

**THE COMPILATION AND EVALUATION OF A  
CREATIVITY PROGRAMME FOR CHILDREN IN  
MIDDLE CHILDHOOD**

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**Dedicated to my husband,  
Louis and my son, Nathan,  
for believing in me and being  
there for me.**

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## *Summary*

The focus of this study was on creativity and how a creativity programme may improve aspects such as creativity, coping, self-concept and problem solving, which is a component of emotional intelligence.

A school in the North West Province was identified for participation in this research. The learners in the school were representative of various racial and socio-economic strata. The learners identified were in their middle childhood (grade 4-7). They were randomly selected and then divided into a control and an experimental group. Both groups completed the Torrance Test for Creative Thinking; the BarOn Emotional Quotient Inventory and the Tennessee Self-Concept Scale. The parents of both groups were requested to complete the Stress Response Scale.

The data was processed by the Statistical Consultation Service of the North-West University. The Cronbach Alpha Coefficient was used to determine the reliability of the tests, while the validity was determined by factor analysis. Descriptive statistics focused on the skewness and kurtosis, and the ANCOVA technique was used to determine the pre- and post-testing scores.

Reliability was found for the measuring instruments. Statistical significance was found for most of the tests. Creativity levels improved significantly, as indicated by a comparison between the control and the experimental groups' pre- and post-testing. The originality scores, which are an indication that the individuals are able to provide responses that are original and not ordinary, showed significant improvements after the programme. Although the scores for the self-concept did not improve significantly, slight improvements were found. Significant improvements were found for the Interpersonal Scale of the BarOn Emotional Quotient, but the remaining scores did not significantly improve. The

Stress Response Scale, which was completed by the parents of the participants, did not reflect significant changes either, but it nevertheless appears that the programme had an effect on the post-testing scores.

Minor problems were experienced in the study. There are no South African norms with which to compare the results, and the results obtained appeared lower than those for international studies. However, in the absence of South African norms, these results cannot be considered as poor. Language also proved to be a problem, as the tests and the programme were administered in English, which is not the mother tongue of most of the respondents. Lastly, extra-mural activities affected the programme, and the results were influenced by children and parents who did not correctly complete the questionnaires.

Based on the study it seems that children in the middle childhood do not present with high creativity levels and that their self-concept, coping and levels of emotional intelligence are poor. However, after the implementation of the programme, these levels increased. It therefore provided a foundation for the further development of creativity, and if the concepts in the programme could be taught to the learners on an individual basis, an improvement should be found.

**Keywords:** creativity, coping, self-concept, emotional intelligence, problem solving

## Opsomming

Kreatiwiteit, en die wyse waarop 'n kreatiwiteitsprogram aspekte van kreatiwiteit, coping, selfkonsep en probleemoplossing kan verbeter, is die tema van hierdie proefskrif.

'n Skool vanuit die Noordwesprovinsie is geïdentifiseer vir die studie. Kinders in hul middelkinderjare, (graad 4 tot 7) is willekeurig geselekteer en opgedeel in 'n kontrolegroep en 'n eksperimentele groep. Die kinders wat deelgeneem het aan die studie was verteenwoordigend van alle rasse- en sosio-ekonomiese groepe. Die *Torrence Test of Creative Thinking*, *BarOn Emotional Quotient Inventory* en die *Tennessee Self-concept Scale* is deur beide die kontrolegroep en die eksperimentele groep voltooi. Die *Stress Response Scale* is voltooi deur beide die kontrolegroep en eksperimentele groep se ouers.

Die Statistiese Konsultasiedienste van die Noordwes-Universiteit is genader om die data te verwerk. Die Cronbach alfa koëffisient is gebruik om die betroubaarheid van die meetinstrumente vas te stel, terwyl faktoranalise gebruik is om die geldigheid te bepaal. Beskrywende statistiek het op die skeefheid en kurtose gefokus en die ANCOVA-tegniek is gebruik om die voor- en natoetsing se tellings te bepaal.

Betroubaarheid is bevestig vir die meetinstrumente. Statistiese beduidendheid is vir die meerderheid van die toetse behaal. Die vlak van kreatiwiteit het beduidend verbeter, soos blyk uit 'n vergelyking tussen die kontrolegroep en die eksperimentele groep se voor- en natoetsing. Die oorspronklikheidstellings, wat die individu se oorspronklikheid meet, het beduidend verbeter. Alhoewel die tellings vir die selfkonsep nie so beduidend was nie, het 'n geringe verbetering wel voorgekom. Beduidende verbeterings is gevind ten onsigte van die

Interpersoonlike Skaal van die *BarOn Emotional Quotient Inventory*, maar die oorblywende tellings het nie beduidende verbeterings getoon nie. Die *Stress Response Scale*, wat deur die ouers voltooi is, het ook nie beduidende veranderinge getoon nie, maar dit blyk nogtans dat die program 'n effek op die na-toetstellings gehad het.

Geringe probleme is ondervind tydens die studie. Daar is geen Suid-Afrikaanse norme waarmee die resultate vergelyk kon word nie, en die resultate het laer vertoon as dié in internasionale studies. Omdat daar egter nie Suid-Afrikaanse norme beskikbaar is nie, kan hierdie tellings nie sonder meer as lag beskou word nie. Taal het ook 'n rol gespeel. Ondanks die feit dat die kinders in 'n Engels-medium skool is, is dit nie die meerderheid respondente se moedertaal nie. Laastens het buitemuurse aktiwiteite die program beïnvloed, en die resultate is beïnvloed deur die feit dat sommige kinders en ouers nie die vraelyste behoorlik voltooi het nie.

Uit die studie blyk dit dat kinders in hul middelkinderjare nie hoë vlakke van kreatiwiteit en selfkonsep toon nie. *Coping* en vlakke van emosionele intelligensie is ook baie laag. 'n Verbetering in die onderskeie afdelings is wel waargeneem na die implementering van die program. Die program het derhalwe 'n grondslag verskaf vir die verdere ontwikkeling van kreatiwiteit, en indien die konsepte in die program op 'n individuele basis aan die leerders oorgedra kan word, behoort verdere verbeterings bespeur te word.

Sleutelterme:           kreatiwiteit, coping, selfkonsep, emosionele intelligensie,  
                                  probleemoplossing.

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# ***Chapter 1: Problem Statement and Objectives***

## **1.1 Introduction**

In this chapter, an overview of the research will be presented. The objectives of this research will also be identified, and hypotheses will be formulated accordingly. In the preview to of the investigation, the research design and sample group will be explained, as well as ethical considerations. Finally, information regarding the chapters which are to follow will be given.

## **1.2 Problem Statement**

Creativity may be perceived as a diverse concept and many researchers have attempted to define it. According to Torrance (1988), creativity defies definition. He argues that creativity is infinite and is often unseen, non-verbal and even unconscious. However, Eiffert (1999) believes creativity can be viewed as a process which will ultimately expand one's choices and will release one's potential into a form of expression. To further understand the concept *creativity*, Ochse (1989) explains that the word *create* is derived from the Latin word *creare*, which means to bring into being, thereby suggesting that creativity is the bringing into being of something that is original as well as valuable. Creativity may also be regarded as the most important and pervasive activity amongst all human activities, and as, a good attribute to possess (Simonton, 2000).

The right hemisphere of the brain is involved in the creative process. Colour, imagination, connecting pieces, intuition and designing new symbols and patterns are all connected to the right hemisphere. The left hemisphere is associated with objective processes. It could also be said that the left

hemisphere is much slower and devoid of emotions (Eiffert, 1999). As creativity draws on many cognitive processes, it means that some may be executed better by the left hemisphere and others better by the right hemisphere. According to reviews done by Hines (1991) and Gardner (1982) (in Katz, 1997), both hemispheres of the brain are involved and different creative activities demand different cognitive skills, which will in turn make different demands on the two hemispheres. Therefore, left or right hemisphere dominance may depend on the type of creative activity that is being performed (Katz, 1997).

Creativity is important, not only for school success, but also to help the child to be inventive and to see things differently and not rigidly (Haelefele, 1962). The creative child will therefore be more flexible, divergent, imaginative and able to think productively (Botha, van Ede & Piek, 1991). In addition to this, the child will also be able to create something that was previously unfamiliar (Van der Berg, 1993). Expression is therefore formed when creativity expands the child's choices and releases his/her potential (Eiffert, 1999).

Creativity can be encouraged in children by providing them with choices, stimulating them by means of providing an environment that has variety and that stimulates their senses, and by providing time for play and fantasy. However, outside influences often create barriers for people to perform at their best and thereby the individual may feel pressured or insecure. Factors such as peer pressure may lead to a temporary decrease in creativity; surveillance, in which the individual is being observed by others, will also decrease creativity; expected external evaluation, in that the individual knows that his/her work is going to be graded, is also a possible factor: and finally, rewards may be a factor, in that, the individual tends to be more creative when expecting a reward (DeBord, 1997). Neethling (1997) also indicates barriers to the whole-brain creative functioning. He further postulates that cultural and historical factors play a role and that the individual often refers back to the past to where something has worked, and then struggles to see beyond that. Limited view of the subject can also be a barrier.

Other factors are fear, laziness and a lack of faith, meaning that the individual believes it cannot be true and therefore does not believe in that which occurs outside of his/her own limited boundaries.

Creativity may be described in terms of art, as art is a convenient medium to express oneself. The creative child will express him/herself through different periods, ranging from the scribbling stage (two to four years), to the pseudo-naturalistic stages (between twelve and fourteen years of age) (DeBord, 1997).

Just as art is an important medium to express oneself creatively, so play helps with the cognitive and creative development of children. Creation results from playing around. The creative child will therefore insist on invention than rather submitting to the norm (Wassermann, 1992). Bruner (1985) also indicates that play promotes cognitive development and finds that children who previously engaged in free play with creative materials were much better prepared to solve problems when presented with them. Play is generative in that one creates something new and one does not have to conform to a set of standards of what is right. Risks can also be taken. Learning by means of play is open-ended and helps one to generate ideas (Wassermann, 1992).

Intrinsic or extrinsic motivation plays a role in creativity. The latter means that one's behaviour is motivated by aspects such as earning money, passing tests or even a need to impress others, while the former refers to a spontaneous interest in a task or an enthusiasm for a task. It seems that intrinsic motivation is often associated with creativity (Amabile, 1985; 1989). According to Amabile & Hennessey (1992), people are motivated primarily by interest, challenges, enjoyment and work satisfaction. Baer (1998) mentions that even when both girls and boys experience the same levels of intrinsic and extrinsic motivation, the different kinds of motivation will have a much greater impact on girls than

boys, thus indicating that motivational constraints may impact differently on boys and girls.

By examining the emotional intelligence of children, various components are highlighted, such as problem solving as well as their way of thinking and/or the perception they make of certain situations. Identifying the child's type of thinking, may also help one to understand how their coping is influenced. In addition to this, both of the aforementioned also play a role in creativity and thereby can be interlinked with each another.

Guilford (1959) distinguishes between convergent and divergent thinking. Convergent thinking involves examining facts and coming to a logical conclusion, whereas divergent thinking involves the individual working with a lot of information, and a number of solutions may result because of it. According to Guilford (1959), creativity depends on many aspects of divergent thinking, such as flexibility, being original, verbal fluency and a capacity to generate unique ideas.

Problem solving, an aspect of emotional intelligence, but also interlinked with creativity, entails that the child should be able to provide possible solutions, test these solutions and then evaluate the solutions in order to achieve one successful solution. Reasoning is just as important (McGhee, 1997) as is creative thinking. Creative thinkers are flexible, divergent, imaginative and productive thinkers. Creative people who make use of these methods will develop their own theories and look at things differently (Botha, van Ede & Piek, 1991). Torrance (1988) also emphasises the importance of creative thinking in order to formulate hypotheses.

A study done by Bond (2001) and Naudé (2001) in South Africa indicates that creativity levels in the late middle childhood (grade 4 to grade 7) are poor. Although the children were able to provide several responses to the creativity questionnaire, the qualities of these responses were rather ordinary, indicating a poor creativity level. According to this study, the children were unable to be imaginative and they conformed only to the known. Any form of expression was lacking.

It was deemed necessary and important to try to enhance the creativity of children. Based on this, the aim of this study is therefore to enhance the creativity of the child, as well as to improve on other aspects such as coping, problem solving, an aspect of emotional intelligence and the child's self-concept. The proposed creativity programme is not only vital in trying to improve the child's imagination but also in striving to improve school success and general coping with everyday life. The programme will strive to enable the child to be more spontaneous, willing to take chances and to try different approaches, instead of simply conforming to norms and standards which may cause a decrease in the child's creativity. The research question is thus whether the development of such a programme is feasible or not and whether a proposed creativity programme will enhance creativity, coping, self-concept and emotional intelligence (of which problem solving is a facet).

Given this context, the central research questions that this research will focus on, are:

1. Are the measuring instruments used in this research valid and reliable?
2. Is the compilation of a creativity programme feasible?
3. Will the implementation of a creativity programme enhance creativity, self-concept, coping and emotional intelligence (of which problem solving is a sub-division) in children in middle childhood?

### **1.3 Aims**

The aims of the study are to determine:

1. the construct validity and reliability of the measuring instruments which will be used in this research:
2. whether the compilation of a creativity programme is feasible: and
3. whether the implementation of a creativity programme will enhance creativity, self-concept, coping and emotional intelligence (of which problem solving is a component) in children in middle childhood.

### **1.4 Hypotheses**

The hypotheses are the following:

- The measuring instruments used in this research have the necessary reliability and validity.
- The compilation of a creativity programme will be feasible.
- The implementation of a creativity programme will enhance creativity, self-concept, coping and emotional intelligence (of which problem solving is a component) in children in middle childhood.

### **1.5 Preview of investigation**

A two-group pre-test, post-test design was used. A random sample was drawn, consisting of 150 children from Potchefstroom Central Primary School. Of the 150 sample, 106 gave consent to participate. The population group consisted of

children in their late middle childhood (grade 4-7). The group was representative of various race and socio-economic strata in Potchefstroom. This group was randomly assigned to the experimental and control groups.

## **1.6 Ethical Considerations**

Informed consent was obtained from the parents of the subjects. Participation in the project was voluntary and subjects could withdraw at any time. No harm due to the participation in the research was foreseen. The control group also had the opportunity to undergo the programme.

## **1.7 Summary and Preview**

The main component of this research is that of creativity. In order to explore various aspects in creativity, aspects such as play, art, divergent thinking and motivation will also be mentioned. Other important components which will also be discussed in this research, are coping, emotional intelligence and self-concept. Each component will be discussed separately.

In Chapter 2, the whole concept regarding creativity will be discussed. In order to obtain a clearer picture regarding creativity, various definitions as well as the researcher's collective definition will be given. As the research is focusing on the middle childhood period, this aspect will also be explored in this chapter. Various theories will be examined and various facets, such as play, art, divergent thinking and motivation will be discussed in detail. Other areas which will be investigated, are those of the influence of hemispheres; affect and the role it plays in creativity; the schoolteacher; assessing creativity and lastly the need for creativity.

Chapter 3 will focus on coping and what coping is in terms of the difference between problem-focused and emotion-focused coping. As stress and coping

are interrelated concepts, both terms will be discussed. Furthermore, theories and models of coping will be explored. Thereafter, the focus will shift towards coping in the middle childhood period: the stressors: coping, emotional intelligence and the different types of coping resources; and the types of coping strategies.

Chapter 4 will deal with self-concept, self-esteem and self-image. Once again, theories will be provided as well as developmental aspects. The chapter will also focus on factors which may affect self-concept, components thereof and the role of various factors in the self-concept. Factors that may decrease the individual's self-esteem and ways to nurture the self-esteem will be discussed.

In Chapter 5, emotional intelligence will be discussed. Problem-solving, as a sub-division of emotional intelligence, will be discussed as well. Definitions, theories and developmental phases will be provided to explain the concept. Thereafter, the branches of emotional intelligence and the positive effects of emotional intelligence will be discussed. The role of brain dominance, types of thinking and the different steps of problem-solving will be investigated.

The relevance of the creativity programme will be discussed in Chapter 6.

In Chapter 7, the method of research will be discussed, and the results of the research will be described and interpreted.

The results and a discussion thereof will be presented in Chapter 8.

Chapter 9 will present the conclusion of this research and recommendations for future research.

## *Chapter 2: Creativity*

### **2.1 Introduction**

In this chapter different definitions for the concept *creativity* will be presented, a definition of the concept will then be formulated for use in this research. The nature of creativity will also be explored. The development of creativity, theories of creativity and various facets of creativity will be discussed. Thereafter, the researcher will investigate the role of the right hemisphere of the brain in creativity. Factors influencing creativity and the importance of the evaluation of creativity will be discussed in the last segments of this chapter.

### **2.2 Definitions of creativity**

The concept *creativity* elicits many definitions and views. Creativity suggests bringing into being something original and valuable (Ochse, 1989), but creativity can also be seen as fun and exciting (Ritter & Brassard, 1998).

Millar (2002) remarks that creativity is ageless and that everyone can be creative. Creativity is therefore seen as a process, twenty-four hours a day, and that by being positive, it helps one to be creative (Millar, 2002). Everyone therefore has creative abilities, but in varying degrees which depends on many factors, as well as experiences in one's life (VanDemark, 1991). For many years however, it was believed that the creative thinking processes were reserved for only a select few. This idea has since changed and it is now believed that all people have the same ability to engage in the creative experience. A child comes into this world with an unlimited potential for creating, but as time passes, more and more of the creative potential is lost (Eiffert, 1999). The ages between four and seven are regarded as the highly creative time in a child's life (Cornelius & Casler, 1991).

However, between the ages of five and seven, a child will lose up to 75 % of his/her creativity (Eiffert, 1999).

According to Torrance (1962), creativity increases from five to eighteen, and drops for a short period at age ten and again at age twelve for a short period. By the age of forty, the individual will express less than 2 % of the creativity which was demonstrated as a child. One's creative ability must be reawakened and trained with encouragement (Eiffert, 1999). Therefore, everything that one experiences while growing up, such as education, society and environment, affects one's creative abilities. Curiosity, imagination, perception and intuition also play a role (VanDemark, 1991).

According to Millar (2002), creativity is a form of energy that seeks to express itself in everyone. This energy allows one to think different thoughts and to express oneself in a novel way. One should not be intimidated by creativity. To be creative means to consistently produce ideas, to put new ideas together in different combinations, to simplify an idea, so as to provide a fresh look at its different aspects and lastly, to make connections between topics and unrelated facts, observations or events (Ritter & Brassard, 1998). The act of creativity is exploring new ways one uses to think and to be, and even though creative action may often lead to nothing, one can gain insight or new thoughts or attitude through it (Eiffert, 1999).

Craft (1997) broadens the concept *creativity* even more, by providing another viewpoint, in that she describes creativity as change, development and growth. She argues that it describes the approach to life which begins with "what if" or "perhaps if" and is not necessarily conscious. Torrance (1988) also believes that creativity may be unconscious and often unseen. Amabile (1989) mentions that some elements of creativity are inborn, some depends on learning and experience and some are dependent on social environment. Creativity is not a trait or a quality that is greater or lesser in a child. It is an aspect of one's nature,

an attitude of expectation that realises itself. One's expectation of creativity fosters its own growth and expression (Eiffert, 1999).

The researcher will, for the purpose of this study, make use of an eclectic definition of creativity, which states that **creativity involves bringing something new into being by consistently producing new ideas and exploring new ones. Thus, it involves gaining insight, new views, and ultimately developing original and valuable ideas. Everyone therefore has the ability to be creative. In this research, creativity will also be viewed as an aid in coping, problem solving and building a stronger self-concept.**

In order to understand the various viewpoints of creativity based on theoretical frameworks, each will be discussed in detail.

## **2.3 Theories regarding creativity**

There are differences in the various theories with regard to how each school approaches and views creativity. The theories which will be discussed are those of psychoanalytic, behaviourists, humanist and developmental theories, the systems theory and an interactionist approach.

### **2.3.1 Psychoanalytic theories**

Psychoanalytic theories view human behaviour, personality traits and development as being shaped by unconscious processes (Starko, 1995). The approaches of a selected number of psychoanalysts are outlined below, namely Freud, and Kris and Kubie.

### 2.3.1.1 Freud

Creativity for Freud is connected to the sublimation of drives which derives from the id. Freud believes that if one's desires are unable to be expressed freely, these desires must be sublimated or released in other ways. Creativity is seen as a healthy form of sublimation. Here, the individual will use his/her unfulfilled unconscious drives for productive purposes. Creative writing and fantasy are all due to unfulfilled wishes: a continuation of childhood play (Starko, 1995). Daydreaming can be seen as such a continuation, but also as a substitution for childhood play. Creativity is also believed to be a substitute for achieving satisfaction and thereby avoiding the hardship of reality. Reality is turned into fantasy by the creative individual and this will give play to erotic wishes and these fantasies will be moulded into reality and thus become creative. It can therefore be said that the creative process originates from within the individual and that creation actually mirrors the unconscious imagery after being processed through the ego (Freud, 1920; 1924; 1947).

### 2.3.1.2 Kris and Kubie

Kris (1952) believes that the process of creativity is regression. He believes that the creative individual is able to make his/her unconscious ideas more conscious by engaging into a childlike state of mind. For Kris (1952), freely wandering fantasy serves the id in relieving the individual's unconscious desires. He mentions two phases of the creative process:

- The *inspirational phase* which derives from the uncontrolled unconscious process. The ego will loosen its control of thinking processes temporarily and this will then allow regression to a preconscious level of thinking. The ego, when in this state, is more receptive to drive-related impulses and ideas. Thinking therefore predominates.

- The *elaborational phase* is directed by the conscious ego (Kris, 1952).

Kubie (1958) states that creativity can be found in the “preconscious system” which flows between the conscious and the unconscious. The conscious and unconscious distorts or disrupts creativity. The conscious mind recalls past experiences, which are shaped by the individual’s language, while the unconscious processes are frozen by one’s unconscious, needs and desires. Kubie (1958) believed that strengthening one’s preconscious processes will help with creativity. Kubie (1958) disagrees with Freud in that Kubie believes that neuroses distort creativity.

The psychoanalytic theorists therefore believe that creativity lies within the subconscious. The views of the behaviourists will be provided below and it will be shown that from their viewpoint, creativity derives from experiences and the bringing together of ideas.

### **2.3.2 Behaviourists**

The goal in the behaviourist field is the prediction and control of behaviour (Möller, 1995) and the trend is to give control to the person and increase his/her range of freedom (Corey, 1996). The views expressed by Skinner and Mednick are described below.

#### **2.3.2.1 Skinner**

Skinner believes that each action is seen as a result of the history of the creator, the responses the individual has experienced. Ideas and behaviour are therefore a product of the individual’s experience. Creativity can be influenced by reinforcement (Starko, 1995).

### **2.3.2.2 Mednick**

Mednick (1962) believes that creative ideas are due to the result of a particular type of response and the bringing together of unrelated ideas. Several factors may influence this process, such as:

- The individuals must have the needed elements in their repertoires and
- the individual must have complex networks of associations with the stimulus (Mednick, 1962).

The views of the humanists will be provided below. Their views differ from the views of behaviourists, in that the humanists focus more on the potentialities of the man which helps to form creativity and not on experiences.

### **2.3.3 Humanist and developmental theories**

Humanistic theories were developed in response to the pessimistic view of the behaviourists in which people react to environmental forces. The viewpoint of the humanists are that people are good and worthy of respect and have the potential to actualise (Möller, 1995). The views of Maslow and Roger are explained in the following sections.

#### **2.3.3.1 Maslow**

Maslow (1968) argues that there are two types of creativeness. *Special talent creativeness* is independent of goodness or health of a person and functions in creative geniuses, while *self-actualising creativeness* is the manifestation of mental health and moves towards self-actualisation. The latter type of individuals will do virtually everything creatively and they are spontaneous, expressive, natural and less controlled or inhibited. Their ideas should be expressed freely.

Maslow (1968) believes that creativity is a characteristic which can be found in almost all, but it gets lost or inhibited when the individual gets enculturated. The personality is stressed in self-actualised creativity. Maslow (1959) also believes that a creative person may be both childlike and mature at the same time. Creative individuals also overcome a fear of learning about their inner processes and this results the individual expressing and integrating aspects of the self so that it can contribute to the person's integrity, wholeness and creativity. The self-actualised, creative person is independent, autonomous and self-directed (Maslow, 1959).

### **2.3.3.2 Roger**

Creativity, according to Roger (1962), is viewed as a product of human growth. Roger believes in *openness to experience* in which creative individual are free of psychological defences, which will keep the individual from experiencing his/her environment. The individual will consider new ideas and view experiences outside traditional ways. Another characteristic is *internal locus of evaluation* which involves that the individual must rely on his/her own judgement. The last characteristic is the individuals ability to *toy with elements and concepts*. The creative individual must play with ideas and ultimately imagine combinations in such a manner that is will generate wild hypotheses. Only once these three characteristics are present, the individual will be able to be creative.

