

Chapter 2: Review of Literature

*“Would you tell me, please, which way I ought to go from here?”
“That depends a good deal on where you want to get to,” said the Cat.
“I don’t much care where” said Alice.
“Then it doesn’t matter which way you go,” said the Cat.
(Dodgson, 1865)*

2.1 Introduction

Emotional intelligence has emerged in the last decade as an area of interest and is considered as an important variable in the context of coping in stressful situations (Ashkanasy, Ashton-James, & Jordan, 2004, p. 16; Folkman & Moskowitz, 2004; Fredrickson & Tugade, 2003). These authors argue that the construct of emotional intelligence, as defined by Mayer and Salovey (1997; Salovey & Mayer, 1990), could contribute towards explaining the differences manifested in coping behaviours within stressful situations. A study of the relevant literature reveals the concept of emotional intelligence as a construct that could possibly explain the reasons why certain people are able to cope easily with stressful situations, while others struggle to cope. In the field of educational technologies people aim at coping with mastering new educational technologies on a daily basis. In their book, *The emotionally intelligent manager*, Caruso and Salovey (2004) demonstrate that emotion is a prerequisite for making the correct decisions, initiating steps to solving problems, coping with change and succeeding. They argue that “emotions provide data that assist us in making rational decisions and behaving in adaptive ways” (Caruso & Salovey, 2004, p. 211). Salovey and colleagues are of the opinion that, as emotional intelligence influences the responses to emotional arousal (Salovey, Bedell, Detweiler, & Mayer, 1999), it therefore plays a significant role in the coping process.

In the conceptualisation of this study I have drawn from five different constructs in the literature, namely:

- Emotional intelligence, as defined by Mayer and Salovey, contains four interlinked branches depicting the abilities to perceive, facilitate, understand and manage emotions.

- The broaden-and-build theory of positive emotions, as described by Fredrickson, in terms of which positive emotions are linked to positive coping strategies and coping successfully in stressful situations.
- Resilience, which is a concept linking emotional intelligence with positive coping strategies. Resilience postulates an explanation for the difference in coping strategies used by individuals in similar situations.
- The theoretical model of appraisal and coping, which originated from the work of Lazarus and Folkman and was revised by Folkman, postulates the processes of appraisal, reappraisal and coping strategies utilised by an individual in order to cope with a stressful event.
- The process model of affective response, in terms of which Ashkanasy and colleagues propose the role of emotional intelligence as a moderator for coping with stress.

The conceptual framework for this study draws together all these concepts, forming an interlinking structure that will guide the exploration of the linkages between emotional intelligence and the coping strategies utilised when mastering new educational technologies. Figure 2.1 illustrates the interlinking of the different constructs to form the conceptual framework for this study.

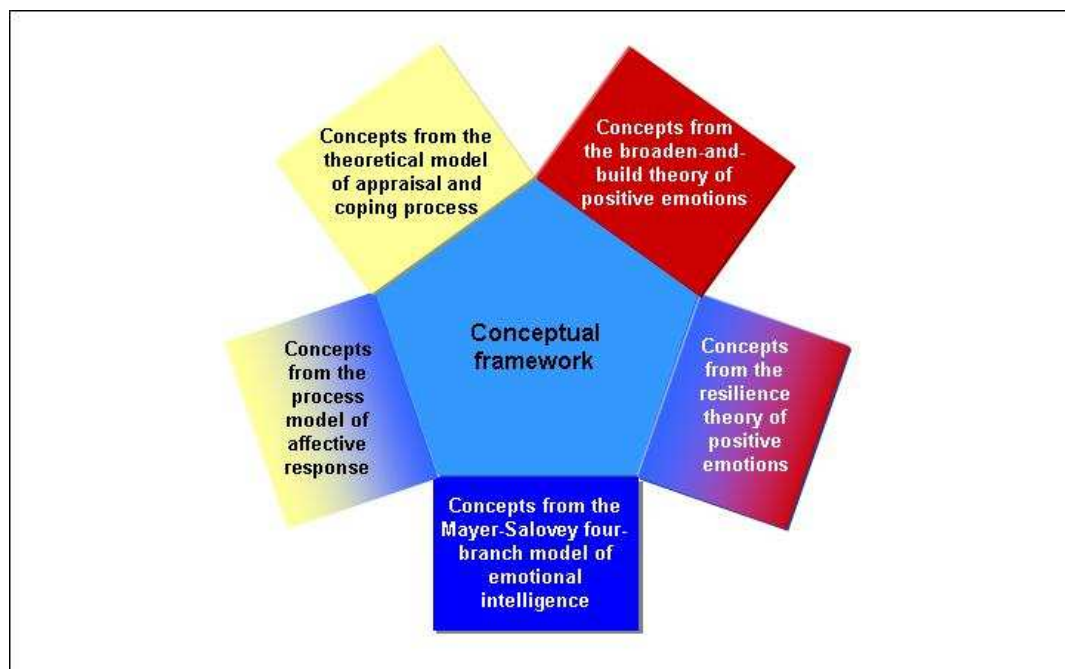


Figure 2.1 Conceptual framework

The colours used in figure 2.1 distinguish between the different concepts, showing overlap of certain constructs. Blue was used for emotional intelligence, red for the broaden-and-build theory and yellow for the concepts from the theoretical model of the appraisal and coping process. Concepts from the process model of affective response are indicated by yellow and blue, depicting the inter-relationship of emotional intelligence and the appraisal and coping process. Concepts from the resilience theory of positive emotions are indicated by blue and red, depicting the inter-relationship of emotional intelligence and positive emotions.

The conceptual framework will serve as a guide in the following areas of exploration:

- The strategies implemented/employed by participants with diverse emotional intelligence profiles in order to master new educational technologies.
- The cognitive thought processes and emotions experienced by participants while using diverse coping strategies.
- The trends regarding emotional intelligence and coping strategies used by participants with diverse emotional intelligence profiles.

These areas of exploration will assist in answering the main research question:

What are the linkages between emotional intelligence and coping strategies when mastering new educational technologies?

This chapter comprises an exploration of the constructs of emotional intelligence, stress, appraisal, coping and resilience, and the linkages between coping strategies and emotional intelligence. It contains a study of the research executed in the field and demonstrates where this study fits in terms of significance.

2.2 The emergence of emotional intelligence

In this section emotional intelligence is discussed in terms of its relevance to stress, appraisal, coping and resilience. The section will commence with an exposition of the background to the current models of emotional intelligence, which will be followed by an exploration of the ability model of EI in terms of the different branches, as defined by Mayer and Salovey (1997), synthesising the different concepts in terms of this study.

The section will conclude with an examination of the development of emotional intelligence.

With the publication of their articles Salovey and Mayer (Mayer, DiPaolo, & Salovey, 1990; Salovey & Mayer, 1990) formulated the term “emotional intelligence” and devised the new scientific idea behind emotional intelligence (EI) that human beings process emotional information in social contexts. In their first article the authors propose that human beings comprehend and use emotional information cognitively. They define emotional intelligence as “the ability to monitor one’s own and other’s feelings and emotions, to discriminate among them and to use this information to guide one’s thinking and actions” (Salovey & Mayer, 1990, p. 189).

Emotional intelligence is described by Mayer and Caruso (2002) as part of an emerging group of cognitive abilities in conjunction with social, practical and personal intelligences. Mayer and colleagues (Mayer & Caruso, 2002; Mayer & Salovey, 1995; Mayer & Salovey, 1997; Mayer, Salovey, & Caruso, 2004a; Mayer, Salovey, & Caruso, 2004b) describe emotional intelligence as consisting of two components: emotion and intelligence. They explain that the terms have specific scientific meanings which indicate ways in which the two terms may be used in conjunction (Mayer & Caruso, 2002). According to these authors “emotions” refer to the feelings a person experiences in a relationship, for example feeling happy or positive in a good relationship or feeling threatened or afraid in a bad relationship (Mayer & Caruso, 2002). “Intelligence” refers to the ability to reason with or about something, while comparing and contrasting different ideas (Mayer & Caruso, 2002). The authors (2004b, p. 198) admit that their notions about EI were influenced by the work of Gardner (1983), Sternberg (1985) and Wechsler (1950) which called for the broadening of the study of intelligence by directing attention to multiple intelligences.

The publication of books by Daniel Goleman (1995) and related work by other scientists (Bar-On & Parker, 2000; Schutte, Malouff, Hall, Haggerty, Copper, Golden, & Dornheim, 1998) resulted in the successful popularisation of the construct of emotional intelligence and this, in turn, led to heated debates about the construct (Mayer & Caruso, 2002). Caruso (2004, p. 1) refers to emotional intelligence as a *conceptual inkblot* – a term which refers to the vast number of interpretations associated with emotional intelligence. Bryan (2006) also notes that emotional intelligence may be defined in a multitude of ways.

2.2.1 Current models of emotional intelligence

In an attempt to clarify the different approaches, Mayer, Salovey and Caruso (2000c) propose two different models of emotional intelligence: an ability model and a mixed model. The models best known in the literature are the ability model of Mayer and Salovey (1997) and the two mixed models of Bar-On (2006) and Goleman (1995). The mixed models are based primarily on Goleman's popularisation of the concept of emotional intelligence as defined by Salovey and Mayer (1990) and resulted in a broad spectrum of approaches (Caruso, Mayer, & Salovey, 2002; Mayer *et al.*, 2004b). These approaches range from the ability approach of Salovey and Mayer (1990) to the lists of competencies advocated by Goleman (1998) and the psychological well-being approach of Bar-On (2006).

Mixed models combine various aspects of personality resulting in a collection of traits, dispositions, skills, competencies and abilities which are labelled emotional intelligence, even though the model predominately involves neither emotion nor intelligence (Bar-On, 2006; Bar-On & Parker, 2000; Goleman, 1995; Mayer *et al.*, 2004b; Schutte *et al.*, 1998). The importance of general intelligence and cognitive ability is de-emphasised in the mixed model (Brackett, Mayer, & Warner, 2004; Cobb & Mayer, 2000).

The ability model of emotional intelligence (Mayer & Salovey, 1997; Salovey & Mayer, 1990) focuses on emotional skills that comprise four abilities: perceiving, facilitating, understanding, and managing or regulating emotions. This model provides a framework for research on social and emotional adaptation (Mayer & Salovey, 1997). The authors posit that, by focusing on the interplay between emotion and intelligence where thought and emotion interact in meaningful and adaptive ways, emotional intelligence is placed within the sphere of an intelligence (Mayer *et al.*, 2000c, p. 400). Table 2.1 summarises the definitions, major areas of skills, and specific examples of the three different models.

Table 2.1 Three different models, all labelled “emotional intelligence”

	Mayer & Salovey (1997)	Bar-On (1997)	Goleman (1995)
Model type	Ability	Mixed	Mixed
Overall definition(s)	“Emotional intelligence is the set of abilities that account for how people’s emotional perception and understanding vary in their accuracy. More formally, we define emotional intelligence as the ability to perceive and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others” (after Mayer & Salovey, 1997).	“Emotional intelligence is ... 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, p. 14).	“The abilities called here <i>emotional intelligence</i> , which include self-control, zeal and persistence, and the ability to motivate oneself” (Goleman, 1995, p. xii. [and] “There is an old-fashioned word for the body of skills that emotional intelligence represents: <i>character</i> ” (Goleman, 1995, p. 28).
Major areas of skills and specific examples	<p>Perception and expression of emotion</p> <ul style="list-style-type: none"> Identifying and expressing emotions in one’s physical states, feelings and thoughts. Identifying and expressing emotions in other people, artwork, language, etc. <p>Assimilating emotion in thought</p> <ul style="list-style-type: none"> Emotions prioritise thinking in productive ways. Emotions generated as aids to judgement and memory. <p>Understanding and analysing emotion</p> <ul style="list-style-type: none"> Ability to label emotions, including complex emotions and simultaneous feelings. Ability to understand relationships associated with shifts of emotion. <p>Reflective regulation of emotion</p> <ul style="list-style-type: none"> Ability to stay open to feelings. Ability to monitor and regulate emotions reflectively to promote emotional and intellectual growth (after Mayer & Salovey, 1997, p. 11). 	<p>Intrapersonal skills</p> <ul style="list-style-type: none"> Emotional self-awareness Assertiveness Self-regard Self-actualisation Independence <p>Interpersonal skills</p> <ul style="list-style-type: none"> Interpersonal relationships Social responsibility Empathy <p>Adaptability scales</p> <ul style="list-style-type: none"> Problem solving Reality testing Flexibility <p>General mood</p> <ul style="list-style-type: none"> Happiness Optimism 	<p>Knowing one’s emotions</p> <ul style="list-style-type: none"> Recognising a feeling as it happens Monitoring feelings from moment to moment <p>Managing emotions</p> <ul style="list-style-type: none"> Handling feelings so they are appropriate Ability to soothe oneself Ability to shake off rampant anxiety, gloom or irritability <p>Motivating oneself</p> <ul style="list-style-type: none"> Marshalling emotions in the service of a goal Delaying gratification and stifling impulsiveness Being able to get into the “flow” state <p>Recognising emotions in others</p> <ul style="list-style-type: none"> Empathic awareness Attunement to what others need or want <p>Handling relationships</p> <ul style="list-style-type: none"> Skill in managing emotions in others Interacting smoothly with others
Measures	Mayer-Salovey-Emotional – Intelligence-Test (MSCEIT) Ability test Criterion-report test	Bar-On EQ-I (Mayer, 2006, p. 10) Self-report scale	Emotional Competency Inventory (ECI) (Mayer, 2006, p. 11) Self-report scale

Source: Adapted from Mayer *et al.*, 2000c.

An important difference between the ability and the mixed models is the way in which emotional intelligence is measured (Mayer & Caruso, 2002). Rather than using broad self-report measures the Mayer-Salovey-Caruso Emotional Intelligence Test (MSCEIT™) is an ability test, testing the ability of the individual to solve emotional problems (Mayer, Salovey, Caruso, & Sitarenios, 2003). For a more detailed account of the MSCEIT™ see § 3.5.2.1.

2.3 The ability model of emotional intelligence

For the purpose of exploring linkages between emotional intelligence and the coping strategies employed in mastering new technologies, the ability model is preferred, with the justification of it being the only model that is skill based and does not rely on self-report (Mayer *et al.*, 2000c; Mayer, Salovey, Caruso, & Sitarenios, 2001b; Mayer *et al.*, 2003). Caruso, Mayer and Salovey (2002, p. 61) state “the model does not focus on personality traits or dispositions per se, except as a product of having these underlying skills”. The ability model has an inherent link to coping strategies because it focuses on the ways in which emotions may facilitate thinking and adaptive aptitude (Mayer *et al.*, 2001b; Mayer *et al.*, 2003). In terms of emotional intelligence being consistent with Sternberg’s (1997) definition of an intelligence, Mayer and colleagues argue that “symposia on intelligence over the years repeatedly conclude that **the first hallmark of intelligence is high-level mental ability such as abstract reasoning**” (2000c, p. 399). Results of studies by Salovey, Mayer and colleagues (Mayer, Caruso & Salovey, 2002; Mayer, Salovey, Caruso & Sitarenios, 2001) provide evidence that emotional intelligence meets the criteria of a standard intelligence.

The ability model of emotional intelligence was conceptualised by Mayer and Salovey in 1990 and later refined (1997) as a four-branch model that involves the skill of recognising emotional information and using this information in abstract reasoning. Mayer and Salovey (1997, p. 10) define emotional intelligence as 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”. In this study, the Mayer and Salovey definition of emotional intelligence is applicable.

Figure 2.2a illustrates the four-branch model of emotional intelligence as conceptualised by Salovey and Mayer*.

