

A Study of the Emotional Intelligence levels of first year student teachers at the Central University of Technology, Free State

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DECLARATION

Student no. **211151572**

I hereby declare that "Emotional Intelligence levels of first year student teachers at the Central University of Technology, Free State" is my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references. This dissertation has not been submitted to another university before.

A handwritten signature in black ink, consisting of a stylized 'J' and 'B' followed by a long horizontal flourish.

Signature
(JAG Beukes)

Date: October 2014

DECLARATION

I, Maria Petronella Roodt, declare that I edited the dissertation titled *A Study of the Emotional Intelligence levels of 1st year student teachers at the Central University of Technology, Free State* by JAG Beukes. I have the following qualifications: MA (Applied Linguistics) and an MA (Higher Education Studies) and have extensive experience in the editing of dissertations.

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LIST OF ABBREVIATIONS

BEd (FET)	- Bachelor of Education - Further Education and Training Phase
CUT	- Central University of Technology, Free State
EI	- Emotional Intelligence
EQ-I	- Emotional Quotient Inventory
EQ-i: YV	- Bar-On Emotional Quotient Inventory: Youth Version
FET	- Further Education and Training
HPCSA	- Health Professions Council of South Africa
IQ	- Intelligence Quotient
MEIS	- Multi-Factor Emotional Intelligence Scale
MSCEIT	- Mayer-Salovey-Caruso Emotional Intelligence test
REQV	- Relative Education Qualification Value
SA	- South Africa
SEL	- Social-Emotional Learning
SPSS	- Statistical Package for the Social Sciences
TEIQue	- Trait Emotional Intelligence Questionnaire
TEIQue-SF	- Trait Emotional Intelligence Questionnaire – Short Form
UCL	- University College London
UK	- United Kingdom
WHO	- The World Health Organization

ABSTRACT

The goal of the education system is to increase cognitive capacity, competencies and skills such as acquiring new knowledge, recalling facts and figures and applying this information to reasoning, understanding and solving problems. To achieve all these competencies teachers and lecturers traditionally use Bloom's Taxonomy of Learning Domains. The competencies and skills as described by Bloom are measured by standardised intelligence tests. Society takes it for granted that the higher a person's IQ (Intelligence quotient), the better he/she will perform at school level.

But what happens after school? While cognitive intelligence may be able to predict quite accurately how one will perform at school, it predicts very little else in the way of social performance and interaction after school. As such, IQ is a rather weak predictor of performance in interpersonal relations, at work and in coping with a wide variety of challenges that surface in the course of one's life on a daily basis (Wagner, 1997). Some writers makes a strong case that people owe their success in their professional careers to much more than mere IQ. Wagner reviews data and offers convincing cases to show that an IQ above 110, fails as an accurate predictor of success in a career. In other words, you need to be smart enough to handle the cognitive complexity of the information you need for a given role or job, be it engineering, law, medicine, or business. But after reaching this threshold of "smart enough," your intellect makes little difference. Wagner concludes that IQ alone predicts just 6 to 10 percent of career success. It has been argued for over a century, as early as Charles Darwin that something is missing from the human performance formula that is needed to explain why some people do very well in life while others do not, irrespective of how cognitively

intelligent they may be. One of the first attempts by psychologists to identify additional predictors of performance in other aspects of life was made by Edward Thorndike (1920) when he described "social intelligence" as the ability to perceive one's own and others' internal states, motives and behaviours, and to act towards them appropriately on the basis of that information.

Mayer, Salovey and Caruso (2000:273) state that emotional intelligence includes "the ability to perceive, appraise and express emotion accurately and adaptively; the ability to understand emotion and emotional knowledge; the ability to access and generate feelings where they facilitate cognitive activities and adaptive action; and the ability to regulate emotions in oneself and others". All of these skills are necessary for the teacher to function successfully in the classroom.

The question is: ***does the modern teacher have the necessary EI skills?***

This dissertation explores and describes the level of Emotional Intelligence of the first year student teachers at the Central University of Technology, Free State. Seventy-nine (79) students were tested during 2012 and 2013 to establish whether they have the necessary levels of Emotional Intelligence to ensure that they will be able to become good classroom leaders upon entering the teacher's profession. Traits of Emotional Intelligence were assessed by means of the Trait Emotional Intelligence Questionnaire (TEIQue).

The study investigates the Emotional Intelligence attributes and skills that a teacher will need to become a good classroom leader. The study examines the four main areas tested in the TEIQue, namely the well-being, the emotionality, the sociability and the self-

control of the student teacher.

Findings suggest that the student teachers still need to develop their emotional intelligence as their results fall in the lower level of the acceptable range.

Key terms

Emotional intelligence (EI), trait emotional intelligence, student teacher, classroom leader, Trait Emotional Intelligence Questionnaire, well-being, self-control, emotionality, sociability.

Emotions are signals, they contain information about us, people and our world. Emotional Intelligence helps learners and teachers read these signals and leverage their power, resulting in better relationships and improved classroom performance.

Dr. Peter Salovey

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CHAPTER 1: INTRODUCTION

1.1 Introduction

One of the goals of an education system, and perhaps the most commonly accepted, is to increase cognitive capacity, competencies and skills such as acquiring new knowledge, recalling facts and figures and applying this information to reasoning, understanding and solving problems (Parker, Saklofske, Wood & Collin, 2009). For this purpose teachers often use Bloom's Taxonomy of Learning Domains. Some of these competencies and skills can be measured by standardised intelligence tests. Previously it was taken for granted that the higher a learner's Intelligence Quotient (IQ), the better his/her performance at school level would be.

But what happens after school? While cognitive intelligence may be able to predict quite accurately how one will perform academically, it predicts very little else in terms of human performance, having completed the school career. As such, IQ is a rather weak predictor of performance in interpersonal relations at work and in coping with a wide variety of challenges that are likely to surface on a daily basis in the course of one's life (Wagner, 1997). Gladwell (2008) presents a strong case that people owe their success in life to a lot more than mere IQ. He reviews data and offers convincing cases to show that an IQ higher than the range of 110-115, is not a reliable predictor of success in a career. According to him, an IQ of about 115 will adequately equip a person to handle the cognitive complexity of the information one needs for a given role or job and to be successful, be it in engineering, law, medicine, or business. However, after reaching this threshold of "smart enough," your intellect makes little difference. Gladwell (2008) concludes that IQ

alone predicts only 6 to 10 percent of career success. He cites the example of Robert Oppenheimer, the American physicist that headed the American effort to build the Atomic bomb. Oppenheimer was regarded as a genius in his job, but during his whole career he had difficulty with depression and mood swings which complicated social interaction with other people. This problem, despite his brilliance, seemed to have impacted negatively on the successful execution of his work at times.

For over a century, from as early as Charles Darwin, researchers realised that something is missing from the human performance formula to adequately explain why some people do very well in life while others do not, irrespective of how academically intelligent they may be. One of the first attempts by psychologists to identify additional predictors of success other than IQ, was made by Edward Thorndike (1920). He described "social intelligence" as the ability to perceive one's own and others' internal states, motives and behaviours, and to act towards them appropriately on the basis of that information. This can be seen as the basis from which emotional intelligence (EI) originated. The most prominent difference between emotional intelligence (EI) and social intelligence (SI) seems to be EI is about self-mastery, while SI is about the ability to lead and inspire other people through your ability to influence, empathise and care (Bar-On, 1997).

1.2 Research Question

This study has as focus the investigation of the Emotional Intelligence levels of First-year student teachers at the Central University of Technology, Free State (CUT) to establish whether

their Emotional Intelligence (EI) is on a sufficiently developed level to enable them to become good classroom leaders.

In order to answer the above-mentioned question, the researcher looked at the following questions:

- What is Emotional Intelligence?
- What is the impact of EI on teaching?
- What emotional intelligence attributes and skills will the student teacher need to be successful in his or her career?

1.3 Aims of the study

In order to answer the above-mentioned research questions, the researcher will consider the following matters:

- Firstly; Are the teachers of tomorrow, and more specifically the two first student groups that were tested, sufficiently equipped to face the challenges of the modern classroom. The working environment, especially disadvantaged areas and support mechanisms from home, can be seen as some of the challenges. For this purpose the level of EI of first year students studying Education at the CUT was tested.
- Research has shown that EI can be taught and this research will address the advantages of EI training.

1.4 Literature review

To guide the study, a proper in-depth study of relevant literature was undertaken. A sound understanding of the term Emotional

intelligence; what it is, how it manifests and the importance of and influence on the teaching profession was derived at.

1.4.1 Emotional Intelligence

The focus of this study is Emotional Intelligence (EI). The literature review presented in Chapter 2 provides an in-depth discussion of the various aspects of EI, the development of the ideas that underpin EI as a science, the different theories of EI put forward by different researchers and the influence EI has on the teacher as a person as well as a leader in the classroom.

Gladwell (2008), mentions that the society of today, has certain expectations from teachers who have to prepare children for the future. Teachers are often emotionally too involved with their learners to reach these expectations as well as to cope with the additional requirements embedded in the educational system. This involvement can refer to personal or interpersonal problems, relationships or the inability to act objectively etc. The professional boundaries of the teacher-student relationships can then easily be distorted.

According to Rushton, Morgan and Richards (2007), the teacher is one of the most important factors in determining a learner's academic success. This responsibility puts immense pressure on teachers and in addition they have to control their emotions in such a way that a positive learning environment for the learners is maintained at all times. A person's ability to control his/her own emotions within these constraints is

described by Hochschild (1983) as emotional work or emotional labour.

Hochschild (1983) states that emotional work involves the manipulation/control of an emotion or feeling so that it is appropriate to a given situation. In order to assess the situation and then to react with an appropriate feeling or emotion, certain socially acceptable guidelines must be followed.

From the above it is clear that the student teacher needs to be equipped with the necessary emotional skills and attributes to identify his/her own feelings which will enable him/her to control his/her emotions in the classroom. According to Bergin and Bergin (2011), teachers should assist learners to improve their emotional skills to improve the regulation of their emotions. This can only be done if the teacher has a high level of emotional intelligence.

1.5 Research design

1.5.1 Research approach

The empirical study followed a correlation research design. A quantitative approach was used to collect data. A standardised test was used to ensure that the data of the students were captured at a specific time.

1.5.2 Research population

The population for this study encompassed the first year students enrolled for the B.Ed FET (Technology) course at the School of Teacher Education at the CUT. In order to validate the tests and ensure that the test population covers a broad spectrum of the students, two groups were tested in two consecutive years.

The first test was conducted with the first years of 2012 and the second test was conducted with the first years of 2013.

The 2012 population comprised of 60 students and 42 were included in the test group. Thus 70% of the first year students of 2012 completed the test.

The 2013 population comprised of 55 students and 37 were included in the test group. Thus 67% of the first year students of 2013 completed the test.

A total group of 79 students participated in this research.

1.5.3 Measuring instrument

The Self-Report measurement tool that was used in this research is the Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF). The TEIQue-SF is a shortened questionnaire comprising of 30 questions developed from the Trait Emotional Intelligence Questionnaire (TEIQue) that uses 153 questions to measure 15 character qualities of a person called traits or facets. This test clusters these facets in groups

to focus on key factors of emotional intelligence. These key factors are an indication of an individual's strengths and/or his development needs (Petrides & Furnham, 2003).

1.5.4 Research procedure

All participants were requested to complete the questionnaire and the forms were collected at the end of the session. The data in the forms were collated and statistics were then produced from the data. Ethical requirements were observed and will be discussed in chapter 4.6.

1.5.5 Statistical analysis

The computer programme Statistical Package for the Social Sciences (SPSS) (Version 17) was used to do the statistical analysis of the data gained from the TEIQue-SF tests that were completed by the participating students.

1.6 Conclusion

The purpose of this chapter was to provide an overview of the study. In the next few chapters Emotional Intelligence will be discussed in more detail when special attention will be paid to the conceptualization of EI, the different models of EI, EI and the teacher, the research design and methodology and then also the outcome and the conclusion of the study.

CHAPTER 2: EMOTIONAL INTELLIGENCE (EI)

2.1 Introduction

In this chapter certain perspectives about the origin of EI and some of the different models developed by different researchers during the last 30 years will be discussed.

When studying EI it is necessary to differentiate between two important aspects, namely feelings and emotions. According to Crawford (2007), a feeling is something that you feel while an emotion is something that you show. Feeling is the natural and spontaneous reaction that a person goes through in a negative or positive situation. This situation can be of such a nature that the person is overwhelmed and then the feeling will transform into an emotion. This emotion should be controlled by the person's own will and intellect. Primary emotions are generally viewed as anger, pleasure or fear. These reactions can be transferred to other people and affect them either negatively or positively. The teacher in the classroom needs to control primary emotions, irrespective of his/her feelings about the person at that stage. Teachers might be uncertain how to control primary emotions and therefore lose self-confidence and start to doubt their own abilities.

According to Goleman (1996), it is the level of Emotional Intelligence that explains why people with the same ability, intellect, and qualifications do not always reach the same level of success in life. Crawford (2007) states that self-awareness plays the most important role in the recognition of one's own emotions. Palmer (1998) believes that the success of education does not depend on teaching techniques, but on the identity and integrity of the teacher.

2.2 Conceptualizing EI

The concept of Emotional Intelligence has been established over the last 100 years and has gone through different phases of development (Gardner, 1993). The following discussion details the developmental phases with reference to the time frames of these developments.

From 1900 to 1969 the development was centred around research into the construct of emotions and intelligence as two separate entities. The research into intelligence was characterised by the development of tests to look at the psychological intelligence and the creation of the IQ tests as we know them today. The research into emotions focussed on the emotional reactions and the connection between emotions and cultural factors, as well as emotions as a product of pathology (Gardner, 1993).

From 1970 the above two aspects were seen as one entity and this led to the development of a new psychological field with the focus on the interactive relationship between the cognitive and the affective. The research focus fell on the interaction between emotions and thoughts. Gardner's (1993) theory on multiple interpersonal intelligences was also developed during this time. Research on the human brain revealed close interaction between the individual's emotions and his/ her cognition (Waterhouse, 2006).

During 1990 Mayer and Salovey developed a formal theory on emotional intelligence. They have shown that EI forms the basis of intelligence. An article on the construct of Emotional Intelligence was published by Salovey and Mayer (1990) and that led to the development of the first measuring instrument to determine an

individual's Emotional Intelligence (Grewal & Salovey, 2005).

The years 1994 to 1997 were characterised as a period in which the construct of Emotional Intelligence developed, as well as being popularised by Goleman. This construct was accompanied by the sensational statement that Emotional Intelligence may be even more important in achieving success and life satisfaction than the individual's intelligence quotient (IQ). According to Ciarrochi, Forgas & Mayer (2001) and Mayer, Salovey, & Caruso (2004), the successful publication of Goleman's (1995) book on emotional intelligence led to increased interest in this construct.

From 1998 to today, the development in this area has been characterised by the emergence and development of instruments of measurement of Emotional Intelligence and increased research in this field. The development was accompanied by refinements of the construct of emotional intelligence, the development and introduction of new measures in the field of research and publication of various research articles (Ciarrochi, Forgas & Mayer, 2001; Mayer, Salovey, & Caruso, 2004).

The role that emotions play in the intellectual functioning of a person was originally studied by people such as Guilford, Gardner and Thorndike. Through their research contemporary theories were formed that propose that emotions play a critical role in motivating, organising and directing human behaviour (Salovey & Mayer, 1990). EI has become a very important research area, especially in the psychological and educational spheres (El Hassan & El Sader, 2005). The first and most promising description and theory of EI was conceptualised in the 1990's by Salovey and Mayer. They concluded that EI involved the "abilities to perceive,

appraise, and express emotion; to access and/or generate feelings when they facilitate thought; to understand emotion and emotional knowledge; and to regulate emotions to promote emotional and intellectual growth" (Mayer & Salovey, 1997).

The initial model of Salovey and Mayer suggested that EI includes the ability to understand one's own feelings and those of others, as well as to use those feelings as a guideline for problem solving and to regulate behaviour. Their description of EI suggests that EI consists of three components: regulating emotions, appraising and expressing emotions and the utilisation of emotional information in thinking and acting.

In 1997 Mayer and Salovey modified their original model of EI and ordered it hierarchically from basic psychological to more integrated psychological processes and divided it into four branches. Each of the branches is associated with emotional abilities. The branches are:

1. *Perception, appraisal and expression of emotion*: the accuracy with which individuals can identify emotions and emotional content;
2. *Emotional facilitation of thinking*: describes emotional events that assist intellectual processing;
3. *Understanding and analysing emotions and employing emotional knowledge*: the ability to recognise, label and interpret emotions; and
4. *Reflective regulation of emotions to promote emotional and intellectual growth*: the conscious, reflective regulation of emotions to enhance growth (Mayer & Salovey, 1997).

These four branches (stages) include levels of abilities which the individual has to complete in order to progress to the next stage. Individuals with a higher level of EI competence progress through these abilities faster than those with a lower level of EI competence (Mayer & Salovey, 1997).

Research has shown that a higher EI competence could be beneficial to the individual and his organisation. Individuals with a high EI have abilities such as self-motivation, postponing gratification, persisting in frustrating situations, managing impulses, mood regulation, and to be able to empathise and create hope (Goleman, as cited in Newsome, Day & Catano, 2000). The individual is able to “identify, understand, experience, and express human emotions in a healthy and productive way” (Justice & Espinoza, 2007).

While some researchers (e.g Watkins, 2000), believe that EI develops over time, others differ and believe that EI can be taught and developed through training (Ashkanasy & Daus, 2002; Gardner, 2005; Wong, Wong & Law, 2007).