Creativity can be seen in almost everyone, and by relying on his/her judgements and by generating ideas, creativity will be present. The Systems view regarding the person, domain and field will be discussed below.

### **2.3.4 Systems view of creativity**

A framework that consists of three subsystems, namely the person, domain and field, was created by Feldman, Csikszentmihalyi and Garnder (1994). It was felt

that researchers would have a better picture of the creative characteristics when environmental factors are taken into account when studying the person, process and product. According to Feldman et al. (1994), these subsystems are in mutual interaction with one another (cf. Figure 1) and each subsystem performs a specific function (Csikszentmihalyi, 1994).

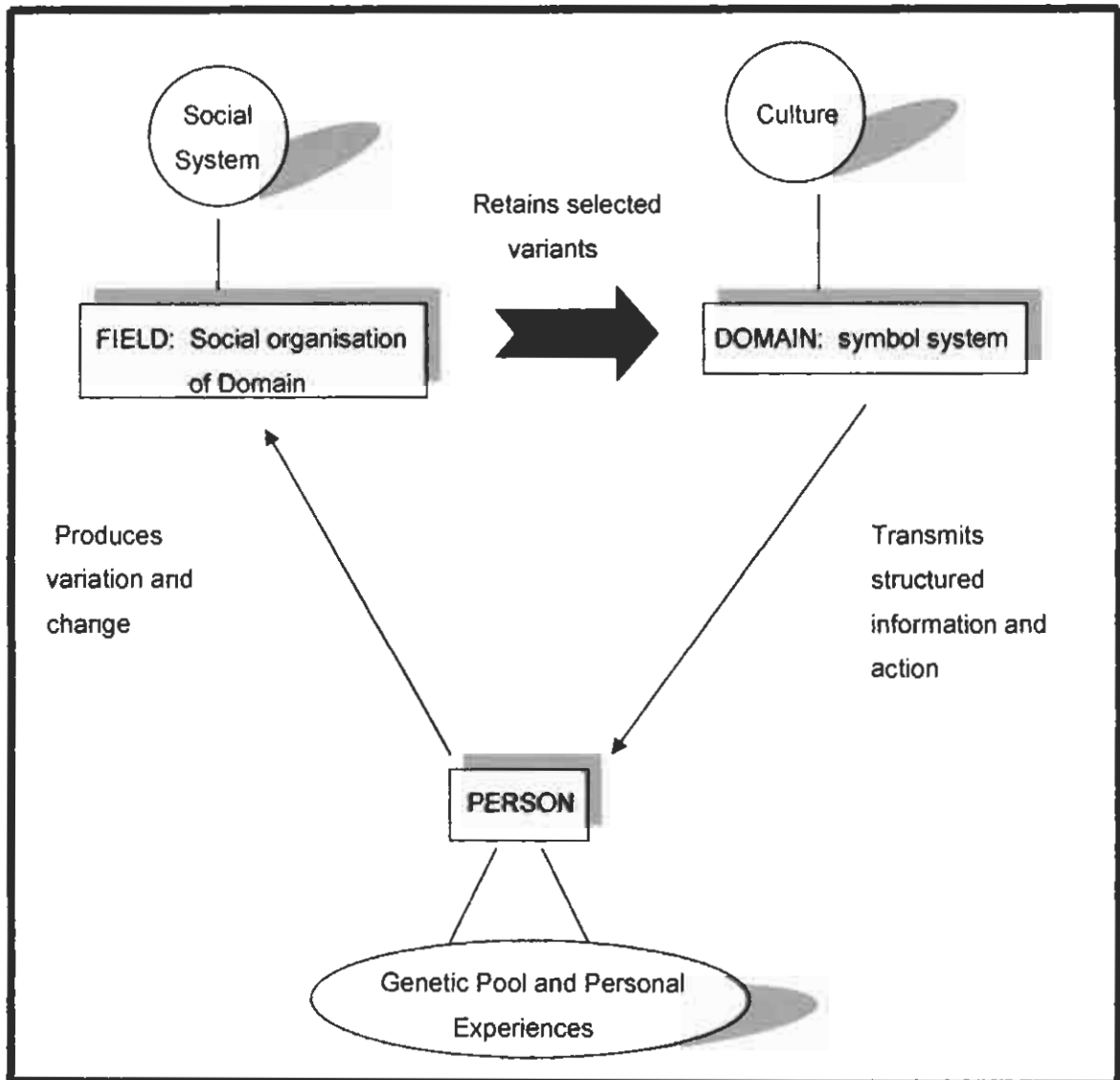


Figure 1: Interaction between the three subsystems in creativity (Csikszentmihalyi, 1988 p.329).

### **2.3.4.1 Person**

According to Csikszentmihalyi (1988), developmental aspects should be brought into account regarding the connection to creativity. It is emphasised that one cannot only look at the person in order to explain creative behaviour, because the individual is in interaction with certain environmental variables: attention is therefore given to cognitive, motivational and affective variables. A holistic image, incorporating all the factors that may influence the individual, is pursued. Demographic variables and experience, according to Walters and Gardner (1986) play a role in creativity.

The function of the person is therefore to provide variations in a domain. Personality traits and cognitive skills play a role in this process, but also help to produce variations which may be selected (Csikszentmihalyi, 1988).

### **2.3.4.2 Domain**

In this subsystem, the question arises as to how various ways of information can be stored and transmitted, and ultimately how this structuring of information may effect creativity (Csikszentmihalyi, 1988).

Feldman (1986; 1994) defines *domain* as a formally organised body of knowledge which is associated with a given field. Csikszentmihalyi (1994), on the other hand, defines it as any symbolic system that represents thought and action and has a set of rules.

This knowledge of the domain exists before the individual changes or even masters it and the domain also has a degree of independence from the person that created it. Each domain therefore consists of a certain set of symbols that is used with the domain and the domain sets the culture for certain groups (Feldman et al., 1994). Csikszentmihalyi (1994) further explains that the function

of the domain is to preserve desirable performances that are selected by the field and then to transmit it to a new generation of individuals. This is done in such a manner that it will be easy to learn.

#### **2.3.4.3 Field**

The field can be seen as the persons that influence the structure of the domain and causes change in the domain. When the individual understands but is dissatisfied with the content of the domain, the variables in the domain cause the boundaries in the domain to be shifted or redefined. Domains may then, however, combine to form new one's (Csikszentmihalyi, 1988).

The field, however, has the power to determine the structure of the domain and has two functions. The preservation of the domain as it is, is regarded as the primary function, while the secondary function is to help it to evolve by a judicious selection of new content (Csikszentmihalyi, 1994).

The domain, field and person interact with one another and the domain can only exist once it has been mastered, changed and preserved by a person. Each person, field and domain has its own characteristics which distinguishes it from the following person, field and domain. It is also suggested that the person, domain and field should be studied in relation to one another, but also independently (Csikszentmihalyi, 1988).

The Interactionist model will be discussed to illustrate the creative behaviour according to their viewpoints.

#### **2.3.5 Interactionist model**

The interactionist model explains creative behaviour as involving more than just the described and observed behaviour (Woodman & Schoenfeldt, 1989). Firstly,

the behaviour of an organism is a complex interaction of the situation and something else: this "something else" refers to the nature of the organism. Secondly, to better understand the organism in its environment, it is imperative to explain the situation and the organism and also the interaction that unfolds (Woodman & Schoenfeldt, 1989).

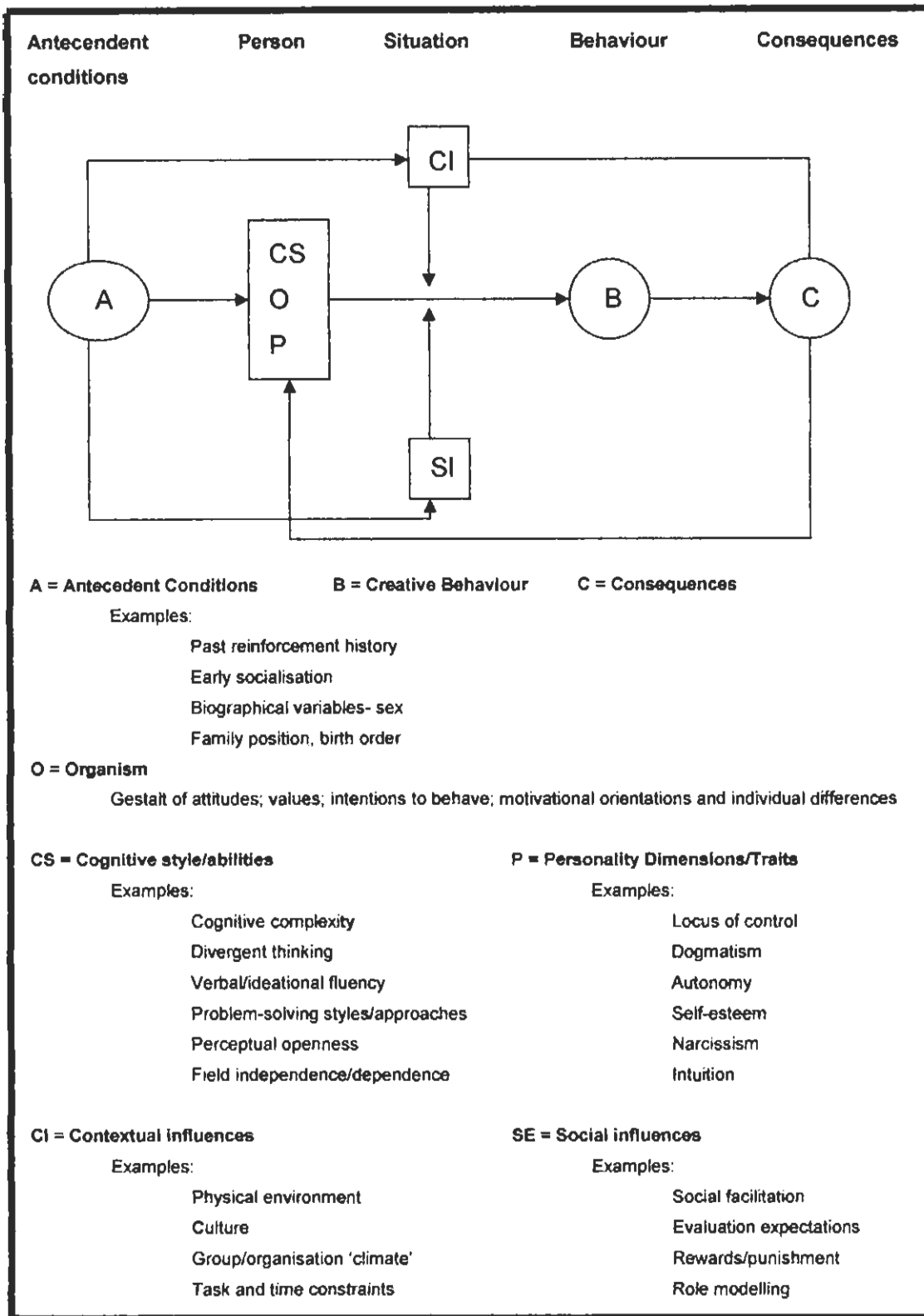


Figure 2: An interactionist model of creative behaviour (Woodman & Schoenfeldt, 1989, p.81)

Human behaviour in complex social settings can be explained by means of the interactionist perspective. Elements such as personality, cognitive and social psychology are incorporated to explain creativity (Woodman & Schoenfeldt, 1989).

Various linkages are used to explain creativity. When explaining creativity based on *personality differences*, the *P-O-B* (personality, organism and creative behaviour) linkage is used. *Cognitive* explanations will focus on the *CS-O-B* (cognitive style, organism and creative behaviour) linkage; while *social psychologists* will focus on the *SI-O-B* (social influences, organism and creative behaviour) linkage. However, interactionists, incorporate all the aforementioned linkages. The rationale regarding this is that incorporating all linkages will help to improve the individuals' ability to understand the creative person, process and products (Woodman & Schoenfeldt, 1989).

Woodman and Schoenfeldt (1989) illustrate how antecedent conditions, cognitive style/abilities, personality, contextual and social influences may account for or explain the differences in creative behaviour or the capability to produce creative products. They are antecedent conditions, cognitive factors, personality factors and contextual and social influences.

### **2.3.5.1 Antecedent Conditions**

Antecedent conditions refers to the individuals background characteristics which explains the differences in creativity. Factors such as past reinforcement history, early socialisation and background characteristics are regarded as some of these antecedent conditions which effect creativity (Woodman & Schoenfeldt, 1989).

These antecedent conditions will in turn influence the cognitive and personality characteristics of the individual and will also help to define the situation existing

for the individual. Different background characteristics may, however, relate to different types of creativity, according to Woodman and Schoenfeldt (1989).

### **2.3.5.2 Cognitive factors**

Based on the Interactionist model, cognitive style and ability can be seen as part of the individual and helps the individual to both define and draw from social and contextual influences (Woodman & Schoenfeldt, 1989).

To gain a better understanding of cognitive factors, Guilford's (1967) Structure-Of-Intellect (SOI) model can be used. The SOI model involved three categories, *content*, *operation* and *product*. Content refers to the organisation of information that is used in the cognitive processes, while the mental operations include memory, evaluation and cognition. The products form an ascending scale, from units, to classes, to relations, to systems, to transformations and lastly to implication. In essence, divergent production involves fluency, flexibility, originality and elaboration, in other words, the cognitive processes. Together they are the cognitive components of creative thinking (Guilford, 1967).

### **2.3.5.3 Personality factors**

Interactionists treat personality in the same manner as the cognitive style and ability model (Woodman & Schoenfeldt, 1989).

Woodman (1981) regards a personality theory that does not take into account the creative act, as incomplete. Woodman (1981) indicates that theorists in the psychoanalytic tradition, view creativity to stem from either the preconscious or unconscious and that humanists believes creativity develops in response to the quest for self-actualisation, while behaviourists believe creativity is novel or unusual behaviour that is learned. These categories of theories do therefore not

explain the creative behaviour and are thus considered by Woodman (1981) as incomplete.

#### **2.3.5.4 Contextual and social influences**

Physical environment, expectations, rewards, culture and role models are the aspects which influence creativity. When combined, these aspects are the elements of the environment and the social setting in which creativity takes place in. These aspects may either contribute to or detract from individual differences in creativity (Woodman & Schoenfeldt, 1989).

Social and contextual influences, as well as antecedent conditions therefore have an impact on one's creativity. The individual's differences are a function of the extent to which social and contextual factors nurture the creative process (Woodman & Schoenfeldt, 1989).

The researcher will evaluate each of the above theories and point out the limitations of each, based on the perceptions and framework used for this research.

#### **2.3.6 Critical evaluation of theories**

Various views/theories have been presented regarding creativity. However, it is essential to know that even though the theories are conflicting, each theorist worked within, his/her own field and beliefs. It is therefore essential to not only consider their explanation regarding creativity, but to also consider their background. Just like their background may have influenced them regarding their ideas of creativity, it is important to note that the preferences, influences and background of the researcher also plays a vital role when viewing the various theories.

The theories of the psychoanalysts offer various opinions ranging from the unfulfilled unconscious drives to regression and the preconscious processes. The researcher believes that these views may be restrictive and one-sided, in that not everyone has the same desires, which according to Freud, are released and results in creativity. The researcher believes that the unconscious, which undoubtedly may play a role in creativity, is given too much emphasis and that one's conscious may also play a role in creativity. The role of regression is also too limiting, in the view of the researcher, in that it is postulated in these theories that creativity can occur fully only when the person regresses into a childlike state. This view limits the whole concept of creativity and denies the fact that creativity can be nurtured in all ages. The preconscious process for explaining creativity is also too limiting for the researcher. However, it is important to remember that the psychoanalytic framework is based on the unconscious, and this explains where and how their theory was formed. The researcher acknowledges this, but also believes that the conscious has an equal role to play in creativity.

The researcher agrees with the views of the behaviourists, namely that by bringing ideas, even if unrelated, together, creative ideas can be formed. Past experiences also seem to play a role. This theory does not appear to be restrictive, but allows all ideas to occur freely and through this, more ideas are developed and created. Experiences may enhance and even improve on the creative process and idea/concept. However, the researcher believes that experiences may, at times be an obstacle as well, and that one should be conscious of bad experiences and know how it may possibly obstruct the creative process.

By viewing the person as being both childlike and mature, Maslow does not limit the creative individual. The researcher finds this theory more acceptable than the theory that creativity occurs by regressing (psychoanalytic view). The researcher also concurs with Roger that creativity develops as a person grows:

once again not restricting creativity to a certain age and acknowledging that creativity may vary depending on one's level of development. The humanistic view is therefore more open to new experiences and the development of creativity. However, the researcher does not believe that, as Roger proposes creativity depends on the presence of three characteristics (cf. 2.3.3.2). This seems to be too rigid and it should rather be stated that they are some requirements, but that certain characteristics may either be present or not and that the creative process will not be hindered if some of the characteristics, as mentioned in 2.3.3.2, are not present.

The interaction of the three subsystems, namely the person, domain and field in creativity, is not limiting and many variables play a role in creativity. This systems theory is therefore not restrictive and illustrates how the different variables play a role in creativity.

The interactionist model incorporates personality and cognitive and social psychology so as to explain creativity and in doing so all linkages are investigated so as to explain creativity in a broader manner. The researcher therefore believes that by incorporating all aspects, the creative person, process and product are taken into consideration, and that this presents a broader and non-rigid viewpoint.

It is important to note that the views presented by the researcher are based on her field of beliefs and experiences. These views may also be seen as subjective, in that a researcher's viewpoint also influences the way he/she perceives and is open to receive theories.

The development of creativity will be discussed in the following section so as to illustrate how the individual's age and the stages of development all play a vital role in creativity.

## **2.4 Development of creativity**

Simonton (2000) sees creativity as an activity that develops over the human life span. Gardener (1993), however, believes that creativity is pluralistic and that individuals are able to use to childhood insights and experiences in a productive way. In order to explore this phenomenon further, the sections below will focus on the different stages of creativity (2.4.1), the creative person, process and product (2.4.2), recognising children's creativity (2.4.3) and intrapersonal obstacles to creativity (2.4.4).

### **2.4.1 Stages of creativity**

Various researchers provide their own viewpoint regarding the different stages/phases of creativity. Some researchers explain the development of creativity by means of different stages, while other researchers believe that creativity is more prominent among certain age groups. These various views will be presented here to identify the diversity of viewpoints. Both Craft (1997) and Lehane (1979) make use of stages, while Lesner and Hillman (1983) and Dacey (1989) prefer to use age (in years) to illustrate their viewpoints.

#### **2.4.1.1 Stages of creativity according to Craft (1997)**

Craft (1997) proposes that creativity involves five stages in a cycle:

1. Preparation
2. Letting go
3. Germination
4. Assimilation
5. Completion

The first stage is **preparation**, which suggests that one gets into an appropriate place for being creative. This “place” can either be physical or emotional and may involve making time or being with others to stimulate or support, or both. Preparation can also refer to the reaching of a point of frustration, where the person experiences the need to make a change.

**Letting go** refers to the period where the individual feels empty and passive and experiences a sense of loss and lack of direction, and where the individual just wants to let go and ultimately surrenders control.

**Germination** (as used by Fritz, 1946, in Craft, 1997) occurs when an idea is conceived and accompanied by a burst of energy. Interest, enthusiasm, a sense of power and insight occur.

The fourth phase, **assimilation**, is least visible and is referred to as an internal stage which takes time to take root. Ideas are starting to finalise here.

**Completion** is the last stage, where the individual receives and creates the idea. The ideas is therefore complete.

Creativity multiplies and increases and therefore leads to more creativity, with the cycle repeating itself. The process of creativity varies from person to person. Some may need more time in the preparation stage, while others may be more focused on the completion stage. There is no right way to be creative and ones own strengths and weaknesses all play a role (Craft, 1997).

#### **2.4.1.2 Stages of creativity according to Lehane (1979)**

In contrast to the above, Lehane (1979) describes three phases of creativity. The first phase, termed the **dreamer**, occurs between the ages of two and four. Here the child discovers his/her ability to think up ideas. The child’s dreams are

rarely applied to the real world; therefore there are no limits to his/her dreams. The second phase, the *poet*, starts from between three and five years of age and enables the child to see associations among his/her ideas and to express these associations in terms of similes, analogies and poetic forms. However, the child is unable to put the poetic images into words. The last phase is referred to as the *inventor*, and is dominant from four to six years of age. Here, the child will refine the associations that were made in the poet stage. The child will turn the analogies into real ideas that are practicable in the outside world. Between the ages of seven and fourteen, the dreamer will predominate again: the poet from between fifteen and thirty and the inventor from middle age on.

#### **2.4.1.3 Stages of creativity according to Lesner and Hillman (1983)**

Lesner and Hillman (1983) identify three stages of change regarding the development of creativity.

1. From birth to eleven years old, the creative *internal enrichment stage* is present, where the child will learn basic life skills and develop his/her own personality.
2. The second stage, from twelve to sixty years of age, is the *creative external enrichment stage*. This involves a transition from the self-centred orientation of the first stage, to a more outward, socially aware, multifocused orientation which develops as one matures.
3. The last stage, the *creative self-evaluation stage*, lasts from sixty years to death. Here, the focus is on creative self-evaluation. It involves a process of assessment and taking stock of ones life in preparation for death.

#### **2.4.1.4 Stages of creativity according to Dacey (1989)**

Dacey (1989) proposes six peak periods of growth in creativity. For the purpose of this study, only the first two periods will be explained, as the others do not apply to the age group on which this study focuses.

The first period, from 0-5 years, and particularly the period of the first year and a half, is crucial, because of the development of microneurons in the brain. Although miniscule in size, microneurons are vital in the creative development. The macroneurons and their many connections are instrumental in thoughts. Under poor conditions, there is only minimal development of microneurons. The development of these neurons depends on conditions in the infant's environment (Dacey, 1989).

Dacey (1989) also refers to the theories of psychoanalysts that the child's interaction with his/her parents in the first five years are also important contributors to the development of creativity. The psychoanalytic school believes that creativity is a product of one's childhood experiences and subconscious processes and that attempts to develop creativity after this period will be pointless.

In the second period, from 10 to 14 years of age, early adolescence is well established as a highly transitional time of life. Dacey (1989) also indicates that females will enter this stage a year earlier than males, as girls precede boys with regard to hormonal change and peak period of growth. Due to this, Dacey (1989) suggests that girls will become open to cultivation of their creative abilities one year sooner than boys.

An investigation done by Ripple and Dacey (1969) concluded that in the early adolescent phase, one's self-concept is being defined, and therefore creativity may be fostered during this period. Their results also found that creativity and

personality tend to be less stable during adolescence because in early adolescence, the teenager re-examines and re-defines his/her personality traits. Dacey (1989) also report that young adolescents are open to growth in creative thinking.

In order for creativity to take place, irrespective of age or stage of creative development, factors such as the person, process and product also have to be taken into consideration. Each will be discussed so as to illustrate how the aforementioned factors should be seen in conjunction with the development of creativity.

## **2.4.2 The creative person, process and product**

Most models, theories and studies of creativeness focus on the creative person, creative process and the creative product (Starko, 1995). Each will be discussed briefly.

### **2.4.2.1 Creative person**

To study the creative person, it is necessary to look at personal characteristics, family dynamics and abilities which have been identified in individuals who are creative (Starko, 1995). For creativity to occur in an individual, Lubart (1994) believes that a person must firstly have the ability to see problems in new ways and be able to recognise that his/her ideas are worthy of pursuing. Furthermore, the individual must also be able to convince other individuals of his/her new idea(s). The individual should also have enough knowledge about the field he/she is entering in order to move forward and the individual should also have the ability to see the big picture and be able to think in novel ways. Lastly, the individual should be willing to take risks, tolerate ambiguity and find intrinsic rewards in his/her work.

According to Arasteh and Arasteh (1968), a child's parents and the atmosphere in his/her home may either foster or hind the child's creative talent, and the child's creative achievement seems to be linked to the type of relationship he/she may have with the parents. Miller and Gerard (1979), however, suggest that firstborns tend to excel at creative tasks while later-borns tend to be more artistically inclined and excel on artistic tasks. Albert (1980) and Amabile (1983) do not agree with this, in that Albert (1980) believes that it is the special position within the family that influences a child's creative achievement and not birth order. Amabile (1983) believes that it is parental characteristics and behaviour that is related to the child's creativity, rather than that of the family constellations.

#### **2.4.2.2 Creative process**

The creative process entails the processes through which individuals create new ideas (Starko, 1995). The creative processes of Wallas (1926) and Stein (1967; 1974) will be discussed.