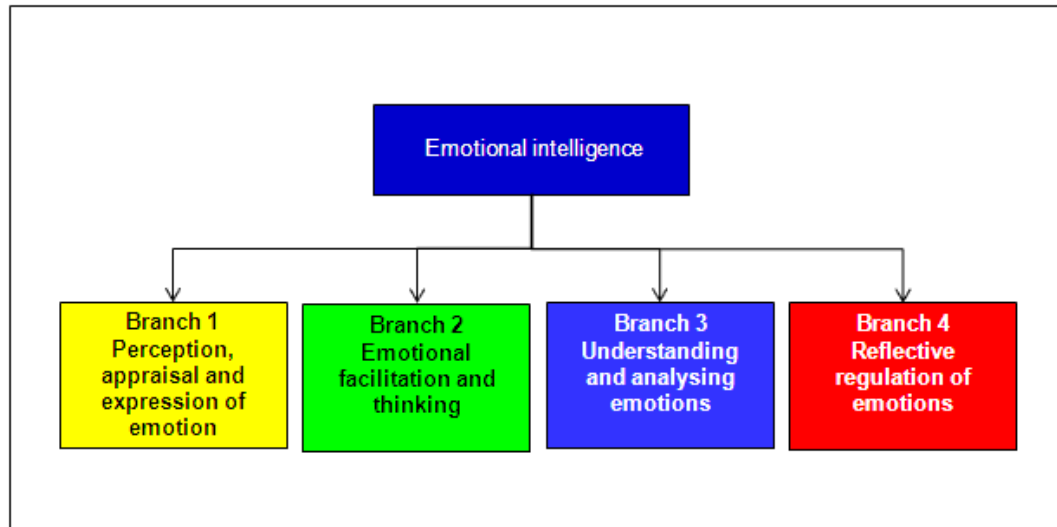


Figure 2.2a The Mayer-Salovey four-branch model of emotional intelligence

Source: Mayer and Salovey (1997, p.11).

The definition formulates four different categories of abilities or skills, which Mayer and Salovey refer to as *branches* of emotional intelligence. In figure 2.2b the concept of puzzle pieces is used to illustrate the four-branch model as interrelated and interlinked pieces depicting the interrelated and interlinked nature of skills involved in emotional intelligence (Mayer & Salovey, 1997).

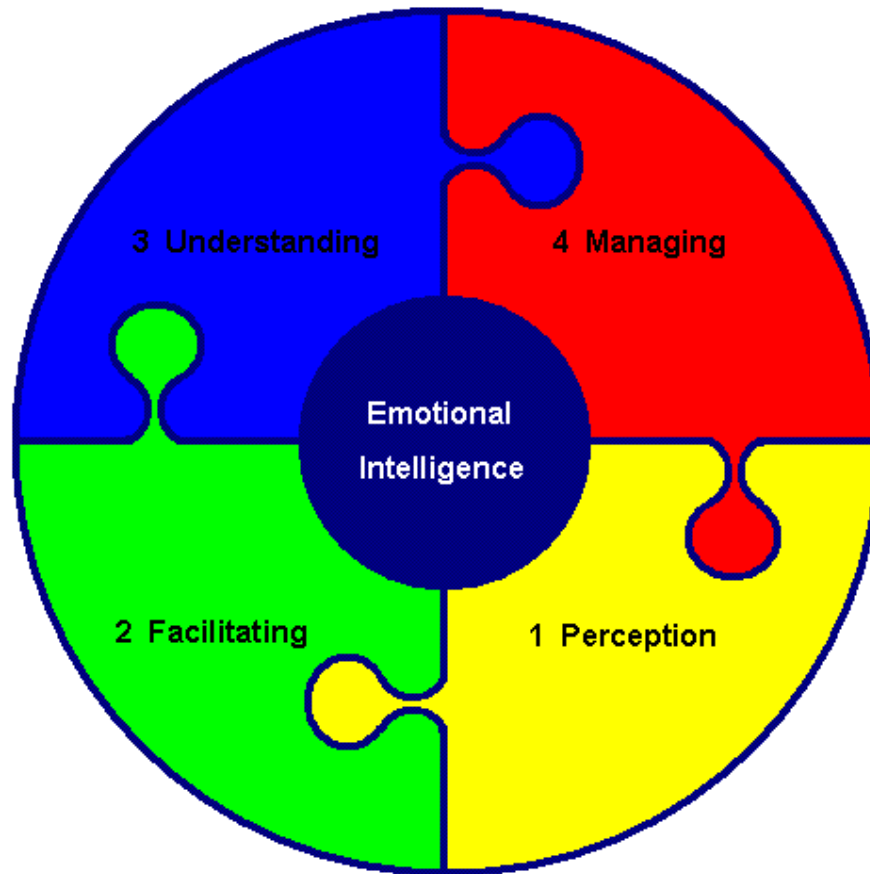


Figure 2.2b The Mayer-Salovey four-branch model of emotional intelligence: Researcher's conceptualisation

Mayer and Salovey (1997) arrange the branches of their model from 1-4, starting from the more basic psychological processes in branch 1 to the higher, more psychologically integrated processes of branch 4. According to the authors the lowest level, the first branch, concerns the relatively uncomplicated abilities of perceiving and expressing emotion (Mayer & Salovey, 1997), while the highest and fourth branch concerns the conscious, reflective management of emotion. The authors (1997) ordered each branch in such a way that those abilities emerging relatively early in the development of emotional intelligence are placed to the left in the first box (figure 2.2), while abilities to the right are later-developed abilities, usually emerging in adult, integrated personalities. In other words, within a branch the skills are presented as a developmental progression from the more basic skills to the more sophisticated, integrated skills (Mayer *et al.*, 2004b, p. 199). Figure 2.3 illustrates the interrelated and interconnected ordering of emerging abilities within a particular branch of emotional intelligence.

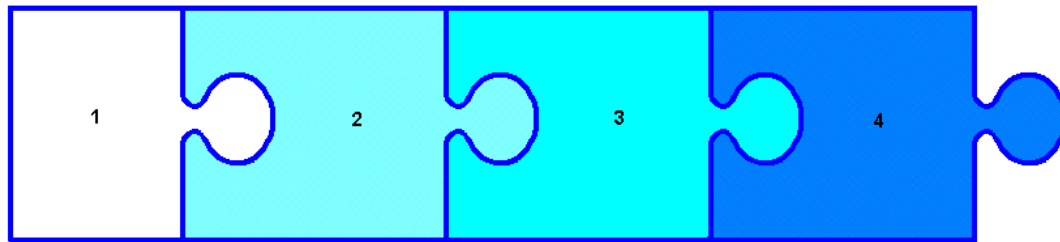


Figure 2.3 Abilities emerging in the development of emotional intelligence

According to Mayer and Salovey (1997) more highly emotionally intelligent people will develop the abilities designated by boxes 1–4 faster and show a greater mastery of the specific abilities than those people with a lower emotional intelligence.

2.3.1 Perceiving emotion

The first branch of the ability model is termed “Perceiving emotion” (Mayer & Salovey, 1997). Figure 2.4 gives an overview of abilities within this branch

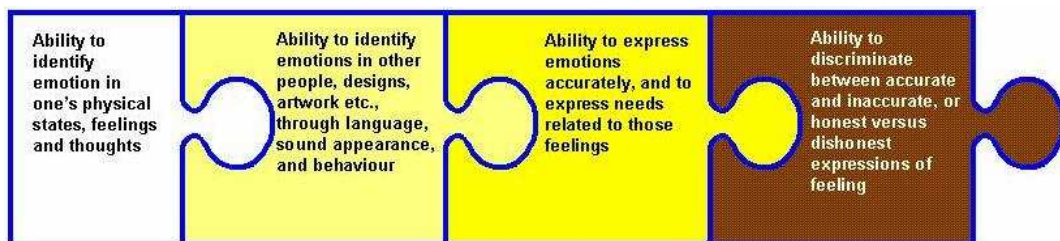


Figure 2.4 Perception, appraisal and expression of emotion

Source: Adapted from Mayer and Salovey (1997).

“Perceiving emotion” includes a number of skills, such as the ability to identify feelings, express emotions accurately, and differentiate between real and false emotional expressions (Mayer & Salovey, 1997). Emotional perception involves paying attention to, and accurately decoding, emotional signals in facial expressions, tone of voice, and artistic expressions (Mayer, Salovey, & Caruso, 2002). Mayer, Salovey, and Caruso (2002) cite evidence that suggests that the accurate appraisal of others is related to accurate perception in oneself. Lopes, Côté and Salovey (2006, p. 57) conclude that the ability to express emotion will contribute towards effective communication whereas the ability to decode emotional information will enable an individual to appraise important situations.

2.3.1.1 Synthesis

Within the context of the coping strategies utilised when mastering new educational technologies, it is my presumption that emotional intelligence will constitute the ability to identify emotions and feelings correctly when exposed to new educational technologies. Emotionally intelligent individuals will be able to express their needs in terms of mastering the technology. Conversely, individuals with a score considered as developing in terms of “Perceiving emotion” will not be able to identify emotions and feelings correctly when exposed to new educational technologies. In addition, these individuals will not be able to express their needs in terms of mastering a particular technology.

2.3.2 Facilitating² thought

The second branch of the ability model comprises “Facilitating thought” or “Using emotions” (Mayer & Salovey, 1997) or in some sources “Assimilating thought” (Mayer *et al.*, 2000c). Figure 2.5 provides an outline of the abilities within this branch of emotional intelligence.³

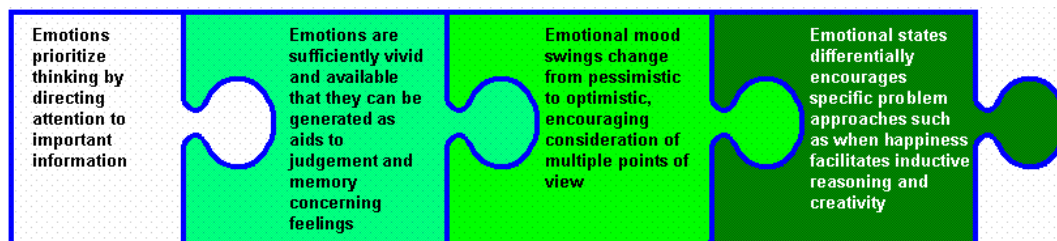


Figure 2.5 Emotional facilitation of thinking

Source: Adapted from Mayer and Salovey (1997)

“Facilitating thought” is the ability to employ feelings in order to enhance thinking and, as such, this ability may be harnessed for more effective problem-solving, reasoning, decision-making and creative endeavours (Mayer *et al.*, 2002). In a commentary on an article by Mayer, Salovey and Caruso (2004), Oatley (2004, p. 216) concluded that, taking into account research on the ways in which moods affect thinking, the question may be posed as to how skilled individuals are in knowing how to use their moods to

² Some authors use the term assimilation and others facilitation. I used assimilation in the original context of the specific author.

³ The colour corresponds with the colour of the facilitation branch in figure 2.2, with the intensity of the colour increasing to depict the developmental progression from the more basic skills to the more sophisticated integrated skills within the facilitation branch.

enhance their thinking effectively. According to Mayer *et al.* (2001a, p. 7) mood swings and changes in viewpoints may have the positive result of viewing matters from different perspectives, thereby fostering creative thinking. As this ability entails the ability to relate mental images and emotions, and knowledge of the effect of emotions on cognitive processes, for example, deductive reasoning, creativity, problem-solving and communication, Lopes *et al.* (2006, p. 57) reason that this ability may contribute towards enhanced decision-making abilities.

2.3.2.1 Synthesis

In terms of coping strategies when mastering educational technologies, it is my assumption that the more emotionally intelligent individual will have the ability to use mood swings to find creative solutions for problems encountered by considering different points of view. For instance, by using emotions to motivate a specific strategy an individual will effectively be using his emotions to facilitate thinking and doing. An emotionally intelligent individual will understand the consequences of emotion and have the ability to use emotion to direct thinking and decision-making. As an example, in situations in which the emotionally intelligent individual may experience anger as a result of software or hardware not functioning properly, the emotionally intelligent individual will refrain from making hasty decisions, as he will be aware that anger may influence decision-making. Conversely, the less emotionally intelligent individual will lack the ability to use mood swings to find creative solutions for problems encountered, and will not be capable of considering different points of view. It is assumed that a less emotionally intelligent individual will not be able to use emotions effectively in the facilitation of thinking and doing. Abilities such as understanding the consequences of emotion and using emotions to direct thinking and in decision-making processes will be deficient. In contrast to the more emotionally intelligent individual the less emotionally intelligent individual will not refrain from making hasty decisions while angry. In general, the quality of decision-making may be deficient.

2.3.3 Understanding emotions

The third branch of the ability model of emotional intelligence comprises “Understanding emotions” (Mayer & Salovey, 1997). Figure 2.6 illustrates the progression of abilities within this branch of emotional intelligence.⁴

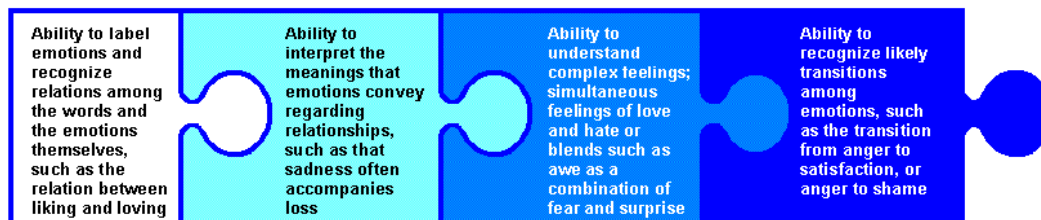


Figure 2.6 Understanding and analysing emotions

Source: Adapted from Mayer and Salovey (1997)

“Understanding emotions” refers to the ability to understand complex emotions and emotional “chains”, the transition of emotions from one stage to another, the ability to recognise the causes of emotions, and the ability to understand relationships between emotions (Mayer *et al.*, 2002). These authors believe the understanding of emotions is a critical component of emotional intelligence in the sense that knowledge of the ways in which emotions may combine and change over time will benefit individuals in their dealings with other people and in understanding themselves (Mayer *et al.*, 2001a, p. 7). For example, an awareness that annoyance and irritation will lead to rage if the cause of the irritation is not prevented from continuing and intensifying (Mayer *et al.*, 2001a, p. 7). Lopes *et al.* (2006, p. 57) note that understanding emotional processes involves an understanding of the type of events that are likely to elicit different emotions and this, in turn, may help individuals to judge how other people will act in response to different situations.

2.3.3.1 Synthesis

Understanding the nature of emotions and how these emotions will change over time, it is my assumption that the more emotionally intelligent individual will probably benefit from using coping strategies that will deal effectively with a perceived problem. For example, the more emotionally intelligent individual will understand that the level of

⁴ The colour corresponds with the colour of the understanding branch in figure 2.2, with the intensity of the colour increasing to depict the developmental progression from the more basic skills to the more sophisticated integrated skills within the understanding branch.

frustration experienced when encountering a problem with the mastering of a new technology will intensify if not addressed. In terms of the coping strategies utilised when mastering new educational technologies, it is supposed that the more emotionally intelligent individual will display signs of understanding the transition between emotions, and of concentrating and utilising the effect of positive emotions. In contrast with the more emotionally intelligent individual, it is my assumption that the less emotionally intelligent individual will not show much evidence of any ability to use emotions in coping strategies, thus dealing effectively with perceived problems. The less emotionally intelligent individual will probably not be capable of understanding and using the transition between emotions, in effect, the less emotionally intelligent individual will not be able to move from negative to positive emotions, and will therefore be unable to cope effectively with a perceived problem.

