control (keeping disruptive emotions and impulses in-check), readiness to act on opportunities (initiative), optimism (persistence in pursuing goals despite obstacles and setbacks) and adaptability (flexibility in handling changes).

iii. Revisions were made on accurate self-assessment for the subjects to assess and reflect on their strength and limits in any emotional state they found themselves. Subjects were allowed to reflect on their strength and weaknesses during some basic.

**Session Eleven**

i. The researcher welcomed the subjects cheerfully and showed appreciation for their cooperation.

ii. Revisions were made on social-awareness: awareness of others feelings, needs and concerns. Subjects were charged to observe what they learnt and always consider the implications of unhealthy self-management, because these competencies determine how well one can handle relationships.

iii. Revisions were also made on empathy (sensing others' feelings, perspectives and taking active interest in their concerns) and service orientation among students whenever they are charged with group work. And on relation management i.e adeptness at inducing desirable response in other. The researcher explains how once behaviour impact on others and how behaviours of others impact on one self

**POST-TREATMENT PHASE**:

The third phase of data collection in this work was the post-test. At the end of training sessions,with the help of research assistants the Academic self-efficacy scale (ASES) was distributed and retrieved to the students so as to obtain the post-test for both control and the experimental groups in order to ascertain the effects of the treatment. The post-test was done in the eighth week. Theresearcher appreciates the effort of School Authorities and students for the success recorded throughout the programme and informed them that these marked the end of the programme.

## 3.9 Procedure for data Analysis

The data collected using the research instruments were organized and analysed. Thus the data obtained by the researcher were analysed using the Statistical Package for Social Sciences (SPSS version 20). The use of descriptive statistics was employed i.e.: meanand standard-deviation for answering the research questions and data presentation. Whereas, inferential statistics: independent and paired T-tests were used for testing the null hypotheses at: 0.05, level of significance.

# CHAPTER FOUR

# RESULTS AND DISCUSSIONS

## 4.1 Introduction

This chapter presents and discusses the result of the study titled "Effects of Emotional Intelligence Training on Academic Self-Efficacy among Secondary School Students in Taraba State, Nigeria". The demographic data were analysed descriptively. Specifically, frequencies and percentages were used to present the demographic characteristics of participants. The principal data were analysed using the Statistical Package for Social Sciences (SPSS) descriptive and inferential statistics for research questions and hypotheses. The result is presented under the following:

- Descriptive Analysis of the Results
- Inferential Analysis of the Results
- Summary
- Discussions

## 4.2 DescriptiveAnalysis of the Results

### 4.2.1 Demographic Data

The demographic or personal characteristics of the participants are presented in Table 4.1

**Table 4.1 Distribution of Respondents by gender**

| Variable | Frequency | Percentage (%) |
|---|---|---|
| Gender | | |
| Male | 60 | 50% |
| Female | 60 | 50% |
| **Total** | **120** | **100%** |

As seen in Table 4.1 there was equal representation of both male and femalerespondents in experimental and control groups, out of the 120 respondents 60 representing 50%were males, whereas, 60 of the respondents representing the remaining 50% of the total sample were females.

### 4.2.2 Answering Research Questions

**Research Question One:** What are the differences between post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training and those in control group? To answer this research question, the means and standard deviation of both experimental and control groups were computed and their mean differences found as shown in Table 4.2

**Table 4.2Descriptive statistics of post-test score inExperimental and control Groups**

| GROUP (post-test) | N | Mean | Std. Deviation |
|---|---|---|---|
| Experimental Group | 60 | 67.72 | 3.82 |
| Control Group | 60 | 46.53 | 5.45 |

The result presented in Table 4.2 indicate that secondary school students exposed to emotional intelligence training obtained the higher mean scores of 67.72 than those in the control group with mean scores of 46.53. This implies those exposed to emotional intelligence skills training outweigh those in control groupwith mean scores gain of 21.19.

**Research Question Two:** What are the differences between pre-test and post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training? To answer research question two, a comparison was made between the pre-test and the post-test mean of secondary school students and their mean differences were obtained as indicated in Table 4.3.