Wallas (1926) proposes four steps in the creative process. In the first step, **preparation**, the individual will gather information and after thinking about the problem, will come up with the best possible ideas. **Incubation** is regarded as the second step in which the individual will not consciously think about the problem but will continue to engage in other activities. However, the mind does at some level continue to consider the question or problem. The third stage is **illumination** or the "Aha!" experience. Here ideas will fit together and the solution to the problem will become clear. Lastly, **verification** occurs. The solution will now be checked with regard to its effectiveness, appropriateness and practicality. If the solution proves not to be satisfactory, the steps will start again.

Stein (1974) also proposes three stages in the creative process, namely *hypothesis formation, hypothesis testing and communication of results*. The first

stage, ***hypothesis formation***, starts after preparation and will end when a tentative plan or idea is formed (Stein, 1967). Here the individual will utilise his/her circumstances and conditions to his/her best advantage because under these circumstances, the individual can be creative. The circumstances in which the individual finds him-/herself may inspire him/her or even allow the generation of ideas. It is important in this stage that the individual should feel self-confident. After developing the hypothesis, the second stage starts (Stein, 1974). ***Hypothesis testing***, the second stage, entails the individual determining whether or not his/her idea will be able to stand up under scrutiny and testing (Stein, 1967). Here, care, judgement, evaluation and criticism of his/her work play a role. The individual is both a creator and an audience in this stage. The individual is also more objective here. The problem leads the individual to the solution. Once the individual senses that his/her work is complete and that the goal has been achieved, he/she stops and proceeds to the last stage (Stein, 1974). The last stage then, ***communication of results***, is the stage in which the individual will present his/her product so that others may react to it and possibly even accept his/her idea (Stein, 1967).

#### **2.4.2.3 Creative product**

The study of the creative product involves the study of what makes something creative (Starko, 1995): it is the result of a creative attempt and often implies a solution to a problem (Smuts, 1986). Greene (1996) believes that in order for a product to be creative, it must be new and unique, as well as valuable, suitable and functional.

#### **2.4.3 Recognising children's creativity**

Amabile (1989) provides examples of creative behaviour in certain areas from the ages of six to thirteen.

<b>AGE</b>	<b>AREA</b>	<b>EXAMPLE OF CREATIVE BEHAVIOUR</b>
6-7 years	Cooking	Experimenting with food combinations. Using food as an art form.
	Sculpture	Using clay, sand and other materials to make various shapes.
	Drama	Making up and acting out plays, including costumes, songs and dialogue.
	Social Relations	Adopting new and useful solutions to interpersonal conflicts.
8-9 years	Storytelling	Sustaining a coherent storyline with invented characters and situations.
	Games	Inventing elaborative games with rules and goals.
	Dressing	Deliberately putting together outfits that combine clothing styles in unusual ways.
10-11 years	Numbers	Playing with ways of using numbers to describe things.
	Language	Creating secret words or language with siblings or small groups of friends.
	Visual world	Decorating living environments, often in idiosyncratic ways around themes that hold personal meaning.
12-13 years	Machines	Studying mechanical and electronic devices, often rebuilding them or using them in new ways.
	Information	Gathering information in logical ways, experimenting and using inductive and deductive reasoning.
	Writing	Expressing ideas using metaphor and simile, in prose and in poetry.

#### 2.4.4 Intrapersonal obstacles to creativity

Even though creativity may be fostered by stimulating the child and providing the child with choices, outside influences often play a role in blocking the creativity or causing a decrease in the individuals creativity.

Cropley (1992) reports eight intrapersonal obstacles to creativity, based on the work of Torrance (1963). They are:

1. ***Inability to 'let go'***. A child may reach a point where it is difficult to release his/her imagination and let ideas flowing due to self-imposed discipline that controls his/her ideas.
2. ***Fear of letting the imagination loose***. The child may actually fear freeing his/her imagination, especially in the presence of others. The child may fear punishment. For a child it may be easier to deliver what is expected than use divergent thinking.
3. ***Preference for analytical thinking***. The child may find it easier to think analytically rather than synthetically, especially in a classroom situation, where fear of social sanctions may occur. Divergent thinking may then become avoided or difficult.
4. ***Premature closure***. When acquiring answers quickly by means of convergent thinking, the child may seize upon an obvious answer and by doing so, the child may cut off thinking about a problem as soon as an acceptable solution is achieved. This answer will be accepted irrespective of whether it is the best or good enough.
5. ***Persistence of set***. One may be set in one's thinking process: when something has worked in the past, it is assumed that it will work again in the future. When rewards from external authorities are being received by the child, the child may persist in this process of thinking and thereby be inhibited from imagination and creative solutions.

6. ***Inability to handle ideas.*** Inability to cope with an influx of ideas may be unpleasant and fearful to the child. This tends to increase when there is pressure for closure.
7. ***Anxiety.*** A child may experience anxiety in the classroom when he/she experiences fear of criticism and very high goals. When the child experiences this, he/she may fear letting go and experience premature closure. Excessive anxiety will therefore lead to rigid, stereotyped and inflexible thinking.
8. ***Excessive emphasis on verbal expression.*** If a child is unable to express his/her creativity verbally, it can be seen as a disadvantage and the ideas may be suppressed. However, these ideas may be expressed non-verbally through by means of drawings, movement and models. In the classroom, though, verbal expression is preferred.

Above, various viewpoints about how creativity develops were presented, ranging from theories about different stages to perceptions about the role of age in the development of creativity. The researcher is of the opinion that age and stage are connected, in that the child's age will determine the degree and formation of creativity, but the process of creativity still has to undergo various stages before a unique and functional creative product may be achieved. However, it is important to take into consideration that obstacles may also occur which may inhibit the creative process.

Just as age and the stages of development play a role in creativity, so do the individual's personality and cognitive characteristics. Each will be explored so as to create a broader picture of creativity.

## **2.5 Nature of creativity**

Numerous characteristics have been identified by researchers in an attempt to categorise the traits of the creative individual. However, a number of these

characteristics overlap, which may be indicative of the fact that even though a creative individual may not possess all the characteristics, certain traits may indeed be attributed to them.

### **2.5.1 Personality characteristics of creative people**

Simonton (2002) has found that creative personalities tend to possess those characteristics that favour the production of numerous and diverse ideas. A number of personality characteristics which are associated with creativity, are described by Tardiff and Sternberg (1988) and MacKinnon (1978).

Tardiff and Sternberg (1988) identifies the following personality characteristics which are to be associated with creativity:

- willingness to take risks;
- perseverance, drive and commitment to task;
- curiosity;
- openness to experience;
- tolerance for ambiguity;
- broad interests;
- value originality;
- intuition; and
- deep emotions.

MacKinnon (1978) describes a creative person as:

- intelligent;
- original;
- independent;
- open to experience and with a sense of destiny;

- intuitive; and
- possessing theoretical and aesthetic interests.

Maslow (in VanDemark, 1991) observes that the creative individual must be:

- flexible;
- spontaneous;
- courageous;
- willing to make mistakes;
- open; and
- humble.

Not everyone may be on the same creative level as Michelangelo, Mozart or Picasso, but everyone has the ability to create. Creative people therefore tend to:

- create an environment to work in;
- work hard;
- enjoy what they are doing;
- question common beliefs and “facts”;
- practice continually (Ritter & Brassard, 1998); and
- disregard rules and details of plans (Cropley, 1992).

**Creative individuals will therefore often:**

- seek change and adventure;
- be impulsive and undisciplined;
- accept new ideas;
- challenge rules;
- dislike conformity;

- adapt quickly to circumstances;
- may at times withdraw, or talk too much, but is usually friendly (Cropley, 1992).

## 2.5.2 Cognitive characteristics of creative people

The following characteristics, according to Tardiff and Sternberg (1988), help the individual to use his/her imaginations and create new ideas:

- **Metaphoric thinking:** This type of thinking helps the individual to use his/her ideas to express another idea.
- **Flexibility and skill in decision making:** This refers to the ability to look at a situation from various points of view.
- **Independence in judgement:** These individuals are capable of assessing situations and products by their own standards. The individual also does not need approval from others.
- **Coping well with novelty:** Such individuals work well with new ideas and often ask "what if"-questions.
- **Logical thinking skills:** Such individuals who make use of logical thinking skills can give reasons for their responses and make use of logical sequences.
- **Visualisation:** Creative individuals are able to visualise that which they are unable to see.
- **Escaping entrenchment:** Creative individuals are able to consider things in a new way and do not get stuck in everyday ideas.

## 2.5.3 Antithetical traits in creative individuals

Csikszentmihalyi (1996) identifies ten pairs of antithetical traits in creative individuals. They are often:

1. physically energetic, while also quiet and restful;
2. smart, but also naïve at the same time;
3. playful (irresponsible: may kick things around and be carefree), but also disciplined, hence responsible, dogged and persevering;
4. imaginative, but with a rooted sense of reality;
5. sometimes introverted and at other times extroverted;
6. humble and proud at the same time;
7. psychologically androgynous: both aggressive and nurturing; both sensitive and rigid; and both dominant and submissive.;
8. both traditional and rebellious;
9. passionate about their work and also objective or detached with regard to their work; and
10. exposed to both enjoyment and pain because of their individual openness and sensitivity.

The creative person therefore has numerous distinguishing personality and cognitive characteristics, but the researcher considers the willingness to take risks and make mistakes as the most important characteristic. The creative person, as described in cf. 2.4.2.1, also requires that the individual should take risks and in doing so, he/she will succeed in finding the creative product. Risks also involve the challenging of rules and seeking change. Other aspects that the researcher considers as being related to this, are for example, the ability to be open to new experiences. This means that the creative person does not conform to the norms of others, but rather uses his/her intuition and perseveres to the end. The individual is also flexible and able to visualise and think logically. Contradictory traits may also be found in the creative individual.

The creative individual possesses various and different characteristics, but external factors, beyond these characteristics may either hinder or foster

creativity. These factors will be discussed below, along with the importance of creativity.

## **2.6 The importance of creativity and factors which influence creativity**

Various factors which may either inhibit or foster creativity in the child will be discussed below: mental health and fully functioning students (2.6.1), role of parents in enhancing creativity (2.6.2), creativity and the schoolteacher (2.6.3), the influence of television on creativity (2.6.4) and the influence of computers on children (2.6.5).

### **2.6.1 Mental health and fully functioning students**

Creativity is important for mental health, in that tension and stress often occur if creativity is stifled in the school or at home. Creativity helps one to cope with daily stresses (Millar, 2002). Creative expression may foster positive feelings, which will prompt one to have a positive outlook and a sense of well-being (Cohen, 2000). Creativity also helps to develop fully functioning students thus implying that children need to practice their creative abilities. Creativity therefore helps one to accept divergence in others and it also helps one to perceive their differences in constructive ways. By being aware of one's thinking styles, one can make things happen in a creative way (Millar, 2002).

### **2.6.2 Role of parents in enhancing creativity**

Parents can nurture creativity in their children by, for example:

- providing the individual with choices;
- providing emotional support;

- monitoring the amount of television watching;
- providing a structure at home;
- providing books and computer access; and
- asking questions (Millar, 2002).

### **2.6.3 Creativity and the schoolteacher**

According to Stein (1974), children's creative behaviour may be inhibited, reinforced or even constricted by their interaction with their teachers and classmates. Children often see their teachers as role-models and the attitude the child develops regarding the interaction between the child and the teacher may play a significant role in the creative process (Stein, 1974). Creativity as well as pretending play can be negatively or positively influenced by a teacher's attitude (Cornelius & Casler, 1991). Teachers can, however, nurture children's creativity (Millar, 2002) in the following ways:

#### **2.6.3.1 Viewpoint of the teacher**

Often teachers prefer the high IQ pupil to the creative one. Creative pupils are often labelled as obnoxious and troublesome because they insist on invention than rather quietly submitting to what teachers ask of them. High IQ pupils are often low risk-takers; yet teachers regard them as ambitious and promising (Wassermann, 1992). Creative children may also display careless behaviour and seem rebellious, disorganised and self-centred, and this may be a reason why they are sometimes difficult to handle in class (Cropley, 1992). Westby and Dawson (1995) found that often the least favourite child in the classroom is the creative child.

Teachers may also view the creative child as an interference or as disruptive because the creative child may ask more questions (Scott, 1999; Oral & Guncer, 1993). Teachers often use words such as wild, silly ideas and playful to

characterise these creative children (Torrance, 1962). According to Torrance (1965), teachers may be biased towards creative children in that teachers prefer courteous, obedient, popular children and children who accept authority.

Peers may even view the creative child as stupid, unfriendly and unpredictable. Clashes may therefore result between the creative child and his/her teacher and peers (Cropley, 1992).

Cropley (1992) remarks that creativity can be seen as a mental functioning (or divergent thinking) and also in an aesthetic sense (for example, saying that Michaelangelo was creative). When teachers therefore speak about children being creative, they may actually see creativity in the Michaelangelo sense. Creativity for Cropley (1992) is being original, inventive and having novel ideas. Innovative and free-range thinking also depends on motivational and emotional factors (Cropley, 1992). Therefore, teachers as well as the school environment play a role in inhibiting or even enhancing the child's creativity (Mellou, 1996).

### **2.6.3.2 The creative teacher**

According to McLeod and Cropley (1989), creative teachers are flexible and they are resourceful in introducing new materials and in finding ways to present knowledge to children; they have good relations with all students but especially with highly divergent children; they are non-conforming and critical with regard to their relationship with colleague. They are also and lastly self-critical.

Although it is important that the teacher should be creative, it is equally important that the teacher should be able to nurture and foster creativity in the individuals. This may be achieved by acknowledging that students have different learning styles; understanding the needs of students; instilling adventure and fun into learning; and providing creative space, with reasonable boundaries and structure for the students. Most importantly, the educators must be creatively motivated

(Millar, 2002). Furthermore, they must allow the child to explore and manipulate material; allow the child to think for him-/herself and be able to make their own fun and meaningful choices and instead of evaluating. They must support the child's ideas (Cornelius & Casler, 1991).

Various views, positive as well as negative, have been given regarding the influence of television on children and how it may influence their creativity (Craig, 1996; Louw, 1991; Louw, van Ede & Louw, 1998; Santrock, 1993). Irrespective of the influence of television, the researcher believes that creativity is an essential element which should be nurtured in a child, because by being creative, the child will not only be able to think divergently, but will also be able to solve problems in a more creative manner. In doing so, the child may possibly decrease tension and increase his/her self-esteem. Even though emphasis has been given to how peers and teachers may either enhance or hinder creativity in children, parents can also help to nurture creativity in a child.

#### **2.6.4 The influence of television on creativity**

There are various opinions about the influence of television. Research in the USA indicates that 98% of families are in possession of a television set (Craig, 1996; Louw, van Ede & Louw, 1998). According to Craig (1996), children tend to watch television more than any other activity.

On the positive side, Craig (1996) mentions that information seen on television may help a child to learn new word, concepts and facts. Children are also often exposed to a world which differs from theirs when watching television. Programmes are often educational and pro-social behaviour is often also promoted, as well as the importance of friendliness, creative thought and empathy (Berk, 2003, Louw et al., 1998; Santrock, 1993).

However, negative aspects include that children often spend more time watching television than playing and often television creates the perception that problems can be solved easily, effortlessly (Santrock, 1993). As already mentioned (cf. 2.7.1), play is essential in a child's physical, mental, emotional and social development (Mayesky, 1990) and when television replaces playing, many of these vital developmental aspects may be lacking.

### **2.6.5 The influence of computers on children**

As with the influence of television, there are various views about the influence of the computer. Both the positive and negative influences of the computer on creativity will be described below.

Computer-assisted instruction is useful in that it presents information, enables the pupil to practice and assess the pupil's level of understanding and even provides additional instruction if needed. The computer is non-judgemental and provides information immediately to the pupil (Santrock, 1998).

Steinberg (1990) refers to numerous studies which have been done regarding computer-assisted instruction and points out that the effects of this type of instruction have been found to be positive. Lepper and Gurtner (1989) observe that the effects of this instruction is positive when it involves tutorials rather than drill and practice. The computer also plays a role in experiential learning (Samaras, 1996) and is a multipurpose tool which helps children to achieve academic goals and also to become more creative (Santrock, 1998).

Morrison (1995) identifies another important aspect of the computer with regard to kindergarten children, namely that it helps with computer competence and enables open-ended discovery learning and problem solving.

However, there are negative influences of the computer as well. Computer literacy may be inequitable for those who come from a low-income background as they may have few opportunities to make use of computers (Santrock, 1998). Other concerns raised by Santrock (1998) are that computers may limit social interaction since the child is in front of the computer all day and that, because mathematics and science are more easily computerised, the curriculum will be more directed into those areas thereby inappropriately shaping the curriculum.

The above arguments show that factors ranging from parents, teachers, and television to computers, all play a role in either hindering or fostering creativity. However, each could help to enhance creativity if is correctly utilised and/or acknowledged by the individuals. Thus far, theoretical aspects of creativity has been discussed, with reference to its development and nature. In the following sections, various components of creativity will be discussed, with the emphasis on play, art, thinking and motivation.

## **2.7 Different components of creativity**

*Creativity* is such a very diverse term, entailing various components. In order to illustrate this, the components of creativity as identified by Cropley (1992) will be described and thereafter, other components such as play, art, divergent thinking and intrinsic and extrinsic motivation will be discussed.

Cropley (1992) identifies four components of creativity:

1. ***Knowledge of the field***, which is obtained through the application of conventional learning skills.
2. ***Talent***, which is seen as the second component and which involves the combination of sensory and intellectual capacities that cause an individual to display skill (for example, distinguishing musical tones from one another).

3. The third is ***expenditure of great effort*** in reading the end product. Here, motivation and belief in oneself plays a role.
4. The last component is ***opportunity***. Many creative individuals might have gone unnoticed because of a lack of opportunity.

The components mentioned by Cropley (1992) refer mostly to mental components, while the components that follow, refer to both mental and physical components.

### **2.7.1 Play**

Children are naturally creative in their play, but as they develop, their creativity becomes less creative (Millar, 2002). Therefore, the more the child has play experiences, the more creative the child will be on tasks (Pepler, 1982). This stresses the importance of play as a component of creativity.

Runco (1996) has found that creative behaviour often seems to be childlike. Gardner (1994) and Barron (1995) concur with this; Gardner (1994) suggests that eminent creators are childlike in their thinking and behaviour, while Barron (1995) expresses the opinion that the mark of an artist is to see things as though for the first time – just like a child.

Play is *generative* in that one creates something new and one does not have to conform to a set of standards of what is right. *Risks* can be taken when one plays. These risks are risks of invention, trying something that has not been tried before and creating new thoughts. These risks are taken within margins of safety. There is also *no failure* in play. Failure occurs when one does not measure up to another's perceived notion of what one should have done. The absence of standards is what allows for innovation. While playing, one can learn from mistakes. While at school, children often learn that errors involve penalties

and therefore when working, the individual will not take chances, for fear of failure and of being wrong (Wassermann, 1992). This fear of failure may develop into a barrier to his/her creativity (DeBord, 1997). Play also builds *autonomy*, and through play the child develops self-initiating behaviours. Children want to make their own creations and to make their own choices. When one's hands are active, so is one's mind: therefore it can be said that play gives one's hands something to do. Passive sitting and listening to talk often leads to boredom and this results in very little mind engagement. When an individual's hands are engaged in play, adrenalin is released and this results in more substantive learning. Active learning or play helps to advance knowledge and to build understanding. Learning by means of play is open-ended and helps one to generate ideas (Wassermann, 1992).

According to Fromberg (1992), play is *symbolic* as it represents reality with attitudes of "as if" and "what if". It is also *episodic*, as children develop and shift their goals spontaneously; *meaningful*, in that experiences are connected or related; and *active*, due to the fact that the child is actively doing something. Play can also be seen as *pleasurable, voluntary and intrinsically motivated and rule-governed*.

Bruner (1985) also indicates that play promotes cognitive development and has found that children who engaged in previously free play with creative materials are much better prepared to solve problems when presented with them. Children who play also tend to generate more hypotheses and become less frustrated. They tend to be more interested in finding out and learning from their explorations than obtaining rewards. Both Russ (1993) and Russ, Robins and Christiano (1999) conclude that play is important regarding cognitive development, but adds that play also helps to develop the child's affective and personality processes involved in creativity. These components are also important for creativity. Both divergent thinking and openness to affect states

occur in, are expressed in and develop through play. Play therefore facilitates a number of different processes that are important in creativity (Russ, 1993).

Children engage in pretend play, which for some, according to Carruthers (2002), may seem odd. However, pretend play can be seen as an expression of creativity and helps facilitate the creative process (Russ, 1993; Singer & Singer, 1990). Pretend play also helps a child practice divergent thinking: expressing and thinking about affect themes: resolving conflict: developing curiosity: being open to experience and taking risks (Singer & Singer, 1990). According to Russ, Robins and Christiano (1999) fantasy and symbolism are often used in pretend play. Play, according to Piaget (1962), also helps with a creative imagination which is used later for reasoning and thinking and play therefore also stimulates a child's creative thinking (Berretta & Privetee, 1990).

Creation, an important component in the definition of creativity (cf. 2.2), comes from playing around. Composers will play with sounds in their head so as to compose new music: architects will play with design: while visual artists will play with images, colour and form so as to create art (Wassermann, 1992).

### **2.7.1.1 The role and function of play**

Play is an important part in a child's life and the child's needs are met by playing. Children are playful by nature. They are intrinsically motivated to play and by playing children develop socially and learn to deal with problems of life. Even though play is an activity, it does not necessarily result into something (Mayesky, 1990). To play is fun, but a closer investigation of the activity also reveals that children play:

1. so as to control their world;
2. because they are curious;
3. because they are intrinsically motivated; and

4. to learn (Mann, 1996).

The above-mentioned reasons for play will now be discussed and elaborated upon.

- **Playing to control their world:**

By playing, children can do things they are unable to do realistically: they can swim oceans or reward themselves in ways their parents/teacher will not.

Children are thrilled by cause and effect. By playing, children can control the course of events. By controlling something, the child feels competent and can master demands and expectations. The child grows and is encouraged to try (Mann, 1996).

- **Curiosity:**

Children are always curious and constantly explore. The child tends to investigate that which is different and in doing so he/she learns (Mann, 1996).

- **Intrinsic motivation:**

Play is enjoyable, but if a child is forced to do something, the child will lose interest in that specific activity. Play challenges a child and by playing, the child controls his/her world and satisfies his/her curiosity. If a child plays because he/she is intrinsically motivated, rewards are not necessary. Extrinsic motivations alone could hamper the child's capabilities because

the child will stop at the point of reward and will not carry on to discover more (Mann, 1996).

- **To learn:**

Mann (1996) observes that even by just fooling around, one can also learn, but it is important that there should be fun and then after fun, learning may follow.

In addition to this, play can also be seen as:

- A natural part of a child's life.
- It is self-directed and a creative activity, which may last for either a few minutes or hours and sometimes even days.
- When playing, there is no right or wrong: it is creative and individualised and the child is actively involved in the activity (Mayesky, 1990).

The importance of play is that it also helps with the **physical, mental, emotional and social growth** of a child (Mayesky, 1990). Each aspect will be discussed.

- **Physical growth:**

Playing helps with the development of the child's muscles in many ways. By throwing a ball, a child starts to develop his/her muscles. When a child plays a game which requires him/her to touch different textures, smell various odours and hear various sounds, the child is developing his/her senses. A child's self-concept even improves once the child gains control over his/her body. Once the child develops strength, the play becomes more adventurous and develops its own challenges (Mayesky, 1990).

- **Mental growth:**

Important concepts are developed when a child plays. It helps a child to develop his/her knowledge of building something and arranging things and thereby also to learn to classify, sort and even to look for answers. Play even helps to set the foundation for learning (Mayesky, 1990).

- **Emotional growth:**

A positive self-concept develops with creative play activities. When playing, the child is not presented with right or wrong answers and very little pressure is present in creative play. The child sees him-/herself as successful and as a worthy human through creative play. Through creative play experiences, the child also learns to not only express emotions, but also to understand their emotions. Even anxiety and stress can be relieved through play activities (Mayesky, 1990).

- **Social growth:**

The child learns social skills when he/she relates to others when playing. When playing in groups, different forms of behaviour are learnt. Social relationships are even formed when playing, even if the child is only sitting next to someone playing (Mayesky, 1990).

### **2.7.1.2 Developmental stages and types of play**

Mann (1996) stresses that it is important to know the different capabilities of children at their different ages.

In the initiative vs. guilt stage of Erikson (1950), the child not only wants to plan, but also to carry out their own the activities that they initiated. During this stage the child will be able to plan, organise, store, retrieve and reorganise events in their play, thus, creating and recreating events and activities.

Mann (1996) provides a table for the "Continuum of Development and Play" (p. 158) based on Piagetian developmental stages.

Age/Years	Developmental Stage	Play Style
0 – 2	Sensory-motor	Practice play
2 – 7	Pre-operational	Symbolic play
7 – 12	Concrete operational	Games with rules

A short description of each play style will be provided below.