2.3.4 Managing emotions

The fourth branch of the ability model comprises “Managing emotions” (Mayer & Salovey, 1997). Figure 2.7 illustrates the skills within the fourth branch of emotional intelligence.⁵

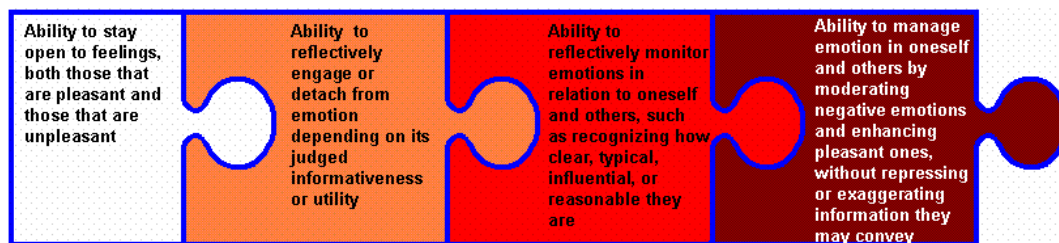


Figure 2.7 Regulation of emotions to promote emotional and intellectual growth

Source: Adapted from Mayer and Salovey (1997)

“Managing emotions” includes the ability to stay aware of one’s emotions, even those that are unpleasant, the ability to determine whether an emotion is clear or typical, and the ability to solve and moderate emotion-laden problems without necessarily suppressing negative emotions (Caruso *et al.*, 2002). This involves understanding the implications of social acts in terms of emotions and the regulation of emotion in oneself and others (Mayer *et al.*, 2000c). When problem-solving, emotionally intelligent people

⁵ The colour corresponds with the colour of the managing branch in figure 2.2, with the intensity of the colour increasing to depict the developmental progression from the more basic skills to the more sophisticated integrated skills within the managing branch.

use the emotions arising from the situation in order to diagnose and solve the underlying problem so as to achieve their goals (Lopes *et al.*, 2006; Mayer & Salovey, 1993).

This branch also refers to the ability to connect or disconnect from an emotion depending whether the emotion is useful in a given situation (Mayer & Salovey, 1997). Mayer, Salovey and Caruso (2001a, p. 7) maintain that, to be emotionally intelligent, it is important for an individual to be aware of and to accept the emotions generated by the situation and to use those emotions in problem-solving. According to these authors, the successful management of emotions entails the ability to include emotion in thought, without either minimising or exaggerating the emotion. Lopes, Côté and Salovey (2006, p. 57) note that modulating an experience with the aim of achieving one's goals may entail reframing a negative experience so that it appears more bearable, for example, using humour to keep up the spirits of a team.

2.3.4.1 Synthesis

In terms of managing emotions, it is my assumption that the more emotionally intelligent individual will, while coping with new educational technologies, be able to integrate logic and emotion into the decision-making process. For this study it is important to be aware that the more emotionally intelligent individual will probably show evidence of an awareness of the emotions created by a situation and will use these emotions creatively in solving the problem at hand.

My assumption is that the more emotionally intelligent individual will be most likely to use humour and positive emotions as coping strategies. In terms of coping strategies, it is assumed that the emotionally intelligent individual will possess the ability to re-evaluate and reframe a difficult situation in order to facilitate viewing the situation in a more positive way. On the other hand it is assumed that the less emotionally intelligent individual will show no evidence of any ability to integrate logic and emotion into the decision-making process. The assumption is that the less emotionally intelligent individual will not have the ability to use positive emotions and humour when coping with new educational technologies. In the case of the less emotionally intelligent individual, it is my assumption that there will be no evidence of any ability to reframe and re-evaluate a difficult situation with the purpose of viewing the situation in a positive light.

2.3.5 Developing emotional intelligence

Several authors have reported on the viability of training to develop emotional intelligence (Caruso & Salovey, 2004; Lopes *et al.*, 2006; Sparrow & Knight, 2006; Tugade & Fredrickson, 2001; Zeidner, Roberts, & Matthews, 2002). In terms of the importance of developing emotional intelligence in this study, it is presumed that, if there are linkages between emotional intelligence and coping strategies, then facilitators should take cognisance of the possibility of developing emotional intelligence. Lopes, Côté and Salovey (2006) state that the set of interrelated abilities that comprise emotional intelligence develop through experience and learning, and that it is possible to train these abilities. Tugade and Fredrickson (2001) agree with this notion and quote data that suggests that emotional skills might be taught. Lopes, Côté and Salovey (2006) argue that interventions in terms of which individuals are taught to learn from their everyday experiences may raise their awareness of the importance of emotional skills and may enhance their understanding of people's motives and behaviour.

Tugade and Fredrickson (2001) suggest that interventions in terms of which individuals are taught to utilise positive emotions effectively may optimise personal and social functioning. Training programmes can be beneficial if people learn to interact effectively with other people and an organisation could reap the benefits (Lopes *et al.*, 2006). These authors state that they are not aware of any training programmes based on the ability model of Mayer and Salovey (1997) that have been rigorously evaluated. In their article (2006), Lopes, Côté and Salovey propose ideas and suggestions for the training of emotional skills. In their book *The emotionally intelligent manager*, Caruso and Salovey (2004) explain the importance of the four branches and the interrelated skills of emotional intelligence, and provide concrete techniques for the use and improvement of these skills.

2.3.5.1 Perceiving and communicating emotion

According to Lopes, Côté and Salovey (2006) training people to read facial expressions such as anger, fear and happiness that are associated with emotion may help them in real life. Training in nonverbal communication may raise awareness and motivate people to pay more attention to emotions, thus enabling them to identify subtle expressions of emotion (Lopes *et al.*, 2006).

2.3.5.2 Using emotion to facilitate thinking

Thoughts are influenced by emotions in many different ways; Lopes, Côté and Salovey (2006) maintain that the degree of risk a person is prepared to take when making a decision is influenced by the emotions experienced at that particular time. According to these authors, both anger and happiness increase risk-taking, but they add that an emotionally intelligent individual will understand the consequences of these emotions and will refrain from making important decisions when angry. Of great importance for this study is the statement that the emotion of happiness stimulates creative thinking and enhances performance in problem-solving (Lopes *et al.*, 2006, p. 68).

2.3.5.3 Understanding emotion

An individual's understanding of emotion will be improved by discussions and concrete examples of the transition of one emotion to another and of the way emotions combine and progress (Lopes *et al.*, 2006, p. 69). A knowledge of the similarities and difference between emotions, the reasons for triggering certain emotions and different appraisals of situations may enhance the ability of a person to understand and predict both his own and other people's emotions (Lopes *et al.*, 2006, p. 69).

2.3.5.4 Managing emotions

Lopes *et al.* (2006, p. 69) suggest helping individuals to extend their repertoire of coping strategies as a way to develop emotional management skills. The reasoning in terms of the topic of coping strategies in relation to the ability to manage emotions effectively is of great importance in this study. These authors also suggest that a discussion on coping strategies may be initiated and that this discussion involve problem-focused ways of coping as it is always better to address a problem directly and seek a solution than to endure with frustration. Emotion-focused coping strategies may be used to deal with temporary feelings of anxiety and frustration in cases where it is not possible to solve problems immediately. Reframing and re-evaluating the situation will engage individuals in viewing the situation in a more positive light. In accordance with the work of Fredrickson *et al.* (2000), Lopes *et al.* (2006, p. 70) advise reframing a difficult situation as an opportunity for learning or finding meaning and insight in hardship. Another emotion-focused strategy involves seeking assistance and support. The authors warn that some coping strategies may be maladaptive, for example, avoiding or denying problems (Lopes *et al.*, 2006).

Lopes *et al.* (2006, p. 73) conclude that emotional intelligence is a set of interrelated abilities that develop over time through learning and experience. In their opinion these abilities are enhanced by training. The development of the emotional skills of staff members will benefit an organisation over time, as people who gain emotional skills interact more effectively and cope better with work stress than those without emotional skills. Coping habits are usually deeply entrenched which means that emotional training will not result in rapid changes, nevertheless training will increase awareness of the importance of emotional skills and serve as motivation to learn from everyday experiences (Lopes *et al.*, 2006).

2.3.5.5 Synthesis

Facilitators of programmes introducing new technologies should take cognisance of the possibility of developing emotional intelligence through training programmes. As coping habits are usually deeply entrenched training will not yield rapid change. However, what is significant is that the facilitation of emotional intelligence skills in training programmes may raise an awareness of the importance of emotional skills and this may serve as motivation to learn from everyday experiences.

2.4 Positive emotions and emotional intelligence

This section comprises an overview of positive emotions and their link with emotional intelligence. The section will start with an outline of the broaden-and-build theory according to Fredrickson (2005), and will be followed by a discussion on increasing the prevalence of positive emotions and the “intelligent” use of emotions and resilience. The section will conclude with a synthesis relating positive emotions and resilience in the study.

According to the ability model of emotional intelligence, emotionally intelligent people are capable of understanding their own emotions – both positive and negative – are proficient in processing emotional information, and have the ability to use these emotions in solving problems (Mayer & Salovey, 1993; Mayer & Salovey, 1995; Mayer & Salovey, 1997). Traditional research on emotion theory focused on the management of negative emotions (Folkman & Moskowitz, 2000b; Fredrickson, 2005; Tugade & Fredrickson, 2001) and did not take into account the effect of positive emotions. Fredrickson identified this gap in traditional approaches and developed the broaden-

and-build theory in an attempt to illuminate the adaptive benefits of positive emotions (Fredrickson, 2005; Fredrickson & Joiner, 2002; Fredrickson & Levenson, 1998; Fredrickson *et al.*, 2000).

2.4.1 The broaden-and-build theory

Fredrickson's broaden-and-build theory (Fredrickson, 2005; Fredrickson & Joiner, 2002; Fredrickson & Levenson, 1998; Fredrickson *et al.*, 2000; Fredrickson & Tugade, 2003) corroborates with research already carried out (Isen, Rosenzweig, & Young, 1991) and posits that, under stressful conditions, positive emotions broaden the thought-action repertoire (Fredrickson & Levenson, 1998; Fredrickson *et al.*, 2000). Fredrickson argues that "positive emotions also *produce* optimal functioning, not just within the present ... but over the long term as well" (2005, p. 120). In contrast, negative emotions narrow the scopes of attention and cognition. Research carried out by Folkman and colleagues on positive emotions and coping (Folkman, 1997; Folkman & Greer, 2000; Folkman & Moskowitz, 2000b) complements the broaden-and-build theory.

Fredrickson *et al.* argue that the broadened mindsets created by positive emotions carry adaptive benefits in the sense that new lines of thought and action are encouraged (Fredrickson, 2005; Fredrickson & Levenson, 1998; Fredrickson *et al.*, 2000). Through the experience of positive emotions individuals may transform themselves, and become more creative, knowledgeable and resilient (Tugade & Fredrickson, 2001). As a consequence, an incidental effect of the experience of positive emotions is the increase of personal resources, which may be tapped into when needed in stressful situations (Fredrickson, 2005; Fredrickson *et al.*, 2000; Fredrickson & Tugade, 2003; Tugade & Fredrickson, 2001). Fredrickson (2005) maintains that, through the effects of broadening thought processes, positive emotions increase the probability of feeling good in the future. She illustrates this upward spiral effect with a feedback loop as depicted in Figure 2.8.

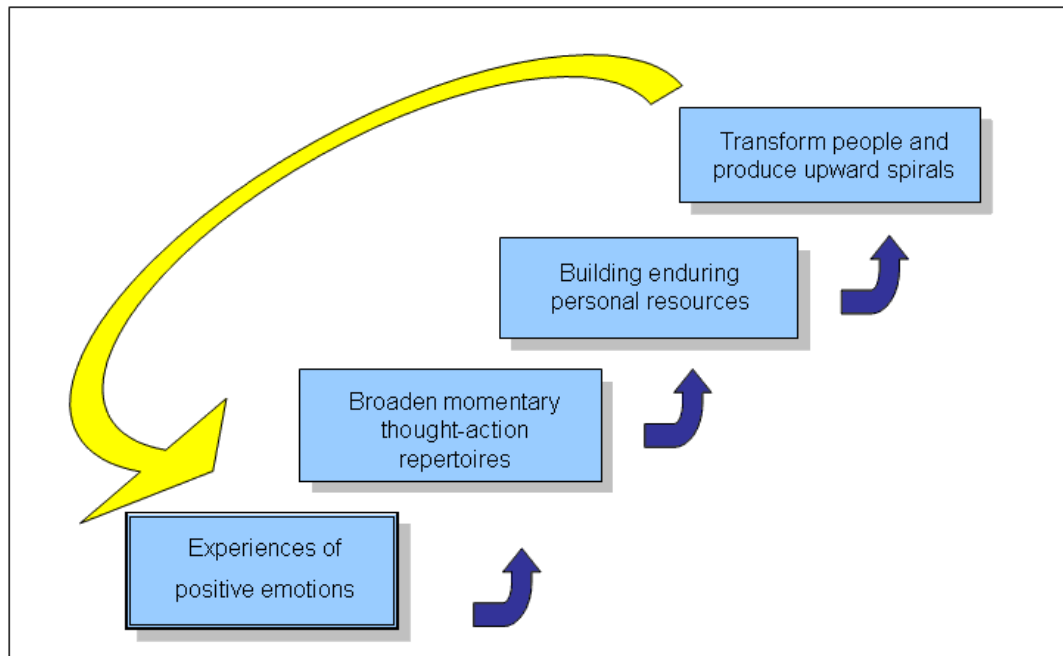


Figure 2.8 The broaden-and build theory of positive emotions

Source: Adapted from (Fredrickson, 2005, p. 124)

2.4.2 Increasing the prevalence of positive emotions

Fredrickson states that no intervention programmes based on the broaden-and-build theory of positive emotions have yet been developed and tested (2005, p. 128). She suggests relaxation and pleasant activities as intervention strategies to increase the prevalence of positive emotions (Fredrickson, 2005). “We should cultivate positive emotions in our own lives and in the lives of those around us not just because doing so makes us feel good in the moment but also because doing so will transform us to better people, with better lives in the future” (Fredrickson, 2005, p. 131).

2.4.3 Synthesis

Using positive emotions it is my assumption that participants will show evidence of adapting to the stressful situation while coping with the mastering of new technologies. Evidence of using positive emotions relates to thinking creatively, showing knowledge and resilience and tapping into personal resources.

2.4.4 “Intelligent” use of positive emotions

In accordance with the ability model of emotional intelligence (Mayer & Salovey, 1993; Mayer *et al.*, 2001a; Mayer *et al.*, 2002) a determining factor in managing emotions intelligently is the ability to draw on feelings in order to understand and guide behaviour. Based on research findings, Aspinwall (2001) states that optimists and people experiencing positive affect tend to expect positive outcomes in stressful situations and will use active coping strategies to attain these outcomes. Tugade and Fredrickson (Tugade & Fredrickson, 2004) point out that a key factor that distinguishes those individuals who cope successfully in stressful situations from those who fail to cope may be emotional intelligence.

Using the findings from various studies carried out (Folkman, 1997; Folkman & Greer, 2000; Folkman & Moskowitz, 2000b; Fredrickson & Joiner, 2002; Fredrickson *et al.*, 2000) Tugade and Fredrickson argue that it is possible that certain individuals have the ability to understand intuitively and to use positive emotions to their advantage in stressful situations (2004, p. 10). These individuals are psychologically resilient and may be described as emotionally intelligent in terms of the ability model of emotional intelligence (Mayer & Salovey, 1997).

2.4.5 Resilience

According to Tugade and Fredrickson (2002, p. 10) psychological resilience entails the ability to bounce back from negative experiences and to be flexible in adapting to the demands of a stressful situation. People with low psychological resilience have difficulty coping with negative experiences and are incapable of recovering from them, while, on the other hand, people who manifest high psychological resilience are able to deal with anxiety and tolerate frustration (Tugade & Fredrickson, 2004). In stressful situations resilient people tend to be creative in their problem-solving and demonstrate greater personal insight into their own capabilities during stressful experiences (Tugade & Fredrickson, 2001) than those who are less resilient. What is important, according to Tugade and Fredrickson, is that highly resilient individuals are able to recognise their own feelings and emotions as well as those of other people, and are able to use this emotional knowledge in the effective management of emotional experiences in stressful situations (2002, p. 11). In other words, resilient individuals reflect emotional intelligence (Tugade & Fredrickson, 2004).