2.3 Models of EI

As a result of the increase in popularity of EI, a number of researchers exploited the popularity and a number of EI models were developed. The development of the different models of EI has resulted in researchers pondering about the construct of EI and how best to measure it.

The three models of EI that are well developed and popular under researchers are subsequently discussed in some depth. Each of the

models draws its basis from the original criteria as suggested by Mayer et al. (1999).

2.3.1 EI Model 1

Mayer and Salovey (1993) suggested that each individual person's EI is related to his/her ability to evaluate his/her own emotions and those of others. They also suggested that persons with a higher EI might be more receptive to internal experiences and they will be able to better label and communicate those experiences.

Salovey and Mayer (1990) initially suggested that the mental processes involving emotional information included the appraisal and expression of emotions, the regulation of emotions and the adaptive use of emotions. In this model however, personality qualities were included, because EI was theorised to show contradiction between persons who were "insensible and ill-mannered" and persons who were "authentic and friendly".

However, in 1997 this model was revisited (Mayer & Salovey, 1997), because the new thinking regarding EI was that it would be better to remove the personality abilities from the equation and confine it to a mental ability. Greater prominence was given to the cognitive components of EI and also to emphasise the prospective emotional and intellectual growth.

This revisited model was hierarchically ordered, starting at the basic psychological processes up to the more integrated

psychological processes. The revisited model is shown in Table 1 below.

Table 2.1 - Mayer and Salovey's model of EI (1997)

EI Dimension	Emotional Abilities
1. Perception, appraisal and expression of emotions	Accurately identify emotions and emotional content
2. Emotional thinking	Be able to describe emotional events
3. Understanding and analysing emotions and using emotional knowhow	Be able to recognise, label and interpret emotions
4. Contemplative regulation of emotions to increase EI growth	Reflective regulation of emotions to enhance development of EI

The level of abilities at each of the stages as presented in Table 2.1 may theoretically be used by the individual in sequence in progression to the next stage. It is believed that those individuals with a higher competence in EI will progress quicker through these stages than individuals with lower abilities.

2.3.2 EI Model 2

The concept of EI was popularised in 1995 by Goleman (1995) with the publication of his book: *Emotional Intelligence: Why it can matter more than IQ*, and again in his second book in 1998: *Working with Emotional Intelligence*. In his first book he postulates that EI would include "self-control, zeal and

persistence and the ability to motivate oneself” (1995), and as being able to “control impulse and delay gratification”; to “keep distress from swamping the ability to think; to empathize and to hope” (1995). In his second book he defined EI as “the capacity for recognizing our own feelings and those of others, for motivating ourselves, and for managing emotions well in ourselves and our relationships” (1998).

In 1998 Goleman (1998) expanded on Mayer and Salovey’s definition published in 1997 by adding what he terms social and personal competencies. Goleman’s model of EI is made up of five different dimensions which he divided into twenty-five emotional competencies and which are presented below in Table 2.2. Intriguingly, the way in which Goleman conceptualised EI, closely parallels the ideas of inter-personal intelligence (Gardner, 1993) and social intelligence (Thorndike, 1920); however, it differs significantly from Salovey and Mayer’s ability model (Table 2.1).

Table 2.2 - Goleman's model of EI (1998)

EI Dimension	Emotional Competencies
Personal competencies:	
1. Self-awareness	Emotional awareness, accurate self-assessment and self-confidence
2. Self-regulation	Self-control, trustworthiness, conscientiousness, adaptability and innovation
3. Motivation	Achievement drive, commitment, initiative and optimism
Social competencies:	
4. Empathy	Understanding others, developing others, service orientation, leveraging diversity and political awareness
5. Social skills	Influence, communication, conflict management, leadership, change catalyst, building bonds, collaboration and cooperation and team capabilities

Goleman (2001) revisited his first model and redeveloped the model when he condensed the twenty-five competencies to twenty and the original five domains to four. The new model is presented in table 2.3.

Table 2.3 - Goleman's redeveloped model (2001)

EI Dimension	Emotional Competencies
Personal competencies:	
1. Self-awareness	Emotional awareness, accurate self-assessment and self-confidence
2. Self-management	Self-control, trustworthiness, conscientiousness, adaptability, achievement drive and initiative
Social competencies:	
3. Social awareness	Empathy, service orientation and organisational awareness
4. Relationship management	Developing others, influence, communication, conflict management, leadership, change catalyst, building bonds and teamwork and collaboration

Table 2.2 and Table 2.3 present the development of the models of EI by Goleman (1998, 2001). His original model of EI (Table 2.2) integrated a high number of competencies which he believed belonged to the construct of EI. As he developed his model further he condensed the model into a briefer framework, as shown in Table 3.

Researchers have however, because of the large scope of attributes in the model of Goleman, questioned those adaptive attributes that Goleman did not consider to be part of EI (Mayer, Salovey & Caruso, 2000). Unlike the ability model of Mayer and Salovey (1997) in Table 2.1, Goleman included a combination of emotional and personality traits and abilities.

For example he included leadership, trustworthiness and conscientiousness as shown in Table 2.3.

Regardless of these limitations in the models of EI by Goleman (1998, 2001), he hypothetically draws links between variables in the place of work and EI which have never before been investigated. Goleman theorised that EI accounts for individuals that excel in their jobs. The outstanding leader in an organisation who is emotionally very intelligent (who has a high EI), will have a better chance to survive than a person who is not. Although Goleman did not base these ideas on observation and experimentation, it forms the base line for further directions of research into EI. The dimension of self-awareness (table 2.3) is, according to Goleman, indispensable in the ability of the individual to distinguish between his own strengths and weaknesses and he feels that accurate self-assessment will lead to better performance in the workplace. It is noted with interest that Goleman believes that each of his twenty emotional competencies (Table 2.3) are job skills that can be taught. This theory is yet to be confirmed through observation and experimentation.

2.3.3 EI Model 3

In 1997 another researcher named Reuven Bar-On proposed a third model of EI, when he defined EI as "an array of non-cognitive capabilities, competencies, and skills that influence one's ability to succeed in coping with environmental demands and pressures" (Bar-On, 1997). The model is very similar to the model of Mayer and Salovey (1997) in that Bar-On included five EI dimensions. The model of Bar-On however,

differs noticeably in substance to the model of Mayer and Salovey (1997) (Table 2.1). The model of Goleman (2001) (Table 2.3) is more in line with the model of Bar-On (Table 2.4) in that both these models suggest that EI includes self-awareness, self-control and the ability to maintain relationships with others (Table 2.3 & 2.4).

Table 2.4 - Bar-On model of EI (1997)

EI Dimension	Emotional Competencies
1. Intrapersonal skills	Being aware of and understanding oneself and one's emotions, expressing one's feelings and ideas
2. Interpersonal skills	Being aware of, understanding and appreciating others' feelings, establishing and maintaining satisfying relationships with others
3. Adaptability	Verifying feelings with external cues, sizing up immediate situations, being flexible in altering feelings and thoughts with changing situations and problem solving
4. Stress management	Coping with stress and controlling impulses

5. General mood	Being optimistic and being able to feel and express positive emotions
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At first glance it seems as if Bar-On has included measures of personality in his model. Bar-On however, made it clear that this was not his intention, but it seems that he included other variables commonly part of psychological research, such as the personality of a person. On the other hand, Mayer and Salovey (1997) suggest that to understand the construct of EI it must be empirically and theoretically removed from personality processes and restricted to a mental ability, assessing the influence of emotions and knowledge acquired.

2.3.4 Summarising the three models

The different models of EI can be theorised in terms of a theory describing a nature, affect or ability. Both the models of Bar-On and Goleman go beyond the norm that is considered the baseline for theories on emotion and intelligence. Mayer and Salovey (1997) define EI in terms of a cognitive ability, whereas Bar-On and Goleman both consider EI to be an affect or a nature of a person. The EI model devised by Mayer and Salovey seems to be the best theorised concept and therefore the most useful description of EI, but little is known about its validity in the workplace. It is not known how this model will respond to the different variables in the workplace and this should be further researched, but not for the purpose of this study.

2.4 Measurement of EI

Ever since the first papers on EI were published, psychologists have been designing measurement tools in order to establish/ determine/ measure the EI of a person. Some of the popular measurement tools include the Multi-Factor Emotional Intelligence Scale (Mayer, et al., 1999), the Schutte Self-Report Inventory (Schutte et al., 1998), the EQ Map Test (Cooper & Sawaf, 1997), the Trait Meta-Mood Scale (Salovey, et al., 1995), and the Bar-On Emotional Quotient Inventory (Bar-On, 1997, 2000).

The function of each of the models previously discussed and the interpretation of each conceptualization dictate the content of each of the measurement tools (Mayer, Salovey, & Caruso, 2000). However, most of the developers classify the EI indicators into two distinct approaches, namely: A Self-report measurement instrument – derived from the typical behaviour of a person in everyday life, as opposed to the Performance-based EI measurement tool – that measures performance in a controlled environment.

Performance-based tools relate to the abilities models and include a variety of emotion-related questions of which the answers can be proven. Two examples of Performance-based measurement tools are the Multi-Factor Emotional Intelligence Scale (MEIS) and the Mayer-Salovey-Caruso Emotional Intelligence test (MSCEIT) (Palmer et al., 2003). The Self-Report measurement tools are intended to measure a person's beliefs about his/her own beliefs about his/her emotional abilities rather than the actual abilities (Mayer et al., 2000). Examples of these types of tools are the Bar-On EQ-I tool and the Schutte Self-Report Inventory (Schutte et al., 1998).

2.4.1 Performance-based EI Measurement tool

Several researchers have, in view of the shortcomings of the Self-report measurement tools, asked for the development of more objective, ability-based indicators of EI (e.g., Mayer, Caruso, & Salovey, 1999, 2000; Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2000). These researchers see ability testing as the “golden standard” in intelligence research. According to them intelligence describes the actual capacity of a person to deal with mental problems, not the beliefs that one has of such capacities. In this context the tool measures the ability directly by requiring a person to solve a problem like identifying the emotions on a character’s face or in a story.

2.4.2 Self-report Measurement instruments

Self-report Measurement instruments were designed to measure perceptions and beliefs about a person’s competencies in the specific domains of EI. These tools normally ask a person to rate a series of statements on a rating scale (Salovey, Woolery, & Mayer, 2000). An example of this is the Schutte Self-Report Inventory (Schutte et al., 1998) where a person is asked to rate him/herself on a scale of 1 – 5 where 5 is strongly agree and 1 is strongly disagree. Thirty-three statements need to be rated in this way, e.g. *“I know why my emotions change,”* *“I expect good things to happen”*. Self-report measurement tools normally sample a range of constructs and therefore assume a mixed model of EI in that both personality traits and ability are incorporated (Mayer, Caruso, & Salovey’s, 2000).

The Self-report measurement tool that will be used in this study is the Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF). The TEIQue-SF is a shortened questionnaire, comprising of 30 questions developed from the Trait Emotional Intelligence Questionnaire (TEIQue) that uses 153 questions to measure 15 character qualities of a person called traits or facets. This test clusters these facets in groups to focus on key factors of emotional intelligence. These key factors are an indication of an individual's strengths and/or his/her developmental needs (Petrides & Furnham, 2003).

The Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF) uses two items from each of the 15 subscales of the longer form of the TEIQue based on their relationship with the matching total subscale score.

A full description and discussion of the TEIQue-SF will be done as part of Chapter 4.

2.5 Can EI be developed?

A debate has been going on between scholars in the Emotional Intelligence field on whether, and if, to what extent, EI can be developed in an individual.

Generally speaking, there is emerging agreement that EI can be developed, but researchers seem to differ in their views regarding the extent to which this development is possible (Dulewicz & Higgs, 2004).

Goleman (1996) stated that while EI is open to development, the biggest impact will be during the later childhood and early adolescent stage of the individual. However, studies have indicated that "training" in EI at a later stage in life is also possible.

Two case studies revealed that development in both the early stages and later stages of life can lead to an increase of EI in the individual. The first of these studies was done by Reuven Bar-On (2003) in 2002. In this study 26 grade 7 children with an average age of 12 years old were exposed to the Self-Science curriculum in school. The Self-Science curriculum was developed by Karen Stone-McCrown and colleagues (Stone-McCrown *et al.*, 1998) and it is an educational programme that was developed to enhance EI in children through didactical methods in the school curriculum. The children were tested at the beginning of the 2002 school year using the EQ-i, Youth Version, and the same test was administered again at the end of the school year. The results clearly indicated a significant increase in the children's EI during the year. They were able to better express and understand themselves, manage and control their own emotions and also showed an increase in the understanding of and relating to their fellow students and to adults. They were also better equipped in adapting to changing environments. The Bar-On Emotional Quotient Inventory: Youth Version (BarOn EQ-i: YV) assesses the emotional and social functioning of youths aged from 7 to 18, providing an estimate of their underlying emotional and social intelligence. This report renders information about the respondents' emotional and social functioning in terms of obtained scores. The total score and scale scores are presented as standard scores. A standard score in the range of 90 to 110 indicates effective emotional and social functioning. A score greater than 110 suggests the presence of

enhanced emotional and social skills, while a score of less than 90 suggests that emphasis should be placed on enriching skills in that area.

The second study was done by Margareta Sjolund at a Swedish construction company and reported by Reuven Bar-On (2003). Twenty-nine of the employees at the company were tested before and after they attended a managerial skills workshop. At the time most of the 29 participants were in their forties. Part of the workshop concentrated on techniques designed to develop EI competencies. The post test showed an increase in their EI competencies from a mean of 97 to 106, with a significant increase in 9 of the 15 EQ-i subscales. The two EI competencies that developed the most during the workshop were empathy and self-awareness; the two competencies interestingly enough, that are considered the most important of all the competencies of emotional and social intelligence. Another interesting outcome of the workshop was that the staff members with the lowest EI score benefited the most from the workshop in that they showed the most progress in terms of their EI development.

To educate people to be stronger emotionally and socially seems logical in that it will result in people being better equipped to handle everyday situations. The above-mentioned two studies transcend logical theory in that it was proven that EI can be taught and developed and that people benefited by acting more emotionally intelligent.

2.6 Conclusion

In this chapter the term Emotional Intelligence was discussed in detail. The intent was to give a historical background and to give a theoretical basis of the EI models, definitions, measurements and the development of EI. The next chapter will concentrate on EI in the workplace with special emphasis on the teaching environment. Because of the value that EI might hold for teachers in their work, the possibility to include EI development as a part of the curriculum for student teachers may be considered.

CHAPTER 3: EMOTIONAL INTELLIGENCE AND THE TEACHER

3.1 Introduction

Currently the South African education system faces enormous challenges in that many teachers are leaving the system and new teachers entering the education system are not necessarily equipped with the necessary skills to cope with the new challenging environment in the post-1994 dispensation with open and multicultural schools and a changed disciplinary system. Tebogo Monama reported in *The Sowetan* (3 February 2010) that more than 13 000 qualified teachers leave the formal education sector each year. According to Sue Miller in the same article, one of the main problems new teachers experience is that they are placed in areas where they do not understand the culture and this makes it difficult to connect with the learners, especially on a more emotional level.

Negative behaviour in the classroom interferes with teaching and learning and this problem will affect the entire classroom environment and atmosphere. Behaviour problems distract students from learning and the teacher needs to sacrifice precious time in handling these problems. Teachers are there to assist all their learners, including those with behavioural problems to succeed in their education. Teachers however, need assistance in preparing themselves for the emotional onslaught that they will have to endure in the process of keeping discipline in the classroom.

Discipline is the practice of caring for another person and having respect for others as well as yourself. The application of discipline in the classroom is to safe-guard the rights of the learners who are open to awkward or hostile responses by other learners (Humphrey

1998). Oosthuizen, Roux and Van der Walt (2003) agree with Humphrey and state that the application of discipline must not only be to stop disruptive, unscrupulous and upsetting behaviour, but to use the opportunity to enter into a caring and loving relationship with the aim to give guidance to the learner. In accordance with Section 11(2) of The South African Schools Act 84 of 1996) the implementation of discipline should be corrective and nurturing. This entails that there will be no physical punishment and no emotional criticism in the classroom. Discipline should be constructive and promote the development of self-discipline. The management of discipline in the classroom therefore calls for the teacher to make the learners feel emotionally secure and physically safe. Teachers must take charge of their classrooms to ensure that learning takes place in the classroom. In order for the teachers to ensure that they will be able to do this, they need to be emotionally well-equipped and strong. Without applicable training to prepare them for this important task, it will not only be difficult, but even impossible (Hargreaves, 1998).

To be permanently appointed as a teacher in South Africa you need to be a qualified teacher in accordance with the Employment of Educators Act 76 of 1998 states: *"In order to qualify for appointment as an educator a person must have at least a recognised three year qualification (REQV 13) which must include appropriate training as an educator (Chapter B 2.2 (i))."*

The Policy on the minimum requirements for teacher education qualification (MRTEQ) (2011) states a 4 year B Ed Degree or a B Degree with a PGCE (Post graduate certificate in education)

However, being a qualified teacher is not the same as being a quality teacher. Justice and Espinoza (2007) state that there are certain qualities inherent in superior/excellent teachers. Qualities that contribute to the quality of the teacher include love for children, enthusiasm, good verbal skills, sound knowledge of subject matter, experience, intelligence and a strong work ethic.

Winograd (2003) analysed his own reflective diary kept over a period of a year while teaching at an elementary school. He identified 5 areas that influence classroom management:

1. Teachers' love and affection for their learners.
2. Teachers need to show their own enthusiasm and passion for the subject to the learners.
3. Teachers cannot show extreme emotions such as anger, but have to stay calm and in control at all times.
4. Teachers need to love their work.
5. Teachers also need to have a sense of humour and laugh at their own mishaps.