- **Practice play:**

Here, repetition of behaviour is found firstly in order to explore the behaviour and then to maintain it. Practice play can also be mental in that the child asks "why?". Repeating something helps the child to remember it and the child is free to make mistakes (Mann, 1996).

- **Symbolic play:**

Children are not able to think about something which is not in front of them until symbolic ability develops. In symbolic play interaction is nonverbal (Mann, 1996). There is often a beginning, middle and end in symbolic

play. The child will also be able to switch roles between acting and directing others in the frame of playing (Garvey, 1979).

- **Games with rules:**

Children never stop to practice, but add symbolising and later combine the two with games with rules. Interest in games with rules will grow in children age six to ten and one will then find a decline in practice play and symbolic play. Children play without caring if they win or lose up to the age of seven/eight. Rules are often changed so as to experiment with challenges and at this age the outcome of the game does not affect them. Being competitive and winning and losing become important after eight years of age. However, the focus remains more on the process in which it helps with exploration, than on the product – winning/losing (Mann, 1996).

Mayesky (1990) and Mann (1996) also identify other types of play. Mayesky (1990) differentiates between two types of play: *free or spontaneous play* and *organised play*. The former refers to play which is flexible, unplanned and self-selected. The latter refers to play which is open and flexible, but by providing material and equipment, the child is given some type of structure and direction.

### **2.7.1.3 Misconceptions about play**

Mann (1996) describes five misconceptions about play:

1. ***Play and entertainment are the same:*** The only similarity between play and entertainment is that they are both fun and enjoyable. The difference is that play can be seen as active, while entertainment is passive. For example, when watching television, the child is being passively entertained. *Active*, means that the child must participate and learn something from it.

2. ***Adult direction is an important ingredient in learning:*** Even though adults can play a role in helping the child to learn, the child grows when he/she does things on his/her own or with friends.
3. ***Learning should hurt:*** Teachers often believe that if their students think that learning is fun, they will not realise the importance of hard work. Students should know that learning can be fun, even though it is not always the case.
4. ***Playing equals winning:*** When one plays, it must include effort and enjoyment, not always only playing to win.
5. ***“Edutainment” is either an oxymoron or a corruption of learning:*** *Edutainment* refers more to entertainment rather than play. Video games seem to limit serious play, but there is no evidence to say that they harm children. Play is useful and keeps children busy.

## **2.7.2 Art**

Just as play is an integral part of creativity, art allows the child to express him-/herself (Millar, 2002) and to express his/her creative ideas (Cornelius & Casler, 1991). As a child grows and matures, the child's ability in art starts to develop (Mayesky, 1990). This creative expression by means of art can even help reduce the child's stress (Millar, 2002).

### **2.7.2.1 Stages of art**

Art may be categorised as either non-representational or representational. The former implies that the art does not look like the item represented, while, the

latter refers to art resembling the item being depicted (Isenberg & Jalongo, 1993).

Art, as a component of creativity, is an easy medium for children to express themselves. In the period between two to four years, the *scribbling stage* starts. Here, the child will draw a circle first and then other geometric shapes. They will try to create (draw) their world and may often want to point to and name their drawings. The *pre-schematic stage* (from late preschool to approximately seven years old), the child will try to draw people or objects. Colours will fascinate them and although they are highly imaginative, they may tend to focus on one idea at a time. They often seek approval and may become discouraged easily. The *schematic stage* (approximately seven to nine years old) is indicative of an increase in the use of symbols, but at this stage they do not have a realistic understanding of their environment. They show better eye-hand coordination and fine motor skills. When playing, the children will divide up according to gender and will represent special characteristics for each object or person in their drawing (DeBord, 1997). Gardner (1982) describes the art found in the ages between seven and eleven as *youth as craftsman* and indicates that the child undertakes more complex and more of a variety of art activities so as to build competence. Making decorations, woodwork, painting with acrylics are common in this stage. The *realistic stage* (nine to twelve years of age) shows an increase in the amount of detail and is greatly affected by peer influence. Individual differences have also expanded. Lastly, the *pseudo-naturalistic stage* occurs between the ages of twelve and fourteen years of age. At this stage, children are very critical about the products they have made. The mode of expression is more adult-like and the child often feels a need to conform to his/her peers and this may stifle his/her creativity (DeBord, 1997).

### **2.7.2.2 Importance of art**

According to Davis (1996) art helps to develop the child's *awareness of internal responses to external stimuli* that are found in the environment. It also helps a child to *understand the world* through exposure to different ways of seeing and making art. In every art project that the child undertakes, *intellectual concepts* are developed and a child *develops cognitively* as well.

Art activities such as painting, pasting and drawing helps to exercise the child's muscles, which helps in the child's *motor development*. Therefore, both small and large muscles develop (otherwise known as *fine* and *gross* motor development). By painting, cutting, and pasting, the small muscles are exercised and fine motor control is developed. Painting, however, combines both large and small muscles. In addition to this, painting also helps with *hand-eye coordination* which is important for schoolwork and helps the child to read. *Sensori-motor learning* in art can be achieved by means of, for example, moulding with clay. This entails that the child will make use of his/her senses (sensory), such as smell and touch, so as to learn about clay and how to use it. Sensori-motor learning therefore enables the child to learn by doing. By doing art work, such as making collages, the child may also *improve his/her vocabulary* by means of describing the pictures. By engaging in art activities, the child will learn to *work independently* and *original thought* is encouraged. *Creative thinking* is also developed. Therefore, it can be said that art helps the child to grow through creative thinking and feeling. The child's *self-confidence* will also improve (Mayesky, 1990).

### **2.7.3 Convergent and divergent thinking**

The significance of divergent thinking in creativity is that by working with various information, a number of solutions may result (Guilford, 1959). Divergent thinking, which occurs in the right hemisphere of the brain, stimulates a person to

look beyond a simple answer and look for the possibilities, as well as to question things (Eiffert, 1999). Divergent thinking is also called *lateral thinking* and implies that many different ways of thinking are used (Isenberg & Jalongo, 1993).

The left hemisphere, however, is involved in convergent thinking, which allows one to choose one right answer (Eiffert, 1999). Convergent thinking is also called *vertical thinking*, implying that thinking moves back and forth between higher and lower levels of thought (Isenberg & Jalongo, 1993).

Cropley (1992) provides a schematic representation to show the difference between convergent and divergent thinking (Figure 3).

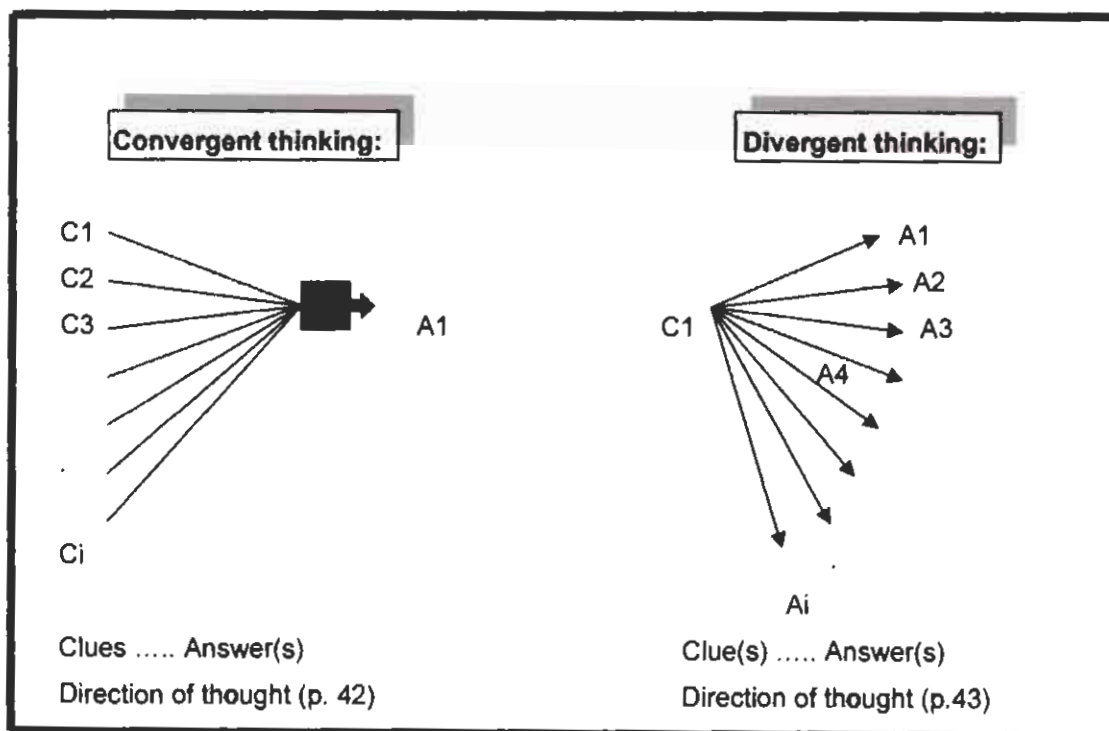


Figure 3: Schematic representation of convergent and divergent thinking  
(Cropley, 1992, p.42-43)

**Convergent thinking** is described as the “zeroing in” on the one, and only one, “best” answer. The answer is therefore reached by applying the known logic in a

systematic fashion to a set of clues. Therefore, the one best answer is determined by taking into account the facts and underlying rules.

**Divergent thinking** branches out from the known and produces novel ideas. Eberle (1977) provides an acronym, **SCAMPER**, to improve divergent thinking. This acronym can help individuals to generate diverse ideas and therefore facilitates divergent thinking:

**S = Substitute:**

The individual must ask questions such as "What could I do instead?"

**C = Combine:**

The individual looks at what he/she can combine or blend to come up with something new.

**A = Adapt:**

The individual changes something which is known in order to solve the problem. Often solutions to problems are derived from adapting old ideas.

**M = Modify:**

The individual changes something to get a solution for example changing the colour of toothpaste to make it more appealing.

**M = Magnify:**

The individual tries to make something bigger, stronger and more frequent for example a big-screen television.

**M = Minify:**

The individual looks at how to make something smaller and less frequent for example a bite-size cracker.

**P = Put to other uses:**

The individual will use something in a new way.

**E = Eliminate:**

What can be left out, or deciding whether it is really necessary for solving the problem.

**R = Rearrange/reverse:**

By changing something around, something new can be formed.

### **2.7.4 Intrinsic and extrinsic motivation**

Creative individuals are motivated and self-confident and without this confidence, it would be difficult to move towards a goal (Martindale (1989).

Intrinsic motivation refers to the individual's enthusiasm and spontaneity for a task: the individual finds interest in what he/she is doing, experiences enjoyment and satisfaction and finds the work challenging. Extrinsic motivation refers to the individual who is only motivated if rewarded, thus, indicating that intrinsic motivation is an important component of creativity (Amabile, 1985; 1989).

Amabile (1989) mentions that even though interest plays a role in intrinsic motivation, competence and self-determination are also important. Children tend to seek out activities and persist longer and enjoy it when they feel that they are mastering something on their own or that they are competent to perform the activity. Intrinsic motivation increases even more when a child is shown or told that they have performed well. Self-determination implies that the child feels that he/she is working on something for their own reasons and not for somebody else. Children need to feel that they are succeeding at something, but also that it was his/her choice to do it.

Amabile (1989) describes four facets for knowing that one is experiencing intrinsic motivation. The first facet is *love*: when one does something, it is because of a love for it, and it is a pleasure to do it. Part of this love, and also the second facet, is *dedication*: the individual will be dedicated to work hard. Dedication is accompanied by effort, self-discipline and perseverance. A combination of *work and play* is the third facet: when doing a task, the individual may experience it as work, but with an element of playfulness. The final aspect is *concentration on the activity itself*: when working on something, one's focus will be on it and other extraneous concerns will be excluded.

According to a study by Lepper, Greene and Nisbett (1973), being rewarded influenced children, but the quality of their work was much lower than those who were not rewarded. Similarly, Condry (1977) has also found that once rewarded, the activity is of a lower quality and even less creative compared to the individual who was not rewarded. This is supported by other researchers (Deci & Ryan, 1987; Koestner & McClelland, 1990). Eisenberger and Cameron (1996), however pointed out that rewards, if given properly, could have a positive effect on the individual's creativity.

Each component therefore helps the child to develop his/her creativity and in return helps with numerous important aspects, such as developing muscles, improving self-confidence and being more motivated. This in turns encourages the individual to take risks, which is an important element in the creative process (cf. 2.4.2.2; 2.5.1).

The influence of both the left and right hemispheres will be discussed to illustrate how each influences creativity.

## **2.8 The influences of the hemispheres on creativity**

Clark (1992) argues that creativity is more than intelligence. Creativity is a result of a synthesis of all the brain's functions: the knowledge that is internally processed and that which comes to an individual from outside his/her system. There are two hemispheres in the brain: the left hemisphere is usually specialised in linear or logical thinking, while the right hemisphere is the non-logical, pattern-making brain (Eiffert, 1999).

Each hemisphere appears to have its own specialised area and will process its information in its own way. The corpus callosum, a mass of nerve fibres, bridges the hemispheres and therefore allows the two hemispheres to communicate with each other. *Whole-brain thinking* is the term used to refer to the process when both sides of the brain become engaged in thinking (Eiffert, 1999).

### **2.8.1 Right hemisphere**

According to Eiffert (1999), most children are born right-hemisphere dominant. This right-side dominance is useful, as children shape events into patterns during the individual's discovery of the world. Playfulness is also a characteristic of the right brain, which is a characteristic of a creative individual. Play stimulates the right hemisphere and thereby enables the mind to see new patterns (Eiffert, 1999).

In the early learning stages, the child responds to familiar shapes, smells and sound, which are all right pattern-associating behaviour. Once the child starts to grow and the connection between the two hemispheres starts to develop, the child will begin to show stronger cognitive skills as right hemisphere functions move to the left. Specific functions will then localise themselves during the period of transference and development as children have greater mental elasticity for movement between hemispheres. As one becomes older, one's

mental functions tend to become more localised into specific areas. The right hemisphere is involved with the creative processes and this is why it is so important to stimulate it in the early stage of creative process (Eiffert, 1999).

Individuals with right-brain preferences, according to Neethling (1993), typically:

1. create new ideas;
2. are able to envision the full picture, but not too much detail;
3. diverse;
4. constantly in search for answers;
5. make use of synthesis so as to create something new;
6. find new and fresh solutions to problems;
7. are intuitive;
8. often take risks;
9. are enthusiastic; and
10. often focus on non-verbal behaviour.

### **2.8.2 Left hemisphere**

The left hemisphere is associated with objective processes (Eiffert, 1999). The left hemisphere is considered to be good in convergent thinking, while the right hemisphere is good at supporting divergent thinking (Craft, 1997).

Neethling (1993) identifies ten preferences of the left brain. These individuals typically:

1. enjoy analysing situations and problems in details;
2. take a more logical and rational approach;
3. enjoy gathering facts and often become frustrated when engaging in a project with others with not enough background information;
4. are comfortable with accounting and financial calculations;

5. have a practical approach to problems;
6. are comfortable with developing detailed planning and procedures;
7. enjoy rules and regulations;
8. enjoy administrative work;
9. enjoy planning and organising;
10. are comfortable with the implementation of work.

Each hemisphere of the brain has an important function and there are differences regarding the left brain and the right brain, as will be illustrated in the discussion below.

### 2.8.3 Left- and right-brain analysis

Torrance (in Neethling, 1993) provides a practical analysis of the two brains in which he describes the following differences:

<b>Left brain</b>	<b>Right brain</b>
The individual will remember names easily.	The individual will rather remember faces.
Will react to verbal instruction and explanations.	Will react to non-verbal and symbolic instruction.
Prefers to do things systematically and more controlled.	More spontaneous and not logical.
The individual tends to break up problems.	The individual will look at problems as a whole.
The individual prefers to plan.	The individual is more spontaneous.
The individual thinks and remembers mostly in language.	The individual will make use of images when thinking and remembering.

Each hemisphere of the brain therefore has an important function. The right hemisphere can be seen as the more creative side, while the left hemisphere is more logical and analytical. Creativity has been explored in numerous ways and assessment is necessary in order to identify the creative level of an individual, so as to further enhance his/her creativity. In the following sections this aspect will be discussed further, as well as the measuring instruments used for and the various terminologies associated with creativity assessment.

## **2.9 Assessing creativity**

Treffinger (1994) argues that just as creativity is an elusive concept in which there is no single, universally accepted definition, so there is no simple, universally valid instrument to assess creativity in individuals. Creativity is complex and multidimensional (Treffinger, Isaksen & Firestien, 1983).

### **2.9.1 Why assess creativity?**

In order to recognise creativity and creating conditions for one to develop creatively, assessment of creativity is essential (Starko, 1995). Treffinger (1987) mentions eight general roles for assessing creativity. They are:

1. Helping to recognise and affirm the strengths and talents of individuals and thereby enabling people to know and understand themselves.
2. Expanding and enhancing ones understanding of the nature of human abilities and giftedness.
3. Providing a "baseline" data for assessing individuals or groups and guide teachers in planning and conducting appropriate and challenging instruction.
4. Provision should be made for pre-test and post-test data for group comparisons for research and evaluation.

5. Helping instructors, counsellors or individuals discover unrecognised or untapped talent resources.
6. Providing a common language for communication amongst professionals about the nature of creative abilities and skills.
7. Helping to remove the realm of mystery and superstition from creativity.
8. Providing operational constructs to help to advance the theory and research on creativity.

When evaluating children with regard to creativity, it is necessary to assess whether the programme had an impact on the individuals and to determine this, the following questions are important to assess the results of the programme:

### **2.9.2 Pre- and post-testing of creativity**

Treffinger (1995) has formulated four questions which need to be asked during pre- and post-tests regarding creativity:

1. Was the programme effective in enhancing both the creative thinking and problem-solving skills in the children?
2. What impact did the programme have on the participating children?
3. Were the children better able to generate ideas, recognise the problems and plan for creative action after the programme?
4. Did the children in the experimental group demonstrate greater gains in creativity than those in the control group?

### **2.9.3 Assessment instruments**

Cooper (1991) analyses and criticises the Torrance Test of Creative Thinking by EP Torrance (1966), which assesses four creative abilities, namely fluency, flexibility, originality and elaboration. Cooper (1991) acknowledges that the test has proved to be an important contribution for assessing the four abilities related

to creativity and that it has shown significant validity and reliability. However, he believes that the TTCT will have more potency as an assessment measure if Torrance would modify his scientific method to encompass a broader spectrum of what being creative actually means.

Treffinger (1985) found that the test-retest reliability ranged from 0.50 to 0.93, with the retest figures ranging in the 0.60s and 0.70s. The TTCT proves to be a reasonably reliable instrument for research and group assessments when evaluating changes within a group over several weeks.

#### **2.9.4 Understanding originality, fluency, flexibility and elaboration**

*Originality*, as one of the four processes which for Torrance make up the structure of creativity, can be seen as the essence of creativity. If the end product is good and unique, it is referred to as *original* (Feldhusen, 2002).

The *fluency stage* involves the recalled information that was previously learned. The information could be used to solve a problem, to create something new or to satisfy the individual's curiosity (Feldhusen, 2002).

*Flexibility* is described as a "non-cognitive personality function of openness to diverse information" (Feldhusen, 2002, p. 181).

Lastly, *elaboration* is the stage in which the individual adds details which are recalled from memory (Feldhusen, 2002).

## 2.10 Summary

Creativity is a very diverse concept, but entails bringing something new into being and also developing original and valuable ideas. Due to the complexity of this concept, various theories have been developed and proposed to explain how creativity develops. Each theory may indeed have value, but should be interpreted within the theorist's field of reference.

In analysing the development of creativity and the way in which the creative product emerges, the individual's personality and age have to be taken into consideration as well as the process of creativity. However, obstructions which hinder the creative process may occur. Creativity may be inhibited or fostered in a child due to various factors such as parents, school, television etc. Creativity comprises various components, such as play, art, motivation and creative thinking. Each helps to develop certain aspects in the developing child. Both hemispheres also play a role in creativity. By assessing creativity, strengths, talents and creativity are identified and may then in turn be enhanced.

Creativity may also play a role in an individual's coping style. When coping by means of finding solutions to a problem, for example, the individual may make use of a creative thinking skill such as brainstorming. The individual will therefore experience a flow of ideas and create unique and original ideas and build upon it. Coping and creativity can therefore be interlinked with each other and help the individual to reach a better coping level. The concept of coping will therefore be discussed in the next chapter.

## *Chapter 3: Coping*

### **3.1 Introduction**

In this chapter, the concept of coping will be explored. Because there are so many definitions of this concept, only the most profound definition (according to Latack & Havlovic, 1992) of Lazarus and Folkman (1984) will be used here, although the differentiation between problem-focused and emotion-focused coping of Lazarus and Folkman (1984) will also be given. A collective definition will be provided. Thereafter, stress and coping will be explored, as these concepts are seen as interrelated. Both theories and models of coping will be given and then the focus shall move towards coping in the middle childhood period; various stressors; and coping and emotional intelligence. Various coping resources shall be provided and coping strategies will be explained.

### **3.2 Definitions**

The concept of coping has formally come into its own during the 1960s and 1970s (Lazarus, 1993). Since the late 1970s, coping was seen more as a process and the hierarchical view of coping was abandoned. Coping was considered to be changing over time and was viewed in conjunction with situational contexts (Lazarus, 1993). De Ridder (1997) postulates that coping can be regarded as a dynamic process and agrees that coping changes over time due to the demands and appraisals of the given situation. Folkman and Lazarus (1985) concur with this but add that coping also shifts in nature from stage to stage in a stressful transaction.

There are over thirty definitions of coping (Latack & Havlovic, 1992). These definitions vary and are often based on theoretical perspectives (Sandler, Wolchik, MacKinnon, Ayers & Roosa, 1997). The most profound definition,

according to Latack and Havlovic (1992) is that of Lazarus and Folkman (1984). This definition describes coping as the behavioural and cognitive *efforts* one makes so as to *manage* external and/or internal demands that are appraised by the individual as either taxing or exceeding his/her resources and is regarded as process-oriented. The definition also makes a distinction between coping and automated adaptive behaviour: it therefore specifies that coping is limited to demands that are appraised by the individual as either taxing or exceeding his/her resources. Thus, the definition limits coping to conditions of psychological stress. This requires mobilisation, the word *efforts* indicates that coping includes anything the individual may think or do. Lastly, *managing* implies that one is not forced to master something: *managing* can also refer to minimising, avoiding, tolerating or accepting the stressful condition (Lazarus & Folkman, 1984).

Kleinke (1998) defines coping as the efforts the individual makes so as to manage situations that have been appraised as either being stressful or harmful. Coping therefore requires effort, planning, and an assumption made by the individual that the outcome of his/her coping responses may not necessarily be positive, and lastly, coping is a process that occurs over time. The appraisals one makes are divided into *primary and secondary appraisals*. Folkman (1984) defines *primary appraisals* as the question the person asks him-/herself of whether, when faced with a challenge or stress, he/she is in actual fact in danger or not and whether it is worth getting upset about it. It is therefore a concern about one's physical and psychological well-being. *Secondary appraisal* is when, after determining that there is danger, the individual will ask him-/herself what can be done about it.

People who *cope successfully*, according to Kleinke (1998), are people who take responsibility in finding solutions for problems/challenges. After assessing the problem, they will often seek advice and support from others and then work out a plan or solution. By using the challenges with which they are faced, the

individual will grow and often face the problem or challenge with humour, patience and hope. However, *unsuccessful copers* tend to respond to problems by either denying it or avoiding it. No time is taken to look for a solution and very often the individual just withdraws and becomes angry and aggressive, or passive and depressed. During challenges, they tend to blame others for their problems (Kleinke, 1998).

Lazarus and Folkman (1984) differentiate between two types of coping, namely problem-focused coping and emotion-focused coping. The distinction between problem-focused and emotion-focused coping by Folkman and Lazarus (1980) is the most widely used way to categorise the coping responses (Parker & Endler, 1992). Each form of coping is described below:

- ***Problem-focused coping:***

This coping can also be sub-divided into *inner-directed coping*, which refers to when the individual making an effort to reconsider his/her attitudes and needs and also to develop new skills, as well as responses. The *outer-directed coping* refers to altering the situation and behaviours of others (Lazarus & Folkman, 1984). Optimism can be related to problem-focused coping, especially when the situation is viewed as controllable. Optimism can also be related to either positive or negative reframing. When the situation is seen as uncontrollable, the individual accepts the reality of the situation. In the negative sense, the individual will often make use of denial or even try to distance him-/herself from the problem. Optimistic and pessimistic individuals differ in their use of problem-focused coping. These individuals may even differ with regard to the acceptance of the reality or the situation (Carver & Scheier, 1999).

- **Emotion-focused coping:**

This type of coping refers to the management of emotional distress, and these strategies include physical exercising, expressing one's feelings and seeking support (Lazarus & Folkman, 1984). Diong and Bishop (1999) view avoidance coping strategy as a form of emotion-focused coping and point out that although it may deal with the emotional aspects of the particular situation, it does not address the problem at hand.