In corroboration of the above, Tugade and Fredrickson (2004, p. 320) report on research findings which indicate that resilient people have an optimistic, enthusiastic and energetic approach to life. Highly resilient people are inquisitive and open to new experiences. High positive emotionality features strongly (Tugade & Fredrickson, 2002, p. 11)

An explanation for effective emotion regulation on the part of resilient people could lie in their understanding of the benefits of using positive emotions (Tugade & Fredrickson, 2002). The authors claim that this argument is supported by the way in which resilient people use positive emotions as coping strategies in stressful situations. Resilient people are happy and energetic, and they often use humour as a coping strategy (Tugade & Fredrickson, 2002). This indicates conclusively the advantage of positive emotions in the coping process, as this will create broadened mindsets that may be valuable in other coping efforts (Tugade & Fredrickson, 2002; Tugade & Fredrickson, 2004).

2.4.6 Synthesis

It is my assumption that participants who show high resilience by being optimistic, enthusiastic and energetic, and who use humour as a coping strategy, will also be emotionally intelligent and will show evidence of their abilities to use and manage emotions. Alternatively, participants manifesting low resilience will have difficulty in coping with stressful situations and will reveal anxiety, thus substantiating the assumption that these participants have yet to develop their emotional abilities.

2.5 Stress, appraisal and coping

This section will examine the processes of stress, appraisal and coping as relevant to the theme of coping with new educational technologies. The section will begin with a discussion on the background to the theoretical model of the coping process. This will be followed by an examination of the stress, appraisal and coping processes. The section will conclude with a summary and synthesis of the coping cycle in the context of the study.

Emotions constitute an integral part of the coping process. The questions that arise in connecting emotional intelligence and managing stress and coping (Ashkanasy *et al.*,

2004; Chapman & Clarke, 2003; Folkman & Moskowitz, 2004; Slaski, 2002; Slaski & Cartwright, 2002; Slaski & Cartwright, 2003) are important in the context of this study .

A significant portion of the research on present-day stress and coping originated with the publication in 1966 of Richard Lazarus's work *Psychological stress and the coping process* (Folkman & Moskowitz, 2004). His theory of stress and coping is cognitively orientated and emphasises the role of cognitive appraisal in the determination of the quality of a person's emotional response to a stressor and the way in which the person copes with the appraised situation (Folkman & Moskowitz, 2004). The process of coping starts in response to a negative appraisal of potential harm to goals important to the individual (Folkman & Moskowitz, 2004). The often intense emotional responses are characteristic of these appraisals, and Folkman and Moskowitz posit that one of the primary coping tasks is often the down-regulation of negative emotions as these emotions may interfere with coping (2004). The Lazarus and Folkman theoretical model of the coping process is illustrated in figure 2.9.

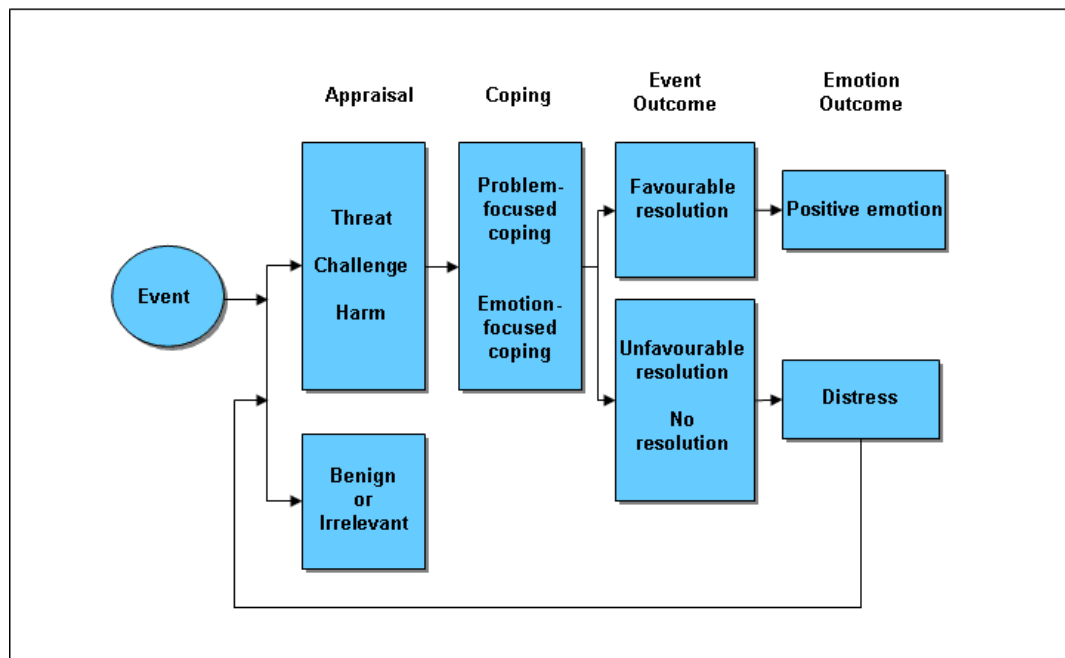


Figure 2.9 Lazarus and Folkman model of the coping process

Source: Adapted from Folkman (1997, p. 1217)

Appraisal and coping are the two processes at the heart of this theoretical model of stress and coping, and serve as vital mediators in stressful encounters between an individual and his environment and the long-term outcomes of these encounters

(Folkman & Greer, 2000; Folkman, Lazarus, Dunkel-Schetter, DeLongis, & Gruen, 1986). Individuals are continuously appraising their relationship with their environment (Folkman, 1997; Lazarus, 1999; Lazarus & Folkman, 1984). The stress process will begin if the environmental demands are perceived to exceed the individual's personal resources (Folkman, 1997; Lazarus & Folkman, 1984). Figure 2.10 illustrates the stress process during which an individual appraises an event, either with a perception of having adequate resources, which will lead to a positive outcome, or inadequate resources with the negative outcome of experiencing stress.⁶

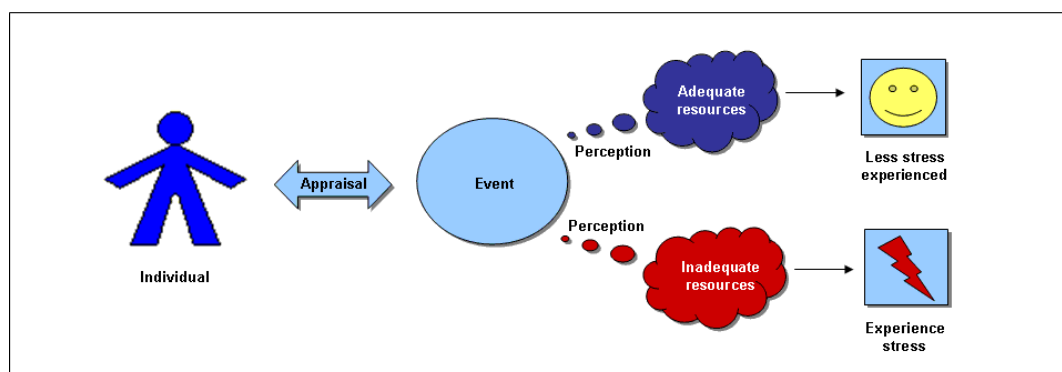


Figure 2.10 The stress process

Ashkanasy *et al.* (2004, p. 5) suggest that stress is not a one-dimensional variable, but a construct consisting of various variables and processes. According to them stress is a response process functioning to alert the individual to the need to adapt to environmental demands in order to preserve well-being.

2.5.1 Stress

Stress is an inevitable aspect of life (Lazarus & Folkman, 1984, p. 21).

The reason for the difference in the ways in which human beings function in response to stressful situations lies in the way in which people cope with stress (Lazarus, 1999). Stress may be described as a response process alerting a person to the need for adaptation in the interests of the well-being of the person (Ashkanasy *et al.*, 2004). Physiological, cognitive, behavioural, and emotional changes in order to adapt to situational demands are characteristic of stress (Lazarus, 1999). The judgement of whether or not a situation is stressful depends on the cognitive process of appraisal (Folkman, 1997; Lazarus & Folkman, 1984, p. 21).

⁶ The use of colour differentiates between the type of stress and the emotion experienced.

2.5.2 Appraisal

Appraisal concerns the evaluation on the part of an individual in terms of the personal significance of a given event and the resources of the individual to cope effectively with that event (Folkman & Greer, 2000; Folkman *et al.*, 1986). Personal differences in sensitivity and vulnerability mean that people differ in the ways in which they evaluate and react to a given event (Folkman & Greer, 2000; Lazarus & Folkman, 1984). Therefore, for the sake of survival and well-being, an individual must distinguish between situations that are either benign or dangerous (Lazarus & Folkman, 1984). These distinctions are often subtle, complex and abstract in nature, and, in order to be able to discriminate between benign and dangerous situations, the individual depends on cognitive processes in the brain. These cognitive processes are powered by what the individual has learned about the world through their experience of the world (Folkman & Greer, 2000; Lazarus & Folkman, 1984, p. 23).

Lazarus and Folkman (1984, p. 31) distinguish between primary appraisal and secondary appraisal. Primary appraisal involves determining the affective significance of the stressor in the sense of the way in which the well-being of the person is affected (Ashkanasy *et al.*, 2004; Folkman & Greer, 2000), while secondary appraisal determines the coping potential of the person. Figure 2.11 illustrates the appraisal process, — both primary and secondary appraisal.

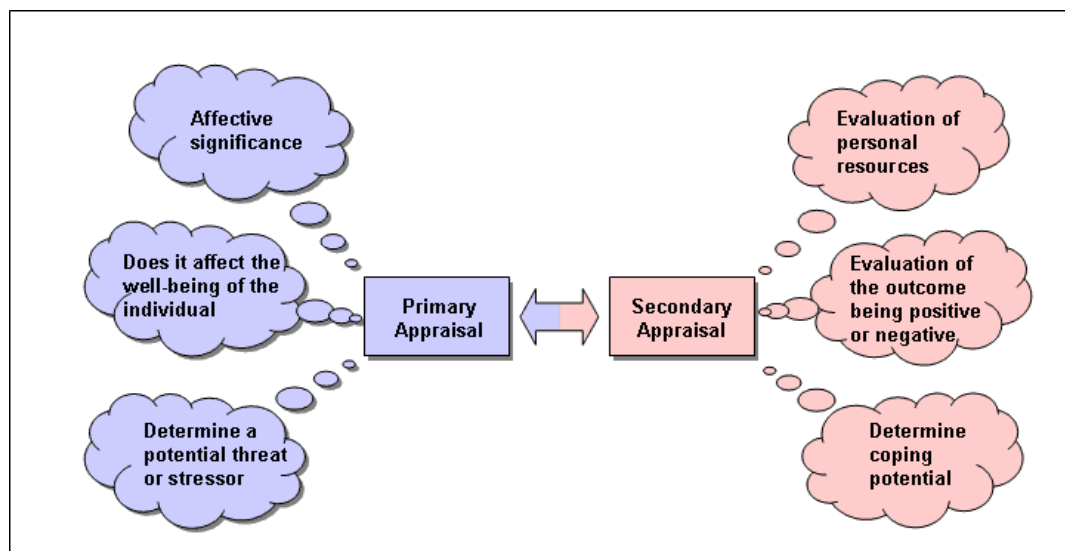


Figure 2.11 Primary and secondary appraisal

The possibility of the event constituting a potential stressor or threat is established by means of the primary appraisal, while the probability of either a positive or negative outcome is established by the secondary appraisal (Folkman & Greer, 2000; Lazarus & Folkman, 1984). Primary and secondary appraisals coalesce to establish whether the potential stressor contains the possibility of harm or loss, or whether it is challenging with the possibility of mastering and benefit (Folkman *et al.*, 1986).

2.5.3 Primary appraisal

The primary appraisal is influenced by factors such as the beliefs, values and commitments of the individual (Folkman & Greer, 2000). Lazarus and Folkman (1984) distinguish between three kinds of primary appraisal, namely irrelevant, benign-positive and stressful. An appraisal will be deemed irrelevant if the encounter with the environment does not hold any implications in terms of the well-being of the person (Lazarus & Folkman, 1984, p. 32). An appraisal will be judged benign-positive when the outcome of the encounter is interpreted as positive (Lazarus & Folkman, 1984, p. 32) and well-being will be either enhanced or preserved. Lazarus and Folkman (1984, p. 32) maintain that benign-positive appraisals are categorised by pleasant emotions such as joy, love, happiness, exhilaration or peacefulness. Lazarus and Folkman (1984) distinguish between three types of stressful appraisal, namely, harm or loss, threat and challenge.

Figure 2.12 illustrates the different categories of primary appraisal,⁷ while figure 2.13 illustrates the different types of stress appraisal.⁸

⁷ The use of colour differentiates the type of stress from the emotion experienced.

⁸ The use of colour depicts the intensity of emotion experienced, with lighter colours indicating less intense emotions and darker colour colours indicating emotions of greater intensity.

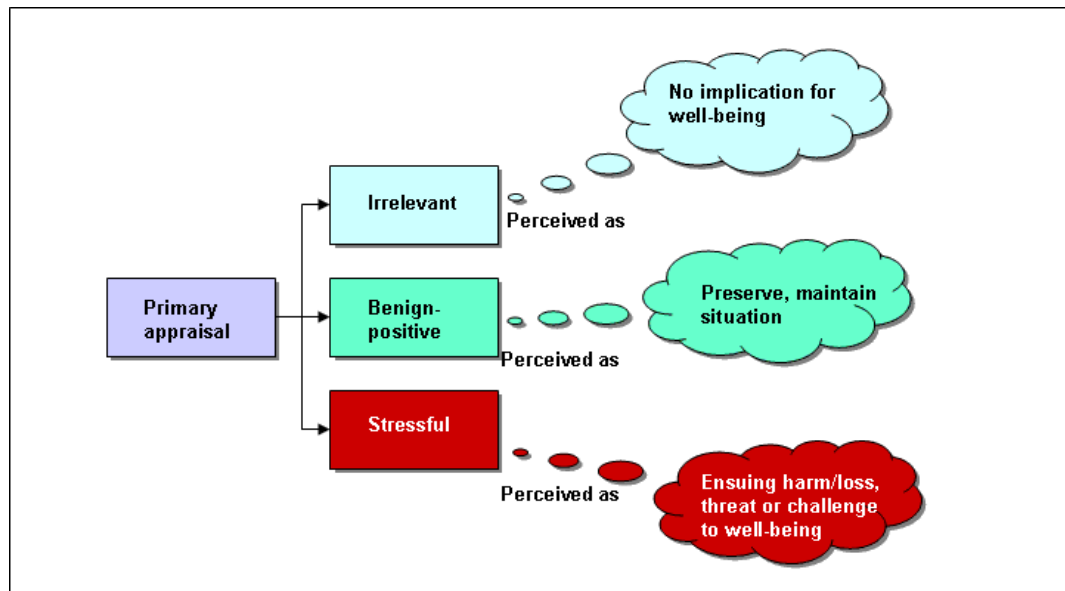


Figure 2.12 Different kinds of primary appraisal

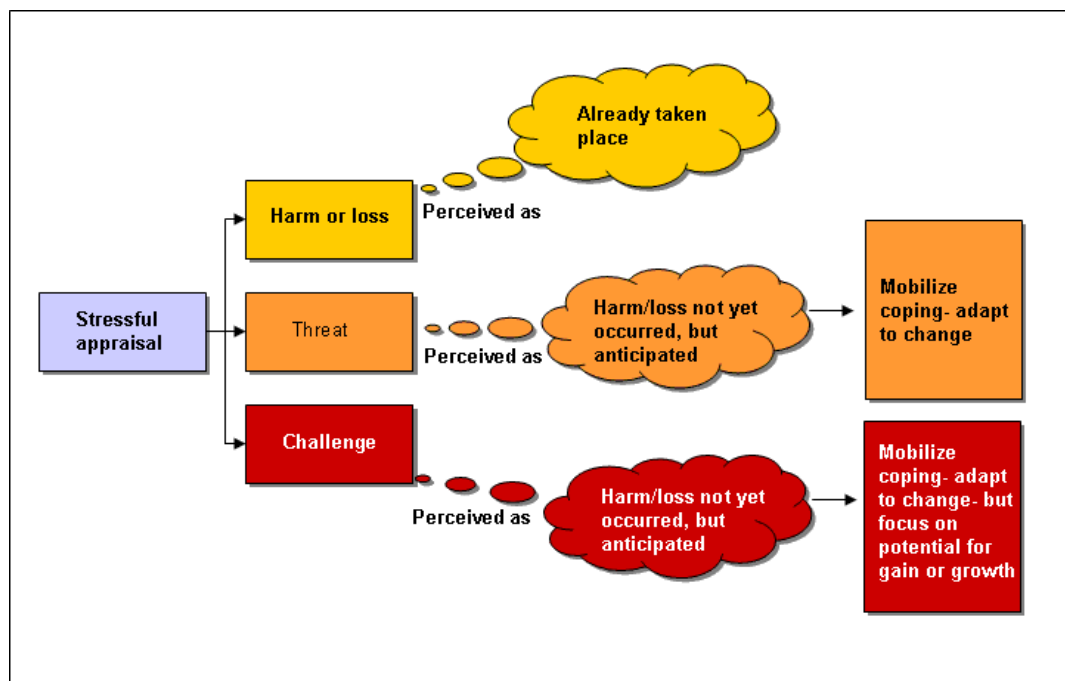


Figure 2.13 Stressful appraisal

Perceptions of harm or loss arise in situations in which damage has already occurred, while an appraisal of threat concerns harm or loss that has not yet occurred, but is anticipated (Lazarus & Folkman, 1984, p. 33). Perceptions of threat bring about anticipatory coping (Lazarus & Folkman, 1984, p. 33) which enables the person to adapt to the situation. Stress appraisals of challenge share common ground with threat

in the sense that they also mobilise the person to adaptive and coping functioning. Lazarus and Folkman (1984, p. 33) state that the main difference between a challenge and a threat lies in the fact that the focus of challenge is on potential gain and growth. Challenge appraisals are characterised by pleasant emotions such as eagerness, excitement and exhilaration, whereas threat centres on potential problems and is characterised by unconstructive emotions such as fear, anxiety and anger (Lazarus & Folkman, 1984, p. 33).