**Table 4.3: Pre-test and Post-test mean scores and SD of the Experimental group.**

| EXPERIMENTAL GROUP | N | Mean | Std. Deviation |
|---|---|---|---|
| Pre-test | 60 | 44.87 | 1.76 |
| Post-test | 60 | 67.72 | 3.83 |

The result in Table 4.3 indicate the secondary school students exposed to emotional intelligence skills training obtained mean score of 44.87 in the pre- test which is lower the mean score of 67.72 in the post-test, this implies training on emotional intelligence had

significant influenced on those exposed to treatment. This is because the mean gain score of the per-test-post-test was 22.85

**Research Question Three:**What are the differences in Academic Self Efficacy scores of male and female students exposed to treatment? To answer this research question, the mean scores of male and female secondary school students were compared and their mean differences found as shown in Table 4.4

**Table 4.4: Mean scores and SD of male and female students in the Experimental group.**

| Gender | N | Mean | Std. Deviation |
|---|---|---|---|
| Male | 30 | 68.27 | 4.09 |
| Female | 30 | 67.17 | 3.53 |

From Table 4.4 above, it can be observed that the male secondary school students had a mean score of 68.27with standard deviation 4.93, whereas female students had a mean score of 67.72with standard deviation 3.53.Their mean gain differences was 1.1, this implies that no significant difference exist among those exposed to emotional intelligence skills training as measured by Academic Self-efficacy Scale.

## 4.3 Hypotheses Testing

### 4.3.1 Hypothesis One

The null hypothesis states that: There is no significant difference in the post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training and those in control group.

**Table 4.5:t-test analysis of differences in post-test scores of Academic Self Efficacy in the treatment and control Group as measured by ASES**

| Groups (post-test) | N | Mean | SD | df | t-cal | t-crit | P (sig) |
|---|---|---|---|---|---|---|---|
| Experimental Group | 60 | 67.72 | 3.83 | 118 | 24.618 | 1.96 | .000 |
| Control Group | 60 | 46.53 | 5.45 | | | | |

*Significant at P<0.05*

Table 4.5 above reveals that significant difference exist in the mean scores of academic self-efficacy between the respondent of experimental and control groups (t= 24.618, P= .000) and df= 118. The null hypothesis one is therefore rejected.This implies that significant difference exists in post-test scores of academic self-efficacy in treatment and control groups as measured by ASES. This is infavour of the experimental group.

### 4.3.2 Hypothesis Two

The null hypothesis here states that: There is no significant difference between pre-test and post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training.

**Table 4.6: t-test analysis of difference between pre-test and post-test scores of Academic Self Efficacy of students exposed to Treatment**

| Variables | N | Mean | SD | df | t-cal | t-crit | P (sig) |
|---|---|---|---|---|---|---|---|
| Pre-test | 60 | 44.87 | 1.76 | 59 | 37.946 | 1.96 | .000 |
| Post-test | 60 | 67.72 | 3.83 | | | | |

*Significant at P<0.05*

Table 4.6 above, reveals that (t= 37.946, P= .000). Those exposed to Emotional Intelligence skills Training recorded greater improvement on academic self-efficacy than when not given treatment. As a result of this, the null hypothesis which states that: There is no significant difference between pre-test and post-test scores on Academic Self Efficacy of secondary school students exposed to Emotional Intelligence skills training, is hereby Rejected. This is in favour of treatment group.

### 4.3.3 Hypothesis Three

There is no significant difference in Academic Self Efficacy scores of male and female students exposed treatment.

**Table 4.7: T-test analysis between male and female respondents in the Experimental group**

| Gender | N | Mean | SD | df | t-cal | t-crit | P (sig) |
|---|---|---|---|---|---|---|---|
| Male | 30 | 68.27 | 4.09 | 58 | 1.114 | 1.96 | .270 |
| Female | 30 | 67.17 | 3.53 | | | | |

*Significant at P<0.05*

Details from Table 4.7 above showed that (t= 1.114, P= .270). This means that there is no significant difference between male and female secondary school students who were exposed to emotional intelligence training. Therefore, the hypothesis which says there is no significant difference in Academic Self Efficacy scores of male and female students exposed treatment is therefore retained.