Coping can therefore be seen as twofold in that it is a **process that changes over time, but also a cognitive and behavioural effort the individual makes to manage his/her demands. In addition to this, the appraisals the individual makes regarding the situation also plays a role in determining whether the situation is stressful or not. Both the resources and strategies which one uses also help with the coping process.**

Even though the relationship between coping and stress seems to be contradictory, coping seems to play a role in adaptation to stress (Segal, Hook & Coolidge, 2001; Shew, Lin & Hwang, 2002).

### **3.3 Coping and stress**

Psychologists have been interested in stress since World War II (Lazarus, 1993). According to Sorensen (1993) the terms *stress* and *coping* are interrelated. **Stress** can be seen as a dynamic process which not only includes events that happen to an individual and the emotional reactions to these events, but it also refers to the various responses and reactions of the individual to these events and the way they cope with it (Lazarus & Folkman, 1984). **Coping** can therefore be described as the individual's response to stress, in that the individual will try to either tolerate or decrease the negative effects of a stressful situation (Baron & Byrne, 1994).

Stress is inevitably a part of an individual's daily life (Louw, 1993) and Baron and Byrne (1994) indicates stress refers to the responses that occur due to either the physical or psychological events that an individual perceives as being either harmful or emotionally upsetting. Threats concerning the occupation and family are the two most common stressors one may experience (Hendrix, Steel & Schultz, 1987).

The term *stress* refers to the process of coping with one's pressures, as well as problems and the negative feelings that it can generate (Thompson, Murphy & Stradling, 1994). Topping, Weightman and Johns (1985) describes stress as a demand that is made on the individual's physical or mental energy. When this is in excess, stress occurs and may even lead to stress-related physiological problems.

Stress even takes a toll on the individual's well-being with regard to emotional and physical discomforts (Hill Rice, 2000) and the onset of various diseases, such as cardiovascular conditions (Benotsch, Christensen & McKelvey, 1997) and cancer (Cohen & Rabin, 1998) has been linked to stress. Headaches may also be linked to stress (Holm, Lokken & Myers, 1997). According to Perrewe and Anthony (1990), as soon as the individual's stress increases, illness becomes more common. Physiological (Henry & Stephens, 1997; Weiner, 1992) as well as psychological stress theories (Lazarus, 1991) state that the health effects which are produced by being exposed to chronically stressful conditions are dependent on the results of the coping process which the individual uses.

Stress may even have a negative impact on the individual's confidence and self-esteem, job satisfaction, the ability to relax and forming balanced judgements (Thompson, Murphy & Stradling, 1994). Therefore, the adequacy of the individual's coping behaviour is a factor in determining the effect stress will have on one's physical and psychological health (Sheu, Lin & Hwang, 2002).

According to Taylor (1991) it seems as if emotion-focused coping is associated with low levels of stress, while social support coping helps with depressive symptoms (Stanton & Snider, 1993). Coping strategies such as avoidance, denial and disengagement may help to minimise distress (Levine, Warrenburg, Kerns, Schwartz, Delaney, Fontana, Gradman, Smith, Allen & Cascione, 1987; Suls & Fletcher, 1985). However, in a more recent study by Theron (2002), it was found that the individual's level of stress will reduce when dealing with the actual problem and stress levels will increase when making use of avoidance coping strategies.

In another study, Nakano (1991) found that problem-focused coping moderates the effects of a stressful event and that the emotion-focused coping will enhance the effects of the stressful event.

In conclusion, it seems as if stress and coping are interrelated and that coping may help the individual with the adaptation to stress. Stress definitely seems to have an impact on one's well-being and the individual's type of coping may either increase or decrease the stress levels.

In order to understand coping better, both the theoretical and conceptual models will be provided.

### **3.4 Theories and conceptual models of coping**

#### **3.4.1 Psychoanalytic approach**

The concept of coping can be traced back to the psychodynamic model by Freud, where coping is seen as a defence mechanism which helps the individual to deal with aggressive conflicts (Snyder & Dinoff, 1999). The defence mechanisms described by Freud to ward off anxiety and to control impulsive behaviour may be regarded as the starting point to explain coping strategies. These defence mechanisms are suppression; denial; projection; reaction

formation; hysteria; obsessive-compulsive behaviour and sublimation (Aldwin, 1994). These defence mechanisms as coping behaviour involves regulating the emotions and have very little to do with the environmental stimulus or with how the individual solves the problem. The individual's behaviour and feelings are therefore determined by the individual's personality structure that was developed in the early childhood period (Aldwin, 1994).

Corey (1996) provides eleven defence mechanisms and explains each. They are:

1. **Repression:** This refers to a means to exclude painful thoughts or feelings from one's awareness. It is an involuntary removal of something from one's consciousness. However, the painful events that may have been removed influence behaviour later in life.
2. **Denial:** Denial operates at one's preconscious and conscious levels. Denial distorts what the individual may think, feel or perceive in a traumatic situation.
3. **Reaction formation:** The individual develops a conscious attitude and behaviour that is opposite to what he/she is actually feeling. Hatred may for example be concealed by a façade of love.
4. **Projection:** The individual attributes his/her own unacceptable desires and impulses to someone else. By doing this, the individual does not have to recognise or deal with his/her own desires.
5. **Displacement:** This refers to displacing his/her energy towards someone or an object when the true object/person is inaccessible.
6. **Rationalisation:** This refers to explaining away failures or losses.

7. **Sublimation:** In order to get rid of sexual or aggressive energy, it is often channelled into socially acceptable manner, such as athletic activities.
8. **Regression:** The individual will revert to a form of behaviour that he/she has already outgrown.
9. **Introjection:** This term refers to the taking in of values and standards of others.
10. **Identification:** Identification is two-fold; firstly, it is used by children to learn sex-role behaviour, but it can also be a defence reaction. People often identify themselves with successful causes so as to increase their self-worth.
11. **Compensation:** Masking one's perceived weaknesses or developing positive traits helps to make up for ones limitations.

In order to fully understand defence mechanisms, it is important to understand their functions. Vaillant (1977) therefore provides the following five functions of defence mechanisms:

1. handling unresolved conflicts among individuals;
2. keeping affects within bearable limits during sudden life crises;
3. restoring emotional balance by either postponing or channelling sudden increases in biological drives;
4. helping to survive conflicts with the conscience; and
5. obtaining time-out so as to master changes in self-image.

### **3.4.2 Cognitive approach**

The cognitive approach is based on four assumptions:

The first assumption is the *appraisal of the situation*. If a situation is not threatening, no coping is necessary. If it is threatening, problem-focused coping will be used so as to try to solve the problem. Adaptation in the approach is conscious. The individual therefore appraises the problem and decides how to cope based on previous experiences.

The second assumption is that the individual is *flexible in the choice of coping strategies* and will *modify the strategy* depending on the problem.

Thirdly, coping includes *problem-focused* as well as *emotion-focused strategies*, thereby directing coping at the emotions and problems. Controlling one's emotions will help to manage or even solve the problem(s).

The last assumption is that cognitive theorists do not assume a hierarchy of adaptiveness. An *empiricist approach* is taken. This implies that the individual must identify the coping strategies used in situations as well as the conditions in which the strategies either worked or did not work in promoting positive adaptations (Aldwin, 1994).

### **3.4.3 Different conceptual models of coping**

#### **3.4.3.1 Problem-focused and emotion-focused coping model**

This model, which is based on the cognitive appraisal model of Lazarus (1974), implies that the assessment made by the individual in a situation will affect the associated stress level. Problem-focused coping, based on this framework, is

directed at modifying the stressor (by means of problem-solving), and the emotion-focused strategies are then directed at regulating the emotional states, which may accompany the stressor. The individual will cry, for instance, so as to release the feelings (Fields & Prinz, 1997).

The function of the emotion-focused strategies is to reduce both the tension and physiological arousal that is associated with the emotional reactions to the stress. The function of the problem-focused coping is to change the external situation in order to make the situation less stressful (Lazarus & Folkman, 1984).

### **3.4.3.2 Primary and Secondary Control Model**

Another theoretical perspective is the primary/secondary control model (Rothbaum, Weis & Snyder, 1982). The difference between the primary and secondary control is that the primary control coping refers to influencing objective conditions or event and attempting to bring the environment more into line with the individual's wishes; while the secondary control coping aims to bring the individual more into line with the forces of the environment (Rothbaum et al, 1982).

Band and Weis (1990) introduce the category of relinquished control. This refers to the absence of goal-directed activity or coping. The individual will either do nothing or just give up. Band and Weiss (1988) argues that secondary control strategies will be acquired over a longer period of development than primary coping strategies because secondary control strategies involve subtle psychological means or reducing stress and are more covert and abstract in nature and these strategies require much more cognitive maturity and may not easily be learnt by observation.

### **3.4.3.3 Approach and Avoidance Model**

This model has largely been used in children's medical literature (Miller & Green, 1985). *Approach*, which is also similar to active coping, *monitoring* and *sensitisation* refer to actively seeking out information, expressing concern and making plans. However, avoidance (which is similar to blunting, passive coping and repression) implies avoiding information, distracting him-/herself from stressful circumstances and expressing very little concern (Peterson, Harbeck, Chaney, Farmer & Thomas, 1990).

The approach coping strategies are also described by Roth and Cohen (1986) as behavioural, cognitive or emotional activities that are directed **towards** the stressor. Cognitive attempts may be made to change a certain way of thinking about the problem. Behavioural attempts may also be made by focusing on the problem and trying to resolve it. On the other hand, avoidance strategies are behavioural, cognitive or emotional strategies which are now directed **away** from the stressor to avoid it. Denying the threat can be regarded as a cognitive attempt, while by escaping or avoiding to confront the situation, is a behavioural attempt. By relieving tension, the individual is expressing his/her emotions (Ebata & Moos, 1991).

The researcher will critically evaluate the theories and models based on her perceptions and framework.

## **3.5 Critical evaluation of the theories and models**

The researcher disagrees with the psychoanalytic approach and believes that the environmental stimulus and the manner in which the individual solves the problem indeed play a role in the coping process: defence mechanisms have an impact on one's life and should not be disregarded. However, the researcher agrees with the cognitive approach and believes that this coincides with the

definition of Lazarus and Folkman (1984) that coping is a cognitive and behaviour effort. The appraisals made by the individual are important and the coping strategies also depend on the situation. In this approach, choices are given to the individual and he/she must take responsibility for his/her choices. The researcher believes that by exercising the choices, the individual will grow, and coping is therefore also seen as a process which changes over time (De Ridder, 1997; Folkman & Lazarus, 1985).

The various conceptual models are valid and can be used in various situations and are based on the appraisals made by the individual. Some of the strategies, such as avoidance and denial, can also be seen as a defence mechanism, as described by Freud.

The researcher believes that the theories and models mentioned above have valid points, and that all can be combined when viewing the concept of coping. However, in light of all of these, the researcher believes that one should combine the definition (cf.3.2) with it so as to obtain a holistic view of the issue.

Coping strategies change as the child progresses and emphasis will therefore be given to aspects such as age, gender, peers, stressors and emotional intelligence.

## **3.6 Development and coping in the middle childhood**

### **3.6.1 Introduction**

According to Fields and Prinz (1997), as children progress, their coping strategies change continuously. Coping strategies are responses which help reduce physical, emotional or psychological burdens (Snyder & Dinoff, 1999), and are linked to daily hassles and stressful life events (Snyder, Ford & Harris, 1987; Houston, 1987). Coping strategies are effective if they are able to reduce

the immediate distress and ensure psychological well-being (Snyder & Dinoff, 1999).

### **3.6.2 Age and coping strategies**

Emotion-focused coping occurs at the ages between six and nine (Altschuler & Ruble, 1989; Compas, Worsham & Ey, 1992). At this stage children are able to differentiate their feelings, but also to verbalise their feelings to a greater degree than before (Aldwin, 1994). As the pre-school child moves across to primary school, more emotion-focused or cognitive coping strategies are used. The primary school age child, from seven through to twelve years of age, starts to make use of positive self-talk as an emotion-focused coping strategy. Problem-focused strategies tend to decline overall, but direct problem solving, a problem-focused strategy, tends to increase. Peer support also seems to take preference over caregiver support. Mixed results have been found with regard to approach and avoidance strategies. These children will make use of more cognitive distraction strategies. During this period, the child is also starting to differentiate between stressful situations and which coping strategy to use for the relevant stressor (Fields & Prinz, 1997).

Different coping strategies can also be found in the younger and older primary school child. The older primary school child will prefer adult support; while the younger primary school child will prefer more peer support (Fields & Prinz, 1997).

According to Spirito, Stark, Grace and Stamoulis (1991), the situation in which children find themselves will affect the strategies they use to cope. Aldwin (1994) further points out that in this age group (the middle childhood), children become more differentiated with regard to the types of emotion-focused coping they will use. Aldwin (1994) also argues that there are inconsistent findings with regard to problem-focused coping in this period. She explains that this could be due to two reasons, namely the situational context and the fact that problem-focused coping

may increase in interpersonal situations, and decrease in less controllable situations. Band and Weisz (1985) found that a decrease in problem-focused coping in the subtype problem-focused avoidance occurred because children are better able to differentiate between controllable and uncontrollable problems. These avoidant strategies may, however, shift from escapism or behavioural strategies to cognitive distraction (Altschuler & Rubler, 1989; Elwood, 1987).

It is therefore much more difficult to assess problem-focused coping than emotion-focused coping in the in the middle childhood, as coping skills increase and become more differentiated (Aldwin, 1994). Specific coping strategies are used by children to cope with different stressors for their own personal reasons, in order to cope with stressors in a particular way (Boekaerts, 1996)

### **3.6.3 Gender and coping strategies**

It has been found that girls will seek more social support and sympathy than boys (Wertlieb, Weigel & Feldstein, 1987; Frydenberg & Lewis, 1990; Frydenberg & Lewis, 1991) and in this period children also tend to seek social support outside their immediate family (Bryant, 1985). Girls will talk more about their feelings and in doing so will be able to cope in a more constructive way. Seeking support may be viewed as self-protecting behaviour. Girls also tend to make use of daydreaming and wishful thinking as a means of coping (Frydenberg & Lewis, 1991)

Kanner, Feldman, Weinberger and Ford (1991) found that girls tend to have a much worse experience of parents' fighting, teasing, parental concerns, feelings of inferiority and insufficient privacy.

Gender-type coping may also play a role in the higher rate of depression among girls (Berk, 2003). Girls who mature early and who are faced with stressful life events are especially prone to depression (Ge, Conger & Elder, 2001).

### **3.6.4 Peers and rejection**

According to Zakriski, Jacobs and Coie (1997), peer rejection is very stressful for a child and a variety of negative outcomes may result due to the rejection (Kupersmidt, Coie & Dodge, 1990). According to Coie (1990) peer rejection a social outcome rather than a characteristic. Zakriski, Jacobs and Coie (1997) have further found that peer rejection is a response of children on the individual: very often these rejected individuals are also treated very poorly. If the child is rejected, the child's self-concept and emotional states may be affected.

If a child is aggressive, his/her peers will often reject the person, due to group norms; however, if aggression is acceptable in terms of the group norms, rejection will not occur (Wright, Giammarine & Parad, 1986). It was found that blunting, a problem-focused coping mechanism, is an ineffective coping manner for the aggressive-rejected child. Such individuals are less likely to change their behaviour than non-aggressive-rejected children (Cillessen, van Leishout & Haselager, 1992). Rejected children tend to cope cognitively and emotionally rather than behaviourally (Zakriski, Jacobs & Coie, 1997).

### **3.6.5 Various stressors and types of coping strategy**

Various studies have been done on seven- to twelve-year olds to determine which type of coping strategies the child uses of to cope with stressors (Fields & Prinz, 1997).

#### **(a) Medical stressors**

Avoidance strategies occur more than approach strategies. It was also found that cognitive avoidance is more frequent (Altshuler & Ruble, 1989; Band & Weisz, 1988). Band and Weisz (1988) found that more emotion-focused strategies are used with regard to problem-focused coping.

## **(b) Social stressors**

Researchers (Band & Weisz, 1988; Compas, Malcarne & Fondacaro, 1988; Gamble, 1994; Jenkins, Smith & Graham, 1989) found that children in this age group use more problem-focused strategies to cope with these stressors. The strategies included direct problem solving, problem-focused aggression, offering comfort to parents and independent attempts to solve the problem.

## **(c) Academic stressor**

In this area, problem-focused strategies such as problem-solving and problem-focused avoidance were used (Band & Weisz, 1988; Brown, O'Keefe, Sanders & Baker, 1986 & Compas et al., 1988).

## **(d) Self-identified stressor**

With regard to this stressor, Brown et al. (1980) and Rossman (1992) found that many children made use of emotional-focused strategies. Studies done by Rossman (1992) and Ryan (1989) found that there are mixed preferences for the approach and avoidance strategies. Even though there are inconsistencies in these findings, Fields & Prinz (1997) conclude that preschool children tend to make more use of avoidance strategies than children in the age group of seven to twelve.

A link has been found between coping and the individual's emotions. It has been shown that the emotional competence of the individual will play a role in how successful the coping will be. The role of emotional intelligence and coping will therefore be discussed.

### 3.6.6 Coping and emotional intelligence

Coping may also be described as a response to an individual's emotions which are elicited by life events. The individual's emotional competences play a role in how resilient he/she is in coping successfully. *Emotional competence* refer to how the individual perceives, expresses, understands and manages the emotional phenomena. It also refers to the concept *emotional intelligence*, which plays a role in the coping process (Salovey, Bedell, Detweiler & Mayer, 1999).

Salovey, Bedell, Detweiler and Mayer (1999) provide four competencies which are involved in emotional intelligence. The first is *appraising and expressing emotions*, not only in oneself but also in others. The second is *assimilating emotions and thoughts*; the third is *understanding* and being able to *analyse one's emotions*; and the fourth is being able to *regulate emotions and promoting growth*, emotionally and intellectually. These competencies are similar to the components identified by Mayer and Salovey (1997), but slightly different from those formulated by Salovey, Bedell, Detweiler and Mayer (1999). This difference pertains to the last component, to which Salovey, Bedell, Detweiler and Mayer (1999) adds *promoting growth*. Even though the wording may differ, however, in essence they refer to the same components.

Palfai and Salovey (1993) and Schwartz (1990) postulate that one's emotions create mental sets that are adaptive for solving problems. Thus, different emotions will create different information processing styles (Salovey, Bedell, Detweiler & Mayer, 1999). When an individual is happy, it will help facilitate mental sets that can be used in creative tasks and the individual thinks intuitively so as to make associations. However, when the individual is in a sad mood, the mental set which is generated allows the individual to solve problems more slowly and more attention is focused on detail (Salovey, Bedell, Detweiler & Mayer, 1999). This was proved in a study done by Palfai and Salovey (1993) in which students had to watch emotional films: the happy students were able to

solve the inductive problems faster, while the sad students solved the deductive problems faster. Certain moods thus make it easier to solve certain problems.

Social support plays a role in the success of one's coping. The emotional intelligent individual is better able to find access to social support networks and when stressed, will be more likely to rely on these support systems (Salovey, Bedell, Detweiler & Mayer, 1999).

Parents play a role in a child's social engaging. Due to his/her parenting, the child may develop a social interaction style that either facilitates or undermines the development of a support network. Children learn from their role models (Salovey, Bedell, Detweiler & Mayer, 1999) and if the child's mother is more emotionally communicative, the child will openly express positive feelings towards his/her peers (Kahen, Katz & Gottman, 1994).

Furthermore, if the parent is aware of their own sadness and teaches their child this aspect, it will have a definite impact on the child's emotion regulation abilities. If emotional intelligent behaviour is modelled, the child will be better equipped for social ties (Hooven, Gottman & Katz, 1995). Emotional intelligence therefore equips the individual with skills that are needed to build solid social support networks (Salovey, Bedell, Detweiler & Mayer, 1999).

### **3.6.7 Various approaches to coping**

Lazarus (1993) provides various approaches to coping as a process. Four of these approaches will be discussed.

1. In order to examine whether the outcomes of the coping thoughts and actions are adaptive or maladaptive, the thoughts and actions must be measured separately. Depending on the individual the

encounter and outcome, the coping process can either be good or bad (Lazarus, 1993).

2. Coping also depends on the context (Folkman & Lazarus, 1985).
3. The coping effort of the individual is independent of the outcome. Coping is used irrespective of whether the process is successful or unsuccessful, adaptive or nonadaptive (Lazarus, 1993).
4. Lastly, the two functions of coping are problem focused and emotion focused (Lazarus, 1993).

Thus it appears that at the age between seven and twelve, the emotion-focused strategy most commonly used by the child is positive self-talk and the most commonly used problem-focused strategy is problem-solving. Peer support becomes more important and a further distinction can be made between the younger and older primary child here, with the older primary child making use of peer support, while the younger primary child will make use of adult support. Girls tend to need more social support than boys and if children are rejected by their peers, they cope cognitively and emotionally rather than using any other strategy. Depending on the stressor, the child may either make use of emotion-focused or problem-focused coping. Lastly, emotional intelligence seems to play a role in the coping process with regard to how resilient the individual copes successfully.

In the above discussion it became clear that a person's coping depends not only on the context, but that the resources available to the individual also enhance coping. Therefore various resources will be explained to illustrate how the resources play a role in reducing the effects of stressors, for example, but also in enhancing coping.

## **3.7 Coping resources in children**

### **3.7.1 Introduction**

Coping resources help to reduce the effects of stressors, but also to enhance coping. Coping resources therefore refer to the individual's characteristics such as the individual's health, values and beliefs and control. Other resources include material and environmental resources, as well as interpersonal resources. The former refers to money and access to services and the latter to factors such as social support networks (Sorensen, 1993).

According to Terry (1991), the individuals coping resources are available to him/her when he/she develops the coping strategies. If the individual is able to access these resources, it will help in developing effective strategies (Compas, 1987). Compas (1987) further postulates that the individual's coping resources that may facilitate positive coping adaptation to stress are divided into two aspects, namely the environment and the self. The environment refers to social support while the self refers to internal locus of control. However, even if coping resources are available to the individual, it does not necessarily indicate how or if the individual will make use of them (Fields & Prinz, 1997).

### **3.7.2 Six categories of resources**

According to Lazarus and Folkman (1984) the individual's coping is often dependent on his/her available resources. Six categories of resources are identified, namely:

#### **1. Health and Energy**

Health and energy can be regarded as a physical resource and also the most pervasive resources, in that these resources are relevant to coping in many stressful situations. Therefore a healthy individual is better able to cope than a sick individual and will make use of less energy than a healthy individual. Health and energy facilitate one's coping efforts (Lazarus & Folkman, 1984).

## **2. Positive Beliefs**

Positive beliefs can be regarded as a psychological resource for coping. By hoping, an individual is encouraged that the outcome is controllable. However, hope can only exist if there is a belief that one can make something positive. Some beliefs may even inhibit the coping efforts (Lazarus, & Folkman, 1984).

## **3. Problem-solving skills**

Problem-solving skills refer to one's competencies (Lazarus & Folkman, 1984). Problem-solving skills allow the individual to search for information, analyse the situation and find appropriate outcomes (Janis & Mann, 1977). This is therefore an important resource for coping. Problem-solving skills may also draw from other resources, such as one's experiences, knowledge, cognitive ability and self-control (Rosenbaum, 1980). Problem solving is very useful in that the individual can integrate coping skills into the plan which he/she chooses to solve a problem (Sharoff, 2002).

## **4. Social skills**

Social skills can also be considered as competencies. They are important because of the role of social functioning in human adaptation. Social skills refer to the ability the individual has to communicate and behave appropriately. Another function of social skills is that it facilitates problem solving and also gives the individual more control over social interactions (Lazarus & Folkman, 1984).

## **5. Social support**

This type of resource concerns the receiving of emotional, informational and tangible support. Someone who receives emotional support will be able to rely on and even confide in a person and will receive reassurance. This may even

contribute to the individual's feeling that he/she is being loved and cared for. Informational support involves the receiving of information and feedback about how one is feeling, while tangible support refers to loans or gifts (Lazarus & Folkman, 1984).

The more social support the individual has, the more active coping strategies the individual will use (Holahan & Moos, 1987).

## **6. Material resources**

This resource consists of money, services and goods that the individual can buy. Individuals who have money and are able to use it effectively, tend to fare better than the individual who does not have money. Coping options increase if one has monetary resources. These coping options may include legal, medical and professional assistance. Money decreases the individual's vulnerability to threat and may facilitate effective coping (Lazarus & Folkman, 1984).

## **3.8 Coping behaviour, styles and skills**

### **3.8.1 Coping behaviour**

The coping behaviour of a child is important in that it helps with the development and growth of the individual. The individual's coping behaviour refers to one's efforts to resolve stress, as well as efforts to create new solutions to challenges found in each developmental stage (Newman & Newman, 1997). Coping behaviour may vary from adaptive to maladaptive behaviour and from functional behaviour to behaviour that does not help with coping (Frydenberg & Lewis, 1991).