Lazarus and Folkman (1984, p. 53) argue that threat and challenge should not be seen as the poles of a single continuum, but should be considered as separate and related constructs that may occur simultaneously.

2.5.4 Secondary appraisal

Secondary appraisal is a decisive feature whenever an individual experiences a stressful encounter, in the sense that the outcome of the encounter depends on the response of the individual to what is at stake and what could be achieved (Lazarus & Folkman, 1984, p. 35). Lazarus and Folkman describe secondary appraisal as a “complex evaluative process that takes into account which coping option will accomplish what it is supposed to do, and the likelihood that one can apply a particular strategy or set of strategies effectively” (Lazarus & Folkman, 1984, p. 35). In the same vein Bandura (1997, p. 35) points out that, in reference to the belief of an individual in order to cope successfully, there is a distinction between what is expected to be the outcome and the efficacy expectation.

Ashkanasy *et al.* (2004, p. 10), in elaborating on the model of Lazarus and Folkman, explain that the role of appraisal in the stress response process is, firstly, to identify situational cues that are significant to the personal goals of the individual. The second role of appraisal is to evaluate the situation in terms of threat, challenge, harm, loss or benefit. Secondary appraisal includes the evaluation and balancing of situational realities with personal resources and coping capabilities. Ashkanasy *et al.* argue that the impact of emotional stress responses on cognitions and behaviours depends on the ability of the individual to use personal resources effectively to transform the emotional experience into adaptive behaviour by using appropriate coping strategies (Ashkanasy *et al.*, 2004).

2.5.5 Reappraisal

Another form of appraisal, namely reappraisal, differs from appraisal in the sense that it constitutes a follow-up of an earlier appraisal and takes place in situations in which, based on new information gained from the environment, a change is deemed necessary (Folkman *et al.*, 1986; Folkman & Moskowitz, 2000b). Reappraisals may be the result of cognitive coping efforts and it is often difficult to distinguish this kind of reappraisal from reappraisal which is based on new information (Lazarus & Folkman, 1984).

Important for this study is the fact that the cognitive appraisal processes, according to Lazarus and Folkman (1984, p. 54), “are not necessarily conscious, nor are the agendas that shape appraisal always easily accessible. Cognitive appraisal may also be shaped by agendas that are below the person’s awareness” (Lazarus & Folkman, 1984, p. 54). Positive reappraisal in the context of coping strategies will be discussed in § 2.4.1.1.

2.5.6 Synthesis

In an environment in which individuals need to master new educational technologies, it is my assumption that individuals will differ in the nature of their responses to a stressful event when mastering a new technology. Consequently, their emotional responses to the stressor will affect their abilities to cope with the mastering of new technologies.

2.5.7 Coping

Coping is not a stand-alone phenomenon. It is embedded in a complex, dynamic, stress process that involves the person, the environment, and the relationship between them (Folkman & Moskowitz, 2004, p. 748).

Lazarus and Folkman (1984, p. 141) define coping as “constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person”. Carver and Scheier (1999, p. 553) describe coping as consisting of “efforts at self-regulation in times of duress”, while Folkman and Moskowitz (2004, p. 745) define coping as “the thoughts and behaviors used to manage the internal and external demands of situations that are appraised as stressful”.

Two main forms of coping will be used when a situation is appraised as stressful, namely, emotion-focused and problem-focused coping (Folkman, 1997). Figure 2.14 illustrates the different types of coping strategy.

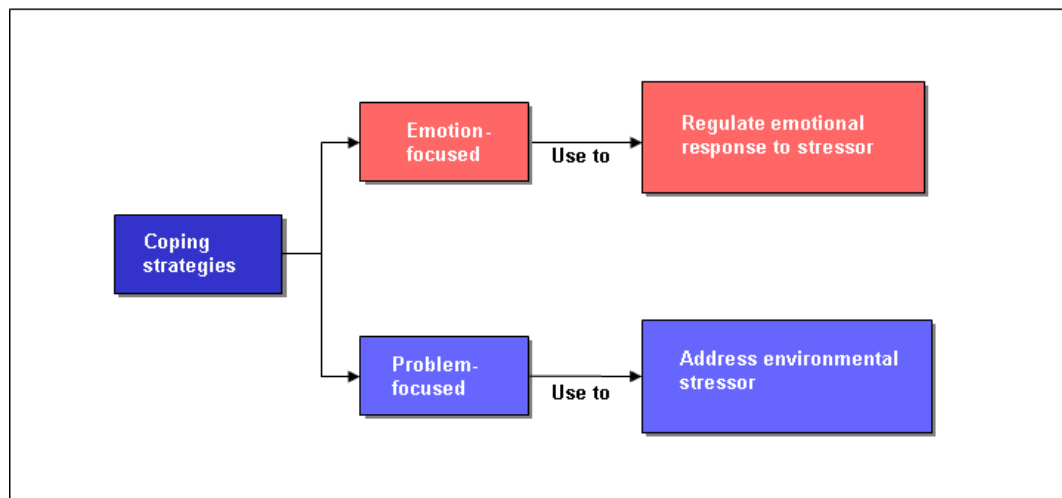


Figure 2.14 Coping strategies

Coping serves two intervening functions, firstly, in terms of problem-focused coping which addresses the environmental stressor and, secondly, in terms of emotion-focused coping which regulates the emotional response to the stressor (Folkman, 1997; Lazarus & Folkman, 1984).

2.5.7.1 Emotion-focused forms of coping

Lazarus and Folkman (1984, p. 150) categorise coping strategies such as avoidance, minimisation, distancing, selective attention, positive comparisons and wresting positive value from negative events as emotion-focused forms of coping. The primary objective of these forms of coping is the lessening of emotional distress (Folkman, 1997; Lazarus & Folkman, 1984). Higher levels of emotion-focused coping strategies, such as escape and avoidance, the seeking of social support, distancing, or cognitive reframing, are linked to less control (Folkman, 1997; Folkman & Greer, 2000; Lazarus & Folkman, 1984).

2.5.7.2 Problem-focused forms of coping

Problem-focused coping strategies are comparable to the strategies used for problem-solving, and Folkman and Lazarus (1984, p. 152) distinguish between problem-focused strategies directed at the environment and those directed at the self. Problem-focused strategies involve an analytic, objective process during which alternative solutions are evaluated (Lazarus & Folkman, 1984). According to Folkman and Greer (2000, p. 35) higher levels of problem-focused coping strategies, such as information search, problem-solving, and direct action to solve a problem, are linked to greater control and secondary appraisal.

2.5.7.3 Diverse coping strategies

There is increasing consensus in the literature on stress and coping that distinctions should be made between diverse coping strategies other than those that are problem-focused and emotion-focused (Carr, 2004; Folkman & Moskowitz, 2004; Zeidner & Endler, 1996). Folkman and Moskowitz (2004, p. 751) note that the challenge for coping researchers is “to find a common nomenclature for these diverse coping strategies so that findings across studies can be discussed meaningfully”. Although the theoretical distinction between problem-focused and emotion-focused coping strategies provides a broad way of dealing with coping strategies, there are other conceptualisations which need to be considered. Folkman and Moskowitz (2004) warn that, although coping nomenclature such as problem-focused and emotion-focused helps in the synthesis of findings across studies, important differences within categories may be masked. They discuss the example of distancing and escape-avoidance – in terms of distancing an individual recognises a problem, but deliberately puts it out of their mind, whereas escape-avoidance includes behaviours such as alcohol abuse (Folkman & Moskowitz, 2004). Both these coping strategies constitute forms of avoidant coping and are usually grouped under emotion-focused coping (Folkman & Moskowitz, 2004). An important distinction between the two forms of coping is that distancing may be adaptive when there is nothing to be done, for example, waiting for the results of a test, while escape-avoidance is maladaptive in the same kind of situation (Folkman & Moskowitz, 2004). It is important in terms of this study, in which the individual coping strategies of participants are investigated, that distinctions such as these be retained.

2.5.7.4 Functional and dysfunctional coping strategies

An important concept encountered in the literature is the distinction between functional and dysfunctional coping strategies. Carr (2004, p. 216) distinguishes between functional and dysfunctional coping strategies in terms of all three styles of coping strategies, namely problem-focused, emotion-focused and avoidance-focused. Table 2.2 lists these functional and dysfunctional strategies.

Table 2.2 Functional and dysfunctional coping strategies

Type	Aim	Functional	Dysfunctional
Problem-focused	Problem solving	<ul style="list-style-type: none"> • Accepting responsibility for solving the problem • Seeking accurate information • Seeking dependable advice and help • Developing a realistic action plan • Following through on the plan • Postponing competing activities • Maintaining an optimistic view of one's capacity to solve the problem 	<ul style="list-style-type: none"> • Taking little responsibility for solving the problem • Seeking inaccurate information • Seeking questionable advice • Developing unrealistic plans • Not following through on plans • Procrastination • Holding a pessimistic view of one's capacity to solve the problem
Emotion-focused	Mood regulation	<ul style="list-style-type: none"> • Making and maintaining socially supportive and emphatic relationships • Seeking meaningful spiritual support • Catharsis and emotional processing • Reframing and cognitive restructuring • Perceiving the stress in a humorous way • Relaxation routines • Physical exercise 	<ul style="list-style-type: none"> • Making and maintaining destructive relationships • Seeking meaningless spiritual support • Unproductive wishful thinking • Long-term denial • Taking the stress too seriously • Drug and alcohol abuse • Aggression
Avoidance-focused	Avoiding source of stress	<ul style="list-style-type: none"> • Temporarily mentally disengaging from the problem • Temporarily engaging in distracting activities • Temporarily engaging in distracting relationships 	<ul style="list-style-type: none"> • Mentally disengaging from the problem for the long term • Long-term engagement in distracting activities • Long-term engagement in distracting relationships

Source: Adopted from Carr (2004, p. 216)

2.5.7.5 Synthesis

In essence, by using functional problem-focused coping strategies, the individual takes responsibility for finding a solution to the problem. Optimism, creativity and wisdom are important characteristics of such an individual (Carr, 2004, p. 215). On the other hand, dysfunctional problem-focused coping strategies comprise not taking responsibility together with a pessimistic perception of the capacity to solve the problem (Carr, 2004).

Within the context of this study it is assumed that acquiring a new skill in the mastering of a new technology will involve a stressor. As individuals differ in the ways in which they cope with stressors it is assumed that different individuals will use different coping strategies to master a new technology.

The assumption is made that an individual will use functional emotion-focused strategies mainly to alleviate stress by seeking social support, constructive reframing, cognitive restructuring and humour (Carr, 2004). Contrary to this, it is assumed that individuals using dysfunctional emotion-focused coping strategies may gain short-term relief, but that stress will not be alleviated in the long term (Carr, 2004).

It is also assumed that well-judged functional avoidance-focused coping strategies may assist in temporarily disengaging psychologically from a stressful situation (Carr, 2004), but that avoidant coping strategies may develop into dysfunctional strategies when used in the long term in stress management (Carr, 2004).

2.5.8 Event outcome

The coping strategies used by individuals may differ from person to person, depending on a number of factors such as the intensity of the emotional response to the stressor, the ability of the individual to regulate and moderate the emotional response, and opportunities for solving the problem inherent in the situation (Folkman & Greer, 2000, p. 35).

Coping processes bring about an event outcome (Folkman, 1997). Figure 2.15 illustrates the event outcome following the coping process.

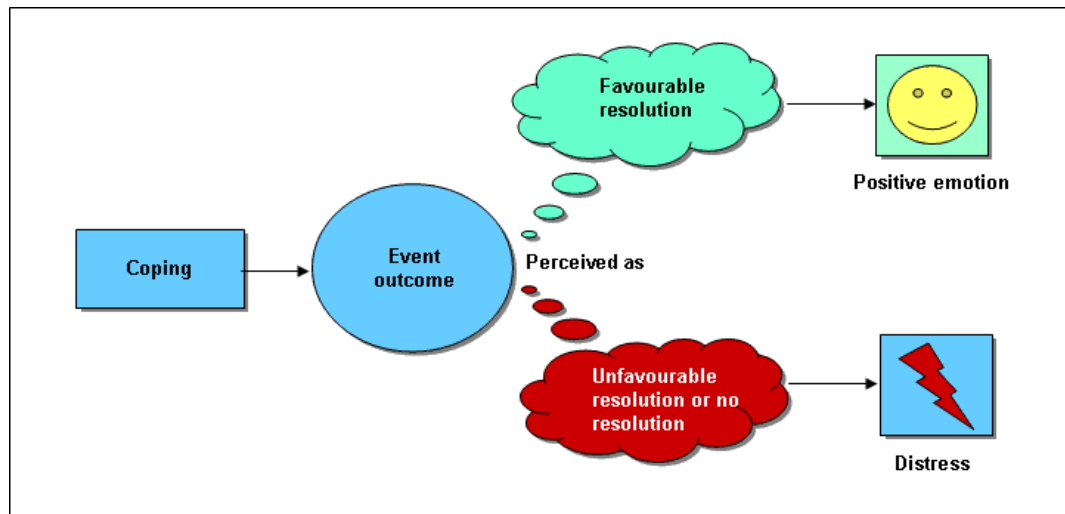


Figure 2.15 Event outcome

If the individual perceives the event outcome as a favourable resolution, it is likely that positive emotion will be generated (Folkman, 1997). On the other hand, if the event outcome is perceived either as not having been resolved or as an unfavourable resolution of the event, this may lead to distress with the possibility of the activation of additional coping processes (Folkman, 1997).

Figure 2.16 presents a graphical summary designed to represent the coping process according to Lazarus and Folkman.