The remainder of this chapter will explore the role that EI plays in the professional and private lives of teachers as well as prospective teachers. EI will determine the success in the classroom, as well as his/her well-being in general.

3.2 The role of emotions in teaching

Surprisingly, the conflicting history of Emotional Intelligence may have been largely influenced by education policy. Mayer and Cobb (2000) discuss the relationship between the Fetzer Institute, a non-profit organisation which offers financial grants for research, and the educational focus of the many claims made in Goleman's 1995 book, *Emotional Intelligence: Why it can matter more than IQ*. When Emotional Intelligence was first conceptualized, the Fetzer Institute organised meetings between researchers of Emotional Intelligence and developers of education curricula (Mayer & Cobb, 2000). It appears that in a desire to mould Emotional Intelligence into something that education policy makers and curriculum designers could more readily utilise, Goleman expanded the view of Emotional Intelligence to include a variety of personality characteristics. As Mayer and Cobb (2000) explain: Goleman's popularisation of the concept of Emotional Intelligence depended in part on broadening it from a specific psychological entity, a mental capacity for processing emotion, to a broader collection of personal qualities. Earlier Salovey and Mayer (1990) had described possible character outcomes of Emotional Intelligence as including optimism and motivation. Goleman equated these character outcomes with the intelligence itself. This subtle shift resulted in the term 'Emotional Intelligence' becoming a catch-phrase for anything that involved motivation, emotion, or good character. Virtually any link between personality and good school outcomes could be attributed to this broad conception of emotional intelligence. Perhaps Goleman's departure from an ability model to one that incorporates a conglomeration of various personality characteristics was the result of a desire to help make Emotional Intelligence relevant to education and to produce a marketable Emotional Intelligence

curriculum. Generally speaking, the founders of the ability model of Emotional Intelligence do not advocate for the explicit teaching of Emotional Intelligence in schools (Mayer & Cobb, 2000; Mayer & Salovey, 1997). As Mayer and Cobb (2000) clarify, "With few exceptions, it does not make sense to us to speak of teaching an intelligence. Intelligence refers to a capacity to learn." What these individuals recommend is the teaching of emotional knowledge which includes an understanding of emotions (i.e. the third branch of the four-branched model). In fact, efforts to teach emotional understanding, such as those made by proponents of social-emotional learning (SEL), have received the full support of Mayer and Cobb (2000). A well-organised program offering explicit instruction to students regarding emotions as SEL programmes can be found in many schools today (Elias, Zins, Graczyk, & Weissberg, 2003). SEL includes partnerships of students, parents, teachers, and community members focussed on helping young people develop the ability to manage emotions, solve problems, and work together effectively (Elias et al., 2003). Studies of Emotional Intelligence helped to establish a foundation for SEL, and the two are occasionally used together (Mayer & Cobb, 2000). Like EI, SEL is also based upon principles of character education, in that both attempt to form a student's character regarding the establishing of a sense of "belonging to and responsibility for others" (Mayer & Cobb, 2000, p. 168).

Mayer and Cobb (2000) also note that SEL was influenced by the affective education movement which largely sprung from humanistic psychology. Each of these traditions maintains that at least some degree of personality can be improved through learning. Research has shown that SEL programmes have a positive impact on schools and students by reducing school drop-out rates, improving

attendance, and increasing academic learning (Elias et al., 2003). It may be that SEL programmes offer teachers, including teacher educators, the best opportunity to increase the important emotional abilities of their learners or students as theorised by emotional intelligence.

In addition to their support for SEL programmes, Mayer and Salovey (1997) discuss other connections between teaching and learning and emotional intelligence. Mayer and Salovey clearly state their belief that most skills can be improved through formal classroom teaching. In their opinion, however, schools are secondary to homes, where the skills and abilities of Emotional Intelligence are taught through "good parent-child" interaction (Mayer & Salovey, 1997). Children typically learn to identify and label their emotions from their parents. Clearly some homes provide more adaptive settings for learning about emotions and applying them in social situations (Mayer & Salovey, 1997). Whether due to a variety of parenting styles, biological factors, or discrepancies in emotional learning opportunities, Mayer and Salovey believe that individuals operate from different emotional "starting places" (1997). Schools may offer children an opportunity for remedial emotional learning. Mayer and Salovey (1997) acknowledge that, "some of the most important learning takes place in the informal relationships between child and teacher; teachers often serve in the role of an important potentially wise adult model".

Aside from the modelling of emotionally intelligent behaviours, Mayer and Salovey (1997) believe that students learn about emotions through the reading of engaging stories. As story characters experience a range of emotions, children are able to observe how those individuals feel and how they respond to such

feelings. As students progress in school, stories become more complex and provide opportunities for more sophisticated emotional learning (Mayer & Salovey, 1997). While literature may be the most powerful tool for educating students about emotions, courses that discuss civics, equality, democracy, and freedom also typically touch on values that can facilitate the development of Emotional Intelligence (Mayer & Salovey, 1997).

One issue that remains to be fully studied, is whether Emotional Intelligence can be taught, and if teacher education would want to make this an aim. Mayer et al. (2004) specify that Emotional Intelligence is a comparatively stable aptitude and discourage efforts to directly teach this intelligence. They note, however, that emotional knowledge, the kind of information that Emotional Intelligence operates on, is easy to teach.

In the event that Emotional Intelligence is found to be a predictor of student teacher performance, teacher education programmes might do well to consider efforts to teach emotional knowledge. The possibility of teacher education to use measurements of emotional intelligence, specifically the MSCEIT (*Mayer-Salovey-Caruso Emotional Intelligence Test*), as part of its admission criteria is also intriguing. While most programmes employ only academic measures in making admission decisions, some have included results from personality inventories in the decision making process (Mayer et al., 2004).

Given the massive teacher shortages expected over the next decade, it remains to be seen if teacher education programmes can afford to be overly selective as to whom they accept (Zumwalt & Craig, 2005). It may be that levels of Emotional Intelligence are

unable to inform the admissions process. On the other hand, Emotional Intelligence scores may offer a new and effective means for screening teacher education programme candidates and enhance the quality of the teacher education in general. Zeichner (2005) claims that more research and from a variety of disciplines is desperately needed to inform the criteria used for admission to teacher education programmes. Research literature clearly indicates that current evaluation methods of teachers, especially student teachers, are sadly lacking in securing the best possible students to teacher education. Emotional Intelligence scores may be able to assist in the evaluation of teacher educators (Zeichner, 2005). This could be done by first testing teacher education candidates' Emotional Intelligence using the MSCEIT, and then comparing those scores with the usual criteria or tests used to select suitable teacher education students at a specific institution. Another possibility would be to observe the classroom practices of both high and low emotionally intelligent teachers in the classroom. Such methods could inform teacher educators as to how high or low Emotional Intelligence levels of their current and future teacher candidates may influence teaching quality, performance, and practices.

Hargreaves (2000) states that there is an indisputable link between Emotional Intelligence and effective teaching, firstly the influence of emotions on the effectiveness of the teacher and consequently because emotions are important to teaching - therefore EI is critical to teaching. Secondly the Emotional Intelligence level characteristics of the teacher should be considered. To validate the role of emotions in teaching there are three concepts that need to be looked at. Firstly one must realise that emotions form an integral part of education, secondly that emotions play different roles in the classroom and thirdly the way that emotions influence the learners,

but also the teachers. Various kinds of emotions are evident in any teaching environment. Teachers will feel either positive emotion such as joy (Golby, 1996), pleasure, satisfaction, love and affection (Godar, 1990) or negative emotions which include vulnerability (Kelctermans, 1996) frustration, anxiety and anger (Hargreaves, 2000).

Both positive and negative emotions are experienced in the classroom. Positive emotions result from an atmosphere of caring, affection and love, which are exactly the emotions you need in a classroom. Too much negative emotion may disrupt the learning environment. A teacher's anger is a source of guilt, shame and sadness in the learners (Thomas & Montgomery, 1998). It is therefore evident that teachers need to understand the impact of emotions in the classroom and therefore their own emotional intelligence. In order to prevent problems at a later stage in their career, prospective teachers need to be prepared for this challenge.

Bartlett and Burton (2003) point out the necessity for preparing the prospective teacher for the challenges inherent to teaching as a profession, seeing that the child is often regarded as: *"... a powerful, competent communicator and with the right to sensitive, responsive care and education"*.

Kessler (2005) makes the statement: *"... we teach who we are ..."* and notes that teachers who teach with heart and soul in the classroom, also need their own spiritual development and nurturing. This presupposes/encompasses that the teacher needs to develop an awareness of clarity, calmness and compassion on a personal level. Roffey (2004) points out that a teacher should possess high levels of positive emotional energy. A high level of positive

emotional energy helps the teacher to remain calm in a crisis and it broadens his ability to remain patient and enables him to focus on the positive and achievable. Low emotional energy allows the teacher to act impulsively and he or she may be overwhelmed by the situation and feel defeated. The teacher must be aware that he needs to be a role model in the classroom and on the playground. Weare (2004) states that the following properties are important in this regard. The teacher should have:

- High self-esteem.
- High self-knowledge.
- Emotional consciousness.
- The ability to manage own emotions.
- Awareness of the impact of emotions on his/her own functioning in the classroom.
- The ability to set clear professional boundaries between himself and the learners.
- Emotional resilience and high tolerance for stress.
- The ability to establish positive interpersonal relationships and cultivate a general positive attitude towards others.
- Characteristics such as reliability, authenticity, honesty and congruence in what he advocates.

3.3 The workplace and EI

Organisations are realising that EI abilities form an integral part of the philosophy of the management of that organisation. Research done by Zeidner et al. (2004) regarding best practices found that four out of five organisations are actively pursuing the promotion of EI in their organisations. The motivation behind this endeavour may lie in the belief that EI could be the answer behind workplace

performance that cannot be accredited to either IQ or the personality of the person. EI could be the psychological factor playing a part in workplace success (Palmer et al., 2003).

As previously mentioned, Goleman (1996) stated that it is the level of Emotional Intelligence that explains why people with the same ability, intellect, and qualifications do not always reach the same level of success in life. This was confirmed in a study by Palmer et al. (2003) that has shown that individuals with high levels of EI have higher workplace results. The study found that employees with higher levels of EI perform better at their work, have a higher level of job fulfilment, have a lower absenteeism rate, show high levels of commitment to the organisation and that these persons are less affected by stress in the workplace. Gardner (2005) found that workers with higher EI have better career success, they show better leadership skills and they build better relations with co-workers, than those workers with a lower level of EI.

Zeidner et al. (2004) mention that some researchers believe that behaviour in the workplace, such as customer loyalty, quality of service, innovation, employee commitment and teamwork is influenced by EI.

Cherniss (2000) describes four reasons why it would be logical to use the place of work as the ideal setting to develop and test the Emotional Intelligence of an individual.

The four reasons are:

1. EI competencies are vital to achieve success in almost all jobs.
2. Many employees enter the workforce ill-equipped to succeed

or excel in their jobs, as they lack the necessary EI skills.

3. A large number of employers have identified the need for EI training and have the necessary resources in place to provide EI training.
4. Employees spend the biggest part of their waking hours at their place of work.

It is apparent that a strong interest in the applications of EI in a professional setting had been developed by organisations around the world. In America the Society for Training and Development published a document outlining basic guidelines on how to assist individuals in organisations to develop the competencies that will differentiate/distinguish them as outstanding performers versus the average ones (Cherniss & Adler, 2000).

Much research has been done in the EI field with the focus on leadership, one of the essential workplace traits. Fleishman and Harris (1962) report that leaders with a certain warmth and the ability to establish mutual trust and respect were more effective as leaders. This finding is not a surprise, as many researchers have argued that to be an effective leader a person needs the ability to solve social problems that may arise within the group or organisation.

The influence of EI on cost effectiveness in the workplace also drew a lot of interest. Several studies were conducted and reported the economical worth of hiring personnel based on their EI abilities. The Government Accounting Office in America reported to Congress in 1998 that the US Air Force started to use the Emotional Quotient Inventory (EQ-I) developed by Bar-On in the selection of the recruiters for the Air Force. Applicants with the highest EI scores

were selected to be employed as recruiters. This resulted in a three times higher success rate in the selection of recruiters and saved \$3 million per year.

Boyatzis (1999) conducted a study in a multinational consulting company where all the partners were assessed on their EI competencies. The study revealed that those partners who scored high brought in business to the value of \$1.2 million more than those who did not score as high.

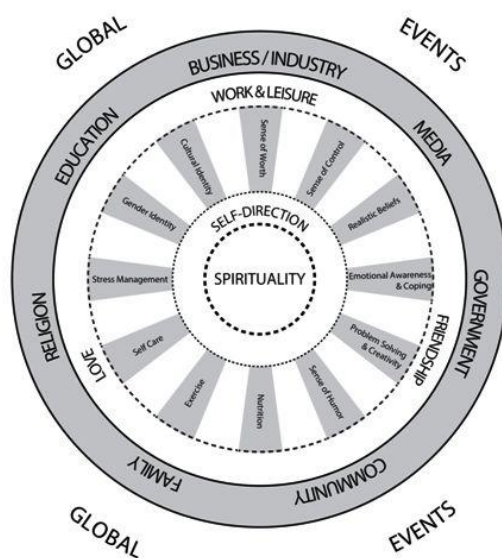
The above is a clear indication that in appointing personnel with higher EI abilities, not only the company owners will benefit, but such competencies will be conducive to teamwork and better relations amongst colleagues, management and customers.

3.4 EI and the well-being of the teacher

To understand the importance of a high level of Emotional Intelligence in daily classroom teaching and in teaching as a profession, the whole question of health and wellness needs to be explored further. The World Health Organization (WHO, 1999) defines health as follows: "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This implies a holistic approach to the well-being of individuals and a balance between the different areas of the individual's way of life and existence (Beattie & Gott & Sidell, 1993; Edelman & Mandle, 2002, Harris, 2007). Wellness involves a choice for optimal health with a focus on lifelong growth, personal improvement and involvement. Ensuring and maintaining one's health and well-being is the individual's own responsibility. It includes a practical healthy lifestyle and positive behaviour that

improve health. According to Gordon (1996), health promotion is a universal goal for humanity. Individuals must be seen in totality by focussing on all areas of their life existence. A new psychological paradigm has been in the spotlight the last few years in that the application of positive thinking and positive identification of strengths is of the utmost importance in the development of health and wellness (Wissing & Van Eeden, 1998).

The "Wheel of Wellness" (Witmer, Sweeney & Myers 1998), indicates the different facets of wellness and how these aspects interact with each other. When change in one facet of an individual's overall well-being occurs, other facets are directly influenced by this change. The wellness wheel firstly identifies the characteristics of healthy functioning and secondly where intervention can be applied. The wellness wheel suggests five essential life tasks that could either prevent or assist the effective development and creation of health.



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Fig 3.1 - Wheel of Wellness

Although the second, third and fourth bullets in the explanation below are perhaps more applicable to the study, providing the full spectrum of tasks will contribute to more clarity.

- The first life task focusses on spirituality, as spirituality can be seen as the key characteristic of a healthy individual. According to Lightsey and Owen (1996) it was found that experienced individuals with mental well-being develop more positive thinking, more social support and ultimately better physical and mental health.
- The second life task focusses on self-direction. According to Whale (2000), self-direction indicates how individuals manage and control their daily tasks and activities to achieve long-term goals. Individuals with high levels of self-direction are also people with good self-esteem.
- The third life task focusses on the interaction between work and pleasure (Whale, 2000). It is essential that individuals have the necessary skills and time to work in such a way that they manage a healthy balance utilising time and energy effectively.
- The fourth life task focusses on building and maintaining friendly relations. Friendly relations encompass all social skills (Goleman, 2006, Meyer, Moore & Viljoen, 1997). Individuals with skills such as empathy experience the same health benefits as people who exercise regularly and/or meditate regularly. Social support leads to the satisfaction of social needs, a positive self-image and healthy physical and emotional well-being.

- The fifth life task focusses on love. A healthy love relationship includes the following five capabilities:
 - the ability to value intimacy and trust and the aptitude to self-revelation;
 - the ability to be able to show and receive affection;
 - the ability to accept other individuals as unique;
 - the appearance of stable intimate relationships with the conferring growth and development of others , and finally
 - a healthy sexual life and sexual identity.

If there is a healthy balance between the above elements, the individual will enjoy well-being and overall health. Personal health and well-being leads to an effective and successful life approach and ultimately complete physical, mental and social well-being. Balanced individuals know themselves and strive to fulfil their emotional needs through self-responsibility for their behaviour and its consequences (Harris, 2007). Individuals with adequate Emotional Intelligence are able to communicate effectively, either verbally or non-verbally. Furthermore, they are able to effectively build relationships and retain social friendships, to see more than one side of a matter, are informed of world events and have good time management skills (Ryff & Singer, 1998; Van Eeden, 1996). These individuals have a clear understanding of their own unique identity, as well as of their social identity and their expected roles within their social environment. This implies that such people lead an emotionally intelligent lifestyle (Steinberg, 2005).

An emotionally intelligent lifestyle implies that the individual realises that wellness is a choice towards optimal health and a fulfilled lifestyle. Emotionally adequate and positive persons will show adaptability and skills in the handling and management of life

stressors (Evans, 2001; Goleman, 1995). The emotionally adequate individual will be motivated to achieve optimal success. Adequate emotional and social intelligence will equip individuals with good social and emotional skills that will enable them to cope with their situations and better manage and control negative emotions, and thus promote general well-being. An emotionally intelligent individual will make a positive contribution to his/her own life and those of others around him/her, which will lead to the general welfare of the community (Sheehan, 2002; Carr, 2004).