Numerous researchers agree that the coping abilities of children differ from those of adults (Arnold, 1990; Compas, Banez, Malcarne & Worsham, 1991; Omizo,

Omizo & Suzuki, 1988). Fields and Prinz (1997) observe that children's environment differs from adult's environment because children have less control over their circumstances and their coping is often limited due to cognitive, expressive, affective and social facets of development, and also the lack of experience. Therefore, aspects such as development and environment may limit the child's coping responses. Children may also have fewer coping behaviours than adults because of their limited experience, still-developing cognitive skills and constrained mobility. Furthermore, children have to deal with situations that are beyond their control. Strategies that work for adults, such as problem-focused strategies, may not necessarily work for children, especially if the situation is beyond their control (Kliewer, 1991).

### **3.8.2 Coping styles**

Coping styles are often influenced by the individual's gender, resources, relationships and life experiences. These coping styles which one uses undergo developmental transformations. Individuals who cope with challenges effectively and also resolve crises positively will acquire psychological strengths, also referred to as *prime adaptive ego qualities*. However, individuals whose coping styles result in new levels of stress, are likely to acquire *core pathologies* (Newman & Newman, 1997).

Erikson (1978) defines the *prime adaptive ego qualities* as mental states that will form an orientation toward the individual's interpretation of his/her life experience. A child who feels competent, will then exercise his/her wits so as to solve a problem(s) and inferiority will not hinder the process. In the middle childhood period, the ego quality is *competence*, and this refers to the child being able to exercise his/her skill and intelligence in completing tasks (Erikson, 1978).

Erikson (1982) mentions that *core pathologies* result in response to negative crisis resolution. According to Newman and Newman (1997) these core

pathologies may also serve as a guiding orientation towards one's behaviour. These pathologies may even cause barriers to relationships and interpersonal domains. The energy is now directed towards either bringing about or avoiding change. The core pathology found in the middle childhood is *inertia*.

### **3.8.3 Coping skills**

Coping skills are just as important as coping styles and behaviour. According to Sharoff (2002), coping skills originate as a result of the individual's personality traits, which influence both the selection and the development of the coping response. Sharoff (2002) further mentions that the individual's coping skills occur naturally as a part of the individual's ego functioning. Children develop their coping skills by means of learning through trial and error.

Coping skills, with regard to the psychodynamic approach, are built-in defence mechanisms that are there to help manage the unconscious sexual and aggressive conflicts (Sharoff, 2002). According to Freud (1964), these coping skills will help to protect oneself against internal instinctual forces. Adler (1929) also argues that it helps with regards to external, environmental threats.

Garmezy (1987) describes coping as a mediator of experience that will shape the individual's development of his/her personality. According to this view, coping also influences the person's adaptability, as well as resilience in difficult situations.

Children are often faced with challenges and stressful circumstances and these often require coping responses and strategies (Fields & Prinz, 1997). Various coping strategies will therefore be discussed.

## **3.9 Coping strategies**

### **3.9.1 Introduction**

Siqueira, Diab, Bodian and Rolnitzky (2000) describe coping strategies as a set of behaviours as well as attitudes the individual uses so as to mediate both internal and external demands. Coping with day-to-day stress varies from individual to individual (Lazarus & Folkman, 1984). Kaluza (2000) believes that there is no coping strategy that has proved to be effective in most situations for most individuals. The effectiveness of coping will depend on various factors such as situational variables (Masel, Terry & Gribble, 1996), social context (Silver, Wortman & Crofton, 1990) and individual dispositions (McCrae & Costa, 1986)

In a study by Kliewer (1991), it was found that in the middle childhood period, coping styles, cognitions and behaviour interaction patterns are associated with the child's use of specific coping strategies in response to the stressor. In addition to this, the individual's self-esteem also plays a role in stressful events. Fleishman (1984) has found that if an individual has a high self-esteem, in that the individual has positive feelings and a liking for him-/herself, this individual will then be able to deal more confidently with negative life events. Such an individual will therefore also focus more on problem-focused strategies. Holahan and Moos (1987) also argue that individual's who are self-confident or have a high self-esteem, make less use of avoidant strategies. Self-esteem therefore has an effect on the individual's coping and it involves more problem-focused coping. Individuals who tend to either avoid thinking about the problem or to ignore it, will often engage in emotion-focused strategies and their coping strategies often deal with the emotional distress which accompanies the stressful event (Fleishman, 1984).

Various coping strategies are identified in the literature. Amirkhan (1990), for instance, refers to problem solving, seeking social support and avoidance.

Carver, Scheier and Weintraub (1989), Endler and Parker (1990) and Segal, Hook and Coolidge (2001) describe coping strategies such as problem-solving/problem-focused strategies, seeking social support/emotion-focused strategies and also avoidance/dysfunctional coping.

Each strategy is therefore important and no one strategy is better than the other. The success of the strategy should only be determined with regard to the effects it has (Lazarus & Folkman, 1984).

### 3.9.2 Types of coping strategies

Ayers, Sandler, West and Roosa (1996) provide a list of eleven categories with regard to children's coping and its definitions. Ayers et al. (1996) also categorise coping into five dimensions, namely:

1. **Problem-focused strategies** can be divided into *cognitive decision-making* and *direct problem solving*. The former refers to the planning and thinking of how to solve a specific problem. It involves more than merely thinking about the problem, but involves thinking about how to solve it. It is therefore the planning, but not the execution of the actions necessary to solve the problem. The latter refers to the efforts involved in changing the problem situation by either changing the self or the environment. This refers to what the individual does, but not what he/she thinks.
2. The second dimension is **direct emotion-focused strategies**. This strategy is divided into *seeking understanding*, *positive cognitive restructuring* and *expressing feelings*. Seeking understanding refers to the cognitive efforts to find meaning in a situation that is regarded as stressful or even to understanding the situation better. It primarily refers to seeking understanding, and not to putting a positive interpretation on

the situation. Positive cognitive restructuring refers to thinking about the stressful situation in a more positive manner. The individual will then either minimise the problem or the consequences of the problem. Optimistic thinking can be regarded as an example of positive cognitive restructuring. Lastly, expressing feelings implies overt expression of one's feelings by means of an action so as to express the feeling, or a verbal expression of the feeling, or it could also refer to an overt release of the emotion the individual is experiencing. The individual expresses his/her feelings when alone and the individual will not discuss the emotion with others. The expressing of feelings takes place in an appropriate manner and will not hurt or threaten anyone.

3. ***Distraction strategies*** are the third dimension which involves physical release of emotions and distracting actions. The individual will make use of exercising or play to release the feelings. The latter refers to avoiding thinking about the problem by using, for example, distracting stimuli or entertainment.
4. ***Avoidant strategies***. *Avoidant actions* and *cognitive avoidance* are the subdivisions of this dimension. The former refers to the behavioural efforts which the individual uses to avoid the stressful situation: the individual will either leave or stay away. The latter, however, refers to avoiding thinking about the matter. Examples of this are fantasy or wishful thinking. Behaviour is not used, but rather a cognitive activity.
5. Lastly, ***support-seeking strategies*** refers to problem-focused support and emotion-focused support. In problem-focused support, other individuals are used as resources so as to assist in seeking solutions to the problem situation. Emotional support is not sought. In emotion-focused support, other individuals will listen to the feelings of the

individual and may even provide understanding so that the individual becomes less upset.

In addition to this, Sorensen (1993) lists some behavioural coping responses. These coping responses include cognitive-emotional components and associated behavioural manifestations. They are:

1. **Problem solving:** The individual will approach the stressor in a behavioural manner directly and actively. If something is broken or lost, for instance, the individual will repair it or look for it.
2. **Emotional expression:** Here, the child will manifest his/her feelings by for example crying or screaming.
3. **Distraction:** The individual avoids or sublimates the stressors. This can be done by playing or doing something which does not involve the specific stressor.
4. **Rebellion:** This is the individual's manner of refusing to submit to or comply with the stressor.

Other coping responses which Sorensen (1993) discusses are:

1. **Thought reframing:** This refers to either intellectual or emotional attempts to change perceptions or by talking to oneself to reframe the perceptions.
2. **Taking personal responsibility:** This refers to apologising and taking action to improve a situation.

3. ***Emotional/external focus:*** This implies that the individual will direct emotional responses outside of him-/herself and not centre feelings within him-/herself.

Therefore, when combining both coping resources and strategies, the individual will be able to cope with the situation after also appraising it correctly. However, as Folkman and Lazarus (1984) point out, the strategy can only be regarded as successful if the desired effects are achieved, but it is the individual's responsibility to make use of the resources and strategies (Fields & Prinz, 1997). The strategies should also be age and situation appropriate.

### **3.10 Summary**

Although numerous definitions are used to explain the term *coping*, the definition to which is most often referred, is that of Lazarus and Folkman (1984), namely that *coping is a behavioural as well as a cognitive effort the individual makes in order for him/her to manage the demands appraised by the individual as either taxing or exceeding his/her resources*. Coping is then also seen as process-oriented.

The concept of *coping* is also sub-divided into various types of coping, which also expands the concept so much more. Furthermore, coping and stress are interrelated, in that coping will occur when a person stresses, so as to decrease or tolerate the effects of the stressful situation.

The theoretical approaches coincide with the definition given by Lazarus and Folkman (1984) and illustrate the definition in more detail. According to the researcher, they are all valid, but one should combine the definition with the theories and models, so as to obtain a holistic description of the issue.

The development of the child in terms of age and gender seems to play a role in not only how the child will cope, but also in what type of coping strategies the individual will use. In addition to this, coping resources will not only enhance coping but will also help to reduce the effects of stressors, and a child will develop his/her coping skills by means of learning through trial and error. Therefore, when combining resources and strategies, coping with a situation is evident. Being creative with one's coping strategy will elicit creative coping ideas and will help the individual to go beyond the borders or conventional thinking and divergent thinking will take place. The more creative thinking one applies to various solutions to problems, the better the solution should be and the more types of strategies should be formed.

Self-concept will be discussed in the following chapter. The relevance of self-concept for this study is that a positive self-concept will help to lead the individual to *effective behaviour* and *good coping skills* and it will ultimately create a *driving force towards a better life* (Hammes-Kirsten, 1997).

## *Chapter 4: Self - concept*

### **4.1 Introduction**

In this chapter, both self-concept and self-esteem will be discussed in detail, because self-esteem may be regarded as a closely related aspect of one's self-concept (Sigelman & Rider, 2006). Furthermore, the term *self-image* will be discussed briefly, since it is regarded as a sub-division of self-concept. Definitions will be provided, and a collective overview will be given. Thereafter, the developmental aspects and theories will be discussed. Other aspects, such as factors that may affect self-concept, components of self-concept and the role of emotions, the teacher, parents and peers, will also be discussed. Factors such as possible causes of a low self-esteem, positive and negative affects of self-esteem and ways to nurture one's self-esteem will also be presented.

### **4.2 Definitions**

Terms such as *self-concept*, *self-image* and *self-esteem* all contain the prefix *self-* and the term *self*, according to Jordaan and Jordaan (1989), is defined as the individual's view of the combination of his/her physical, social and psychological characteristics. Definitions of these concepts will be given, as they are all regarded as dimensions of one's self-concept.

#### **4.2.1 Definitions of self-concept**

Greef (2000) points out that various definitions have been formulated for the term *self-concept*. Self-concept was for numerous years viewed as a single global dimension and emphasis was placed on the overall evaluation a person makes of him-/herself. In the 1960s and 1970s, self-concept was an unproblematic

construct and it was handled as a trait. As such it referred to generalised, rather stable, cognitive set of descriptive features of an individual (Van der Meulen, 2001). However, this has been questioned from different angles over the last two decades (Van der Meulen, 2001). Aspects such as a cognitivistic interpretation of the self-concept (Byrne, 1996; Damon & Hart, 1988), as well as the proposal for a more dynamic self-concept by Markus and Wurf (1987) had an influence on this process.

One's self-concept can also be identified as either positive or negative, in that an individual's self-concept can be regarded as *positive* if the individual evaluates his/her traits as good and acceptable (Louw, 1991). According to Saracho (1980), if an individual has a positive self-concept, the individual will perceive him-/herself as *important* and *capable to utilise learning experiences*.

The self-concept is negative when the individual is dissatisfied with his/her traits (Louw, 1991) and a negative self-concept may lead to the individual feeling inferior and incapable of utilising learning experiences (Saracho, 1980).

Definitions provided for the term *self-concept* varies from the perception the individual has of him-/herself to attitudes and wishes, and it is even seen as a diverse collection of ideas the individual has. These definitions illustrate the diversity of this term. Specific definitions include:

- Self-concept can be seen as the *view or image* a person has of him-/herself and includes aspects such as self-image, self-acceptance and self-esteem (Sigelman & Rider, 2006).
- The desired self-concept is defined by Louw and Edwards (1993) as what *one wishes to be like*. This concept indicates that identity is not only content or structure, but rather active or motivated. People are therefore continually striving to shape him-/herself into a more positive image.

- Hamacheck (1987) believes that self-concept refers to an individuals *ideas and attitudes* regarding him-/herself at any given time.
- Baron and Bryne (1994) describes the self-concept as a complex collection of *diverse information* that is held together as “you”.
- Lefrançois (2001) defines self-concept as a term that reflects the *description* one gives to a stranger regarding your *personality characteristics*. Therefore, it is a reflection of what the person thinks of him-/herself and what the person believes others think of him/her.
- The term *self-concept* can also be referred to as a more *limited view of the self and domain specific*. The individual will for instance, evaluate him-/herself with regard to his/her academic abilities (Santrock, 1998).

Just as for self-concept, various definitions and viewpoints are also held regarding self-esteem.

#### **4.2.2 Definitions of self-esteem**

According to Hewitt (2002), self-esteem is often defined as the evaluative dimension of the self-concept and is also viewed as a psychological state of self-evaluation, which ranges from positive or self-affirming, to negative or self-denigrating. Schiraldi (2000) defines self-esteem as a realistic (accurate and honest) appreciation (positive feelings and liking) of oneself: it therefore involves a clear view of oneself and a gladness to be oneself.

Bourne (2000) mentions that self-esteem has to do with how the individual thinks, feels and acts, thereby implying that one should accept, respect, trust and believe in oneself. When one starts to accept him-/herself, one can start to live comfortably with both his/her strengths and weaknesses. The individual acknowledges his/her dignity and value as a unique human being, thus respecting him-/herself. Self-trust refers to one's behaviour and feelings that are consistent and provides the individual with an inner sense of continuity and

coherence irrespective of changes or challenges in one's external circumstances. Lastly, when an individual who believes in him-/herself feels that he/she deserves good things in life. The individual will also have confidence to fulfil needs, goals and aspiration. Self-esteem needs to come from within (Bourne, 2000).

Another viewpoint, given by Smith-Lovin (1995), describes self-esteem as a reflexive emotion that has developed over time, but in social processes of invention. Individuals therefore learn to experience and talk about it that arises in social circumstances that are predictable and subject to social control.

Furthermore, self-esteem is essential for one's psychological survival. Individuals have the ability to define themselves and to decide if they like this identity. One can damage one's psychological structures when one rejects parts of oneself; in response to this one can encounter pain and take fewer risks. Barriers of defence may then occur to avoid further judgements and self-rejection (McKay & Fanning, 2000).

McKay and Fanning (2000) refer to the chicken and egg scenario, when explaining that one's self-esteem may develop because of one's circumstances but that one's circumstances may also be influenced by one's self-esteem. They conclude that self-esteem and circumstances are indirectly related, but that one's thoughts also play a role in this process.

According to Davis (1996) *self-esteem is linked to creativity*. Davis (1996) indicates that once a child is placed in a structured and a traditional setting, a drop in both self-esteem and creativity occurs. Creative behaviour may help to build a child's self-esteem and this behaviour validates thoughts and feelings (Smith, 1993).

Self-esteem also has an emotional component and is based on the relation between the standards of individuals and their evaluation of their attributes. Self-

esteem explains the individual's degree of anxiety or uncertainty compared to one's feelings of pride or confidence that follows one's reflection of one's attributes (Kagan, 1998). Self-esteem does not only help to protect one from anxiety and stress, but it is also a predictor of happiness and life satisfaction (Schiraldi, 2000). Self-esteem can, however, be developed (Shiraldi, 2000) and even enhanced by conforming to social expectations so as to receive approval by others (Hewitt, 2002).

A child's self-esteem is developed through his/her interaction with his/her parents, friends, teachers and siblings. If these interactions are positive, the child will feel valued and competent. This competency increases self-esteem (Smith, 1993). According to Thompson and Rudolph (2000), self-esteem can be seen as a by-product of one's productive activity and relationships. Self-esteem is also determined by the quality of the child's relationship with the individual(s) who play(s) a significant role in his/her life. Self-esteem is positive if the child feels worthy and experiences a feeling of self-confidence and self-respect (Smith, 1993).

In the *first three to four years*, a child is influenced by his/her parents' child-rearing style and this in turn may determine the amount of self-esteem with which the child starts (McKay & Fanning, 2000). Schiraldi (2000) remarks that parents who model self-esteem and show their child that he/she is valued for who he/she is, will help the child to develop an own self-esteem. According to Maslow's (1970) hierarchy of self-esteem needs, the child needs someone to affirm his/her self-worth, and the child needs to be given the opportunity to achieve and to accomplish tasks which he/she undertook. Lastly, the child also needs to be given the opportunity to make choices for him-/herself.

According to the theory of Allport, however, a child's self-esteem develops as soon as the child becomes aware of his/her identity. At the age of three or four, it becomes prominent. Pride is now shown in his/her skills and achievement and

the self-worth develops. This self-worth changes continuously, depending on the experiences and changes that occur in his/her value system (Louw, 1991).

Kidwell (1982) has found that the *middle-born child* has lower self-esteem than the first- or last-born. Baron and Byrne (1994) suggest that this could be because the first-born is often allowed more freedom and the youngest often receives the most parental affection, thus leaving the middle child feeling unloved and mistrusted.

Changes occur in self-esteem over the years (Van der Meulen, 2001). According to Demo (1992) and Harter (1998), there seems to be a decline in one's self-esteem, but in the middle childhood period, there is a recovery in the individual's global self-worth. This decline could be ascribed to a more realistic view of themselves (Van der Meulen, 2001). A slight decline again occurs in early adolescence, in response to possible changes in school settings or other social settings. A steady increase is found from then onwards until late adulthood (Van der Meulen, 2001).

In order to understand and broaden the term, *self-concept*, self-image, will be discussed.

### **4.2.3 Definitions of self-image**

Self-image, as treated by Sigelman and Rider (2006), is one of the sub-divisions of the self-concept. The development of one's self-image, according to Raath and Jacobs (1990), is one of the most important tasks that a child must execute in his/her middle childhood period. Self-image can be defined as the way in which the individual experiences him-/herself – this may not necessarily be a realistic and accurate view of the self (Jordaan & Jordaan, 1989). According to Santrock (1998), self-image can be seen as a global evaluating dimension of the self.

Collectively, the individual's *self-concept* can be seen as the *individual's image of him-/herself and includes various aspects, such as the person's attitudes and views of him-/herself. All of this play a role in forming the self. Self-esteem (an aspect of one's self-concept) involves having a clear and realistic view of oneself. It develops as a result of the quality of the child's interactions with others, especially significant others, and self-confidence: a feeling of worthiness results in response to this. A child's creative behaviour may also enhance his/her self-esteem.*

Theories regarding self-concept and self-esteem will be examined to illustrate the concepts in a theoretical framework.

### **4.3 Theories regarding self-esteem and self-concept**

#### **4.3.1 Humanistic approach: Abraham Maslow**

Maslow is regarded as the father of the humanistic approach. According to Maslow, people are worthy of respect, inherently good and have the potential to actualise. Maslow also see people as growth-orientated and continuously following objectives that will make their life rewarding and meaningful. Maslow designed a hierarchy of needs, which are differentiated between basic and meta-needs. The former needs are deficiency motives and the latter are growth motives (Möller, 1995). These needs are divided into five groups (cf. figure 4), which are arranged according to the urgency to satisfy them.

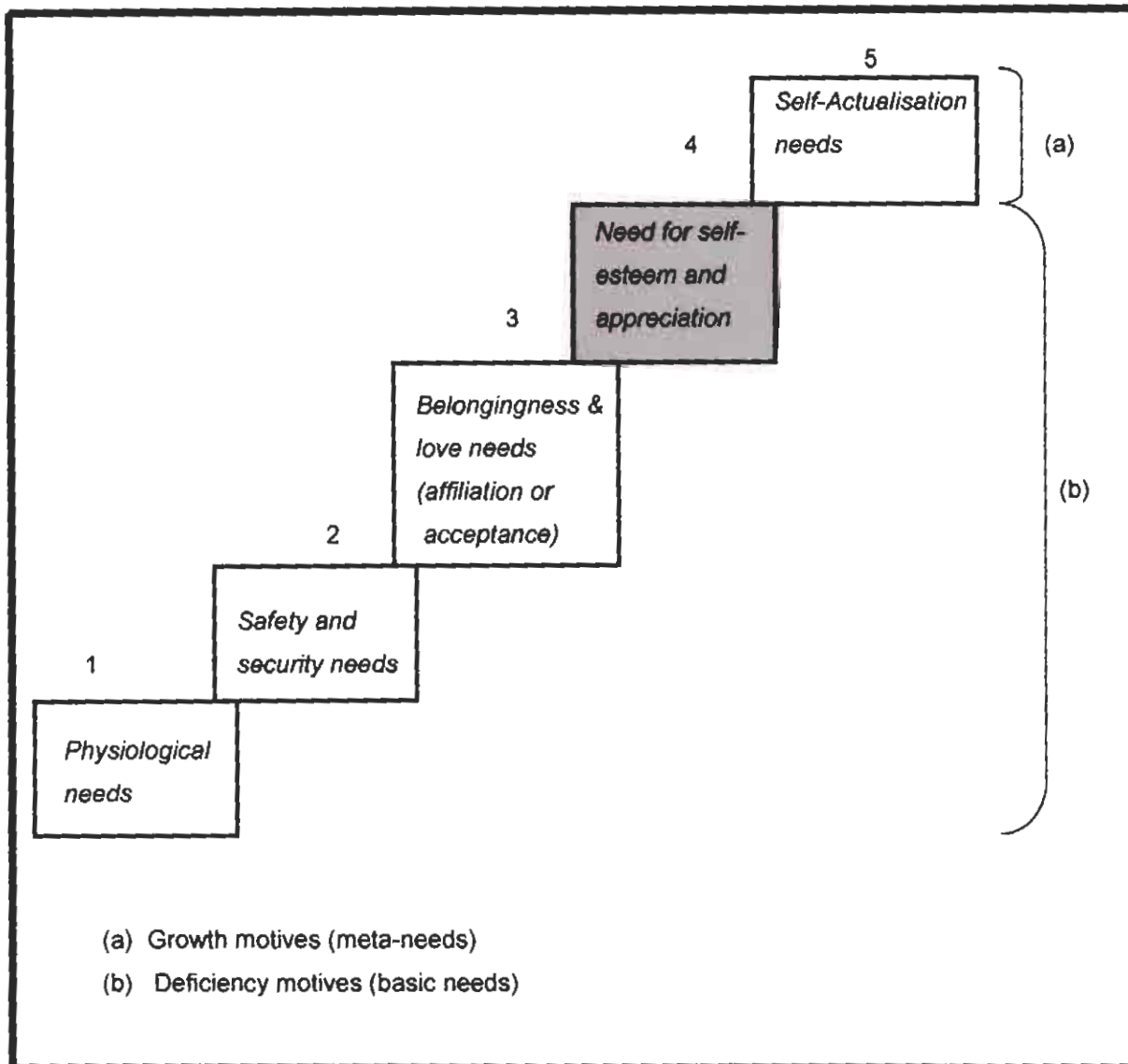


Figure 4: Maslow's hierarch of needs (Möller, 1995, p.203).

The assumption regarding this hierarchy is that the lower-order needs have to be satisfied first before the person will become aware of the needs that are higher in the hierarchy. Only a short description will be given to explain each, as the main focus of this study is on the needs for self-esteem and appreciation.

**Physiological needs:** For survival one needs food, water, oxygen, protection etc. Once these needs have been met, the individual can move on to the following level, namely safety and security needs (Möller, 1995).

**Safety and security needs:** One has a need for security, order and structure and this plays an important role in motivation of behaviour. Children have a need for fixed, undisturbed routine (Möller, 1995).

**Needs relating to love and affiliation:** Thirdly, people have a need for belonging and for receiving love. This level becomes more dominant once the previous two levels are satisfied. Individuals need warmth and acceptance and often long for affectionate relationships especially within the family (Möller, 1995).