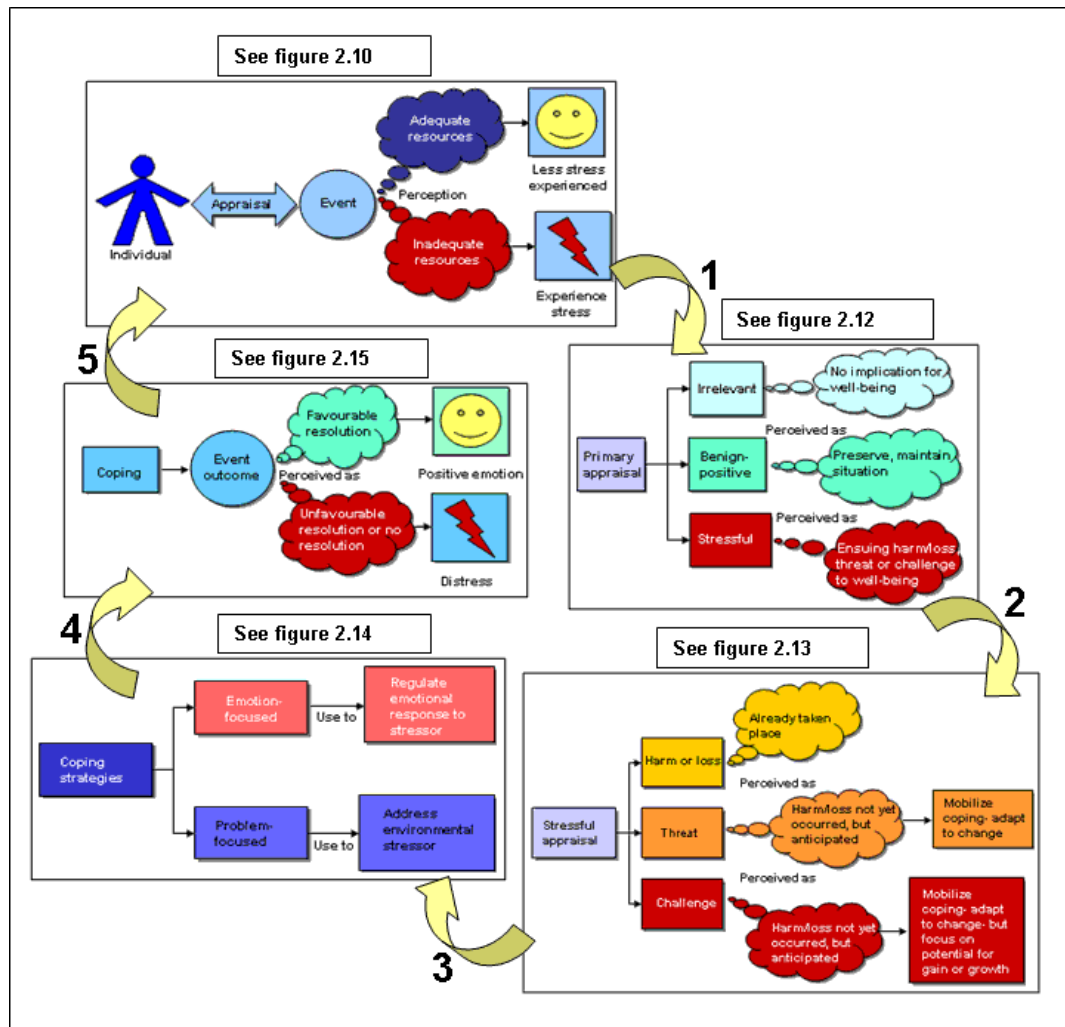


Figure 2.16 Summary of the coping process according to Lazarus and Folkman

According to the Lazarus and Folkman model of the coping process (Folkman, 1997; Lazarus & Folkman, 1984) individuals in a situation or event will constantly appraise their actions within the situational environment – step 1 in figure 2.16. If the situation is appraised as constituting a threat, challenge or harm (step 2), the individual will experience stress and will feel the need to cope (step 3) with the situation (Folkman, 1997; Lazarus & Folkman, 1984). According to this model the individual will require emotion-focused strategies to cope with distress and problem-focused coping strategies to deal with the stressor causing the distress (Folkman, 1997; Lazarus & Folkman, 1984). The use of these coping strategies (step 4) will lead to an event outcome, either a favourable resolution or an unfavourable resolution. If the event outcome is unsatisfactory this will lead to distress and further coping (step 5).

2.5.9 Synthesis

Within the context of this study it is my assumption that, by introducing a new technology to a participant, the participant will appraise the situation. If the appraisal is positive and the participant perceives their abilities to master the new technology as adequate, they will experience less stress with accompanying positive emotion. Alternatively, if the appraisal is negative and the participant perceives that they lack adequate resources, they will experience more stress. The secondary appraisal determines the type of stress experienced as the outcome depends on the response of the participant to what is at stake and what they are able to do in the situation. The participant may perceive the situation as harmless, in which case nothing will need to be done; as a threat which will necessitate the calling up of coping strategies to deal with the threat; or a challenge, in which case another set of coping strategies will be used. The participant will use emotion-focused coping strategies to cope with distress and problem-focused coping strategies to cope with the stressor. This will lead either to a favourable resolution or to another coping cycle if the outcome is not favourable.

2.6 Positive emotions and coping

This section comprises an overview of the effect of positive emotions on the coping process, and starts with an outline of new directions in coping research, followed by a discussion on the modified theoretical model of the coping process and the associated positive psychological states, and concludes with a synthesis relating positive emotions and coping to the study.

An exciting new direction in coping research is the effect of positive emotions on the outcome of the coping process in stressful contexts (Folkman & Moskowitz, 2000b; Folkman & Moskowitz, 2004). In a review of relevant studies, Folkman and Moskowitz (2000b, p. 115) report on evidence indicating that positive emotions serve as a buffer against stress. Positive reappraisal, problem-focused coping and the use of positive meaning are associated with the incidence and continuation of positive affect (Folkman & Moskowitz, 2000b). Corresponding with these findings, Carver and Scheier (1999, p. 569) reported on the difference in the coping strategies used by optimists and pessimists in a number of studies. They noted that optimists tend to use problem-focused coping strategies and, when that is not possible, they tend to use adaptive emotion-focused coping strategies such as acceptance, use of humour and positive reframing. By using these strategies optimists keep moving forward (Carver & Scheier,

1999), while pessimists disengage from their goals and use denial in order to cope. Folkman and Moskowitz (2000b) point out that these findings suggest the importance of positive emotions as tools in the establishment of improved outcomes. Echoing the interest in positive emotions, Fredrickson and colleagues (Fredrickson & Joiner, 2002; Fredrickson & Levenson, 1998; Fredrickson *et al.*, 2000; Fredrickson & Tugade, 2003) reported on the adaptive effect of positive emotions in stressful situations.

In evaluating research findings relating to the role of positive emotions in the coping process, Folkman (1997, p. 1216) saw the need for the modification of the Lazarus and Folkman model of the coping process in order to include “a third pathway that leads from the positive psychological states back to appraisal and coping”. Figure 2.17 presents the modified Folkman theoretical model of the coping process.

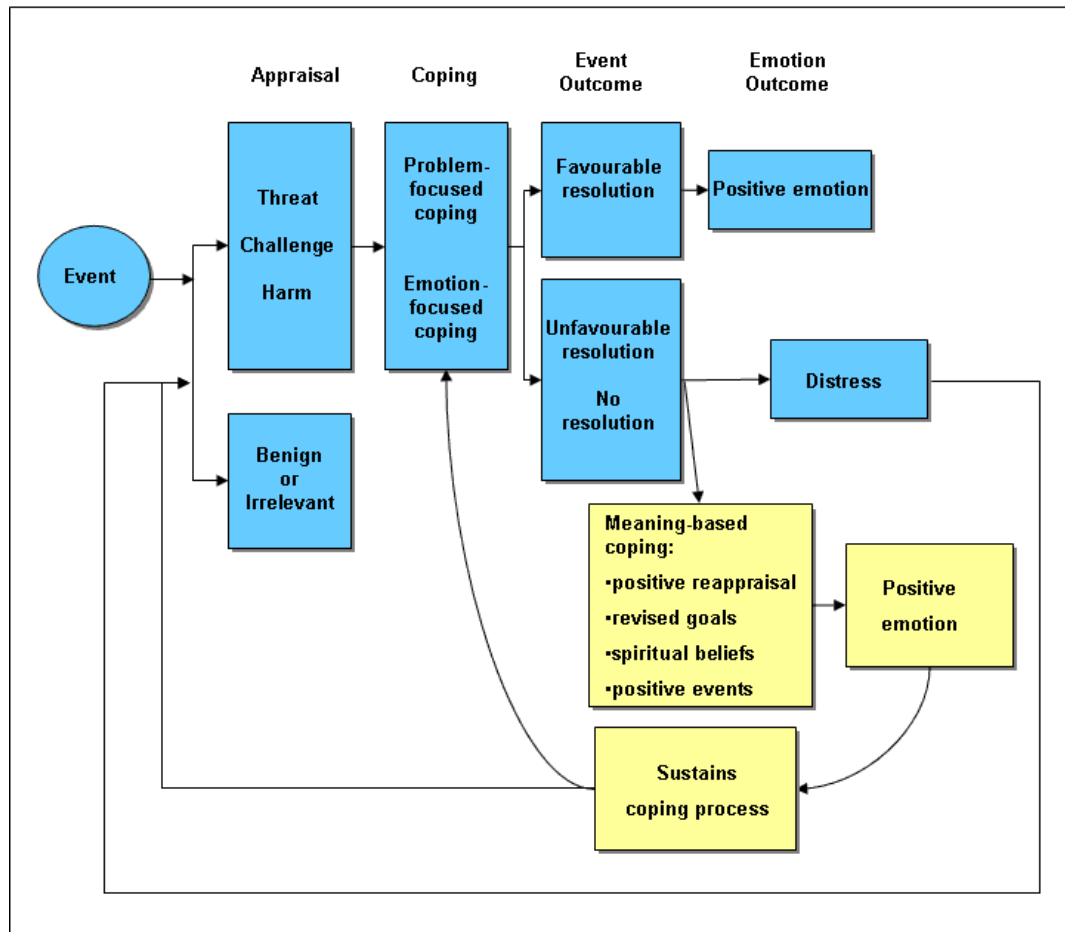


Figure 2.17 Modified Folkman theoretical model of the coping process

Folkman (1997, p. 1216) hypothesised that coping processes that produce positive psychological states and that the positive psychological states themselves may assist

the individual in sustaining renewed coping efforts. In this way positive reappraisal processes will help the individual to focus on positive meaning, and this, in turn, will motivate the use of goal-directed problem-focused coping strategies (Folkman, 1997, p. 1217).

2.6.1 Coping and positive psychological states

Folkman (1997, p. 1212) reported on findings in terms of which different approaches were used to create positive affect, even in the midst of stressful and challenging circumstances. In a review of the evidence relating to the occurrence of positive emotions under stressful conditions, Folkman and Moskowitz identified three types of coping process associated with positive psychological states, namely, positive reappraisal, problem-focused coping and the infusion of ordinary events with positive meaning (Folkman & Moskowitz, 2000b, p. 115). They pointed out the possibility of positive emotions playing a significant role in terms of adaptation in the stress process.

2.6.2 Positive reappraisal

The use of a cognitive process such as positive reappraisal enables people to focus on the positive outcomes of an event by reframing the situation in a positive light (Folkman & Moskowitz, 2000b). Examples of positive reappraisal include perceptions of personal growth or benefit (Folkman & Moskowitz, 2000b). By reappraising an event positively individuals will interrelate the event with possible benefits in terms of their values, beliefs and goals (Folkman & Moskowitz, 2004).

2.6.2.1 Goal-directed problem-focused coping

Problem-focused coping strategies, such as being goal directed, include strategies such as the gathering of information, decision making, planning and resolving conflicts, in order to solve or manage problems that impede or block goals and create distress (Folkman & Moskowitz, 2004). Folkman and Moskowitz (2000b, p. 1213) suggest that “being engaged in the pursuit of personally meaningful goals is widely considered a hall mark of good mental health in the western world”. If individuals focus on specific, proximal tasks they are more capable of identifying realistic and attainable goals (Folkman & Moskowitz, 2000b, p. 1213). Feelings of mastery and control are associated with effective problem-focused coping (Folkman & Moskowitz, 2004).

2.6.2.2 Infusion of ordinary events with positive meaning

The three most frequently cited sources of meaning found in the study by Folkman and Moskowitz (2000b, p. 1215) were a feeling of being connected and cared about, experiencing a sense of achievement and self-esteem, and having an opportunity to be distracted from everyday cares. Positive meaningful events contribute towards positive emotion in the sense that these events reaffirm the values of the individual and assist the individual to temporarily focus on these values while coping with the stressful event (Folkman & Moskowitz, 2004).

2.6.2.3 The common underlying theme

Folkman and Moskowitz (2000b, p. 1215) point out that searching for and finding positive meaning stands out as a common underlying theme during the stress process. Figure 2.18 presents a graphical representation designed to conceptualise the relationship between reappraisal and positive emotion,

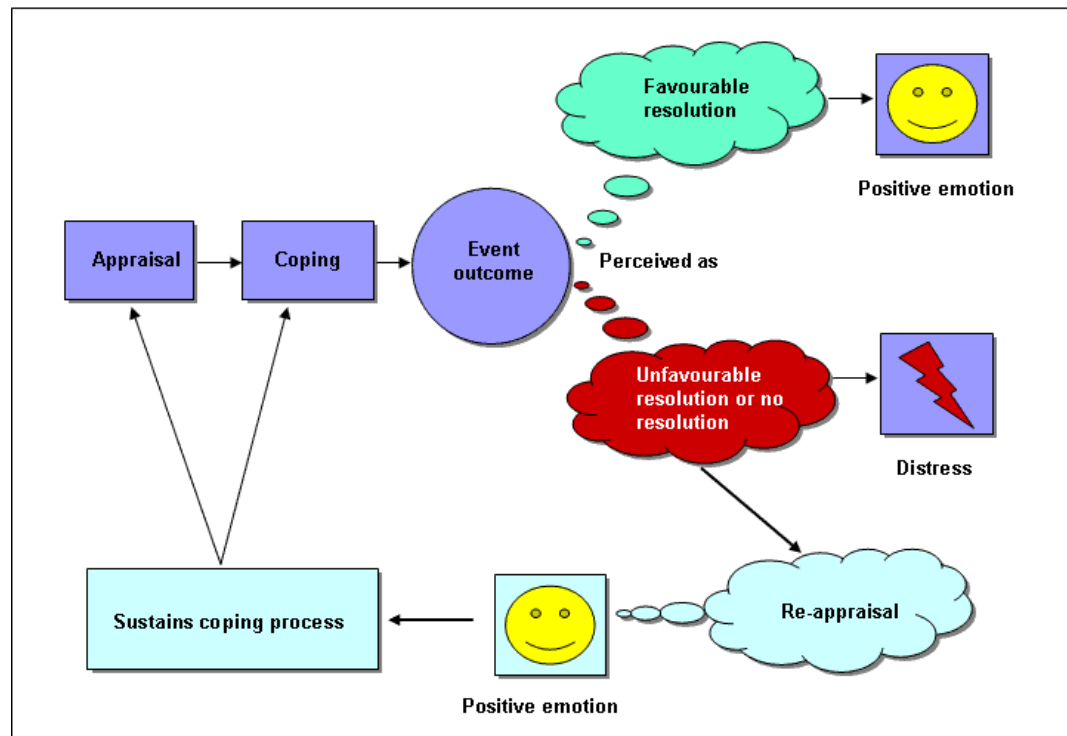


Figure 2.18 Reappraisal and positive emotion

2.6.2.4 Synthesis

From the perspective of coping strategies used when mastering new technologies, it is my assumption that certain individuals will, during the reappraisal process, use positive reappraisal, goal-directed problem-focused coping and infusion of events with positive meaning to cope with the task. Collectively these strategies involve a reappraisal process with positive emotion and the sustaining of the coping process as outcomes.