Salovey and Mayer (1990) suggest that people with adequate Emotional Intelligence levels will approach problems in a constructive manner to resolve them and will cope more effectively with negative life events and eventually benefit to achieve personal goals (Goleman, 1995; 2006). If individuals cannot control their own feelings and behaviour, events will not be effectively managed and the individual's behaviour will be seen as socially unacceptable. According to Steinberg (2005), individuals with inadequate Emotional Intelligence are controlled by their emotions and feelings and are unable to manage such feelings and emotions effectively. Emotions such as anger and frustration can lead to, for example, assault and in extreme cases, even murder (Ryff & Singer, 2001). Research by Steinberg (2005) suggests that individuals equipped with emotional skills can use negative energy such as anger purposefully in creating positive, possible new opportunities. It must be emphasised that it is essential for individuals to acquire emotional life skills resulting from self-knowledge and understanding.

Individuals must be able to identify their feelings and identify those things that control their own emotions, feelings and circumstances in order to effectively maintain livelihoods and general well-being. Poor

life outcomes can result in individuals having negative emotions like depression, and inadequate governance and management of those negative experienced emotions. This may influence relationships negatively (Barlow & Durand, 2001). Poor life outcomes can lead to individuals losing their creativity, motivation and interest in daily tasks. In this way the influence of experience and of poor life outcomes not only affect the individual's psychological well-being, but also his/her physical well-being.

It is important to individuals, as holistic beings, to realise that there is direct interaction between the psychological and the physical well-being. Research by Maslow suggests that all individuals have the need for self-actualisation, growth, development and ultimately achieving their goals in life. Individuals who are equipped with the emotional and social skills to identify and satisfy their basic needs will eventually be able to handle more specific needs in order to achieve self-actualisation, and overall wellness.

Great interest in the role that affectivity and emotions play in the education system developed during the last 30 years as research in EI was being done. The importance of feelings in the overall development of learners in the classroom as well as in their own day-to-day experiences have been understood and encouraged by educators for a long time. This resulted in the need to support not only the academic development of the learner but also the expansion of the learner's emotional and social abilities (Elias et al., 1997; Greenberg et al., 2003).

Sutton and Wheatly (2002) found that it is important not only to develop the EI abilities in the learners but that the teachers themselves need EI abilities, especially for their own well being and

to be efficient in the classroom and deliver teaching and learning of high quality. Modern teachers are more aware of the role that emotions play in their daily interaction with children, parents and fellow teachers. The skill to understand and control your emotions affects the learning processes, the teacher's physical and mental health, social relationships, as well as his/her academic performance (Brackett & Caruso, 2007). Teaching is seen as one of the most stressful jobs because it involves daily social interaction in which the teachers must regulate not only their own emotions, but also those of the learners, parents and fellow teachers (Brotheridge & Grandey, 2002).

During an ordinary day in the life of a teacher he or she will most probably experience more negative than positive emotions. For instance, anxiety, a negative emotion, will interfere with his/her ability to acquire knowledge and process information. On the other hand, experiencing positive emotions will enhance the teacher's well-being which in turn will lead to an increase of the teacher's creative capacity. This may result in the creation of new ideas and most importantly, facilitate better/improved problem solving skills (Frederickson, 2001).

Teacher well-being will be increased by positive emotions and this will have a snowball effect in the creation of a favourable learning environment (Sutton & Whealey, 2003). Taking into account all of the above, it is clear that the ability to identify, understand and control negative and positive emotions is fundamental in the teaching profession.

A study done under secondary school teachers in England to determine whether EI abilities could be used as a predictor of the

teacher burn-out by Brackett et al. (2010) found that teachers with high levels of EI may experience less burnout and greater job satisfaction, remain in the profession longer and be more effective in the classroom. This study confirmed a study done by Mendes (2003) in which the teachers' ability to regulate emotions were compared with their apparent levels of personal completeness, emotional labour and alienation of people. It also showed that teachers with high EI abilities use positive and appropriate strategies in dealing with the different stressors in their place of work. These teachers also expressed a greater sense of satisfaction in their work. The influence of EI on the stress levels of teachers and their work satisfaction can be directly linked to the extent of positive influence they experience (Brackett, Palomera, & Mojsa, 2010).

Schutte et al. (2007) did a meta-analysis of the relationship between the health of a person and the EI of the person. They found a significant correlation between health and EI, more specifically between EI and mental, psychosomatic and physical health. This study proved that high EI levels are indisputably linked to the overall health of a person. Bar-On (2000) and Gignac (2006) found that general life satisfaction could be linked to EI.

A study with particular relevance to the education sector was done by Oginska-Bulik (2005) on 330 services professionals, such as nurses, social workers and teachers. These occupations generally experience high levels of stress. It was found that EI acted as a buffer in the prevention of negative health outcomes, especially mental health problems. It was noted that lower levels of job stress and ill health, such as stress related ailments, were experienced by the respondents who displayed higher levels of EI.

This study has as aim to prove that by increasing the EI levels of teachers, the stress levels of such teachers will decrease, resulting in better health. Therefore it may be of value to assist teachers in increasing their EI levels and develop EI abilities, as this will not only benefit the teachers, but the learners and the school in general.

3.5 EI and the teacher's self-control

The basis of self-control lies in a person having a positive self-image and sufficient self-knowledge to make the correct decision about what to do with a specific emotion. The part of the brain that deals with thought makes decisions based on emotions. Persons with a high EI will display feelings if they are appropriate, based on the emotions that they are experiencing and at the same time deal positively with those emotions that they feel are inappropriate to show. These persons exhibit self-control at an appropriate and balanced level - this means that other people judge them to be less impatient, more open to ideas and not likely to get involved in conflict. Such a person will generally be seen as a likeable person. With the right amount of self-control a person will be able to manage his or her moods effectively (Goleman, 1998).

Self-control comprises three facets:

- Emotional regulation

The first is emotional regulation - the ability to control one's emotions. A person who scores high on this facet can moderate his/her negative moods and induce positive moods, while low scorers tend to experience depression, anxiety and irritability.

- Stress Management

Secondly, self-control encompasses stress management – a very important facet when using the TEIQue (Trait Emotional Intelligence Questionnaire) for workplace assessments. High scorers can handle pressure and cope well when placed in pressurised situations. A low scorer, on the other hand, finds it difficult to deal with stress-induced tension and lacks the coping strategies employed by high scorers.

- Impulsivity

Lastly, the TEIQue also measures impulsivity - a high score on this facet indicates someone who is not impulsive while a low score indicates an impulsive person. A high scorer is often cautious and thinks things through, while a low score is associated with behaviour such as impetuosity and spontaneous outbursts.

Altogether, these three facets are subsumed under the factor of self-control. Generally, high scorers in this factor have a good sense of control over their emotions and stress levels, and think things through carefully. On the other hand, low scorers tend to behave impulsively and let their emotions run loose at times.

In the educational dispensation as currently experienced in South African schools, the self-control of teachers seems to be of paramount importance.

3.6 EI and the emotionality of the teacher

Studies done by researchers such as Nias (1996) and Zembylas (2002) clearly indicate how emotions are inseparably linked to the lives of teachers. They argue that the emotional issues in teaching have long been overlooked in research on teaching and teachers. This is now being rectified and more research is being done in this area. Hargreaves (2000) looked at the emotional complexities in the teacher – student interaction; Zembylas and Barker (2002) looked at the anxiety of student teachers teaching subject matter that makes them uncomfortable and Lasky (2000) looked at the emotional aspects of teacher-parent relationships.

These studies showed that there is a complex relationship between teaching and emotions. Hargreaves (1998) calls it “the emotional practice of teaching”; a clear indication of how emotion is inseparably linked with teaching. Because of the interaction between the two, it is important that teachers recognise the fact that emotions will have an impact on the way they teach. Teachers need to learn how to analyse the emotional characteristics of their teaching in order to impede overbearing emotions in their actions. By understanding how emotions rule their behaviour and understand how to recognise these emotions they will be able to begin to control these emotions in certain circumstances.

Emotionality primarily concerns close family and friends, and examines how in touch a person is with his own and others’ feelings. A person who scores highly on this factor can recognise his own emotions and express these well, while a low scorer would find it difficult to build relationships or perceive emotions correctly.

- Empathy

The first facet within this factor is empathy – it measures the extent to which a person comprehends from another’s point of view. People with high scores on empathy are able to appreciate the other person’s perspective, and thus are skilled at communicating. A low scorer may battle to see the other side of the coin, and may mostly stick to his/her own view of the world.

- Emotional perception

The second facet is known as emotional perception. This facet measures how well a person can perceive their own emotions (as well as those of others). A low score indicates the inability to accurately identify emotions, while a high score indicates someone who knows exactly how he or she feels and is able to understand other people’s emotions.

- Emotional expression

Thirdly, emotional expression is also measured under the factor of emotionality. This facet captures how well a person can express emotions, with the implication that a person with a high emotional expression score would accurately and explicitly communicate their emotions to others. A low score, on the other hand, indicates a lack of emotion-based communication.

- Relationships

Lastly, relationships resort under the area that concerns an individual's ability to forge and maintain close and fulfilling interactions, associations, and contact with others. This includes family, friends and romantic partners. A low scorer would not find it easy to establish close emotional bonds with others, and may let down those who do get close to him or her. A high scorer finds it easy to bond with others and to establish emotionally rewarding reciprocal relationships. Once these are established, he or she is generally able to maintain them.

The above mentioned facets of emotional development can and will impact on the affectivity of the teacher and his teaching involvement as already indicated in the first two paragraphs of this sub-section.

3.7 EI and the sociability of the teacher

One of the most relevant traits of a teacher must be sociability. Buss and Plomin (1975; 1984) describe sociability as being genetically based and can therefore be observed in infants, children, adults as well as in animals. Sociability is defined as the inclination of a person to be with other people rather than being by him/herself. They argue that sociability not only reflects the need for stimulation or comforting, but also that individual disparity in sociability stems from the preference of a person in how his or her needs should be satisfied. For example, when an egoistic person needs stimulation, that person will most likely be excited by events or objects; in contrast to a social person who will seek out peers in

order to satisfy his or her craving for reciprocal feedback that only comes from social interaction with other people.

Teachers need to be socially competent. Social competence is related to the individual's degree of effectiveness in dealing with others. The emphasis is not placed on internal processes, but on the processes in which the individual are involved. Four related aspects in this regard are attitudes, social knowledge, reflection, and social skills. The processes used by the individual in his efforts to be socially competent to act, are also important, namely social information processing and social role modelling (Deacon, 2008).

- Attitudes

Attitude refers to an individual's feelings and behaviour toward other persons or objects. Although a certain attitude is often open to empirical observation, it is not necessarily easy to describe and people are often not aware of their attitudes about specific issues. Attitude plays a very big role in social interaction and individuals should be made aware of different attitudes and subsequent/resulting consequences.

- Social knowledge

Social knowledge refers to the collective knowledge within a community, but in this case it rather refers to knowledge about social and community issues. As with emotional knowledge, it is important that the individual has sufficient knowledge of people around him, should he/she have to work effectively with others (Tem Dam & Volman, 2005).

Social knowledge implies good background knowledge of what society would expect and what is acceptable and helps the child to act within the parameters of such implied rules, which in turn promotes social interaction (Howes et al., 2008).

- Reflection

Reflection refers to thinking about social situations and what can be learned from those. Learners in the developmental stage of their lives must learn to evaluate themselves and to see others as those would see themselves. The challenge presented to learners with a positive image of themselves is to retain this positivity to meet new challenges and tackle them with enthusiasm (Brendgen, Vitaro, Turgeon, Poulin & Wanner, 2004).

- Social skills

Social skills refer to specific skills that an individual has that would enable him to effectively socialise with those around him. These skills range from the skills of friendship to handling conflict and suggest a wide variety of topics.

Learners with adequate social skills find it easier to make friends than their friends without social skills. Social skills imply social knowledge, but also a practical component of experience that would accompany such skills (Tem Dam & Volman, 2005).

As mentioned, the individual also uses certain processes to be socially competent in his/her actions. The following are applicable:

- Social information processing

This refers to the process that an individual follows to solve problems or to make decisions. This combines all the aspects of social competence, namely that the child's attitude to the problem should be positive; that he can reflect effectively on problems and his part in them, together with adequate social knowledge and the appropriate social skills to master the steps to complete the process successfully (Howes et al., 2008).

- Social role modelling

Modelling behaviour is something that often occurs inadvertently. Individuals direct their behaviour according to what their mentors do, or make decisions based on some preconceived models which formed over the years. Modelling is a very powerful medium that can be used very effectively to promote socially responsible behaviour (Howes et al., 2008).

3.8 The professional role of the teacher

"The task of the excellent teacher is to stimulate 'apparently ordinary' people to unusual effort. The tough problem is not in identifying winners: it is in making winners out of ordinary people."

~ K. Patricia Cross

The role of the teacher in the 21st century has changed dramatically in terms of what the teacher needs to know and the behaviour of the teacher in classroom. The learners in the

classroom need to be prepared to enter an occupational world that is run by technology as well as for the fact that technology makes the world fast-paced and impersonal. Learners need to be developed as complete persons, academically as well as socially to enable them to be fully functional members of society who are inventive thinkers, masters of technology, highly productive, and effective communicators. To ensure this, teachers need to master those skills and more importantly, model said skills in the classroom.

On account of the fact that the role of the teacher has changed from being a “teacher working with children” to that of a person who needs to interact with fellow teachers, parents, politicians, community members, employers, academics and other stakeholders, this role needs to be clearly defined and the teacher must be equipped and developed to handle these tasks (Rosete & Ciarrochi, 2005).

Teachers have to realise that they should have a professional relationship with their learners and therefore a profound understanding of the characteristics of such relationship with learners is essential.

Typical characteristics of a professional relationship are the following:

- A professional relationship is different from a personal relationship.
- A professional relationship has a specific purpose.
- A professional relationship is time-bound (limited to a specific time or period).

- A professional relationship is mainly for the benefit of the learner.
- A professional relationship carries the power to influence.
- A professional relationship is a controlled relationship.
- A professional relationship is governed by the ethics and principles of a specific profession.
- A professional relationship has definite boundaries.
- A professional relationship honours confidentiality which can be defined as the principle of not sharing information, not gossiping and sharing information only with other professionals on the basis of need-to-know.

Learners and their families must be treated with respect and professionalism.

The following roles will be looked into and their relationship with EI observed:

3.8.1 As classroom leader

Tuckmen and Monetti (2011) describe educational leadership in two ways. It consists of:

1. A range of psychological characteristics that define the person that exerts influence, and
2. A range of behaviours that influence the relationships between people.

The second way of thinking is the more appropriate of the two in describing the type of leadership that a teacher exerts in the classroom. Good leaders must have the ability to motivate

others and to establish an environment that is conducive for people to do their jobs to the best of their ability. Levi (2001) states that performance in the workplace, a classroom or any other environment depends on motivated individuals working and interacting in a supportive environment. He suggests that it can be formulated as follows:

Effort x Support x Ability = Performance.

This formula will ensure that teachers who live by high standards in a warm encouraging environment will be efficient in helping learners to learn. The teacher's attitude towards the learner's abilities will guide the development of the learner. Levi (2001) states that if the teacher believes the learners will produce satisfying work, he or she will create a classroom environment that will support this. On the other hand, if the teacher expects the learners to fail in their work he or she will bring this about as well. The German philosopher Goethe said the following true words: "If I accept you as you are, I will make you worse; however, if I treat you as though you are what you are capable of becoming, I help you become that."

Leadership is a combination of skills applied correctly and good teachers know that in order for a group to function optimally, leadership should be shared by the group members. The learners are not accustomed to this situation and it should therefore be done with the direction of the teacher. If and when the teacher neglects leadership in class, learners themselves may elect to fulfil this role.

The question then is, does high EI make someone a good classroom leader? Goleman (1998) and Mckee (2005) propose that EI is the most important predictor in the leadership qualities of a person.

According to the researchers such as Goleman (1998), Ashkanasy and Trevor-Roberts (2000), George (2000), Goleman, Boyatzis, and Mckee (2002), Mayer, Salovey, and Caruso (2004), EI is one of the biggest contributors to a person's capacity to lead others, manage stress and to be part of a team. Rosete and Ciarrochi (2005) state that it is for this reason that leaders (teachers) with low EI may be poor in perceiving their own emotions and that may lead to miss interpretation of, or even totally overlooking important emotional signals from learners and co-workers. If they are poor at managing their own emotions, they may allow those to interfere with their handling of emotions in the classroom.

It therefore seems that EI does play an important role in the leadership abilities of a person and even more so in the leadership of a teacher in the classroom.

3.8.2 As educator

The role of the teacher as educator has changed significantly during the last few years. He/she is no longer the person that walks into a classroom, presents a lecture and walks out. The ideal teacher is a person that teaches from the heart, who seeks the participation of everybody in class, who takes the opinions of learners into account and is emotionally connected to the learners. The teacher's task is to teach all the

knowledge and skills associated with the relevant study field. In addition to this, the teacher needs to guide the learners through each step of the curriculum and phases of life; he or she must support and inspire the learners, not only in the classroom, but also in their lives outside the school and in general.

To be able to carry out this mammoth task, teachers should be geared for, in control of, and fully understand their own emotions and the importance of controlled emotions and interaction with learners. Teachers have to understand the importance of emotions and feelings in the development of the learners, but more importantly their role in the execution of their daily tasks (Elias et al., 1997; Greenberg et al., 2003). To be able to do this the teachers need training in emotional competencies to pass this competence on to the learners as well.