## 4.4 Summary of Findings

The following were the major findings of the analyses:

- Emotional intelligence skills training had effect on Academic self-efficacy (t-24.618, P= 0.000) of the respondents in favour of the experimental group.
- Emotional intelligence skills' training was effective in improving academic self-efficacy of secondary school students as can be observed in the difference between Pre-test and Post-test(t= 37.946, P= .000). The difference is in favour of Post-test.
- There was no gender difference in the effect of emotional intelligence skills training on academic self-efficacy of respondents; hence the training had similar effect for both male and female.

## 4.5 Discussion of Finding

The findings of this study revealed that significant differences exists in Emotional intelligence skills training which had effects on Academic self-efficacy of the respondents in favour of the experimental group. This implies that emotional intelligence training is effective in improving academic self-efficacy among secondary school students. The finding of this study is in line with the result obtained by Aremu and Moyosola (2012), whofound thatemotional intelligence training effectively enhanced teaching self-efficacy of career frustrated teachers in Ondo State, Nigeria. The result is also consistent with the results revealed by Hashemi (2011) who investigated the relationship between emotional intelligence and self-efficacy and found that a significant relationship between learners' emotional intelligence and self-efficacy.

It was also presented by Mishra (2008), that there is a positive effect of emotional intelligence on academic achievement of senor secondary school students. Similarly,

Ogundokun and Adeyemo (2010) examined the moderating influence of emotional intelligence, age and academic motivation on academic achievement of secondary school students and the result disclosed that emotional intelligence, age and academic motivation were potential predictors of academic achievement. Moreover, a result of a research on the relationship between Emotional Intelligence and Academic Achievement of Senior Secondary School Students in the Federal Capital Territory revealed that there was a significant low positive relationship between emotional intelligence of SS2 students and their academic achievement in mathematics (Festus, 2012).

Social learning theorists suggest that individual sense of confidence regarding the performance of specific tasks and, consequently, one's sense of self efficacy may influence several aspects of behaviour that are important to learning. These aspects can include choice of activities, effort, persistence, learning, and achievement (Zimmerman & Schunk, 2003).Emotional intelligence skills consists of adaptive emotional functioning involving inter-related competencies relating to perception, understanding, utilising and managing emotions in the self and others. Researchers in diverse field shave studied emotional intelligence and found the construct to be associated with a variety of intrapersonal and interpersonal factors such as mental health, relationship satisfaction, and academic/work performance.

The findings of null hypothesis two revealedthat Emotional intelligence skills' training was effective in improving academic self-efficacy of secondary school students as can be observed in the difference between Pre-test and Post-test. The difference is in favour of Post-test. Consequently, what was interesting here is that from the literature reviewed so far, no attempt was made to isolate the four competencies of emotional intelligence to observe their effects on academic self-efficacy or any other variables of its kind; nevertheless,

Ahmed and Elmasri (2012) conducted a study on effects of self-awareness education on self-efficacy and sociotropy characteristics of Nurses in a psychiatry clinic. With a similar result with the findings of the current study and it was concluded that self-awareness training had a positive effects on the development of self-efficacy. It was recommended that self-awareness education should be applied as continuing education for nurses. Hence, the findings of the current study are in line with their findings by confirming the positive effects of self-awareness of the development of self-efficacy. Duval and Silvia (2002) were of the view that success and failure attribution are moderated by self-awareness and by ability to improve. When self-focus is high success is attributed internally; failure is attributed internally when people improve; failure is attributed externally when people cannot improve and these attributions affect state of self-esteem and by implication self-awareness affects academic self-efficacy. Self-management skills have been successfully used for a variety of emotional and behavioural problems; self-management during their periods of study in the universities improves students' creative abilities and academic success. Self-management practices have potential mediation effect on self-efficacy and performance (Yu, 2013).

Self-regulation allows you to select the particular emotion you wish to experience at a given moment, in a particular situation. This process takes a lot of practice and a considerable amount of self-control, but mastering it will allow one to take ownership of emotions, and free one from being anyone else's emotional victim because one alone will manage emotional reaction. It needs to be noted, however, that self-regulation is more than merely "stuffing" or ignoring negative emotions. It is an active process that takes considerable training and focus to accomplish. Students with higher self-efficacy expend greater effort, exhibit more persistence and demonstrate greater resilience in the face of adverse situations. As a result of these influences, self-efficacy beliefs are strong determinants of the level of accomplishment

(Bandura, 1997; Pajares, 1996), and therefore contribute tremendously to intellectual development which leads to academic success (Bandura, 1995).