**Needs for self-esteem and appreciation:** Once the individual starts to feel affiliated and does not experience rejection, the individual will experience a need for esteem and this will not take preference. A need for self-esteem needs and a need for appreciation represent the two sub-sections of this level. The former refers to becoming more self-confident and competent, and to a need for achievement and independence, while the latter refers to needs such as attention, status, fame and reputation. Feelings which arise once the individual reaches a satisfaction of needs for esteem, are self-confidence, self-worth and feeling self-competent. However, if the needs are not satisfied, the individual may feel inferior and weak, as well as helpless (Möller, 1995).

**Self-actualisation:** The meta-needs of a self-actualised individual are goodness, virtue, justice and unity. Only 1 % of the population will reach self-actualisation according to Maslow. This is due to that many individuals do not acknowledge their potential and do not realise that self-actualisation is actually possible. Prejudices may also hinder the self-actualisation potential (Möller, 1995).

The viewpoint of the self-theory will be discussed to gain further insight into the view of self-concept.

### 4.3.2 Self-theory: Carl Rogers

Rogers believes that man is striving to actualise him-/herself in order to achieve maturity. The focus is therefore on the future. The central focus, however, is on the self: hence self-theory. It became clear for Rogers that the self plays an important role in ones experiences. The self may be differentiated from the individual's experiences. A person's self-concept develops due to the self-experiences, together with positive and negative values accompanying it (Möller, 1995).

The self indicates how the individual will feel about and see him-/herself, but also how he/she rates him-/herself and new experiences (Möller, 1995). Rogers, argues that values play an important role in the self-concept and can be acquired either through a specific experience or by being taken over from others and incorporated into the structure of the self (Möller, 1995). Rogers identifies four attributes which may be ascribed to the self-concept:

1. The self-concept can be seen as *conscious*. The individual will direct all his/her behaviour in accordance with a conscious self-concept.
2. The self-concept also seems to *remain constant over time and in different situations*. Thus, the way in which one rates oneself will influence the way one will see oneself at a specific time and in a specific situation.
3. The self *functions as a whole* and one's behaviour is seen as consistent with the self-concept. Thus, the individual will not do something which is in conflict with the self-concept. The individual will not be able to actualise him-/herself if the experiences do not correspond with the self.

4. Lastly, a *change will occur* in the way the individual *perceives others*, if a *change occurs in his/her self-concept*. A distortion in the self-concept will be reflected in the individual's behaviour (Möller, 1995).

The humanistic stance of Allport is described below, in order to illustrate this viewpoint on self-concept.

### 4.3.3 Theory of Allport

The humanists (represented here by Allport) believe that the uniqueness of each individual should be the main objective of psychology. Personality traits are emphasised in his theory (Möller, 1995). Allport describes the self by using the term *proprium* but prefers to speak of *proprie functions* instead. *Proprium* can be defined as all the aspects of one's personality. This refers to the central part of the individual's world of experience, which relates to "me" or "I". Certain experiences acquire personal meaning and make the individual feel intimately involved in it, and this is what distinguishes individuals from one another (Möller, 1995).

The *proprium* is not inborn and the development of the *proprium* is therefore characterised by the individual's realisation of the "I" or "me" of self-consciousness. This process, which is dependent on maturation, learning, differentiation and integration, takes place in seven phases. These phases are:

- the development of the bodily self;
- self-identity;
- self-esteem;
- self-extension;
- self-image;
- rational self; and
- *proprie striving* (Möller, 1995).

The first three phases develop during the first three years of the individual's life, while the self-extension and self-image develop between four and six years of age. The rational self develops between the ages of six and twelve, while propiarte striving occurs in adolescence (Möller, 1995). For the purpose of this research, only self-esteem and self-image will be discussed.

*Self-esteem* is an important aspect of one's self-concept and refers to the rating of one's value. Words such as *shy*, *proud*, *inferior* and *ambitious* are often used to describe one's self-esteem (Möller, 1995). The self-esteem, according to Allport, develops at about two years of age when the child has a need to show that he/she can do things independently. At three years of age, negativism, also an indication of the developing self-esteem, occurs in that the child will refuse to do anything asked of him/her (Möller, 1995). Thus, one's self-esteem develops throughout one's life, but its development depends on the expectations of the parents as well as the feedback the child receives from them (Möller, 1995).

At four years of age, the self-image starts to develop. A person's self-image has to do with how the individual sees him-/herself. It is a general, moral assessment the individual makes of him-/herself (Möller, 1995). By punishing, rewarding and reprimanding the child, the parents make him/her aware of the type of individual they want him/her to be. The child's self-image will start to develop as he/she learns that his/her parents want him/her to be good rather than naughty (Möller, 1995).

Three aspects can be distinguished regarding the self-image: the self-image as the individual sees him-/herself (known as the *true self*); the image the individual would like to be (therefore the *ideal self*); and the image of how he/she should be, according to the standards of the society (Möller, 1995).

Because Freud did not focus solely on the concepts *self-concept* or *self-esteem*, his concepts of the id, ego and superego, which make up the personality will be discussed below.

#### **4.3.4 Theory of Sigmund Freud**

Freud did not focus solely on self-concept or self-esteem, but believed that one's personality consists of three structures, namely the id, the ego and the superego (Corey, 1996; Möller, 1995). The id refers to the original system of one's personality and Freud believes that when an individual is born, the person is all id, and that the id is the seat of instincts and that it is largely unconscious. This seat of instincts also motivates one's behaviour. The ego controls and regulates the individual's personality and mediates between the environment and the instincts. The ego also controls the conscious. The superego is viewed as the judicial branch of one's personality, or the moral side of one's personality (Corey, 1996; Möller, 1995).

According to Freud, instincts play a role in one's life. The term *libido* was initially used to refer to sexual energy/instinct. However, the association between libido and sexuality can be misleading, as Freud meant to encompass pleasure and sexuality, as well as the physiology and mental representations of it. The understanding of libido was later broadened to include life-and-death instincts (Corey, 1996; Kaplan & Sadock, 1998).

Freud also refers to the term narcissism which is used to describe "situations in which an individual's libido is invested in the ego itself rather than in other people" (p. 213 in Kaplan & Sadock, 1998). Freud uses this term to describe various psychiatric disorders and various dimensions of one's experiences. At birth, according to Freud, there is a primary narcissism in that the libido is stored in the individual's ego. This means that the child has needs which have to be

satisfied. Freud also uses the term *narcissism* synonymously and interchangeably with self-esteem (Kaplan & Sadock, 1998).

Freud further believed that the structure of one's personality is formed during the first six years of life. Freud then developed the psychosexual stages of development, namely the oral, anal, phallic, latency and genital stages (Möller, 1995). Each will be described briefly.

1. The **oral stage**, is the stage where satisfaction occurs via the child's mouth and is typical of the first year of life (Möller, 1995). Sucking the mother's breasts satisfies the child's need for food and pleasure. The sucking produces erotic pleasure; the infant is nurtured and oral gratification is achieved (Corey, 1996).
2. During the **anal stage**, at ages two to three, the satisfaction is mainly in the anal zone and this includes developing tasks such as learning to become independent, learning to express negative feelings and also learning to accept personal power (Möller, 1995).
3. The **phallic stage** ranges from ages three to five. The child becomes aware of his/her genital organs and the Oedipus and the Electra complexes can also occur at this stage (Möller, 1995).
4. The **latency stage**, which ranges from six to twelve years of age, is not considered as very important for the personality development. In this stage, interests regarding school, friends and sports replace the child's sexual interests. The child will start to form relationships with others as well (Möller, 1995).

5. The **genital stage** starts at puberty and lasts until senility. The child forms friends and participates in sport activities, but also starts to prepare for a career (Corey, 1996; Möller, 1995).

The above-mentioned theories will be evaluated based on the researcher's perceptions and framework.

#### **4.4 Critical evaluation of the theories**

The assumption underlying the hierarchy of needs is that one can only progress to the next level once the previous levels have been satisfied. However, this is a restrictive view, because the needs of individuals differ according to their circumstances and these needs may therefore not follow the hierarchy as presented. The researcher believes that these needs presented by Maslow, even though relevant, may be too rigid.

In contrast with Rogers, the researcher also believes that one's self-concept can change and that circumstances and changes in the individual's life may either enhance or hinder the self-concept.

The researcher agrees with Allport that the self-concept develops throughout one's life. However, it should not only depend on the expectations of one's parents. Neither does the researcher believe that the parents should, either by rewarding or punishing the child, make the child aware of how they want him/her to be. The child should develop his/her own self-image and be able to learn from others, but then to broaden his/her views, and not to solely depend on these inputs from others. The child should therefore develop and grow by learning from his/her own mistakes. The child will then also take more risks and by doing so, learn and become more motivated.

Although Freud does not formally focus on the self-concept, the term *narcissism* is used to refer to self-esteem. The researcher believes that the terms, *narcissism* and *libido* are open to too broad an interpretation, that their true meanings may become confused. The researcher further believes that the latency stage should receive more recognition, because of the important role that school and friends play in one's life.

Various opinions have been provided regarding the development and importance of a child's self-concept. This development and the various stages associated with it will be discussed below.

## **4.5 Development of the self-concept**

### **4.5.1 Introduction**

The middle childhood is a critical period with regard to the development of the self-concept (Swayze, 1980 & Yawkey, 1980). During this period, the self-concept develops rapidly and factors such as parents and friends play a role. This period is also crucial for the development of the child's cognitive, social, emotional and self-concept development. The child will better understand his/her world once he/she has developed the aforementioned aspects (Louw, 1991). The child's view of his/her experiences also depends on his/her self-concept and perceptions often influence the way the child views others (Yawkey, 1980).

According to Swayze (1980), one's self-concept is acquired and not inherited. The individual's self-concept therefore develops continuously and in children, it is based on aspects such as physical performance and appearance as well as feedback from peers and interaction with others (Braet, Mervielde & Vandereycken, 1997; O'Dea & Abraham, 1999 & Pierce & Wardle, 1997). Purkey and Novak (1996) also agree that no one is born with a self-concept.

Childhood experiences are vital for forming the child's self-concept (Baron & Byrne, 1994). Purkey and Novak (1996) also agree that the experiences of the individual ultimately help to modify his/her self-concept. The development of one's self-concept is a crucial developmental task (Swayze, 1980) and childhood, as well as adolescence, according to Erikson's stage of ego development, are critical in the development of a healthy self-concept (Sigelman & Rider, 2006). If this process is unsuccessful, feelings of inferiority, identity confusion and an inability to make life choices may result (Sigelman & Rider, 2006). One's self-concept is often offered as an explanation for socially conforming or prosocial behaviour to antisocial or deviant behaviour (Hewitt, 2002).

According to Felson (1989), children tend to evaluate themselves based on how their parents evaluate them and as children grow older, assumptions are also based on the reactions of others and the impact of their self-concept becomes more important (Braet, Mervielde & Vandereycken, 1997).

#### **4.5.2 Stages of the development**

In order to understand the development of self-concept, the various stages thereof should be explained, as a person's self-concept develops continuously throughout life (Sigelman & Rider, 2006).

The first stage occurs at about *six or eight months of age*. The child begins to distinguish between him-/herself and other people (Sigelman & Rider, 2006). This stage is called the *existential self* by Lewis and Brooks-Gunn (1979). The child also starts to realise that he/she continues to exist. The *early childhood years*, are very important for the child's self-concept. The child not only builds on the foundations laid in infancy, but also becomes aware of traits such as age and gender (Bee, 1981). In the first three years of a child's life, the child moves from a symbiotic union, through awareness of separation, to a sense of self and then the child finally separates from the mother (Mahler, 1963; Mahler, Pine and

Bergman, 1975). A healthy self-concept is related to the child's self-identification and the separation from his/her mother. A sense of fear and a loss of confidence occur when there is a disturbance in the process of identification.

As soon as the child learns in his/her second year that people and objects exist, even though they are out of sight, a sense of perception occurs that others have a separate existence. This can also be referred to as object constancy or object permanence (Piaget, 1954). As soon as a child is able to separate him-/herself from his/her mother, the individual is free to explore new things in the environment and is therefore open to experiences in life. It is difficult to hold a picture of his/her mother in mind if object constancy has not been achieved (Swayze, 1980).

Behaviour is more acceptable if the child has established a sense of selfness at the age of four/five (Swayze, 1980). During this stage, Erikson (1955) believes that the child should be allowed choices and the child should also be developing a sense of initiative in his/her development. This is also the period when the conscience becomes established and the concept of male/female develops as the child starts to relate to his/her parents and to others as well. Make-belief and endless questions are also common in this stage. A healthy self-concept will be present at age five, if trust, autonomy and initiative have been developed. Erikson (1950; 1955) believes that the affection and loving care given by the mother is essential for developing a sense of trust in the child. This sense of trust can be seen as the foundation in the stages in the development of the identity. From the ages of five to seven, changes also take place at social and cognitive levels (Cole, Maxwell, Martin, Peeke, Seroczynski, Tram, Hoffman, Ruiz, Jacques & Maschman, 2000).

Later stages continue and become more complex as the traits become more differentiated and cognitive abilities increase (Louw, 1991). A sense of striving to be successful is found in the *school-age child*. The young child wants to be

skilled at doing things and also to produce. The child will also often form gangs and be loyal towards his/her friends. Being part of a healthy gang, being loyal and accepting rules help to develop a sense of self-respect and respect for others, and it also helps the child to become more confident in him-/herself. A sense of hopelessness may occur when the child experiences trouble at the beginning of school years (Swayze, 1980). Self-perceptions are very positive when the child enters his/her primary school years. Expectations of the self may also be unrealistically optimistic (Cole et al., 2000).

Between the ages of *seven and thirteen*, the child develops a capacity for abstract thoughts. The child will now begin to understand the emotions of others and will also be able to combine series of situations. The child learns a lot about others, but also about him-/herself and about his/her place in the world (Osborne, 1996). As the child develops and changes physically, emotionally and socially, the individual often seeks a new sense of trust and a sense of independence. A sense of identity is being explored and developed. Although freedom is often sought, the individual also wants the security and comfort that is associated with parental control and firmness (Swayze, 1980). Erikson (1968), however, observes that when bodily changes occur and when the child's abilities and social status change, it may have an effect on the child's self-concept, thus explaining why *adolescents* often experience identity crises.

The middle childhood period may therefore be described as a critical period in the child's development of his/her self-concept, but at the same time it must also be acknowledged that the child's self-concept develops continuously. If the child does not develop his/her self-concept successfully, he/she may feel inferior or experience an identity crisis, and also be unable to make choices regarding life decisions. Various stages concerning the development of the self-concept have been described, starting at six or eight months. By the age of seven and thirteen years, the child is capable of abstract thoughts and of understanding emotions of

others. They tend to want to be more independent, but at the same time also seek parental firmness.

Even though the self-concept develops continuously, certain factors influence it, as will be indicated below.

## **4.6 Factors influencing the development of the self-concept**

Factors that may affect the development of the child's self-concept are:

### **4.6.1 Parents**

As parents are primary caretakers, and their influence on and role in the development of their child's self-concept is of great value (Joseph, 1994). According to Coopersmith (1967) parents set clear and definite demands and standards when, for example, their son has a high self-esteem. These parents are also even more active in their role as parents and allow the child to express his/her opinions. Parents of children with low self-esteem show clear differences from the former. Sigelman and Rider (2006) have also found that the attitude of parents and the family structure and interactions all play a role in the development of the child's self-concept.

The way in which parents raise their child, or their parenting style, therefore has an impact on the development of the child (Doyle, Markiewicz, Brendgen, Lieberman & Voss, 2000). Bee (1989) believes that if a child grows up in an authoritarian house, the child often has low self-esteem and may be less skilled in relationships. Authoritarian parents are described by Louw (1991) as parents who place much emphasis on conformity and obedience and who may reject a child who does not adhere to it.

Parents should therefore allow their child(ren) to develop their own identity and not overprotect them. By giving positive feedback to the child, the child can strengthen his/her self-concept. A child who receives only negative feedback often feels inept. Clear and consequent messages should be given to the child and the parent should remember that contradictory messages may lead to confusion (Harter, 1993).

According to Brooks (1996), parents help to foster all facets, such as protecting, nourishing and guiding, of a child's growth. Brooks (1996) further argues that parents must develop warm, nurturing relationships with their children and also provide opportunities for the children to learn to be more independent and competent. Parents are a key aspect in a child's life; yet parents seem to be spending less time with children due to work obligations and also because the children spend a lot of time at school.

#### **4.6.2 The role of teachers and school**

According to Sigelman and Rider (2003), school plays an important role in the child's development, especially in the middle childhood. The role of the teacher is equally important in that the teacher helps the child to develop social skills and allows him/her to expand his/her world. Joseph (1994) also indicates that while the child is still at school, positive aspects of the self-concept can be learnt, such as developing new abilities, learning to trust others and even to become more independent.

Researchers have found that there is a relationship between the individual's self-concept and school achievement (Hansford & Hattie, 1982; Hattie, 1992; Harper & Purkey, 1993; Hoges & Renzulli, 1993 & Colangelo, Kelly & Schrepfer, 1987). Purkey and Novak (1996) also postulate that schools plays an important role and influences the way in which the individual will view him-/herself and his/her abilities. Pupils' self-concepts are influenced by those individuals who treat them

as able, valuable and responsible, but also by those who influence them negatively by treating them as unable, worthless and irresponsible (Purkey & Novak, 1996). Children tend to persist more with their tasks if they have a positive perception of themselves (Chapman, 1988). On the other hand, Covington (1984) concludes that if the child has a poor self-concept, the child will often give up when faced with a difficult situation. Teachers are referred to as stimulus objects, in that they have a profound impact on the self-concept of the pupil (Beane, 1991). Beane (1991) further suggests that teachers should encourage positive perceptions in their pupils with regard to their abilities and themselves.

Harper and Purkey (1993) and Silvernail (1987) agree that there is a downward trend in the pupil's self-concept as they progress through school. Marsh (1993) points out that the academic self-concept drops from grade four through to grade seven; however, Stanley and Purkey (1995) found that if an inviting environment surrounds a pupil, the pupil is not likely to have a decline in their self-concept.

#### **4.6.3 Peers or social contact**

The way peers, teachers and other adults treat children will have an effect on the child's self-concept (Louw & Edwards, 1993). Murray, Rose, Bellavia and Holmes (2002) believe that a low self-concept may be indicative of a need for acceptance and interpersonal contact. Children with low self-concept often have a need to feel included.

Friendships develop through various stages. The first stage is known as *momentary playmateship*. This is found in the age group three to seven years of age, where no real friendships are formed. In this stage a friend is regarded as someone who can be reached easily, for example, someone who lives next door. The second stage, *one-way support*, is found in children aged four to nine. The give-and-take concept of friendship is realised here; friends are individuals who

help one another. From the age of nine to fifteen years, the *intimate mutually shared relationship* is found. During this stage, friends mean more than just someone who can do something for you. Secrets are shared, but if differences in opinions occur, the friendship may not last. Jealousy and possessiveness are also common at this stage. With girls, friends are usually limited to either one or two close friends, while boys they tend to develop a much larger group of friendships. Lastly, from age twelve to adulthood, the *autonomous interdependence* stage occurs. During this stage friends receive emotional support from one another. Possessiveness is no longer present and friends will respect each other's need for dependence as well as independence (Selman & Selman, 1979; Selman, 1981).

Just as friendships develop through various stages, peer groups also provide certain functions that ultimately help the child to grow emotionally and socially. The functions of peer groups as described by Williams and Stith (1980) and Vander Zanden (1989) are the following:

1. Peer groups allow the child to play and talk to other and provide camaraderie, as very often the child may not experience this at home.
2. The child may experiment with new behaviours in peer groups.
3. In a peer group, new information and knowledge are learnt from one another.
4. A child learns in a group setting that by complying to group rules, he/she is accepted, thus learning to adhere to rules and regulations.
5. Due to influences from their peers, sex role differences are reinforced.
6. An important developmental step is taken regarding the independence of a child. Becoming more independent it helps prepare the child to leave the parents' home in the future.
7. Peer groups provide the individual with the opportunity to compete with others. The child can learn to be more assertive, competitive and to socialise.

By playing, children also develop their self-concept. The child will identify him-/herself as pretty, clever or not clever based on his/her own behaviour and also on from feedback from others (Sigelman & Rider, 2006). Self-esteem, according to Leonetti (1980) also plays an important role in interpersonal relationships and rejection may result in a decrease in the child's self-concept - the child may then try to associate with others who are also successful, so as to satisfy his/her need for happiness (Brown, 1998).

#### **4.6.4 Skills and self-motivation**

When a child succeeds in doing something he/she has set out to do, the child's confidence may increase and this may make the child more willing to tackle other tasks (Louw & Edwards, 1993). The development of the self-concept is also linked to motor skills and cognitive processes. Therefore, as soon as a child does something and succeeds, his/her confidence in his/her skill will increase (Louw & Edwards, 1993).

**Self-motivation** means that the child contributes to the development of his/her own self-concept according to whether he/she focuses on and rehearses positive thoughts in response to disappointments and difficulties (Louw & Edwards, 1993). Even though the self-concept develops continuously and is a constant process, it is vital that influences such as parents, teachers, the school and friends are aware of how their influences may be instrumental in either enhancing or hindering the child's self-concept. The child should also be aware of the way in which he/she may enhance or hinder the development of his/her self-concept and here self-motivation and skills are particularly important. Each of these aspects may help the development of the self-concept, for example, by providing positive feedback and helping the child to become more independent.

Just as there are factors which may influence the development of the self-concept, there are also factors that may cause a low self-esteem, because self-esteem is a component of one's self-concept.

#### **4.7 Factors causing a low self-esteem**

Bourne (2000) provides eight possible causes of low self-esteem. They are:

1. **Overly critical parents** who are constantly critical and even set impossibly high standards of behaviour. This may in turn let the individual feel guilty and feel that he/she can never be good enough. Self-criticism may have the same effect.
2. The second cause may be a **significant childhood loss**, for instance if the child is separated from a parent by death or divorce. Feelings of abandonment may occur and the child may experience feelings of emptiness and insecurity.
3. **Parental abuse**, such as physical or sexual abuse, may leave the individual with mixed feelings such as feelings of inadequacy, insecurity and lack of trust.
4. **Parental alcoholism or drug abuse** may create an unreliable family environment and the child may find it difficult to develop a sense of trust or security. When the parents deny the problem, the child often starts to deny his/her own feelings and pain which is connected to the family situation and the child may then often grow up with a poor self-esteem or a poor sense of personal identity.

5. **Parental neglect** often leaves the child to his/her own devices and the child then often grows up feeling worthless, lonely and insecure. Later on, the neglect of his/her own needs may occur.
6. **Parental rejection** may leave the child feeling unwanted and often doubting his/her right to exist.
7. **Parental overprotectiveness** may create a child who never trusts the world outside of his/her immediate family. Insecurity and fear to venture far from a safe person or play may result.
8. Lastly, **parental overindulgence** refers to the child who is given insufficient exposure to appropriate limits. Boredom, lack of persistence or difficulty to initiate and sustain individual effort may result.

In addition to this, Harter (1999) observes that a person's self-esteem may be influenced by two factors, namely children being more **competent** than others and secondly children receiving more **positive social feedback** than others. Competence involves both physical and cognitive competence. Harter (1999) developed a self-perception scale and found that for children in mid-elementary school five aspects of self-worth are applicable, namely:

- scholastic competence: feeling smart and doing well in school;
- social acceptance: feeling that he/she is liked and is popular;
- behavioural conduct: not getting into trouble;
- athletic competence: being good at sport(s); and
- physical appearance; feeling good looking.

**Culture** also affects a child's self-esteem. Berk (2003) points out that expectations of gender stereotypes may affect the child, and that in certain cultures physical attractiveness and achievement have an effect on girls in

particular. Crain (1996) argues that girls in their adolescent years tend to worry more about their appearance and feel more insecure about their abilities than boys, and it seems to be a cultural belief that boys have a higher self-esteem because girls tend to internalise this negative cultural message (Kling, Hyde, Showers & Buswell, 1999)

Here, emphasis is placed on how various aspects of the parental role can cause a low self-esteem in the child. The researcher believes that the factors described in cf. 4.6 may also contribute to negative self-esteem, since self-esteem is a component of the individual's self-concept.

Just as various external factors, such as peers and parents, may influence self-concept, the emotions of the individual are also instrumental in the self-concept. This will be discussed in the following sections.

#### **4.8 Emotions and the self-concept**

Both James (1890) and Cooley (1902) included self-feelings as an important element of the "self". James (1890) felt that one's self-feelings are aroused when the success of the individual is not in accordance with the pretensions of the individual. Cooley (1902), however, felt that one's self-feelings accompany one's emotions when the individual starts to picture how he/she appears for others and also how others judge that appearance. Later, Mead (1934) proposed that the "self" firstly has to do with thinking and is therefore a cognitive construct more than an emotional phenomenon.