Studies put forward the need for the creation of a classroom environment that ensures secure and positive emotions and feelings in order to support the learners' development, well-being and happiness. Diener, et al. (1991), define happiness as the experience of positive emotions most of the time in comparison with the amount of time when we experience negative emotions. Lyubomirsky, Diener and King (2005) have shown that positive emotions promote learning and the development of interpersonal relationships. Kuperminc, Leadbeater and Blatt (2001) observe that a favourable school environment presents a positive effect on the adjustment of learners in association with their development and in

optimising learning. Therefore it is of the utmost importance that teachers will be able to create this environment.

3.9 Conclusion

In this chapter the role that Emotional Intelligence plays in the day-to-day operations of a teacher was discussed in depth. It became clear that EI should form a very important part of the teacher's skill set and that the teacher's abilities - if not developed - need to be developed in order to ensure the optimal teaching and learning experience for the learners as well as the well-being of the teacher.

CHAPTER 4: RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

This chapter mainly focusses on the methods used during the research to determine the Emotional Intelligence levels of the first-year student teachers at the Central University of Technology, Free State. In this chapter the organisation of the study is explained in more detail by looking at both the theoretical as well as the practical aspects of this research project (Olivier, 2003).

4.2 Research design and methodology

A research design describes the structure, plan and strategy of a research project. This research involves empirical testing of the given hypotheses. The Figure below is a diagrammatic representation of the research design employed for the purposes of this study.

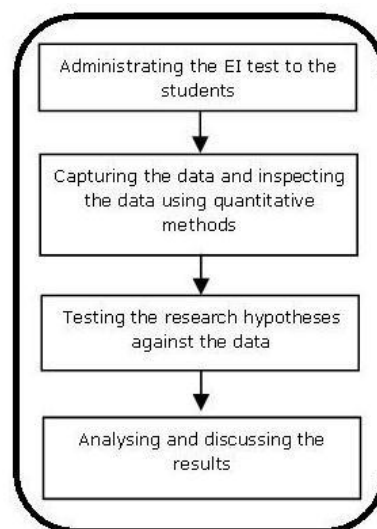


Figure 4.1 - Research Design

The research design will take a quantitative form. In education, quantitative research refers to the systematic, empirical investigation of social phenomena via statistical, mathematical or numerical data or computational techniques. The objective of quantitative research is to develop and employ mathematical models, theories and/or hypotheses pertaining to phenomena. The process of measurement is central to quantitative research because it provides the fundamental connection between empirical observation and mathematical expression of quantitative relationships. Quantitative data is any data that is in numerical form such as statistics, percentages, etc. In layman's terms, this means that the quantitative researcher asks a specific, narrow question and collects a sample of numerical data from participants to answer the question. The researcher analyses the data with the help of statistics, envisaging that the numbers will yield an unbiased result that can be generalized to some larger population.

The aim is to develop or use an existing research paradigm that is empirical and has "observable measurements". In an attempt to produce results from individuals, the relationships amongst the variables, both independent and dependent, will be tested through statistical analyses (Babbie & Mouton, 2002).

4.3 Target population and sampling

The population for this research were students studying education at the School for Teacher Education at the CUT, specifically the first year students enrolled for the B.Ed FET Technology course during the academic years of 2012 and 2013. The 2012 population comprised of 60 students and 42 were included in the test group.

The 2013 population comprised of 55 students and 37 were included in the test group. All ethical considerations, as discussed in 4.6, were strictly followed. As discussed in 4.6 participation was voluntary and that is why not all the students took part in the research. The sample of $n=79$ will be used in this research.

As Field (2009) points out, for large samples (generally above 30), the sampling distribution can be assumed to be normal, regardless of the actual data collected, based on the central limit theorem. Given the size of the current sample ($n=79$), it may be assumed that the underlying sampling distribution is normal.

4.4 Measurement Instrument

The Self-report measurement tool that was used in this research is the Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF). The TEIQue-SF is a shortened questionnaire, comprising 30 questions developed from the Trait Emotional Intelligence Questionnaire (TEIQue) that uses 153 questions to measure 15 character qualities of a person called traits or facets. The long form of TEIQue was developed by Petrides and Furnham (2006) to provide coverage of the trait EI domain in measuring emotional intelligence.

The TEIQue-short form (TEIQue-SF) was used in this study. This TEIQue-SF is derived from the long form of TEIQue in which thirty questions comprising of four factors with fifteen subscales are used (Petrides & Furnham, 2006). According to Cooper and Petrides (2010), two items from each of the fifteen subscales of the TEIQue were selected for inclusion, based primarily on their correlations with the corresponding total subscale scores (Table 1 and 2). This

procedure ensures broader coverage of the sampling domain and ensures adequate internal consistencies which describe the extent to which the same concept or construct is measured. Items were further responded to on a 7-point Likert scale, ranging from 1 (Completely Disagree) to 7 (Completely Agree).

The following table shows the 15 subscales in the 4 areas of Emotional Intelligence that the researcher focussed on:

Table 4.1 – The 15 sub scales of the TEIQue

Well-being	Sociability	Emotionality	Self-control	Global Trait
Optimism	Assertiveness	Empathy	Emotional regulation	Adaptability
Happiness	Social awareness	Emotional perception	Impulsiveness	Self motivation
Self-esteem	Emotional management	Emotional expression	Stress management	
		Relationships		

4.4.1 Description and scoring of the TEIQue

Early self-report Emotional Intelligence instruments displayed several shortcomings in that they were developed without clear theoretical guidelines; they overlooked fundamental facets of the instrument’s sampling domain and they did not claim to measure EI as a cognitive ability (Pérez, Petrides & Furnham, 2005). K.V. Petrides and his fellow researchers (Petrides, 2001; Petrides & Furnham, 2003) started to

develop the Trait Emotional Intelligence Questionnaire (TEIQue) based on their interpretation and theory of the trait EI framework.

The TEIQue comprises 153 questions – rated on a 7-point Likert scale, organised into 4 groups or factors namely (1) well-being, (2) self-control, (3) emotionality and (4) sociability. These four are described by 13 facets with an additional 2 facets added to contribute to the global trait EI score.

The following table taken from the brochure on TRAIT EI by K.V. Petrides gives a detailed description of the factors and facets:

Table 4.2 – Description of TRAIT EI

WELL-BEING	Evaluates how positive, happy and fulfilled an individual is.
Optimism	Confidence and likelihood to “look on the bright side” of life.
Happiness	Pleasant emotional states, primarily directed towards the present rather than the past or future.
Self-esteem	Personal success and self-confidence.
SOCIABILITY	Evaluates relationship building, influence in social settings and networking.
Emotion Management	The influencing of other people’s

	feelings.
Assertiveness	Forthright, frank, and willing to stand up for their rights.
Social Awareness	Ability to network and social skills
EMOTIONALITY	Evaluates ability to recognise emotional states in others, express emotions and use these abilities to develop and sustain close relationships with others.
Empathy	Acknowledging and appreciate someone else's perspective.
Emotional Perception	Insightful and clear about the feelings of others.
Emotional Expression	Communication of one's feelings to others.
Relationships	Capability to have fulfilling personal relationships.
SELF-CONTROL	Evaluates control over their impulsiveness and coping with external pressures & stress.
Emotion Regulation	Short, medium and long term control of one's own feelings and emotional states.
Impulsiveness	How the ability to reflect reflective and the likelihood of giving-in to urges.
Stress Management	Capability to withstand pressure and regulate stress.
AUXILIARY FACETS	
Adaptability	Flexibility and willingness to adapt

	to new conditions.
Self Motivation	Drive and endurance in the face of adversity.

TRAIT EI, Petrides (2008)

Table 4.3 describes the scoring of the questions in the TEIQue (SF). It is important to note that certain questions are reversed scored, in other words, if a score is entered as 7 the value must be taken as 1 and if entered as 1 the value will be 7.

Table 4.3 - Scoring of the 30-Questions in the TEIQue (SF)

Factor	Questions
Well-being	5*, 9, 12, 20, 24, and 27
Self-control	4*, 7*, 15, 19, 22*, and 30
Emotionality	1, 2*, 8*, 13*, 16*, 17, 23, and 28*
Sociability	6, 10*,11, 21, 25*, and 26*

* Those items had to be calculated in reverse-score, as they are presented in negatively worded format.

4.4.2 Validity and Reliability of the TEIQue

The Alpha coefficient was developed by Lee Cronbach in 1951 to provide a measure of the internal consistency of a test or scale; it is expressed as a number between 0 and 1. Internal consistency describes the extent to which all the items in a test measure the same concept or construct and hence it is

connected to the inter-relatedness of the items within the test. Internal consistency should be determined before a test can be employed for research or examination purposes to ensure validity. In addition, reliability estimates show the degree of measurement error in a test. Put simply, this interpretation of reliability is the correlation of a test with itself (Tavakol & Dennick, 2011).

The TEIQue variables exhibit acceptable to high Cronbach Alpha values which are constant across gender (Petrides, 2009). Table 4.4 shows internal consistency based on the current United Kingdom (UK) normative sample (n=1712) and is taken from the technical manual (Petrides, 2009). Alpha values are shown for the 15 individual facets, as well as the 4 factors and global EI score.

Table 4.4 – The Cronbach Alpha values across gender - UK norms

	Male (n=759)	Female (n=907)
Adaptability	0.73	0.84
Assertiveness	0.73	0.93
Emotion Expression	0.87	0.89
Emotion Management	0.72	0.68
Emotion Perception	0.75	0.70
Emotion	0.78	0.79

Regulation		
Empathy	0.70	0.67
Happiness	0.85	0.87
Impulsiveness (low)	0.74	0.75
Optimism	0.78	0.81
Relationships	0.69	0.68
Self-esteem	0.78	0.81
Self-motivation	0.70	0.71
Social Awareness	0.83	0.80
Stress Management	0.76	0.80
Well-being	0.84	0.83
Self-control	0.78	0.78
Emotionality	0.8	0.75
Sociability	0.82	0.79
Global Trait EI	0.92	0.89

Adapted from the "Technical Manual for the Trait Emotional Intelligence Questionnaire (TEIQue)", (Petrides, 2009).

The South African technical manual (2009) reported somewhat different Cronbach Alpha values in the norm group (n=1061). The alpha values for the South African sample, split by gender are displayed in Table 4.5. Some of the facets seem slightly different between the UK and South African groups. For example, self-motivation has a relatively high alpha value in the UK group (0.70 to 0.71), and a

relatively lower value in the South African group (0.51 to 0.37). One possible explanation for these inconsistencies may be partly ascribed to the language differences between two groups (Thomas International, 2009). This does not mean that the South African group's alpha values are low; they are still acceptable to high, with all the values above 0.80 for the 4 main factors.

Terracciano, Costa and McCrae (2006) conclude that personality variables, such as Trait EI, remain constant after 30 years of age.

Table 4.5 - Cronbach Alpha values across gender – South Africa

	Male (n=493)	Female n=568)
Adaptability	0.55	0.65
Assertiveness	0.68	0.83
Emotion Expression	0.84	0.81
Emotion Management	0.64	0.68
Emotion Perception	0.70	0.65
Emotion Regulation	0.76	0.69
Empathy	0.62	0.60
Happiness	0.75	0.77

Impulsiveness (low)	0.66	0.60
Optimism	0.60	0.56
Relationships	0.58	0.51
Self-esteem	0.62	0.63
Self- motivation	0.51	0.35
Social Awareness	0.79	0.77
Stress Management	0.73	0.71
Well-being	0.82	0.82
Self-control	0.86	0.82
Emotionality	0.88	0.85
Sociability	0.86	0.86

Source: "South African TEIQue Technical Manual" by Thomas International (2009).

The test-retest data in the TEIQue technical manual, using a sample group of 58 individuals with a 12 month period between tests, are presented in table 4.6. The TEIQue's overall co-efficient was 0.78, $p < 0.01$ slightly lower than the original test. The test show high constancy with the exception of empathy (Petrides, 2009).

Table 4.6 - Test-retest reliability of the TEIQue - UK

Adaptability	0.64**
Assertiveness	0.79**
Emotion Expression	0.60**
Emotion Management	0.49**
Emotion Perception	0.66**
Emotion Regulation	0.72**
Empathy	0.19
Happiness	0.80**
Impulsiveness (low)	0.55**
Optimism	0.79**
Relationships	0.60**
Self-esteem	0.82**
Self-motivation	0.65**
Social Awareness	0.61**
Stress Management	0.71**
Global Trait EI	0.78**

n=58; **=p<.01;

Source: "Technical Manual for the Trait Emotional Intelligence Questionnaire (TEIQue)", (Petrides, 2009).

The South African technical manual also provides data for a local test-retest of the reliability of the TEIQue. A group of 50 individuals (37% females, 63% males) between 18 and 55 years old participated. They were re-tested after 12 months. Statistically significant correlations were obtained for all facets and factors, with the correlations ranging between 0.59 and 0.83 as shown in table 4.7.

Table 4.7 - Test-retest reliability of the TEIQue – South Africa

Adaptability	0.64**
Assertiveness	0.82**
Emotion Expression	0.83**
Emotion Management	0.66**
Emotion Perception	0.80**
Emotion Regulation	0.71**
Empathy	0.66**
Happiness	0.70**
Impulsiveness (low)	0.74**
Optimism	0.68**
Relationships	0.59**
Self-esteem	0.77**
Self-motivation	0.63**
Social Awareness	0.81**
Stress Management	0.78**
Well-being	0.79**
Self-control	0.76**
Emotionality	0.80**
Sociability	0.86**
Global EI score	0.81**

N=50; **:p<0.01

Source: The “South African TEIQue Technical Manual” (Thomas International, 2009).

Validity

As shown in the UK TEIQue technical manual, the TEIQue “*shows strong evidence of criterion, concurrent, discriminant, incremental, predictive and ultimately, construct validity*” (Petrides, 2009). Validity has been demonstrated through various educational, social and clinical studies. It has been found that TEIQue scores were related to life satisfaction, coping styles (Petrides, Pérez-González, & Furnham, 2007), social adjustment variables, as well as depression (Petrides, 2009). Lower TEIQue scores have also been linked with higher instances of truancy and anti-social behaviour at school level.

A study conducted by Mikolajczak et al. (2007) investigated the use of the TEIQue in a French speaking population and found preliminary evidence of criterion, incremental and convergent/divergent validity. They also found the scores to be normally distributed and reliable.

The TEIQue is registered with the Health Professions Council of South Africa (HPCSA). This means that it is a recognised psychometric tool and has to be regarded as valid and reliable for use with the South African population (Health Professions Council of South Africa, 2010). The test must be conducted by registered psychometrists. Dr F.A. Naudè, a lecturer in Education at the CUT, is an accredited psychometrist and he supervised the process.

4.5 Analysing the data

The Trait Emotional Intelligence Questionnaires (TEIQue-SF) completed by the students were hand scored using the scoring sheet supplied by the London Psychometric Laboratory. The Laboratory is based at University College London (UCL). It is currently directed by Dr. K. V. Petrides and is home to the trait emotional intelligence research programme. The Emotional Intelligence areas of report, as previously discussed, are: the Well-being of the participant, the Sociability of the participant, the Self-control of the participant and the Emotionality of the participant.

Careful consideration was given to the number of students (n) taking part in the research, the highest score achieved by the individual students as well as the lowest score achieved by the individual students. Subsequently the mean score of the groups, as well as the standard variance within the groups, were examined.

The two groups tested were all first year student teachers. The first group consisted of 42 students, 27 female and 15 male and the second group consisted of 37 students, 18 female and 19 male. The analysis included processing of the data within each group, as well as a comparison of the scores between the two groups.

4.6 Ethical considerations

McMillan and Schumacher (2010) mention that ethical considerations are essential when conducting quantitative research and therefore the following were taken into account while conducting this research.

4.6.1 Voluntary participation of all involved

Participation by the students in this research was totally voluntary, as they were informed that they could stop their participation in this project at any time. No student was forced to participate.

4.6.2 Informed consent

The aims of the research, the research question, the research procedures to be followed and how the results of the research will be used were explained to the students. The students could thus make an informed decision about their participation in the research. Approval for this research was obtained from the Central University of Technology, Free State, through the Director, School for Teacher Education, Faculty of Humanities.

4.6.3 Deception of participants

No form of deception, intended or involuntarily/accidental was inflicted upon any person involved in this research. No information was withheld or any form of incorrect information given to or required from participants to ensure their continuous participation in the project.

4.6.4 Privacy

The privacy of all participating students was protected at all times. No recording medium was used other than the relevant measurement instrument as discussed in Chapter 4.

4.6.5 Anonymity and confidentiality

Private information regarding the students was considered confidential. The instrument does not allow for the inclusion of names or any other personal data on the form. All reporting was done in the group only and not individually, thereby ensuring anonymity and confidentiality at all times.

4.7 Conclusion

In this chapter the focus was on the quantitative research design and how it was implemented. Thorough explanations of the measurement instrument and the participants in the study in respect of their location and study areas, were followed by a discussion of the procedure followed completing the questionnaires. Lastly, the statistical analysis and the ethical guidelines were reviewed. In chapter 5 the processing and interpretation of research data will be addressed.

CHAPTER 5: RESULTS

5.1 Introduction

In this chapter the results of the data analyses will be discussed regarding the 4 areas tested with the TEIQue (SF), namely the well-being of the teacher, the sociability of the teacher, the self-control of the teacher and the emotionality of the teacher as well as the Total Trait of the groups. The Total Trait is a 'snapshot' of the general emotional functioning of a person. Firstly statistics regarding the sample group are presented to give an overview of the demographic detail of the participants, such as gender and the educational level of the group.

The objective of this chapter is to examine the research question asked in Chapter 1.2.