2.7 A process model of affective response

Stress is a common feature of organisational life, across all occupational domains (Ashkanasy et al., 2004, p. 2).

This section will discuss the process model of affective response as proposed by Ashkanasy, Ashton-James and Jordan (2004). As this model provides a deeper understanding of emotional intelligence as a moderator of work stress, the model has important implications for research pertaining to linkages between emotional intelligence and coping strategies. After a discussion on the implications of the model in terms of the development of a supportive organisational climate, the section concludes with a synthesis of the implications of the model in terms of the study

Ashkanasy *et al.* (2004) proposed a process model of affective response formation and modulation that provides a possible explanation for the cognitive-affective processes underlying emotional intelligence, as defined by Mayer and Salovey (1997). Their model provides an explanation of the way in which emotional intelligence serves as a moderator of the stress experienced in the workplace. In terms of this study, the model is pivotal in providing possible insight into the processes at the core of emotional intelligence, moderating the affective impact of stressors and the effect that these emotional responses have on coping strategies.

Ashkanasy *et al.* (2004) developed and integrated recent work carried out by Jordan, Ashkanasy and Hartel (2002; Jordan, Ashkanasy, & Hartel, 2003), the Affective Events Theory of Weiss and Cropanzano (1996) and studies on emotional intelligence by Mayer and Salovey (1997). The model presented by Ashkanasy *et al.* (2004) is illustrated in figure 2.19.

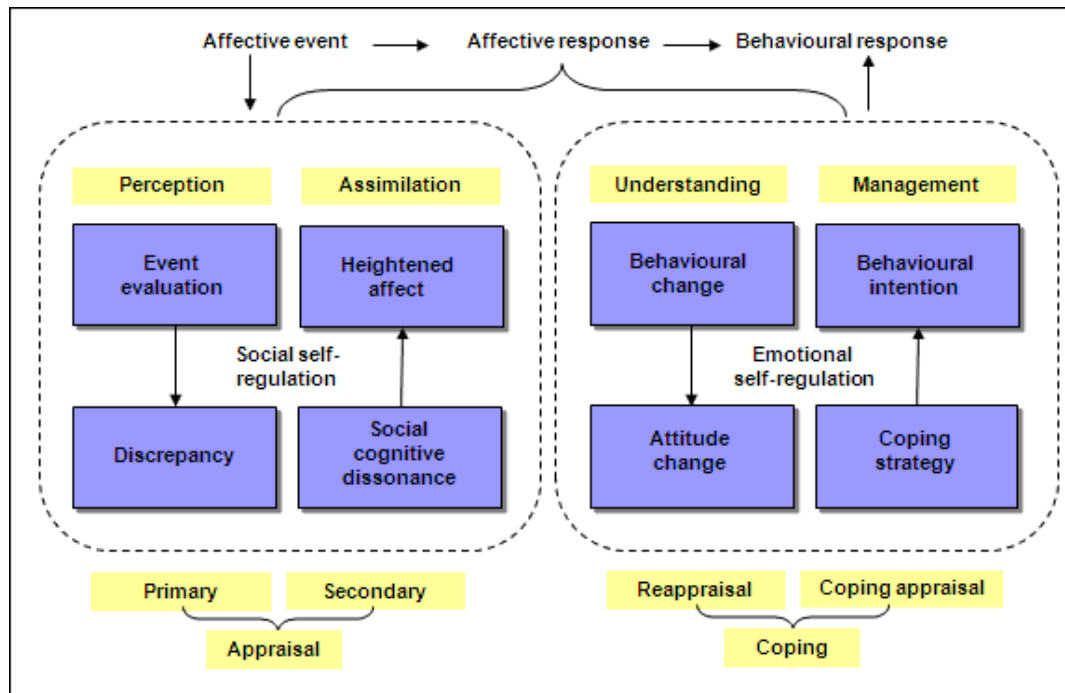


Figure 2.19 A Process Model of Affective Response

Source: Adapted from Ashkanasy *et al.*, 2004

This study will draw **only on those aspects of the model, which pertain to those components of emotional intelligence incorporated in the process of stress appraisal and coping**, indicated in the figure highlighted in yellow. Consistent with Mayer and Salovey (1995; Mayer & Salovey, 1997), Ashkanasy *et al.* (2004, p. 29) propose that, during the process of self-regulation, the different components function more or less interdependently. According to their model, emotional perception is involved in the process of primary appraisal, emotional assimilation with secondary appraisal, emotional understanding with the first component of coping, namely reappraisal, and emotional management with effective self-regulation (Ashkanasy *et al.*, 2004, p. 29). Figure 2.20 presents a diagram designed to represent the process model for affective response in terms of the Mayer and Salovey model of emotional intelligence showing the interlinked nature of appraisal, coping and emotional intelligence.

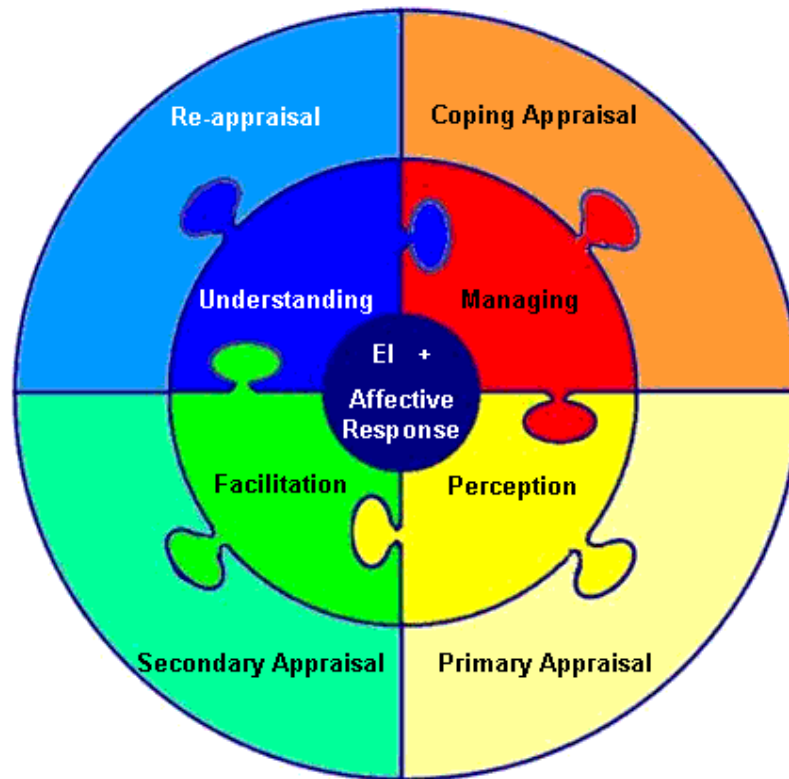


Figure 2.20 The process model of affective response in terms of EI

The relationship between emotional intelligence and coping, as proposed by Ashkanasy *et al.* (2004, p. 35), is modelled in accordance with the four branches of emotional intelligence as conceptualised by Mayer and Salovey (1997). Their model attempts to explain why individuals with diverse emotional intelligence profiles differ in their capacity “to appraise and to cope with the processes inherent in their affective responses to events in their environment” (Ashkanasy *et al.*, 2004, p. 35). According to Ashkanasy *et al.*’s model, emotional perception determines accurate primary appraisal, emotional assimilation determines secondary appraisal, and emotional understanding determines “the accuracy of reappraisal and subsequent attitudinal or behavioural change, and the efficacy of coping, and the monitoring of the success of social psychological adjustments to affective responses can be explained in terms of emotional management” (Ashkanasy *et al.*, 2004, p. 35).

2.7.1 Perceiving emotion: Primary appraisal

Ashkanasy *et al.* argue that the issue of emotional awareness is important and, in particular, in the discussion on the link between emotional intelligence and coping, since “emotional self-awareness is a starting point for dealing with an appraisal of

stress” (2004, p. 19). According to Ashkanasy *et al.*, the feelings that emerge following the appraisal of stress drive the emotional and behavioural consequences that follow. They are also of the opinion that the ability to recognise the emotions of others and the sincerity of these emotional expressions are of use in dealing with stressful situations (Ashkanasy *et al.*, 2004). For example, individuals may compare their situation and their feelings in relation to others in the same situation. If, during this comparison, they observe that the other parties appear stressed or distressed, this may contribute to their selection of an appropriate coping strategy (Ashkanasy *et al.*, 2004, p. 20).

2.7.2 Facilitating thought: Secondary appraisal

The ability to facilitate thought is linked to a person’s appraisal of the situation during which they may experience a range of emotions including frustration, anger and fear (Ashkanasy *et al.*, 2004). The ability to assimilate emotions will enable a person to process cognitively the reasons why these feelings are being experienced in order to determine whether these emotions are appropriate in the particular situation (Ashkanasy *et al.*, 2004, p. 19). Ashkanasy *et al.* propose that this ability will also determine the level of stress that the person will experience during the appraisal process. This ability to assimilate emotions may also act as a trigger for the level of emotional management required in choosing an appropriate coping strategy (Ashkanasy *et al.*, 2004, p. 20). For instance, if the initial emotional reaction were out of proportion to the stressor, then the individual would need to exercise a greater degree of emotional control. Ashkanasy *et al.* (Ashkanasy *et al.*, 2004) use the analogy of a jammed photocopying machine to illustrate this point. A range of familiar reactions may result from this type of incident (fixing the problem) – “problem-based strategy with good emotional control emanating from the assessment of a mild inconvenience” to a major tantrum involving swearing and kicking the copier, or emotion-focused strategy of blaming with poor emotional control emanating from the assessment of a major obstacle” (Ashkanasy *et al.*, 2004, p. 20).

According to these authors this branch includes the ability to “adopt multiple perspectives to assess a problem from all sides, including pessimistic and optimistic perspectives” (Ashkanasy *et al.*, 2004, p. 20). They state that a person is able to determine the appropriate emotional state facilitating the solution to the problem, or the conflicting emotions experienced may be resolved by adopting multiple perspectives (Ashkanasy *et al.*, 2004). The adoption of multiple perspectives may provide a key

process that will enable a person to break the cycle of negativity that could emerge as a result of the stress experienced (Ashkanasy *et al.*, 2004).

2.7.3 Understanding emotions: Re-appraisal

Ashkanasy *et al.* (2004, p. 20) refer to this branch of understanding emotions as “the ability of individuals to recognize the likely transitions between emotions, moving, for example, from feelings of anger or hopelessness if the threat is appraised as insurmountable”. The recognition and analysis of the succession of emotions that will emerge from perceptions is vitally important in order to defeat possible negative responses to emotions (Ashkanasy *et al.*, 2004). Ashkanasy *et al.* explain that emotional understanding may contribute to a resolution of the feelings of emotional dissonance that may emerge from an appraisal of stress in the same way that the generation of multiple perspectives may assist in interrupting negative-coping cycles. The branch of understanding emotions helps to prepare a person for the emotions they may expect to encounter during a stressful period in the same way that understanding the grief cycle assists a person to come to terms with painful periods of grief in their life (Ashkanasy *et al.*, 2004). An understanding of the varying emotions that emerge during a stressful episode may assist the process of overcoming negative feelings in order to address the problem (Ashkanasy *et al.*, 2004).

2.7.4 Managing emotions: Coping appraisal

Ashkanasy *et al.* (2004, p. 21) state that an ability to detach from feelings of frustration that arise during the perception of stress may be useful if these feelings of frustration are distracting. This statement is in accordance with Salovey (2001) who suggests that, in reality, emotional management involves focusing on actions that are of the utmost importance for one’s health. Therefore, in line with the literature on coping, Ashkanasy *et al.* (2004, p. 21) suggest that, depending on the best outcome, there are occasions during which emotion-focused strategies that entail the expression of emotion should be used, and other occasions when the suppression of emotion would present the best outcome.

The model of these authors (2004) provides a deeper understanding of emotional intelligence as a moderator of work stress and, in the case of the proposed study, of the stress encountered in mastering new educational technologies with subsequent coping strategies. Their model has an important implication for research pertaining to linkages between emotional intelligence and coping strategies as it provides “a

framework for studying the interaction of personal characteristics and environment as determinants of behaviour. From a practical perspective, the model implies that development of a supportive organizational climate that will facilitate positive interactions is an important goal for managers” (Ashkanasy *et al.*, 2004, p. 37).

2.7.5 Synthesis

Participants with diverse emotional intelligence profiles will, because of their disparate emotional abilities in terms of perceiving, facilitating, understanding and managing emotions, differ in their capacity to cope effectively with mastering new educational technologies.

2.8 Emotional intelligence and coping

In the previous sections, different constructs relating to the coping process in terms of emotional intelligence skills were discussed. These constructs relate to the conceptual framework discussed in §2.1, which will guided the qualitative analysis of the data, discussed chapter 3. In this section I argue for the inclusion of facilitating in the Emotional Coping Hierarchy⁹ developed by Salovey, Bedell, Detweiler and Mayer (1999).

The following section examines the Emotional Coping Hierarchy developed by Salovey, Bedell, Detweiler and Mayer (1999). The Emotional Coping Hierarchy facilitates the application of emotional intelligence to the coping process and the processes linked with the coping process. In this study the Emotional Coping Hierarchy was used to interpret the quantitative data (EI scores of participants, measured with the MSCEIT™) as discussed in chapter 3 and 4. This will be followed by an examination of emotional intelligence linked to the coping process from the viewpoint of Salovey and colleagues. The section will conclude with a synthesis related to this study.

Salovey and colleagues developed a hierarchy of emotional competencies to “facilitate the application of emotional intelligence to the coping process” (Salovey *et al.*, 1999, p. 146). Included in their hierarchy are those competencies of emotional intelligence most relevant to the coping process according to these authors. Upon reflection of this hierarchy and going back to the literature, the researcher is of the opinion that their

⁹ Initially Salovey and Mayer had three branches in their EI model, but adapted the model to include four branches.

hierarchy reflect the initial conceptualisation of Salovey and Mayer as described in their article *Emotional Intelligence* (1990, p. 190). At that stage, their conceptualisation of emotional intelligence consisted of three branches, namely appraisal and expression of emotion, regulation of emotion and utilisation of emotion. Figure 2.21a provides an illustration of the relevant competencies of emotional intelligence in the emotional coping hierarchy as suggested by Salovey *et al.*(1999).

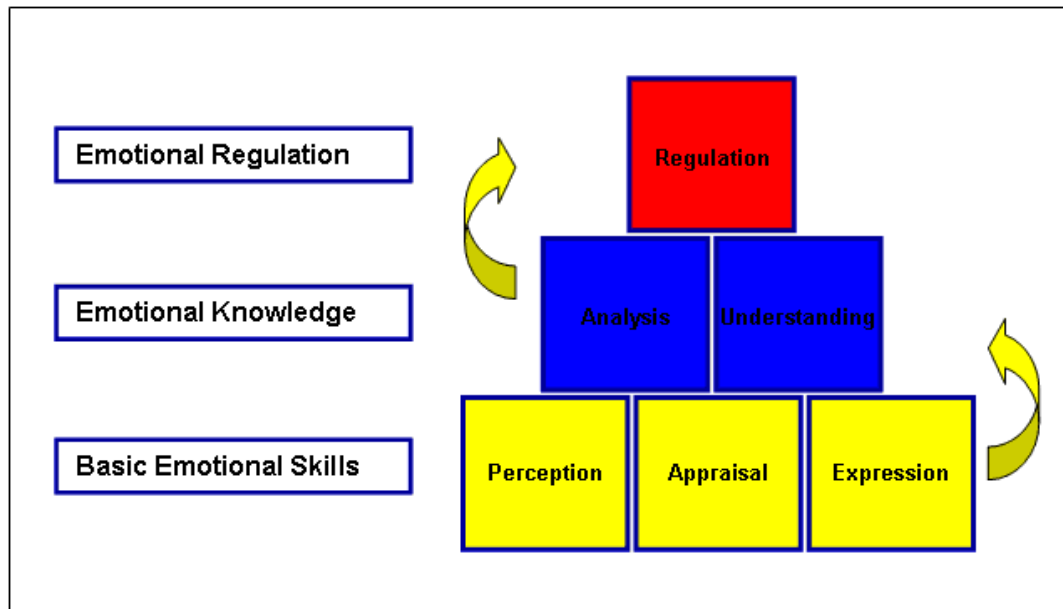


Figure 2.21a The Emotional Coping Hierarchy

Source: Adapted from (Salovey *et al.*, 1999, p. 146)

Salovey *et al.* (1999, p. 144) state:

Second, we must recognize that emotions prioritize thinking, shape memory, create different problem-solving perspectives, and facilitate creativity.