This finding has been confirmed across a number of experimental and correlational studies involving students of different ages (Bandura, 1997; Pintrich & Schunk, 2002). Also, in a correlational study conducted by Linnenbrink and Pintrich (2002), It was found that self-efficacy is positively related to student cognitive engagement and their use of self- regulatory strategies as well as general achievement as indexed by grades (Pintrich, 2000b; Pintrich & De Groot, 1990; Wolters, Yu, & Pintrich, 1996). Lastly, further evidence exists in the research literature that confirms Schunk's hypothesis that students who have positive self-efficacy beliefs are more likely to choose to continue to take more difficult courses over the course of schooling.Students' involvement and participation in school depend in part on how much the school environment contributes to their perceptions of autonomy and relatedness, which in turn influence self-efficacy and academic achievement. Although parents and teachers contribute to feeling of autonomy and relatedness, peers become highly significant during adolescence. The peer group context enhances or diminishes students' feelings of belonging and affiliation (Hymel, Comfort, Schonert-Reichl, & McDougall, 1996).

Self-Efficacy focuses on the individual and refers to general social influences, such as peer influences, media, social norms, and support (Bandura, 1982). Therefore, the findings of hypothesis 4 is not strange because the subjects in the treatment group were trained on social awareness and the result revealed that there is a significant effects of social awareness on academic self-efficacy of the subjects. Moreover, Relationship management skills are used by people to inspire, influence and develop other people. These skills are important for children, adults and professionals. Relationship management skills focus on the power of influence in relations with others.

The findings of null hypothesis threeshowsthat there was no gender difference in the effect of emotional intelligence skills training on academic self-efficacy of respondents; hence the training had similar effect for both male and female. The findings of this study was in line with the findings of Festus (2012) where the result of the study indicated that there was a significant low positive relationship between the emotional intelligence of SS2 male students, SS2 female students, urban school students, and rural school students, and their academic achievement in mathematics. It was therefore concluded that apart from cognitive factors, emotional intelligence of students also affects their academic achievement in mathematics.

Moreover, the work of Parveen, et al. (2012), revealed that the results of previous two classes of the sample subjects were taken as their academic achievement. The analysis of the data showed that there was no significant difference between male and female adolescent students on composite score of their emotional intelligence. It has also been found that male and female adolescents do not differ significantly on academic achievement.

# CHAPTER FIVE

# SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

## 5.1 Summary

The purpose of this study was to investigate the effect of emotional intelligence skills training on academic self-efficacy among senior secondary school students. The research was carried out based on three objectives, three research questions, and three hypotheses in chapter one, which were answered and tested accordingly. In chapter two the concept of emotional intelligence and Academic self-efficacy were discussed. Theoretical framework and literature related to the topic were well reviewed. However, chapter three described the type of research design which is Quasi-experimental pre-test, post-test control group design. The population of this study was 73,651 secondary school students whereas 120 students were purposively sampled and used for the study. The instrument used for data collection was, Academic Self Efficacy Scales (ASES). Data were analysed using mean, standard deviation and T-test. The findings reveals that Emotional intelligence skills training had effect on Academic self-efficacy of the respondents in favour of the experimental group(t=24.618, P=.0001); Emotional intelligence skills' training was effective in improving academic self-efficacy of secondary school students as can be observed in the difference between Pre-test and Post-test (t= 37.946, P= .000). The difference is in favour of Post-test;And There was no gender difference in the effect of emotional intelligence skills training on academic self-efficacy of respondents; hence the training had similar effect for both male and female (t=1.114, P=.270). It was recommended that School Principals, counsellors, Psychologist and Subject teachers should be exposed to Emotional intelligence skills

(emotional self-awareness, self-management, social-awareness and relationship management) in re-addressing students with academic problems.

## 5.2 Conclusions

Emotional intelligence skills training was found to be effective technique that can be used by teachers, counsellors, curriculum planners and parents to improve the academic self-efficacy among students irrespective of their gender. Difference between experimental group and the control group was noticed due to treatment. Emotional intelligence skills training was found to be effective in increasing academic self-efficacy among secondary school students.