This study has as focus the investigation of the Emotional Intelligence levels of first year student teachers at the Central University of Technology, Free State to establish whether their Emotional Intelligence (EI) is on a sufficiently developed level to enable them to become good classroom leaders.

5.2 Demographical detail of sample group

The two groups of students used during the research consisted of 79 students; all registered at the Central University of Technology, Free State for the degree B Ed. (FET) Specialisation Technology.

The rationale to test two groups was to determine whether a substantial difference worth mentioning existed between the two

groups to have clarity for further argumentation during the summary and recommendations of the study.

5.2.1 Period distributions

The first test was conducted with the first years of 2012 and the second test was conducted with the first years of 2013.

The 2012 population comprised of 60 students and 42 were included in the test group. Thus 70% of the first year students of 2012 completed the test.

The 2013 population comprised of 55 students and 37 were included in the test group, in other words 67% of the first year students enrolled for B. Ed. (FET) Specialization Technology of 2013 completed the test.

The total test group, $n = 79$.

Table 5.1 - Period distributions

Year	Frequency	Percentage of n
2012	42	53%
2013	37	47%
n	79	100%

5.2.2 Gender distribution

Tables 5.2 to 5.4 provide a breakdown of the gender of the 2 groups.

Table 5.2 - Gender distribution of group 1

Group	Frequency	Percentage
Male	15	36%
Female	27	64%
Total	42	100%

Table 5.3 - Gender distribution of group 2

Group	Frequency	Percentage
Male	19	51%
Female	18	49%
Total	37	100%

Table 5.4 - Gender distribution of total sample

Group	Frequency	Percentage
Male	34	43%
Female	45	57%
Total	79	100%

Statistics provided by Statistics SA in 2011 regarding the distribution of males to females in South Africa present roughly the same distribution (male - 48.74 and female - 51.26). The sample group is not 100% in line with the above-mentioned national distribution ratio, but still within an acceptable range to be representative of both genders in the population.

5.2.3 Educational distribution

The sample groups were not asked what their current educational levels were, but for them to be admitted to the CUT to study for the mentioned degree, they need to have passed Grade 12 at a FET institution with a score at least 27 or more points on the CUT scoring scale for the NSC examination.

Table 5.5 - Educational level distributions total sample

Frequency	Grade	Percentage
79	12	100%

5.3 Descriptive statistics

In this part the descriptive statistics of this study for the various areas and the factors on the TEIQue (SF) measuring instrument as discussed in chapter 3 are presented. The statistics are divided into 2 groups, namely group 1: students tested in 2012 and group 2: students tested in 2013. Subsequently the statistics of the combined group are given to form an overall picture of the test results.

5.3.1 Well-being

The first area of the TEIQue (SF) is well-being. It consists of three aspects, namely happiness, optimism, and self-esteem.

These aspects aim to measure how happy a person is at a particular moment, how positively he/she sees the future and how good he/she feels about him-/herself.

Table 5.6 consists of descriptive statistics of group 1 for well-being. The mean for happiness, 4.5, is not high - in fact, it is at the bottom of what is seen as normal (acceptable) at 4.5 to 5.5. This indicates that the majority of participants view themselves as not very happy. The mean for optimism and self-esteem are higher at 5.8 and 4.8 respectively, although only optimism is above the norm. Overall, the sample has an average score of 5 on well-being, which falls in the middle of the acceptable range.

Table 5.6 - Well-Being score – Group 1

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Happiness	4.5	1.3	1.7	3.0	7.0	4.0
Optimism	5.8	1.5	2.1	1.0	7.0	6.0
Self-esteem	4.8	1.1	1.1	1.0	7.0	6.0
Well-Being	5.0	0.74	0.55	3.3	6.3	3.0

N=42

Table 5.7 depicts the descriptive statistics of group 2 for well-being. The mean for happiness, 5.1, is average. This

indicates that the majority of these participants view their state of happiness as undetermined or neutral. The mean for optimism and self-esteem are higher at 5.5 and 5.2 respectively, and both areas are within the norm range. Overall, this sample has an average score of 5.3 on well-being, which is within the acceptable range.

Table 5.7 - Well-being score – Group 2

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Happiness	5.1	1.6	2.5	2.0	7.0	5.0
Optimism	5.5	1.2	1.4	3.0	7.0	4.0
Self-esteem	5.2	0.9	0.9	3.0	7.0	4.0
Well-Being	5.3	0.8	0.7	3.7	7.0	3.3

N=37

Table 5.8 presents the descriptive statistics for the combined group for well-being. The mean for happiness, 4.7, is not high - in fact, it is towards the bottom of what is seen as normal (acceptable) at 4.5 to 5.5. This is due to the low scores of group 1. This indicates that the majority of participants view themselves as not very happy. The means for optimism and self-esteem are higher at 5.7 and 5.0 respectively, although only optimism is above normal. Overall, this sample (the combined group) has an average score of 5

on well-being, which is in the middle of the acceptable range.

Table 5.8 - Well-being score – combined group

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Happiness	4.7	1.5	2.1	2.0	7.0	5.0
Optimism	5.7	1.3	1.8	1.0	7.0	6.0
Self-esteem	5.0	1.0	1.1	1.0	7.0	6.0
Well-Being	5.1	0.8	0.6	3.3	7.0	3.7

N=79

5.3.2 Self-control

The second area on the TEIQue (SF) is known as self-control. It consists of three separate facets - emotion regulation, impulse control and stress management. Globally, this factor gives an indication of how well the participants can control their emotions, how they respond to impulses and manage their stress levels. An individual with a high score in this area feels that he/she can control his/her impulses well, while a person with a low score will give in to desires without thinking too hard about it.

This area has specific implications for student teachers aspiring to become classroom managers/educationists,

because self-control can be considered as a determining factor for interpersonal relations and a classroom atmosphere conducive to effective teaching and learning.

Table 5.9 displays the descriptive statistics of group 1 for self-control. The mean score for these facets is between 3.3 and 5.0. This suggests that some of the participants have problems with impulse control. This is not a concern at this stage and will be discussed in detail in chapter 6. The mean for the area of self-control is in the middle of the acceptable range, indicating that the group does not have problems with their self-control as a whole.

Table 5.9 – Self-control score – Group 1

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion Regulation	4.6	1.3	1.6	2.0	7.0	5.0
Impulse Control	3.3	1.5	2.1	1.0	6.0	6.0
Stress Management	5.0	1.3	1.8	1.0	7.0	6.0
Self-Control	5.0	1.3	1.8	2.3	6.5	4.2

N=42

Table 5.10 demonstrates the descriptive statistics of group 2

for Self-control. The mean score for these facets is between 3.3 and 5.0. This suggests that some of the participants have problems with impulse control. This phenomenon will be discussed in detail in chapter 6. The mean for the area of self-control is below the acceptable range of 4.5 to 5.5 and this indicates a problem area that needs to be addressed. This will also be discussed in some detail in chapter 6.

Table 5.10 – Self-control score – Group 2

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion Regulation	4.3	1.5	2.2	1.0	7.0	6.0
Impulse Control	3.7	1.5	2.3	1.0	7.0	6.0
Stress Management	4.9	1.2	1.5	1.5	6.2	4.7
Self-Control	4.3	0.9	0.8	2.7	7.0	4.3

N=37

Table 5.11 consists of the descriptive statistics of the combined group for Self-control. The mean score for these facets is between 3.5 and 5.0. This suggests that some of the participants have problems with impulse control where the score is at 3.5 and this might be a concern. Emotion regulation at 4.5 is below the normal (acceptable) range. The

score for stress management at 5.0 is acceptable. The mean for the area of self-control is slightly below the middle of the acceptable range at 4.3, indicating that impulse control is an area of concern.

Table 5.11 – Self-control score– Combined Group

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion Regulation	4.5	1.4	1.9	1.0	7.0	6.0
Impulse Control	3.5	1.5	2.2	1.0	7.0	6.0
Stress Management	5.0	1.3	1.7	1.0	7.0	6.0
Self-Control	4.3	0.9	0.8	2.3	6.5	4.2

N=79

5.3.3 Emotionality

Emotionality, as the third area tested with the TEIQue (SF), consists of four sub-areas, namely empathy, emotion perception, emotion expression and relationships. Overall, this area gives an indication of an individual's Emotional Intelligence with regard to his/her close friends, family and other personal relationships. At first glance these aspects may not seem as important for this study as some of

the others. Yet, deeper consideration reveals the importance of understanding the emotional expression of learners in the classroom. Empathy pertains to feelings of “being in someone else’s shoes”. Emotion perception involves the ability to recognise the emotions of other people. Emotion expression is the biased ability of an individual to express his/her emotions in a healthy way. The relationships area pertains to how much an individual values a relationship - and the work the individual will put in to sustain close personal relationships (Petrides, 2009).

Table 5.12 explains the descriptive statistics for the four areas and the overall Emotionality factor for group 1. With scores between 3.8 for Relationships and the highest at 4.4 for Emotion perception, these areas are the areas that are a big concern which need closer examination. A possible explanation and further discussion of these will be done in chapter 6.

Table 5.12 – Emotionality score - Group 1

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Empathy	4.3	1.3	1.8	1.0	7.0	6.0
Emotion Perception	4.4	1.3	1.7	1.0	7.0	6.0
Emotion Expression	4.2	1.2	1.4	2.0	7.0	5.0
Relationships	3.8	2.0	4.0	1.0	7.0	6.0
Emotionality	4.2	0.8	0.7	2.5	6.1	3.6

N=42

Table 5.13 will provide descriptive statistics for the four areas and the overall emotionality factor for group 2. With scores between 4.6 for Emotion Perception and the highest at 5.0 for Relationships, this area seems not to be such an area of concern, compared to group 1 which scored much lower in these areas. The score of 4.8 for the total emotionality is still within the acceptable range. A possible explanation will be discussed in chapter 6.

Table 5.13 – Emotionality score - Group 2

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Empathy	4.9	1.4	1.3	2.0	7.0	5.0
Emotion Perception	4.6	1.0	1.0	2.5	7.0	4.5
Emotion Expression	4.8	1.4	2.1	1.5	7.0	5.5
Relationships	5.0	1.5	2.3	1.0	6.0	5.0
Emotionality	4.8	0.7	0.4	3.5	7.0	3.5

N=37

Table 5.14 gives descriptive statistics for the four areas and the overall emotionality factor for the combined group, with scores between 4.3 for Relationships and the highest at 5.0 for Emotion Expression. It shows that the group as a whole resorts on the lower end of the acceptable. The score of 4.5 for the total emotionality is however still within the acceptable range. A possible explanation for the low scores will be given in chapter 6.

Table 5.14 – Emotionality score - Combined group

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Empathy	4.5	1.4	1.9	1.0	7.0	6.0
Emotion Perception	4.5	1.2	1.3	1.0	7.0	6.0
Emotion Expression	5.0	1.3	1.8	1.5	7.0	5.5
Relationships	4.3	1.9	3.5	1.0	7.0	6.0
Emotionality	4.5	0.8	0.6	2.5	6.1	3.6

N=79

5.3.4 Sociability

The Sociability area on the TEIQue (SF) consists of three areas: emotion management, assertiveness and social awareness. Individuals who score high on the sociability factor would see themselves as influential in the emotions of others, be able to adapt to different social situations and stand up for themselves when necessary.

Table 5.15 provides the descriptive statistics regarding Sociability for group 1. The mean score on social awareness is 3.9 and the score for assertiveness at 3.5 is extremely low

and of concern. Emotion management 5.3 is in the upper half of the acceptable range. This may imply that participants have a problem with assertiveness. This is however in line with his or her stage in the life cycle and will be discussed in chapter 6.

Table 5.15 – Sociability score - Group 1

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion management	5.3	1.3	1.6	3.0	7.0	4.0
Assertiveness	3.5	1.6	2.7	1.0	7.0	5.0
Social Awareness	3.9	1.4	1.9	0.5	7.0	6.5
Emotionality	4.2	1.0	0.9	2.0	5.8	3.8

N=42

Table 5.16 shows the statistics regarding sociability for group 2. The mean score on social awareness, 4.4, and the score for assertiveness, 3.9, is still low and a concern, but is higher than the scores of group 1. Emotion management at 5.3 falls in the upper half of the acceptable range. This may imply that these participants, like those in group 1, have a problem with assertiveness.

Table 5.16 – Sociability score - Group 2

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion management	5.3	1.1	1.2	3.0	7.0	4.0
Assertiveness	3.9	1.6	2.5	1.0	7.0	6.0
Social Awareness	4.4	1.4	1.9	1.5	6.8	5.3
Emotionality	4.5	0.9	0.9	1.8	7.0	5.2

N=37

Table 5.17 portrays the statistics regarding sociability for the combined group. The mean score on social awareness, 4.4, and the score for assertiveness, 3.9, are still low and a concern but are higher than the scores of group 1. Emotion management at 5.3 is in the upper half of the acceptable range. This may imply that participants have a problem with assertiveness. An overall score on sociability of 4.5 is at the bottom of the normal (acceptable) range.

Table 5.17 – Sociability score - Combined Group

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Emotion management	5.3	1.2	1.4	3.0	7.0	4.0
Assertiveness	3.4	1.6	2.6	1.0	7.0	6.0
Social Awareness	4.1	1.4	1.9	0.5	7.0	6.5
Emotionality	4.3	0.9	0.9	1.8	6.8	5.0

N=79

5.3.5 Adaptability, self-motivation and total EI score

Besides the four areas, each made up of their respective facets, there are also two more facets that require further attention. The scores of these facets are not added to any of the other areas. These facets are Adaptability and Self-Motivation. A person who is adaptable enjoys change and responds well to situations where adjustment is necessary. Self-motivation concerns a person's ability to motivate him- or herself internally - a low score indicates that external motivators may be required for good performance.

Besides these two facet scores, there is also a total EI score. This overall score sums up the different factors, as well as adaptability and self-motivation, to provide an indication of an individual's Emotional Intelligence functioning.

Table 5.18 displays the analysis on these variables for group 1. Total EI score has a mean value of 4.5 with a standard deviation of 0.6. There is a very small variance in the total score, with not many scores falling in the lower extremes with no score below 2.9. However, the maximum score is 6.2, indicating that some respondents had scores in the higher extremes.

Table 5.18 – Adaptability, self-motivation and total EI score - Group 1

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Adaptability	4.9	1.2	1.4	2.5	7.0	4.5
Self-motivation	4.3	1.5	2.3	1.0	7.0	6.0
TOTAL EI	4.4	0.6	0.3	2.9	6.2	3.3

N=42

Table 5.19 depicts the analysis of these variables for group 2. Total EI score has a mean value of 4.7 with a standard deviation of 0.5. There is a very small variance in the total

score, with not many scores falling in the lower extremes, with no score below 3.8. However, the maximum score is 5.6, indicating that no respondents scored in the higher extremes.

Table 5.19 – Adaptability, self-motivation and total EI score for Group 2

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Adaptability	4.8	1.1	1.3	2.5	7.0	4.5
Self-motivation	4.9	1.4	1.8	1.5	5.6	4.1
TOTAL EI	4.7	0.5	0.2	3.8	5.6	1.9

N=37

Table 5.20 indicates the analysis of these variables for the combined group. The total EI score has a mean value of 4.6 with a standard deviation of 0.5. There is a very small variance in the total score with not many scores falling in the lower extremes (nothing below 2.9). However, the maximum score is 6.2, indicating that some of the respondents scored in the higher extremes. The other two factors score in the normal (acceptable) range, but still in the bottom half. Adaptability scored a 4.8 and Self-motivation a 4.6.

Table 5.20 – Adaptability, Self-motivation and total EI score
Combined Group

Areas	Mean	Standard Deviation	Variance (Standard Deviation)	Min	Max	Range
Adaptability	4.8	1.2	1.3	2.5	7.0	4.5
Self-motivation	4.6	1.5	2.1	1.0	7.0	6.0
TOTAL EI	4.6	0.5	0.3	2.9	6.2	3.3

N=79

5.4 Research question

The results and statistical information obtained when the TEIQue (SF) test was administered to the two indicated groups were presented and discussed in this chapter. To determine the value of the outcome of the obtained results, the research question should be reviewed.

In chapter 1 (1.2) the research question was asked:

This study has as focus the investigation of the Emotional Intelligence levels of the First-year student teachers at the Central University of Technology, Free State to establish whether their

Emotional Intelligence (EI) was on a sufficiently developed level to enable them to become good classroom leaders.

The statistics discussed above indicate that the research question was indeed answered through the discussion of the factors and subscales measured in the EI domain. The normal acceptable level of an individual's EI is between 4.5 and 5.5. As shown in the tables above it is clear that the group as a whole is right at the bottom extremes of the acceptable level.

There may be many reasons for the low score on EI, but it was not the intent of the research to find the factors influencing the level of Emotional Intelligence of the first year student teachers at the Central University of Technology, Free State.

5.5 Conclusion

In this chapter the statistical data were presented and briefly discussed. Data from two groups were first presented separately and then as a combined group. The research question does not state explicitly that a specific year group would be used and therefore the two groups could be combined into one to indicate/demonstrate the EI levels of the first year Technology student teachers studying at the Central University of Technology, Free State. Each of the areas will be discussed in detail in chapter 6.

CHAPTER 6: DISCUSSION, RECOMMENDATIONS AND CONCLUSION

6.1 Introduction

This study focussed on the investigation of the Emotional Intelligence levels of the first year Technology student teachers at the Central University of Technology, Free State, to establish whether their Emotional Intelligence (EI) was on a sufficiently developed level to enable them to become good classroom leaders.