Reflecting on the importance of facilitation of emotions on the development of understanding and regulation and managing of emotions, the researcher adapted the emotional coping hierarchy to include the second branch of emotional intelligence, facilitation in the first level of basic emotional skills. . Figure 2.21b provides an illustration of the relevant competencies of emotional intelligence in the adapted emotional coping hierarchy.

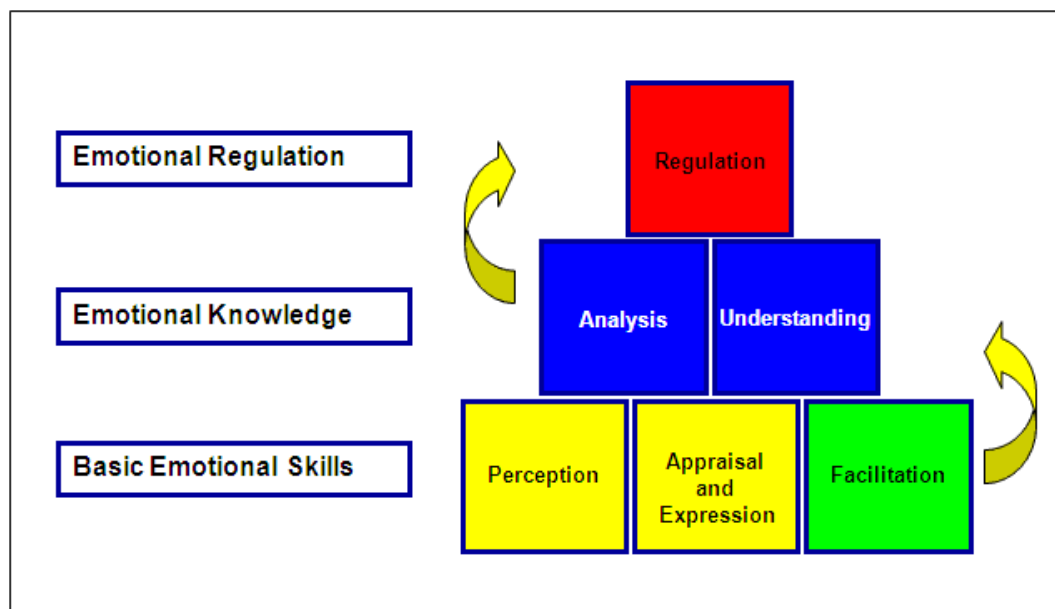


Figure 2.21b The Emotional Coping Hierarchy: Adapted by researcher

Source: Adapted from (Salovey *et al.*, 1999, p. 146)

The first level of the emotional coping hierarchy incorporates the basic emotional intelligence skills of perception, appraisal, expression and facilitation. Understanding and analysis, which, according to Salovey *et al.* (1999), are more sophisticated subcomponents of emotional knowledge, are on the second level. Emotional regulation is placed on the third level. These authors believe that the “entire hierarchy of emotional coping skills must be successfully developed and employed” (Salovey *et al.*, 1999, p. 146) in order for successful coping to take place.

In their discussion of coping skills in relation to emotional intelligence, Salovey *et al.* link three processes with coping skills, namely, rumination, social support and emotional disclosure. In the next sections, these processes will be discussed in relation to coping with the mastering of new educational technologies.

2.8.1 Ruminative coping

Experiencing stressors is an inevitable part of life and individuals respond in significantly different ways to these stressors (Salovey *et al.*, 1999). According to Salovey *et al.* (1999) it is natural to spend time thinking about a stressful event, although the length of time that individuals spend on this thinking may vary. Individuals who are prone to thinking excessively about a specific stressor are employing ruminative coping. Salovey *et al.* (1999) define rumination as focusing inertly and

continually on the situation and on feelings of distress. They report on findings that rumination is a maladaptive coping strategy, as individuals who are inclined to rumination will experience more frequent and longer lasting episodes of depression, which in turn result in their not being able to cope effectively.

Salovey *et al.* (1999) link emotional intelligence to rumination and coping and argue that the ability to appraise and express emotions correctly is the most basic building block of emotional intelligence. The ability to appraise and express emotions accurately also entails an ability to recognise and identify emotions within oneself. The emotionally intelligent individual will possess the ability to articulate feelings clearly (Salovey *et al.*, 1999). These authors believe that the capacity to be clear about feelings and moods will aid an individual to break out of a ruminative cycle. Furthermore, they point out that “the ability to manage emotions in oneself by moderating negative emotions and enhancing pleasant ones is considered one of the most advanced skills within the reflective regulation of emotion” (Salovey *et al.*, 1999, p. 151).

An important aspect of emotional intelligence, as mentioned by Salovey *et al.* (1999), is the balance between experiencing emotion and deciding when to use distraction in order to cope effectively. They stress the important distinction between distraction and negative avoidance actions. The more emotionally intelligent individual will be able to decide when it is appropriate to employ healthy functional distraction coping strategies, such as seeking social support (Salovey *et al.*, 1999). The use and development of social support in successful and healthy coping is the second process linked to emotional intelligence.

2.8.2 Social support

Salovey *et al.* (1999, p. 151) contend that “social support appears to play a critical role in successful and healthy coping”. They argue that the more emotionally intelligent individuals are more likely to gain access to social support networks and to rely on these networks in times of stress and duress. According to Salovey *et al.* (1999), emotional intelligence equips individuals with the necessary skills to enable them to build supportive social networks. Moreover, emotionally intelligent individuals will be more likely to use these supportive social networks as resources enabling them to cope effectively.

2.8.3 Emotional disclosure

Salovey *et al.* (1999, p. 155) also apply the emotional intelligence framework to emotional disclosure. They view the disclosure of emotional experiences as an imperative part of the coping process. Linguistic features characterising effective emotional disclosure are reflections on the ability to understand, analyse and actively regulate emotions. Salovey *et al.* (1999) argue that, in comparison with individuals who are overwhelmed by negative experiences, emotionally intelligent individuals are more likely to cope efficiently with stressful situations. According to them the more emotionally intelligent individuals are more likely to share emotions and feelings by using diaries and journals, since they have the emotional knowledge to do so (Salovey *et al.*, 1999). Emotional disclosure, by means of writing and sharing emotions, is, according to Salovey *et al.* (1999), an efficient way of regulating emotions.

These authors postulate that these three aspects, ruminative coping, social support and emotional disclosure, are interrelated in the sense that emotionally intelligent individuals have skills that assist them in avoiding rumination, building supportive networks and effectively relating emotions (Salovey *et al.*, 1999). In terms of this study the framework of emotional intelligence establishes a hierarchy of emotional competencies that may serve as a guide to pinpoint where the breakdown in coping skills occurs.

2.8.4 Applying emotional intelligence to the coping process

Salovey *et al.* (1999, p. 157) state that they originally proposed the framework of emotional intelligence “to enumerate and describe *specific* emotional competencies”. The failure of an individual to cope effectively with a stressful situation may be attributable to a lack of one of these competencies. Furthermore, Salovey *et al.* believe that it is possible to work on and increase emotional competencies. They state that more research is needed to examine the relationship between emotional intelligence and the coping process.

2.8.5 Synthesis

As a reflection of their ability to understand, analyse and regulate their emotions, it is assumed in this study that more highly emotionally intelligent individuals will be able to

recognise when they are experiencing an emotion that requires a reaction in terms of emotional disclosure. These individuals will possess the insight and causal thinking skills, which enable them to understand and analyse the emotions caused by a stressful experience and to cope effectively. Conversely, it is assumed for the purposes of this study that less emotionally intelligent individuals will not have the capacity to perceive and appraise their emotions accurately, and will, therefore, be unable to recognise the origin of the dilemma.

It is also assumed that the more emotionally intelligent individuals will possess the emotional competencies to manage their emotions by moderating negative emotions and concentrating on positive emotions, thereby enabling these individuals to resist rumination. In contrast, the assumption is made that less emotionally intelligent individuals will have difficulty in appraising and understanding the emotions caused by a stressful event, and this will render them unable to gain clarity and to label emotions. Therefore, as a result of being unable to make sense of their emotional experiences and because of the need for some kind of meaning-making activity, less emotionally intelligent individuals will tend to employ ruminative coping.

It is assumed that the more emotionally intelligent individuals will be equipped with skills, which will enable them to make use of social networks as a resource and a buffer against stress. Conversely, less emotionally intelligent individuals will lack the skills to utilise social support during the coping process.

2.9 Working assumptions

Throughout the chapter, syntheses of specific concepts in terms of this study were added in order to elucidate the role of the concepts within the conceptual framework. Collectively, these syntheses form working assumptions in the exploration to find linkages between emotional intelligence and the coping strategies used when mastering new educational technologies.

In conjunction with the Emotional Intelligence Hierarchy of Salovey and colleagues (1999), these syntheses have been collated by the author to form the following working assumptions:

Assumption 1:

For the purposes of this study it is assumed that, if the individual perceives the situation to be favourable in terms of the fact that they possess the capabilities to handle the situation, they will, accordingly, experience less stress and be able cope adequately. In the event of perceiving the situation as stressful it is assumed that the more emotionally intelligent individual will take responsibility for finding a solution to the problem, they will show resiliency and use creativity, optimism and insight in their use of functional problem-focused coping strategies. Conversely, the less emotionally intelligent individuals will use dysfunctional problem-focused coping strategies in terms of an inability to take responsibility, and pessimistic views of their capacity to solve the problem.

Assumption 2:

As a reflection of their ability to understand, analyse and regulate their emotions, this study assumes that more emotionally intelligent individuals will be able to recognise that they are experiencing an emotion that requires a reaction in terms of emotional disclosure. These individuals will possess the insight and causal thinking skills that enable them to understand and analyse the emotions caused by a stressful experience and to cope effectively. Conversely, less emotionally intelligent individuals will not be able to perceive and appraise their emotions accurately, and will therefore be unable to recognise the origin of the dilemma, thus manifesting an inability to cope effectively.

Assumption 3:

This study also assumes that the more emotionally intelligent individuals will have the emotional competencies to manage their emotions by moderating negative emotions and concentrating on positive emotions, thereby enabling them to resist rumination. In contrast, I assume that less emotionally intelligent individuals will experience problems in appraising and understanding the emotions caused by a stressful event, and this, in turn, will give rise to an inability to gain clarity and to label emotions. As they are unable to make sense of their emotional experiences and because of the need for some kind of meaning-making activity, it is assumed that less emotionally intelligent individuals will tend to employ ruminative coping or avoidance coping strategies.

Assumption 4:

This study makes the assumption that more emotionally intelligent individuals will be equipped with those skills which will enable them to make use of social networks as a

resource and a buffer against stress. Conversely, less emotionally intelligent individuals will lack the necessary skills to utilise social support during the coping process.

2.10 Summary

Figure 2.22 summarises this chapter.

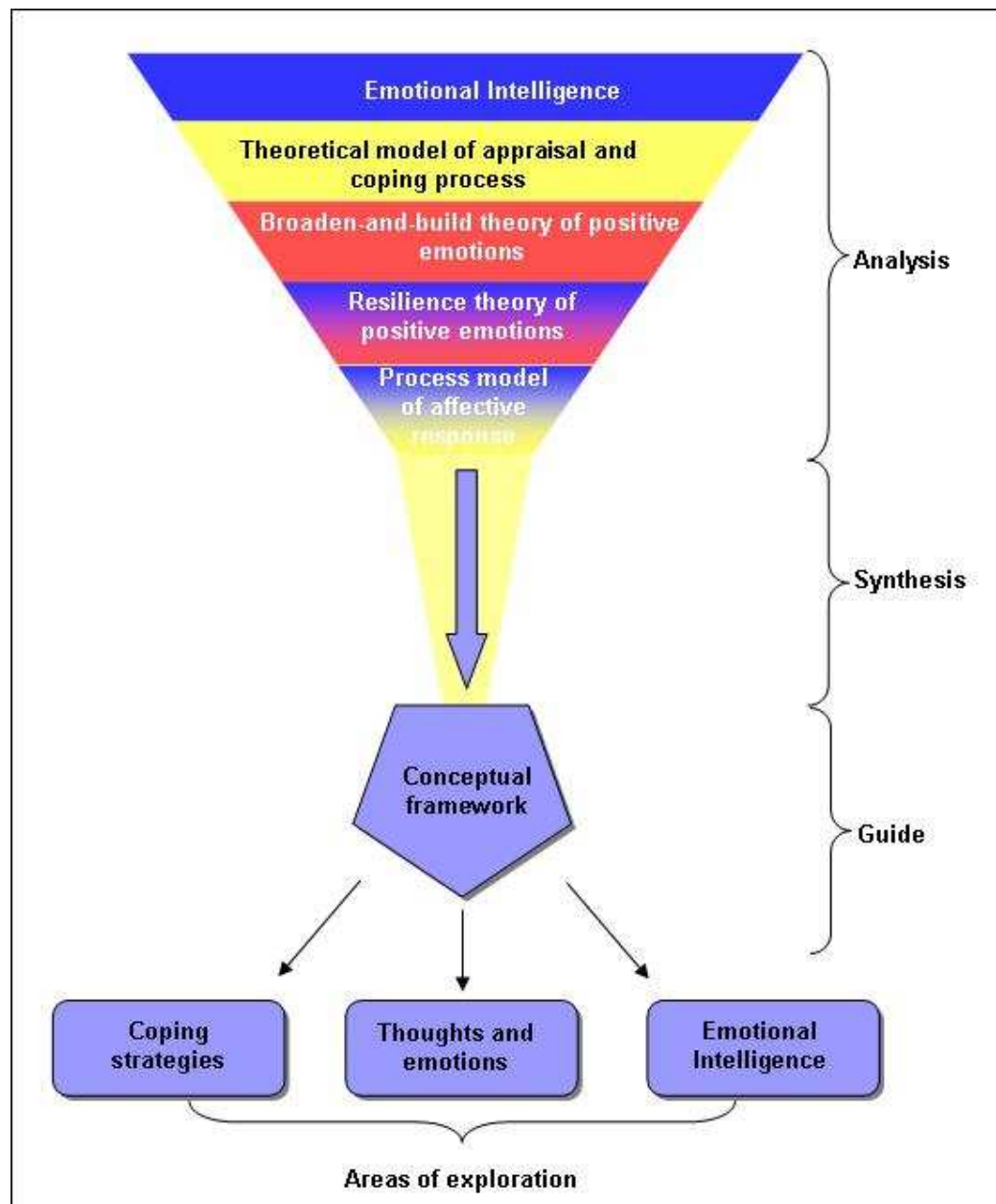


Figure 2.22 Summary of chapter 2

This chapter explored, analysed and synthesised literature on the constructs of emotional intelligence, stress, appraisal, coping and resilience, and combined these constructs into the conceptual framework that will guide the study. The areas explored are the coping strategies used by the participants when mastering new educational technologies, their thoughts and emotions while making use of these coping strategies, and the trends regarding linkages between emotional intelligence and the coping strategies employed. The next chapter presents the research methodology and research design followed in order to address the research problem.