## 5.3 Recommendations

From the findings and conclusion of this study, the following recommendations are hereby made:

1. School Principals, counsellors, Psychologist and Subject teachers should be exposed to Emotional intelligence skills (emotional self-awareness, self- management, social awareness and relationship management) in re-addressing students with academic problems.
2. Emotional intelligence training should be inculcated into the school curriculum so as to develop in students competent or efficacy in their academic endeavour.
3. Seminars, workshops and symposium should be organised to train teachers on emotional intelligence skills to solve students' academic problems in schools.

## 5.4 Suggestion for Further Research

In light of this study the following suggestions were made:

1. This study was carried out in public schools in Taraba State. It is recommended that a similar study should be carried out in other states to whether same result will be obtained so that generalization could be made about the findings in all secondary schools in Nigeria.
2. Future research should also investigate the effects of Emotional Intelligence on academic self-efficacy across the academic years.
3. This study was conducted upon secondary school Students with low academic self-efficacy. Similar studies can be conducted upon Primary School Pupils, University Undergraduate Students and Teachers.
4. The results of this study are inconclusive regarding possible effects of emotional intelligence trainingon academic self-efficacy. Those who choose to further explore the possible interactions between emotional intelligence and academic self-efficacy, status should be advised to select different measures than those chosen for this study. It would also be advisable to select a larger and more diverse sample.

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# Appendixes

## Appendix1

Dear Respondent,

This study intended to find out the effect of Emotional Intelligence Training on AcademicSelf-Efficacy of Secondary School Students. The study has been instituted as an Academic study. Please, respond to the following items objectively as possible. The confidentiality of your responses will be strictly maintained, for that your name is not required.

Thank you in advance.

**SECTION 'A'**

Gender: Male ☐ Female ☐

Name of School……

**INSTRUCTION**

This questionnaire measures Academic self-efficacy which is your belief that you can handle situations so as to successfully attain your goals. Below is a list of statement you will probably agree or disagree with. Please read carefully and indicate by ticking (√) to show the extent each statement describes your feelings.

**Academic Self-Efficacy Scale (ASES)**

Keys: SA (Strongly agree) A (agree) U (undecided) D (disagree) SD (strongly disagree)

| S/n | STATEMENT | SA | A | U | D | SD |
|---|---|---|---|---|---|---|
| 1 | I can remain calm when facing difficult academic tasks. | | | | | |
| 2 | When I set academic targets for myself, I am confident I can achieve them. | | | | | |
| 3 | If something looks too complicated, I will not even bother to try it. | | | | | |
| 4 | I avoid trying to learn new things when they look too difficult to me. | | | | | |
| 5 | Failure just makes me try harder. | | | | | |
| 6 | I feel insecure about my ability to succeed in academic endeavours. | | | | | |
| 7 | When I make plans, I am certain I can execute them. | | | | | |
| 8 | I believe I can cope with the demand of my course of study. | | | | | |
| 9 | I have a lot of confidence in my ability to excel in my studies. | | | | | |
| 10 | I believe I can make use of my study time wisely. | | | | | |
| 11 | I keep trying to learn difficult things because I know I can make it. | | | | | |
| 12 | I give up easily on things I consider impossible to do. | | | | | |
| 13 | When something doesn't work for me, I try another way. | | | | | |
| 14 | I always try to know what went wrong so that I can correct it. | | | | | |
| 15 | I can withstand any difficult academic task. | | | | | |
| 16 | I am always late to class. | | | | | |
| 17 | I find it difficult to cope with my studies. | | | | | |
| 18 | I make sure I have enough time for study and leisure. | | | | | |

**Appendix 2**

**Facial Expression of Emotions**



## Appendix 3

### Reliability of Academic Self-Efficacy Scale (ASES)

**Scale: ALL VARIABLES**

**Case Processing Summary**

| | | N | % |
|---|---|---|---|
| Cases | Valid | 20 | 100.0 |
| | Excluded[a] | 0 | .0 |
| | Total | 20 | 100.0 |

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

**Reliability Statistics**

| Cronbach's Alpha | Cronbach's Alpha Based on Standardized Items | N of Items |
|---|---|---|
| .926 | .962 | 18 |