In order to answer the above-mentioned question, the researcher looked at the following questions which were introduced and addressed in Chapters 3 and 5:

- What is Emotional Intelligence?

This was discussed in detail in chapter 2. The intention was to give a historical background and to give a theoretical basis of the various EI models, definitions, measurements and the development of EI.

The model used in this research is based on the models that Goleman (1995, 1996, 1997 and 2002) developed and which Konstantinos Vasilis Petrides used to construct his model of Trait EI. He proposed a conceptual distinction between the ability- based model and a trait-based model of EI and has been developing the latter over many years in numerous scientific publications (2000, 2001, 2003, 2006, 2007 and 2009). Trait EI is "a constellation of emotional self-perceptions located at the lower levels of personality" (Petrides, 2000). In lay terms, trait EI refers to an individual's

self-perceptions of his/her emotional abilities. This definition of EI encompasses behavioural dispositions and self-perceived abilities and is measured by self-report, as opposed to the ability-based model which refers to actual abilities, which have proven highly resistant to scientific measurement. Trait EI should be investigated within a personality framework. An alternative label for the same construct is Trait Emotional Self-efficacy.

The trait EI model is general and subsumes the Goleman model discussed in chapter 2.

- What is the role or influence of EI on teaching?

EI has a definite role in, and influence on teaching, as it is important not only to develop the EI abilities in the learners, but teachers themselves need EI abilities, especially for their own well-being and efficiency in the classroom to deliver teaching and learning of high quality (Sutton & Wheatly, 2002). Brackett and Caruso (2007) found that modern teachers are more aware of the role that emotions play in their daily roles in the education system. Teachers need to understand and control their emotions, as these affect not only the learning processes, their physical and mental health and social relationships, but also the academic performance of the learners.

Brotheridge and Grandey (2002) state that teaching is seen as one of the most stressful jobs, because it involves daily social interaction in which the teachers must regulate their

own emotions, as well as those of the learners, parents and co-workers.

This aspect is very important for this study, because the researcher specifically evaluated the level of EI of the first year teacher students at the Central University of Technology, Free State.

- What was the level of well-being of the students?

During an ordinary day in the life of a student he or she may most probably experience more negative emotions than positive ones. Anxiety, for instance, may interfere with his/her ability to acquire knowledge and process information. The experience of positive emotions will most probably lead to an enhanced sense of well-being which in turn may lead to increased creative capacity which may lead to new ideas and most importantly, assist in the student's ability to handle problems (Frederickson, 2001).

The well-being of students/teachers will be increased by positive emotions and this will have a snowball effect in the creation of a favourable learning environment (Sutton & Whealey, 2003). Taking into account all of the above, it is evident that the ability to identify, understand and control negative and positive emotions is fundamental in the teaching profession. Effectively managing emotions and creating positive emotions will be favourable to both the teacher and the learners.

The purpose of this study was to determine the emotional intelligence levels of the students in their accomplishment as individuals. In chapter 5 all the statistical data were presented and interpreted, according to the stated well-being values.

- What was the level of sociability of the students?

One of the most relevant traits of a teacher should be sociability. Buss and Plomin (1975; 1984) describe sociability as being genetically based and can therefore be observed in infants, children, adults, as well as in animals. Sociability can be defined as the inclination of a person to be with other people rather than being by him or herself. They argue that sociability not only reflects the need for stimulation or comforting, but also that individual disparity in sociability stems from the preference of a person in how his or her needs are satisfied. For example, when an egoistic person needs stimulation, the person will most likely be excited by events or objects, in contrast to a social person who will seek out peers to satisfy his or her craving of the give and take feedback resulting from social interaction with others.

The purpose regarding this aspect was to determine the development of sociability towards building relationships and the influence on the social environment of the student. In chapter 5 the statistical data were presented and interpreted according to the sociability development scales. In this chapter the level of sociability of the student will be discussed in context of the statistical data obtained.

The development of emotionality of the students was also researched.

Nias (1996) and Zembylas (2002) indicate that emotions are inseparably linked to the lives of teachers. They argue that the emotional issues in teaching have long been overlooked in research on teaching and teachers. This has since been rectified and more research has been done in this area. Hargreaves (2000) looked at the emotional complexities in the teacher-student interaction; Zembylas and Barker (2002) looked at the anxiety of student teachers teaching subject matter that makes them uncomfortable and Lasky (2000) looked at the emotional aspects of the teacher-parent relationship.

In this study the researcher also wanted to determine the level of emotionality in terms of recognising emotional states in others, expressed emotions and the use of these abilities to develop and sustain close relationships with others. In chapter 5 the statistical data were presented and interpreted according to the emotionality scales. In this chapter the level of emotionality of the student will be discussed in context of the statistical data obtained.

- What was the level of self-control of the students?

In the current educational dispensation in South African schools the self-control of teachers seems to be of paramount importance. The basis of self-control lies in a person's positive self-attitude and sufficient self-knowledge to make the correct decision about what to do with a specific emotion. The section

of the brain that deals with thought makes decisions based on emotions. People with a high EI will display appropriate feelings based on the emotions that they are experiencing and at the same time deal positively with those emotions that they feel are inappropriate to show. These persons exhibit self-control at an appropriate and balanced level which means that other people judge them to be less impatient, more open to ideas, most likely not to get involved in conflict and are generally regarded as likeable people. With the right amount of self-control a person will be able to manage his or her moods effectively (Goleman, 1998).

The researcher wanted to determine whether the students have control over their impulsiveness and also to determine their ability to cope with external pressures and stress. In chapter 5 the statistical data were presented and interpreted according to the self-control indicators. In this chapter the level of self-control of the student will be discussed in context of the statistical data obtained.

6.2 Discussion of some of the consequences and outcomes of this study

The four areas namely, the Well-being, the Self-control, the Emotionality and the Sociability of the student teachers are discussed to determine whether student teachers should receive some form of additional training to enhance their personality development and skills to become more effective and efficient teachers.

6.2.1 The level of well-being

The first area of the TEIQue introduced in Chapter 3 is well-being. It consists of three aspects, namely happiness, optimism, and self-esteem. Altogether, this area aims to establish how happy a person is at a particular moment, how positively the student sees the future and how good the student feels about him/herself.

Table 5.8 (Chapter 5) depicts descriptive statistics of the combined group for well-being. The mean for happiness, 4.7, is not high - in fact, it is towards the bottom of what is seen as normal (acceptable) at 4.5 to 5.5. This is due to the low scores of group 1. This result indicates that the majority of participants view themselves as not very happy. The means for optimism and self-esteem are higher at 5.7 and 5.0 respectively, although only optimism has a score of above normal. Overall, the sample has an average score of 5 on well-being which is right in the middle of the acceptable range.

The researcher is of the opinion that the well-being scores reveal a strength in terms of the total EI score and the first year students must be made aware of this attribute in terms of their EI.

People with a normal (acceptable) level of well-being are able to identify their feelings and identify those things that control their emotions and circumstances in order to effectively maintain happiness, optimism and self-esteem towards general healthy well-being. A lower level of well-being can

result in poor life outcomes that can cause negative emotions such as depression, inadequate governance and poor management of their own emotions in general. It may influence relationships negatively (Barlow & Durand, 2001). In the classroom negative relationships can be detrimental to effective teaching and learning, because it is well known that friendly, caring teachers, who show interest in their learners, are also successful teachers.

The fact that we regard individuals as holistic beings enables us to see and realise that there is a direct interaction between the psychological and the physical spheres. Research by Maslow (1954) suggests that all individuals have the need to self-actualisation, growth, development and ultimately achieving their goals in life. It is therefore obvious that people with high levels of emotional and social skills will be able to identify and satisfy their basic needs to achieve more specific needs to ultimately accomplish self-actualisation, and overall wellness.

Teachers most probably experience more negative emotions than positive emotions on a daily basis. The ability of the teacher to identify, understand and control negative and positive emotions is therefore fundamentally important in the teaching profession. It will be useful to create emotions that will be favourable to both the teacher and the learners.

Therefore, an acceptable level of well-being is not only beneficial to the teacher, but to the learners and the school in general as well.

6.2.2 The level of self-control

The second area on the TEIQue, which was initially discussed in Chapter 3, is known as self-control. It consists of three separate areas - emotion regulation, impulse control and stress management. Globally, this factor gives an indication of how well participants can control their emotions, how they respond to impulses and manage their stress levels. An individual with a high score in this area will be able to control his/her impulses well, while an individual with a low score will give in to desires without thinking too hard about it.

Chapter 5, Table 5.11 displays descriptive statistics of the combined group in terms of Self-control. The mean scores for these areas, namely emotion regulation, impulse control and stress management range between 3.5 and 5.0. This suggests that some of the participants have problems with impulse control as explicated in the score of 3.5. This might be a concern. Emotion regulation at 4.5 is at the bottom of the normal (acceptable) range. The score for stress management at 5.0 is acceptable. The mean for the area of self-control is slightly below the acceptable range at 4.3, with impulse control as an area of concern.

Generally, high scorers in this area have a good sense of control over their emotions and stress levels, and these scorers will think things through carefully before acting. On the other hand, low scorers tend to behave impulsively and allow their emotions to determine their behaviour and therefore all thought processes are motivated from an external locus of control.

In any school environment the self-control of teachers seems to be of paramount importance for both teachers and learners. A vast number of teachers tend to feel that their hands are tied with regards to maintaining discipline in the classroom. The teacher needs to display a high level of self-control and most importantly, impulse control to stay in control of the classroom and his/her own reaction to events in the classroom. Tuckman and Monetti (2011) name six steps that a teacher should follow to successfully handle anger and aggression in the classroom:

- Stop, calm down and think before you act.
- Go over the problem.
- Set a positive goal for the outcome of the situation.
- Think of positive solutions that will lead towards that goal.
- Try to anticipate the consequences of possible solutions.
- Choose the best solution and try it out.

A low score for self-control is alarming, as self-control is one of the most important attributes a teacher needs to maintain discipline in terms of relationships, work performance, self-actualisation and achievements.

Given the current situation in most South African schools, the self-control of teachers seems to be of vital importance. A low score needs to be addressed, as it can result in behaviour such as impetuosity and spontaneous outbursts of the said teacher.

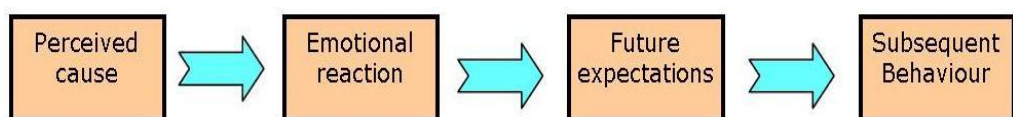
6.2.3 The level of emotionality

Emotionality comprises four areas, namely empathy, emotion perception, emotion expression and relationships. Overall, this area gives an indication of an individual's Emotional Intelligence with regard to his/her close friends, family and other personal relationships. Empathy pertains to feelings of "being in someone else's shoes". Emotion perception involves the ability to recognize the emotions of other people. Emotion expression is the predisposition ability of an individual to express his/her emotions in a healthy way. The area relationships pertain to how much an individual values close relationships, as well as the energy he/she will put into sustaining close personal relationships (Petrides, 2009).

Chapter 5, table 5.14 gives the descriptive statistics for the four areas and the overall emotionality factor for the combined group, with scores between 4.3 for Relationships and the highest at 5.0 for Emotion Expression. It shows that the group as a whole falls on the lower end of the acceptable range. The score of 4.5 for the total emotionality is, however, still within the acceptable range.

Tuckman and Monetti (2011) depict the role of emotions as follows:

Fig 6.1 - The role of emotions



They state that our emotional reactions and the emotional reactions of other people influence what we expect and what we do. Therefore it is of the utmost importance that the teacher be emotionally equipped to manage all aspects in and outside the classroom.

A low scorer in terms of emotionality would not find it easy to establish close emotional bonds with others, which may result in a perception of mistrust and detachment. A high scorer may find it uncomplicated to bond with others and to establish emotionally rewarding reciprocal relationships. Once these are established, he or she is generally able to maintain these relationships.

As explained in Chapter 3, there is a complex relationship between teaching and emotions and because of the interaction between the two it is important that teachers recognise that emotions will have an impact on the way they teach. Teachers must be able to analyse the emotional characteristics of their teaching to interrupt and/or stall overbearing emotions in their actions. By understanding how emotions rule their behaviour and understand how to recognise such emotions, they will be able to begin to control these emotions.

A person needs to examine this factor to find out to what extent a person is in touch with his/her and others' feelings. One can deduce that a person who scores highly on the factor will be able to recognise his/her own emotions and express these well, while a low scorer would find it difficult to build relationships or perceive emotions correctly.

The score of the group is at the low end of the normal (acceptable) range and it is a concern that needs to be addressed, as teachers must be aware of their own emotionality and the effect it might have on any type of relationship they form or wish to form. Teachers and learners enter into a relationship and although this relationship should be professional in terms of time and boundaries, it will have a direct impact on the power of influence and trust a teacher will experience in the classroom.

6.2.4 The level of sociability

The Sociability on the TEIQue consists of three areas - emotion management, assertiveness and social awareness. Individuals who score high on the sociability factor would see themselves as influential in the emotions of others, be able to adapt to different social situations and stand up for themselves when necessary.

Chapter 5, Table 5.17 shows the statistics regarding sociability for the combined group. The mean score on social awareness on 4.4, and the score for assertiveness on 3.9 are low and a source of concern. Emotion management on 5.3 falls in the upper half of the acceptable range. This may imply that participants have a problem with assertiveness and this is in line with their development stage, as they may find themselves in the conflict area of intimacy versus isolation (Erickson, 1997). An overall score on sociability of 4.5 is right at the bottom of the normal (acceptable) range.

The area of concern is assertiveness and this may be linked to

the stage of development that the student is going through. Peer pressure and the "new" freedom that the student experiences as part of campus/university life will have an influence on the assertiveness of the student in that his/her role in the identity versus confusion stage has taken a step backwards as he/she is no longer in the senior position at school. This can result in the inability to be assertive and the student may feel that he/she is not being seen as part of the "in" crowd. The student has not reached the young adulthood level of relationships and therefore is still confused about his/her own role in the group dynamics (Tuckman & Monetti, 2011).

Social cognition represents the way the students think about themselves and those around them, which in turn may influence their social awareness. The more a student values his/her own being, the more assertive he/she will respond and the more effective his/her emotional management will be.

As discussed in Chapter 3, teachers need to be socially competent and this social competence is related to the individual's degree of effectiveness in dealing with others. The emphasis is placed on the processes in which the individual is involved. The teacher's profession entails dealing with people every day, from the learner in class to other teachers and parents. A teacher with a low score on sociability will be withdrawn and will be seen as unapproachable and therefore not the ideal teacher. Modelling behaviour is something that often occurs inadvertently. Individuals direct their behaviour according to what their mentors do, or make decisions based on some preconceived models which formed over the years.

Modelling is a very powerful medium that can be used very effectively to promote socially responsible behaviour (Howes et al., 2008). It is therefore important that the teacher's behaviour is acceptable and that he/she displays acceptable emotional responses to challenges. The teacher who demonstrates socially acceptable behaviour is inevitably the teacher who will carry the most influence in the classroom and amongst colleagues.

6.2.5 Adaptability, Self-motivation and Total EI score

Apart from the above-mentioned four areas, each made up of their respective factors, there are also two factors that are autonomous in terms of EI. These are adaptability and self-motivation.

A person who is adaptable enjoys change and responds well to situations where adjustment is necessary. Self-motivation describes a person's ability to motivate him or herself internally; a low score indicates that external motivators may be required for good performance.

Besides the scores of the two factors, there is also a total EI score. This overall score summarises the different areas, as well as the adaptability and self-motivation areas to provide an indication of an individual's total Emotional Intelligence functioning, which would be an indication of a possible successful future career. Scholars like Ashkanasy and Trevor-Roberts (2000); George (2000); Goleman, Boyatzis, and Mckee (2002); Mayer, Salovey, and Caruso (2004), all

theorised that EI is one of the biggest contributors to a person's capacity to lead others, manage stress and to be part of a team. As discussed in Chapter 3, Rosete and Ciarrochi (2005) mention that it is for this reason that leaders (in this case teachers) with low EI may be poor in perceiving their own emotions which may lead to misinterpreting , or even missing important emotional signals from learners and co-workers. If they are poor at managing their own emotions, they may allow those to interfere with their handling of emotions in the classroom.

A complete analysis of these variables for the combined group is portrayed in Table 5.20 (Chapter 5). The total EI score has a mean value of 4.6 with a standard deviation of 0.5. There is a very small variance in the total score, with not many scores falling in the lower extremes (nothing below 2.9). However, the maximum score is 6.2, indicating that some of the respondents scored in the higher extremes. The other two factors score in the normal (acceptable) range, but still in the bottom half. Adaptability scored a 4.8 and Self-motivation a 4.6.

Bergin & Bergin (2012) mention that the typical first year students on campus will have problems in adapting to their new environment and life style. Campus life and seclusion from the former strict oversight of parents and teachers will have an influence on their emotional state and their ability to adapt to the "new" lifestyle. The lower score of 4.8 (Adaptability) does therefore not pose a concern in terms of the overall EI score.

Both Evans (2001) and Goleman (1995) (cf. Chapter 3) state that emotionally adequate and positive persons will show adaptability and adequate skills in the handling and management of life stressors. The emotionally adequate individual will be motivated to achieve optimal success. Adequate emotional and social intelligence will equip individuals with good social and emotional skills that will enable them to cope with situations and better manage and control negative emotions, and thus promote general well-being.

As indicated in Chapter 3, Salovey & Mayer (1990) mention that people with an adequate emotional intelligence will approach a problem in a constructive manner to resolve it, and will cope more effectively with negative life events and eventually benefit to achieve personal goals (Goleman, 1995; 2006). If people cannot control their own feelings and behaviour, events will not be effectively managed and the behaviour will be regarded as socially unacceptable. Steinberg (2005) also states that individuals with inadequate emotional intelligence are under the control of their emotions and feelings and not in control.

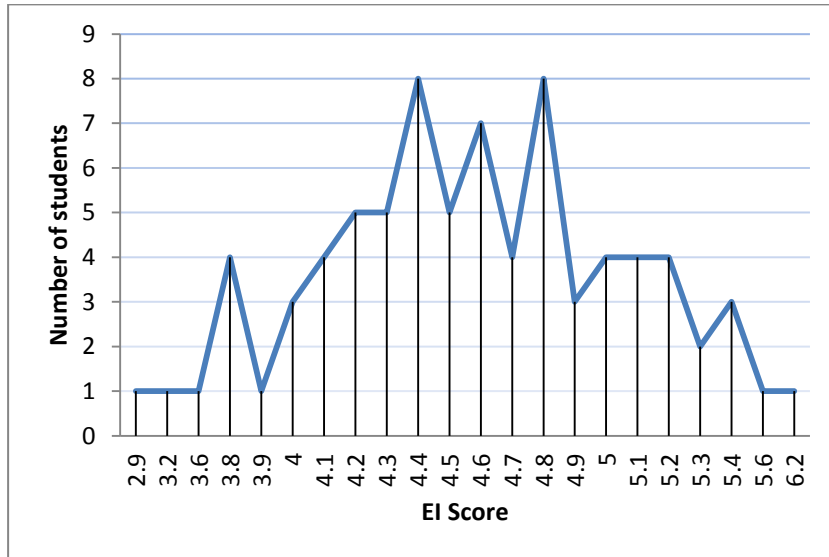
Self-motivation concerns a person's ability to motivate him or herself internally and with the students' score at 4.6, this is a concern. A low score indicates that external motivators are required for good performance and this may indicate that the students will only function optimally under direct supervision. The level of self-motivation needs to be improved to ensure more independent functioning of the student when he/she enters the teaching profession. Research has shown that a

higher EI competence could be beneficial to the individual and his organisation. People with a high EI have abilities such as self-motivation, postponing gratification, persisting in frustrating situations, managing impulses, mood regulation, and are able to empathise and create hope (Goleman, as cited in Newsome, Day & Catano, 2000). The individual is able to "identify, understand, experience, and express human emotions in a healthy and productive way" (Justice & Espinoza, 2007).

In probability theory, the normal (or Gaussian distribution) is a very commonly occurring continuous probability distribution — a function that indicates the probability that any real observation will fall between any two real limits or real numbers, as the curve approaches zero on either side. Normal distributions are extremely important in statistics and are often used in the natural and social sciences for real-valued random variables whose distributions are not known (Krishnamoorthy, 2006).

The normal distribution is immensely useful, because of the central limit theorem, which states that, under mild conditions, the mean of many random variables independently drawn from the same distribution is distributed approximately normally, irrespective of the form of the original distribution: physical quantities that are expected to be the sum of many independent processes (such as measurement errors) often have a distribution very close to the normal. Moreover, many results and methods (such as propagation of uncertainty and least squares parameter fitting) can be derived analytically in explicit form when the relevant

variables are normally distributed (Krishnamoorthy, 2006). Graph 6.1 shows that the test group falls within this normal distribution.



Graph 6.1 - Total EI distribution

From the distribution of EI score the following can be deduced:

Table 6.1 - EI Distribution

EI Score	Total number of participants	% of total Group
EI score very low (Concern area) (<4.0)	8	10 %
EI score low (>4.0 but <4.5)	25	31.5 %
EI score normal (acceptable)	44	56 %

(>4.5 but <5.5)		
EI high (>5.5)	2	2.5%
Total	79	100 %

Table 6.1 clearly indicates the distribution of the EI score in the test group. It is a big concern that 41.5 % of the group achieved a low score in terms of Emotional Intelligence (scores below the acceptable level of 4.5).

Finally, it can be concluded that a total of 41.5% of the respondents tested do not have the attributes for acceptable EI levels.. Theoretical research has emphasised the importance of the discussed 15 qualities of EI that are interlinked and interdependent as a total package in terms of the attributes necessary to be a successful and well-balanced teacher in the South African education system. Almost half of the student sample need to master these specific skills in terms of EI and therefore recommendations will be made to suggest possible solutions.

Goleman (1996) states (Chapter 3) that while EI may develop throughout one's life, the biggest impact will be during the later childhood and early adolescent stage of the individual. However, studies have clearly indicated that "training" in EI at a later stage in life is also possible (Ashkanasy & Daus 2002; Gardner, 2005; Wong et al., 2007).

In a study done by Reuven Bar-On (2003) in 2002 and referred to in Chapter 2, 26 grade 7 children with an average age of 12 years were exposed to the Self-Science curriculum

in school. The Self-Science curriculum was developed by Karen Stone-McCrown and colleagues (Stone-McCrown *et al.*, 1998) and it is an educational programme that was developed to enhance EI in children through didactical methods in the school curriculum. In 2002 at the beginning of the school year the children were tested using the EQ-i, Youth Version, and the same test was administered at the end of the school year. The results showed a significant increase in the children's EI during the year.

As stated in Chapter 2, Margareta Sjolund at a Swedish construction company did a second study which was reported on by Reuven Bar-On (2003) in his study. Twenty-nine of the employees at the company were tested before and after they attended a managerial skills workshop. At the time most of the 29 participants were in their 40's. Part of the workshop concentrated on techniques designed to develop EI competencies. The after test showed an increase in their EI competencies from a mean of 97 to 106, with significant increase in 9 of the 15 EQ-i subscales.

To educate people to be stronger emotionally and socially seems logical in that it will produce people better equipped to handle everyday situations. The two studies mentioned, proved that EI can be taught and developed and that people benefited from such training.

6.3 Limitations of the study

The following limitations might have had an impact on the results obtained.

6.3.1 First limitation

The first limitation to this study is that all the students used in this study were from one university, namely the Central University of Technology, Free State. This can be seen as a limitation, as it may not necessarily reflect the true cultural diversity of the South African landscape. If this study was done at another university, the results may differ due to a different combination of cultural groups attending that university.

6.3.2 Second limitation

All the students participating in this study were first year student teachers from the same department, namely The Department of Science, Mathematics and Technology Education in the Faculty of Humanities. The Faculty of Humanities, with reverence to the School of Teacher Education, consist of four departments namely:

- The Department of Science, Mathematics and Technology: Education
- Department of Educational and Professional Studies: Education
- Department of Languages and Social Sciences: Education
- Department of Postgraduate Studies: Education

First year students from the other departments were not included in this study.

6.3.3 Third limitation

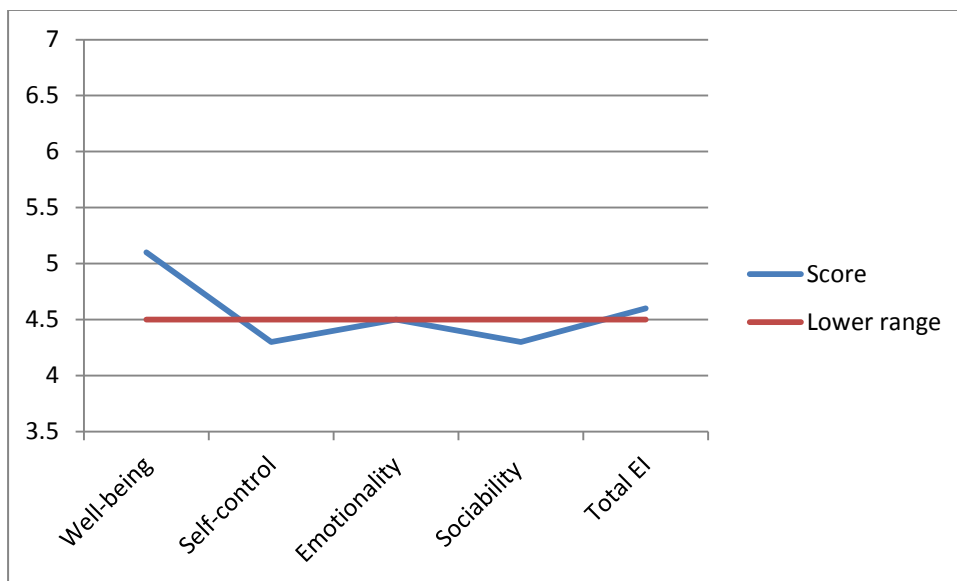
The third limitation was the fact that the study was based on voluntary participation; some of the students opted not to participate and this may skew the results.

The above-mentioned limitations may result in the inability to generalise the research outcomes for all first year student teachers.

6.4 Recommendations

During the course of this study and in the answering of the research question it became clear that specialised training in Emotional Intelligence is necessary to enhance the EI levels of the student teachers at the Central University of Technology, Free State.

With 41.5 % of the test group's EI level below 4.5, the normal (acceptable) range, it is clear that a large percentage of the student teachers are inadequately equipped with the necessary skills as portrayed in Emotional Intelligence. A well balanced set of skills in terms of the 15 qualities of Emotional Intelligence will be a positive attribute and will be an advantage towards the career of the future teachers as good classroom leaders and educationists.



Graph 6.2 – Score Comparison

Graph 6.2 clearly shows that except for the aspect of Well-being, the students' scores are on or below the lower range of the acceptable score on Self-control, Emotionality, Sociability and Total EI. Therefore the researcher recommends the following with regards to the development of the students' emotional intelligence.

6.4.1 Development and enhancement

It is recommended that the EI levels of student teachers be developed and enhanced to master the necessary skills and attributes for acceptable or even high levels of Emotional Intelligence. The enhancement of EI levels can be addressed during his/her studies at the Central University of Technology, Free State. Possible ways and means to address this recommendation are the following:

6.4.1.1 Testing and awareness of EI Levels

It is recommended that all students aspiring to become teachers be required to undergo an EI test as part of the curriculum and the importance of the scoring and test results should be explained to these first year students. The importance of re-testing must not be underestimated and a pre- and post-testing programme may be significant to establish progress and growth in terms of the identified areas.

6.4.1.2 Part of existing curriculum

EI development can be incorporated in the subject SLO 10 AS (Skills and Life Orientation) as a separate module. This training should be specifically designed for Teacher Education. The module should have theoretical and practical sessions and be in line with the current curriculum of SLO 10 AS.

6.4.1.3 New subject

The second option is to develop a new subject for the students to register for. This can be in line with the subject 'Academic Literacy and Communication Studies (ALP)' that the student attends for a specific period. The subject should be non-credit bearing and a certificate of completion should be presented at the end of the

period. This subject can be offered in either the first year of second year band.

6.4.2 Testing of students

The second recommendation is that Emotional Intelligence testing be part of the selection process for prospective student teachers. This recommendation might however be complicated and have more consequences than the first option.

The preferred choice of the researcher is that EI development be incorporated into the subject SLO 10 AS (Skills and Life Orientation) as a separate module. This training should be specifically designed for Teacher Education. The scope of the training can go hand in hand with the rest of the themes in SLO 10 AS. Some of the themes in the subject are:

- Setting goals
- Obstacles on the journey: Student Life
- Time Management
- Coping with diversity and change
- Overcoming the challenges of conflict management, problem solving and decision making
- Your best travel companion - you

As seen above training and development of EI will augment the rest of the themes.

6.5 Recommendations for further study

The sample of this study consisted of only 79 first year student teachers at the Central University of Technology, Free State, and the results obtained from this study cannot be generalised for all first year students at the Central University of Technology or other universities in South Africa. To validate these results it will be necessary to expand this research to other Teacher Education Faculties at other universities across South Africa or at least in the Free State province as a whole.

Another recommendation for further study is that the same group of students be re-tested in their fourth year of study, and that the two sets of results be analysed to identify growth or lack thereof in Emotional Intelligence levels taking into consideration that no formal programme for EI development is currently in place. .

In closing and to summarise, it is necessary to comment very briefly about what has emerged from the study and what value this study might hold for the training and preparation of prospective teachers.

Firstly, the importance of a well-developed level of EI to ensure effective service delivery in the workplace, in this case the teaching profession should, never be underestimated.

Secondly, the importance of a high level of EI for the teaching profession can hardly be over- emphasised because the teacher finds him/herself in an environment where interpersonal relationships, understanding, adaptability, self-motivation, assertiveness and emotional stability, general well-being and self-

control will influence and determine effective leadership and educational success in the classroom.

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APPENDIX

TEIQue-SF

Instructions: Please answer each statement below by putting a circle around the number that best reflects your degree of agreement or disagreement with that statement. Do not think too long about the exact meaning of the statements. Work quickly and try to answer as accurately as possible. There are no right or wrong answers. There are seven possible responses to each statement ranging from 'Completely Disagree' (number 1) to 'Completely Agree' (number 7).

1 2 3 4 5 6 7

Completely Disagree **Completely Agree**

1. Expressing my emotions with words is not a problem for me.	1	2	3	4	5	6	7
2. I often find it difficult to see things from another person's viewpoint.	1	2	3	4	5	6	7
3. On the whole, I'm a highly motivated person.	1	2	3	4	5	6	7
4. I usually find it difficult to regulate my emotions.	1	2	3	4	5	6	7
5. I generally don't find life enjoyable.	1	2	3	4	5	6	7
6. I can deal effectively with people.	1	2	3	4	5	6	7
7. I tend to change my mind frequently.	1	2	3	4	5	6	7
8. Many times, I can't figure out what emotion I'm feeling.	1	2	3	4	5	6	7
9. I feel that I have a number of good qualities.	1	2	3	4	5	6	7
10. I often find it difficult to stand up for my rights.	1	2	3	4	5	6	7
11. I'm usually able to influence the way other people feel.	1	2	3	4	5	6	7
12. On the whole, I have a gloomy perspective on most things.	1	2	3	4	5	6	7
13. Those close to me often complain that I don't treat them right.	1	2	3	4	5	6	7
14. I often find it difficult to adjust my life according to the circumstances.	1	2	3	4	5	6	7
15. On the whole, I'm able to deal with stress.	1	2	3	4	5	6	7
16. I often find it difficult to show my affection to those close to me.	1	2	3	4	5	6	7
17. I'm normally able to "get into someone's shoes" and experience their emotions.	1	2	3	4	5	6	7
18. I normally find it difficult to keep myself motivated.	1	2	3	4	5	6	7
19. I'm usually able to find ways to control my emotions when I want to.	1	2	3	4	5	6	7
20. On the whole, I'm pleased with my life.	1	2	3	4	5	6	7
21. I would describe myself as a good negotiator.	1	2	3	4	5	6	7
22. I tend to get involved in things I later wish I could get out of.	1	2	3	4	5	6	7
23. I often pause and think about my feelings.	1	2	3	4	5	6	7
24. I believe I'm full of personal strengths.	1	2	3	4	5	6	7
25. I tend to "back down" even if I know I'm right.	1	2	3	4	5	6	7
26. I don't seem to have any power at all over other people's feelings.	1	2	3	4	5	6	7
27. I generally believe that things will work out fine in my life.	1	2	3	4	5	6	7
28. I find it difficult to bond well even with those close to me.	1	2	3	4	5	6	7
29. Generally, I'm able to adapt to new environments.	1	2	3	4	5	6	7
30. Others admire me for being relaxed.	1	2	3	4	5	6	7

Scoring key: Reverse-score the following items and then sum up all responses

I often find it difficult to show my affection to those close to me. (R) 16
I often find it difficult to see things from another person's viewpoint. (R) 2
I normally find it difficult to keep myself motivated. (R) 18
I usually find it difficult to regulate my emotions. (R) 4
I generally don't find life enjoyable. (R) 5
I tend to change my mind frequently. (R) 7
I tend to get involved in things I later wish I could get out of. (R) 22
Many times, I can't figure out what emotion I'm feeling. (R) 8
I normally find it difficult to stand up for my rights. (R) 10
I tend to "back down" even if I know I'm right. (R) 25
I don't seem to have any power at all over other people's feelings. (R) 26
On the whole, I have a gloomy perspective on most things. (R) 12
Those close to me often complain that I don't treat them right. (R) 13
I find it difficult to bond well even with those close to me. (R) 28
I often find it difficult to adjust my life according to the circumstances. (R) 14

*Numbers on the right correspond to the position of the items in the short form of the questionnaire.

**If you would like to derive factor scores based on the long form, see Webnote 2 on the website.

Trait Emotional Intelligence Questionnaire – Short Form (TEIQue-SF). This is a 30-item questionnaire designed to measure *global* trait emotional intelligence (trait EI). It is based on the long form of the TEIQue (Petrides & Furnham, 2003). Two items from each of the 15 subscales of the TEIQue were selected for inclusion, based primarily on their correlations with the corresponding total subscale scores. This procedure was followed in order to ensure adequate internal consistencies and broad coverage of the sampling domain of the construct. Items were responded to on a 7-point Likert scale. The TEIQue has been constructed with the aim of providing comprehensive coverage of the trait EI domain (Petrides & Furnham, 2001).

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Reference for the TEIQue-SF: Petrides, K. V. & Furnham, A. (2006). The role of trait emotional intelligence in a gender-specific model of organizational variables. *Journal of Applied Social Psychology*, 36, 552-569.

Please note that any commercial use of this instrument is strictly prohibited.

If you would like to use the long form of the TEIQue, please e-mail me at:
k.petrides@ucl.ac.uk

For more information about the trait emotional intelligence research program go to:
www.psychometriclab.com