**Item Statistics**

| | Mean | Std. Deviation | N |
|---|---|---|---|
| I can effectively persuade others to adopt my point of view without coercing them | 4.9500 | .22361 | 20 |
| If something looks too complicated, I will not even bother to try it. | 4.8000 | .69585 | 20 |
| I avoid trying to learn new things when they look too difficult to me. | 4.8500 | .67082 | 20 |
| Failure just makes me try harder. | 4.8000 | .89443 | 20 |
| I feel insecure about my ability to succeed in academic endeavours. | 4.8000 | .69585 | 20 |
| When I make plans, I am certain I can execute them. | 4.9000 | .44721 | 20 |
| I believe I can cope with the demand of my course of study. | 4.9500 | .22361 | 20 |
| I have a lot of confidence in my ability to excel in my studies. | 4.9500 | .22361 | 20 |
| I believe I can make use of my study time wisely. | 4.9500 | .22361 | 20 |
| I keep trying to learn difficult things because I know I can make it. | 4.9500 | .22361 | 20 |
| I give up easily on things I consider impossible to do. | 4.8500 | .67082 | 20 |
| When something doesn't work for me, I try another way. | 4.8500 | .67082 | 20 |
| I can withstand any difficult academic task. | 4.9500 | .22361 | 20 |
| I am always late to class. | 4.8000 | .69585 | 20 |
| I find it difficult to cope with my studies. | 4.6500 | 1.08942 | 20 |
| I make sure I have enough time for study and leisure. | 4.9500 | .22361 | 20 |

**Summary Item Statistics**

| | Mean | Minimum | Maximum | Range | Maximum / Minimum | Variance | No of Items |
|---|---|---|---|---|---|---|---|
| Item Means | 4.872 | 4.650 | 4.950 | .300 | 1.065 | .008 | 18 |

## Appendix 4

### Population Distribution of Secondary Schools Students (SS2)

| S/N | ZONE | NO. OF SCHOOLS | NO. OF STUDENTS |
|---|---|---|---|
| 1 | BALI | 54 | 7799 |
| 2 | DONGA | 47 | 7218 |
| 3 | GEMBU | 56 | 8237 |
| 4 | JALINGO | 66 | 18586 |
| 5 | KARIM | 33 | 6249 |
| 6 | TAKUM | 62 | 9323 |
| 7 | WUKARI | 50 | 9571 |
| 8 | ZING | 45 | 6668 |
| | **TOTAL** | **413** | **73651** |

Source: Taraba State Post primary schools Management Board (2013)

## Appendix 5

## SPSS OUTPUTS

### T-Test hypo 1

**Group Statistics**

| | GROUP | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| SCORE_IN_ASES | EXP ASES | 60 | 67.7167 | 3.83159 | .49466 |
| | CONTROL ASES | 60 | 46.5333 | 5.45386 | .70409 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| SCORE_IN_ASES | Equal variances assumed | 11.161 | .001 | 24.618 | 118 | .000 | 21.18333 | .86048 | 19.47935 | 22.88732 |
| | Equal variances not assumed | | | 24.618 | 105.832 | .000 | 21.18333 | .86048 | 19.47731 | 22.88935 |

## T-Test hypo 2

**Paired Samples Statistics**

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | pretest_scores_ASES | 44.8667 | 60 | 1.76084 | .22732 |
| | post_test_scores_ASES | 67.7167 | 60 | 3.83159 | .49466 |

**Paired Samples Test**

| | | Paired Differences | | | | | t | df | Sig. (2-tailed) |
|---|---|---|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | | | | |
| | | | | | Lower | Upper | | | |
| Pair 1 | pretest_scores_ASES - post_test_scores_ASES | 22.85000 | 4.66442 | .60217 | 24.05495 | 21.64505 | 37.946 | 59 | .000 |

## T-Test hypo 3

**Group Statistics**

| | GENDER | N | Mean | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| post_test_scores_ASES | MALE | 30 | 68.2667 | 4.09317 | .74731 |
| | FEMALE | 30 | 67.1667 | 3.53391 | .64520 |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | 95% Confidence Interval of the Difference | |
| | | | | | | | | | Lower | Upper |
| post_test_scores_ASES | Equal variances assumed | .170 | .681 | 1.114 | 58 | .270 | 1.10000 | .98729 | .87629 | 3.07629 |
| | Equal variances not assumed | | | 1.114 | 56.792 | .270 | 1.10000 | .98729 | .87718 | 3.07718 |