#### **4.8.1 Different types of relationships between emotions and self-concept**

Van der Meulen (2001) describes various relationships between the self-concept and emotions, explaining that the relationship between the self-concept and emotions vary from early self-awareness to a close association of cognition and emotion with the self-concept. Four different types of relationships are described:

1. ***Self-awareness as a prerequisite for emotional experience.*** Van der Meulen (2001) mentions that people may often not be aware of, or may not perceive their own emotions/emotional states. According to Lewis (1993), a person's emotional experience requires a cognitive ability, or self-awareness: therefore, the individual's capability to attend to him-/herself. When young children show signs of self-recognition, Lewis, Sullivan, Stanger and Weiss (1989) found that the occurrence of embarrassment and a self-conscious emotion is more intense; and in order for an individual to recognise his/her own emotions and to communicate it, the individual must be able to reflect upon him-/herself (Saarni, 1997).
2. ***Emotions as indicators of self-awareness:*** Self-awareness is seen as a prerequisite for emotional experience. Emotional expressions are indications of the existence of self-awareness (Van der Meulen, 2001).
3. ***Self-esteem as the affective component of the self-concept.*** Self-esteem is often seen as representing the affective dimension of one's self-concept (Keith & Bracken, 1996).
4. ***Causal relationships between self-concept and emotions:*** Appraisals or certain evaluations may trigger emotions (Van der Meulen, 2001).

Baumeister (1993) indicates that depression and suicide are often associated with a low self-esteem and one's self-worth and depressed affect influence each other (Van der Meulen, 2001).

The researcher is of the opinion that emotions play a role in an individual's self-concept, but that emotions on their own are not the deciding factor of a stronger or weaker self-concept and that other factors play an equally important role in this process. However, should an individual be unable to verbalise his/her emotions, a conflicting emotion may arise and in turn form faulty perceptions which will ultimately contribute to lowering the self-concept. Therefore, children should be taught to not only to communicate their feelings, but also to identify them. They should also learn coping skills, in order to deal with conflicting views/emotions effectively. By learning these skills, the individual will be better equipped to deal with negative influences which may influence the self-concept.

Various components/domains of the self-concept will be discussed below so as to illustrate how diverse the notion of term self-concept is.

#### **4.9 Components of self-concept**

Rosenberg (1979) provides three components regarding the self-concept of an individual:

1. The ***idealized self-image*** is created in the person's imagination as an ultimate form and may even be a cultural stereotype such as the macho-man.
2. The ***committed image*** is the self-concept the individual will take seriously and pursue.
3. The ***moral self-image*** is what one ought to be.

In addition to this, Harter (1990) also describes domains/components depicting the development of the self-concept and feelings of global self-worth or self-esteem. For the purpose of this research, only the aspects pertaining to the middle/late childhood will be discussed.

These domains refer to the scholastic and athletic competence; physical appearance; peer acceptance; behavioural conduct; and the global self-worth (Harter, 1990). Young children do not verbalise global feelings of self-worth, but rather express it through behaviour which they have studied. One's self-esteem can increase when there is an increase in both feelings of competence in valued domains and social support (Harter, 1990).

Physical appearance and social acceptance by parents and peers contribute to the child's feelings of self-worth. Self-esteem does not seem to be a fixed quality for life. One's self-esteem may increase as the individual becomes more competent in areas of importance to him-/herself or when increased support from others is experienced. In the reverse conditions, self-esteem may decrease. Triggers such as entering kindergarten, high school, university or moving to a new neighbourhood may cause a change in one's self-esteem. Maintenance of one's self-esteem is successful when one joins or creates positive social support or when there is an increase in one's competence (Harter, 1990).

Self-concept as a phenomenon was described above: the emphasis will now shift to how a positive or a negative self-esteem may affect the individual. It will then be possible to better understand what the individual is feeling and why.

#### **4.10 Effects of a negative and a positive self-esteem**

Individuals may experience ups and downs in their self-esteem over a day or week (Van der Meulen, 2001). Self-esteem refers to the self-evaluations one makes and an individual with high self-esteem describes him-/herself as good,

capable and worthy, and tends to be less lonely (Baron & Byrne, 1994). A child who has a positive self-esteem also has a sense of value and responsibility (Smith, 1993). On the other hand, a low self-esteem individual will describe him-/herself as useless, unhappy, inept and unworthy (Baron & Byrne, 1994). The lower the self-esteem, the more depressed the individual may feel (Pillow, West & Reich, 1991). According to Smith (1993), when a child's self-esteem is low, his/her ability to learn successfully and the quality of his/her relationships with others are reduced. The opinions of others may help to shape the attitudes of the individual. These opinions of others may even change one's self-esteem (Baron & Byrne, 1994).

Baron and Byrne (1994) depicts the effects of negative self-esteem in the following diagram.

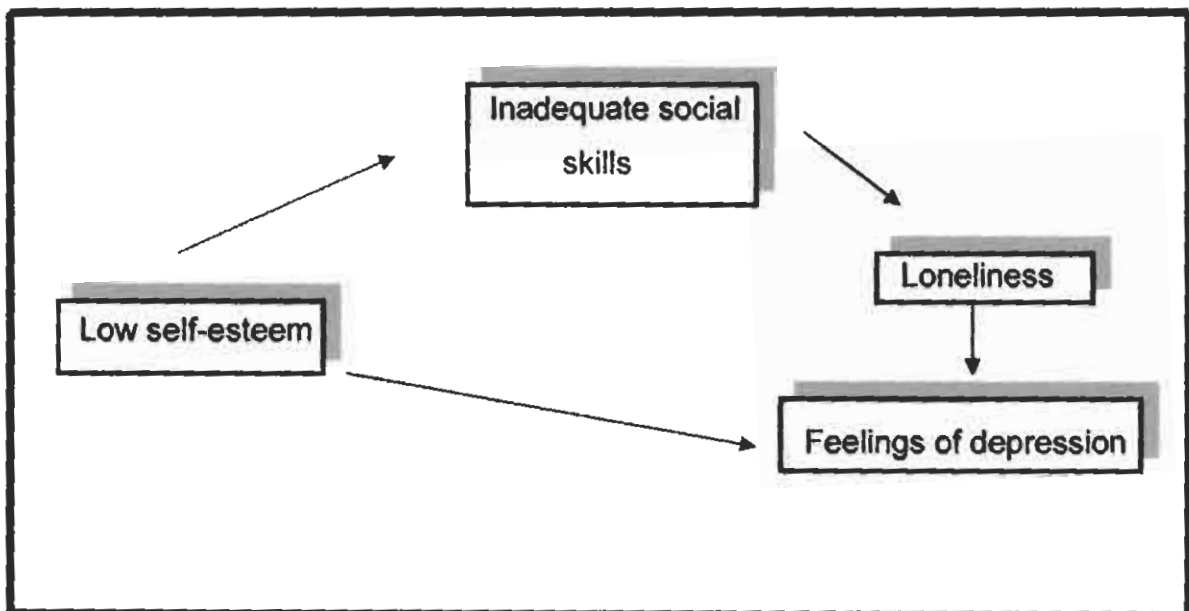


Figure 5: Effects of a negative self-esteem (Baron & Byrne, 1994, p.180).

The diagram indicates that low self-esteem is often associated with inadequate social skills, and this leads to loneliness and ultimately to feelings of depression.

Roberts and Monroe (1992) point out that depression is also related to the variable self-esteem and not due to low self-esteem alone. Therefore, an individual whose self-esteem goes up and down frequently in response to changes in a situation, is more likely to become depressed.

As mentioned in cf. 4.2, self-esteem is defined as the way in which the individual views him-/herself: if the child views him-/herself as positive, the child will feel worthy, good and capable; but if viewed as negative, the child will feel unworthy, unhappy and even depressed. This may in turn influence social skills and feelings of loneliness. In order to enhance the child's self-esteem, conditions for maintaining and nurturing the self-esteem will be provided.

#### **4.11 Six conditions for maintaining and nurturing self-esteem**

Simon (1988) describes six conditions for maintaining and nurturing self-esteem and mental health in children. These conditions are:

1. ***Belonging***: The child needs to feel connected or that he/she belongs to his/her family as well as to a peer group.
2. ***Child advocacy***: An advocate/individual is needed who can be trusted when the child is in a crisis, to help him/her through it.
3. ***Risk management***: As risks are taken and tasks mastered, the child's self-esteem starts to increase. A child needs to know that when performing a task, it is acceptable to risk, but also acceptable to fail.
4. ***Empowerment***: When a child is given the opportunity to make a choice or decision, the child becomes empowered. It is just as important that the child should exercise control over his/her life.

5. **Uniqueness:** It is important that the child feels that he/she is special.
6. **Productivity.** The child should be encouraged, and reinforcing the productive activity may help the child to find intrinsic rewards for his/her accomplishment, because when something gets done, the child often feels better.

#### 4.12 Summary

Even though *self-esteem* can be viewed as a component of self-concept, *self-concept* refers to the image the individual has of him-/herself, while self-esteem is the view of him-/herself.

Although self-concept develops continuously, the middle childhood period is regarded as the most critical period in its development. In the middle childhood period, the individual will be able to engage in abstract thoughts and to better understand the emotions of others. By nurturing his/her self-esteem as well, the child will also feel good about him-/herself, worthy and feel less lonely; this will encourage the child to engage positively in activities which develop social skills. However, the opposite is true of the individual who has a low self-esteem. Parents are instrumental in either hindering or enhancing the child's self-esteem and self-concept. Other factors such as school, teachers and peers also have an effect on self-esteem and self-concept.

Various theories provide broad viewpoints regarding these concepts. Although the researcher feels that some theories are too rigid, they all contribute towards the understanding of the child and the role self-concept.

The creative behaviour of the child may enhance his/her self-esteem. However, if the child is placed in a strict, structured setting, a drop in both creativity and his/her self-esteem has been noted to occur.

Furthermore, self-esteem is also related to emotional intelligence (Mayer, Salovey & Caruso, 2000). Problem solving (which is a branch of emotional intelligence) is a creative thinking skill; and this creative skill will in turn not only help the individual to think of various creative solutions to a problem, but also to enhance the self-concept. Because these concepts are all interlinked, it is necessary to investigate emotional intelligence in more detail in the next chapter.

## *Chapter 5: Emotional Intelligence and Problem Solving, as a component of Emotional Intelligence*

### **5.1 Introduction**

For the purpose of this study, the concept of emotional intelligence (including problem solving, as a component thereof) will be discussed. Definitions will be provided for both, and a collective overview will be given as well. Thereafter the developmental theories will be discussed, as well as the developmental phases of emotions. Aspects such as the branches of emotional intelligence and the positive effects of emotional intelligence will be presented. Problem solving, as a component of emotional intelligence, will be discussed in detail with regard to brain dominance, types of thinking and the phases and steps in problem solving.

### **5.2 Definitions**

Definitions of emotional intelligence and problem solving will be presented below, as well as information regarding the terms, so as to illustrate the two concepts.

#### **5.2.1 Definitions of emotional-intelligence**

De Klerk and le Roux (2003) define emotional intelligence as the ability to identify and understand your own thought and feelings, as well as to communicate it to others and to have empathy with the others emotions of others. This enables one to have a relationship with another person on an emotional level. Emotional intelligence therefore seems very appealing, as it represents the individual's

ability to appraise, perceive and express his/her emotions accurately and adaptively. The individual will also have the ability to understand emotions and emotional knowledge, and will therefore be able to access and/or generate feelings. Lastly, it also involves the ability to regulate emotions not only in oneself but also in others (Mayer & Salovey, 1997)

The definition provided by Salovey, Mayer and Caruso (2002) highlights aspects other than those mentioned above: they define emotional intelligence as one's ability to process emotion-laden information competently. One can also use it to guide cognitive activities such as *problem solving* and the ability to focus one's energy on required behaviours. It is further suggested that there are other ways of being intelligent, apart from those emphasised in standard IQ tests. Emotional intelligence could therefore even be a predictor of one's success in personal relationships, the family functioning and even in the workplace. Hope and promise are instilled in this term (Salovey, Mayer & Caruso, 2002).

In addition to these definitions, emotional intelligence is also related to *self-esteem*, *sociability* and the individual's *satisfaction with life*. It is related negatively to aggressive behaviour (Mayer, Salovey & Caruso, 2000). The whole concept of emotional intelligence has increased teachers' awareness, as it was found that when children are provided with experiences that meet their social and emotional needs, their adjustment improves (Graczyk, Weikssberg, Payton, Elias, Greenberg & Zins, 2000). However, Saami (2000) expresses the concern that the emotional ability score may lead psychologists and educators to make overly simplistic comparisons between children and to lose sight of the fact that adaptiveness of both emotional and social behaviour varies across situations.

## 5.2.2 Definitions of problem solving

Problem solving is a branch of emotional intelligence and Salovey, Mayer and Caruso (2002) refer to problem solving as a cognitive process involved in the emotion facilitation of thought. Problem solving therefore refers to the ability to produce new ideas in order to solve problems and it is regarded as a valuable asset (Mouchiroud & Lubart, 2002).

Guilford (1968) explains that whenever there are problems present, creative behaviour is required: but problems can also be solved by *creativity* and creativity therefore helps to enhance one's life (Feldhusen, 2002). In addition to this, Cropley (1992) argues that problem solving is an activity that requires productive thinking. *Creative problem solving* may also be described as an *activity for fostering creativity* (Cropley, 1992).

Problem solving is central to various creative processes (Runco, 1995; Getzels & Csikszentmihalyi, 1989). According to Hoover and Feldhusen (1994), gifted individuals with good problem solving skills spend more time to conceptualise the problem once the appearance of the problem is understood completely. As soon as the problem is understood, however, problem solvers take less time to find a solution. Such individuals also have the ability to monitor and evaluate themselves continually.

A healthy individual is able to avoid making impulsive actions and such an individual will make use of alternative solutions and means-end thinking. By viewing all the options and making sure that there are no harmful consequences with regard to the selected options, the individual will be able to pick the best option(s) for the problem solving (Sharoff, 2002).

Collectively then, the researcher interprets *emotional intelligence as twofold, in that it should be regarded as both intellectual and emotional, because it involves the identification of the individual's thoughts and feelings, as well as the ability to express feelings accurately. Problem solving, a facet of emotional intelligence, is equally important because it enable the individual to solve a problem, and this in turn may foster creativity.*

The development of the child in the middle childhood period is important, because during this period the emotional development helps the child to adjust for adolescence and he/she also learns new experiences and starts to understand his/her world better. The development of the child in this period will therefore be explored.

### **5.3 Developmental theories in the middle childhood**

#### **5.3.1 Introduction**

The sixth till the twelfth years are regarded as the middle childhood years. This period in a child's life is relatively calm and stable. Freud refers to this period as the psychosexual latency period, while Erikson calls it the period of industry vs. inferiority (Corey, 1996). This period is critical with regard to the child's cognitive, social, emotional and self-concept development. This development enables the child to adjust well for adolescence, but also to understand the world and learn new experiences (Louw, 1991).

Physically, the child grows rapidly in the arms and legs. During this period, the child grows more gradually than in the previous stage. Girls, however, will grow faster in height and weight during this period than boys (Louw, 1991). The refinement and learning of psychomotor take place at this stage, and the child's

balance and physical movement improve. Facets such as personality, social development and self-esteem also increase due to motor development (Louw, 1991). The individual will interact with children of the same sex and age (Gormly & Brodzinsky, 1989).

The theories of Freud, Erikson and Piaget will be discussed with reference to the development found in the middle childhood. Thereafter, the guidelines regarding emotional development will be presented.

According to Piaget, the thought process – a sub-division of emotional-intelligence – plays a role and when this reasoning occurs in the child, the individual builds and refines his/her psychological structures. Problem solving is also addressed in both the theories of Freud and Erikson, especially when the child is forming new relationships and self-identity. There are correlations between these stages and emotional development, and both have to be viewed as a whole in order to understand the individual.

### **5.3.2 Developmental theory of Piaget**

The theory of Piaget plays an important role in research on cognition with regard to child development. According to Piaget's theory, cognition is based in the biological capacities of the infant. It also postulates that knowledge is derived from action and that encountering various experiences helps with advancing new ideas and the thought process. In the middle childhood period, the concrete operations stage lasts from ages six or seven until eleven/twelve years of age. Here, reasoning occurs and the individual may even reason about reasoning (Newman & Newman, 1997).

Piaget believes that infants do not start out as cognitive beings: rather, the individual builds and refines his/her psychological structures. By developing these structures, the child is actively involved in selecting and interpreting

experiences using the structure. The structures will then be modified so that more subtle aspects of reality are taken into account. Piaget therefore viewed children as discovering or constructing knowledge of the world through activity. This is the reason why his theory is often called a *constructivist approach* to cognitive development (Berk, 2003).

The child moves through four stages in the human cognitive development, namely:

- a. sensori-motor;
- b. preoperational;
- c. concrete operational; and
- d. formal operational (Berk, 2003).

Each will be discussed below.

1. The *sensory-motor period* lasts from birth to two years. The functioning of the child changes from a reflex level to a level where he/she can execute actions that are applicable to the child's environment (Papalia, Wendkos Olds & Duskin Feldman, 2002). The term *sensory-motor* is derived from the words sensory and motor and sensori-motor development describes the way in which a child learns by doing things. *Sensory* refers to the person's senses and *motor* refers to the physical act of doing. Therefore, sensori-motor learning refers to the body and senses. Modelling with clay is an example of sensori-motor learning in art: the motor activity involves that the child is playing with the clay and the sensory part is that the child is feeling and smelling the clay and by doing so, is learning how to use clay (Mayesky, 1990).
2. The second period, from two to seven, is the *pre-operational period*. This period is a stage of transition between the sensori-motor and operational period that occurs later. The child's ability to represent something

symbolically or mentally is being developed (Papalia, Wendkos Olds & Duskin Feldman, 2002). According to Piaget (1952), intuitive thought develops in this stage. The child will also learn to associate and develop transductive reasoning. The child therefore learns to symbolically represent events and people.

3. From seven to eleven years, the period of *concrete operations* occurs, in which the development and use of a coherent cognitive system take place. Thought processes are now reversible, but only with concrete and real things (Papalia, Wendkos Olds & Duskin Feldman, 2002). The cognitive operational stage is viewed by Piaget as the major turning point in cognitive development. The child's concrete operational reasoning is more **logical, flexible and organised** (Berk, 2003).
4. The last period is from eleven years of age and is characterised by the **formal operational period**. Now the individual will be able to execute formal operations, meaning that the child will be able to think in an abstract and logical manner and also be able to make deductions. These thoughts can deal with abstract things, hypotheses and possibilities (Papalia, Wendkos Olds & Duskin Feldman, 2002).

Based on the various stages, Piaget believes that there are three important characteristics to the stage sequence:

- i. It is a **general theory**, because cognition develops in an integrated manner and undergoes a course of change that is similar.
- ii. The stages are **invariant**. The stages follow a fixed order and no stage is skipped.

- iii. The stages are *universal*. The stages presumably describe the cognitive development of the child everywhere (Piaget, Inhelder & Szeminska, 1048/1960).

Sigelman and Rider (2003) provides various aspects regarding the concrete operational thinking phase. Firstly, children in this age period are able to solve conservation tasks because they have:

- *Reversibility of thought*, which means that the child is able to mentally reverse or undo an action.
- *Decentration* which means that the individual is able to focus on two or more dimensions of a problem at the same time.
- *Transformational thought* implies that the individual is able to understand the process of change from one state to another.

Secondly, the child is able to *reason logically* and acquires internal operations that he/she can apply to various problems. Thirdly, *deductive reasoning* is possible, as the child will draw cause-effect conclusions logically due to factual information that is represented to him/her. Fourthly, during this period, the child is also *less egocentric*. The child will now realise that other individuals may have thoughts that may differ from him-/herself. Lastly, *multiple classification* occurs, during which the child is be able to classify objects by multiple dimension and also to grasp class inclusion (Sigelman & Rider, 2003).

### **5.3.3 Developmental theory of Freud**

From six to twelve years of age, the *latency stage* is present, in which most of the individual's interests centre around school, friends, sports and other activities. During this period, the child forms new relationships and socialises (Corey, 1996).

From twelve to eighteen years of age, the child is in the *genital stage*. Themes that were present in the phallic stage (age three to six) are now revived. The individual is able to deal with his/her sexual energy by investing it in forming friends, being active in sport and also in preparing for his/her future career (Corey, 1996).

#### **5.3.4 Developmental theory of Erikson**

The period from six to twelve years is called the *school age* by Erikson. It is marked by a struggle between *industry* and *inferiority*. The individual starts to develop his/her sex-role identity and needs to learn basic skills that are required for school success. The individual needs to set and attain personal goals for him-/herself. If this is not achieved, the individual will feel inadequate (Corey, 1996).

From twelve to eighteen, the stage of *adolescence* is dominant, involving a struggle of *identity vs. role confusion*. This is the stage in which a transition is made from being a child to entering adulthood. Now, a new identity is being formed, dependent ties are being broken and limits are being tested. Conflicts are profound here with regard to goals, meaning in life and self-identity. Role confusion occurs when the individual fails to achieve a sense of identity (Corey, 1996).

#### **5.3.5 Developmental phases in emotional development**

De Klerk and Le Roux (2003) provide a guideline with regard to the developmental phases in emotional development of a child (Gottman (1997) in De Klerk & Le Roux, 2003).

6 – 11 years	11 – 15 years
Group participation and plays with rules. The individual wants to feel he/she is “in”.	The child strives towards identity and independence. The child will show empathy, but the child is very emotional and confuses feelings.
Periods of emotionality are experienced. The child highlights feelings and names emotions.	The child experiences intense feelings and reasons.
Thrives on acceptance and acknowledgement.	The child wants to partake in decision-making.
The child has to work hard on understanding and controlling emotions.	The parent plays the role as consultant.

#### 5.4 Summary of the theories

Middle childhood is the period between the ages of six and twelve years of age. Freud calls this period the *psychosexual latency period*; while Erikson refers to it as the *industry vs. inferiority period* and Piaget calls it the *concrete operational period*.

During the middle childhood period, aspects such as emotions, and the child’s self-concept develop which will help to prepare the child for his/her next phase in his/her life and also with his/her interpretation of the world.

The concrete operational period is regarded as the turning point in the child's cognitive development and reasoning becomes more logical, flexible and organised.

In this period, the child's interest shifts to school, friends, and the development of new relationships (as postulated by Freud): it is therefore very important that the child can interpret, understand and express his/her emotions in an appropriate manner. Failure to correctly interpret emotions may cause serious problems in achieving further milestones, especially with regard to school and relationships. In addition, when the child starts to develop his/her sex-role identity (as postulated by Erikson), it is vital that the child interprets this stage correctly and can express his/her emotions accordingly.

The researcher therefore believes that each stage (as described by Freud, Erikson and Piaget) and emotional intelligence are vital in the child's development. Emotional intelligence is not one-sided and in order to illustrate this, the various branches of emotional intelligence will be presented below.

## **5.5 Branches in emotional intelligence**

Salovey, Mayer and Caruso (2002) suggest that emotional intelligence can be divided into branches. The first branch is ***emotional perception and expression***. This involves recognising and inputting verbal and non-verbal information from the emotion system. The first branch begins with one's capacity to perceive and express feelings. Very little will be learnt about one's feelings if the individual turns his/her attention away from unpleasant feelings. Emotional perception involves being able to register, attend to and decipher emotional messages when expressed in facial expressions and tone of voice.

***Emotion facilitating of thought***, the second branch, refers to using one's emotions as part of cognitive processes such as problem solving and creativity.

It is important to recognise that emotions are complex organisations and motivational subsystems. Emotions therefore enter the individual's cognitive system as cognised feelings and as altered cognitions. The emotional facilitation focuses on how the emotion affects the cognitive system and can be "harnessed for more effective problem solving, reasoning and creative endeavours" (p. 161).

The third branch is the ***emotional understanding*** and this involves the cognitive processing of emotion, referring to insight and knowledge bearing upon an individual's feelings or feelings of others. This branch involves understanding emotion in that emotions form a rich and complex interrelated symbol set. It is important to label one's emotions with words. The individual who is able to understand how emotions blend together and progress over time, it often able to understand important aspects of human nature and interpersonal relationships.

***Emotional management*** is the last branch and refers to the regulation of emotions in not only oneself, but also in other individuals. Individuals who employ this branch often hope that emotional intelligence will free them from troublesome emotions. By trying to minimise or eliminate emotion, however, one may stifle emotional intelligence.

Emotional intelligence is important in the child's development and in this process, the child must learn to identify emotions non-verbally as well, therefore acquiring another cue with regard to the other individual's emotions. The child will be able to gain insight into and to name the emotion. Interpersonal relationships and human nature will be understood and perceived better. The positive effects of emotional intelligence will be highlighted below.

## **5.6 Positive effects of emotional intelligence**

De Klerk and Le Roux (2003) describe seven positive effects of emotional intelligence. Children with emotional intelligence skills:

- are healthy and perform better academically;
- have good peer relations;
- tend to experience more positive feelings;
- experience fewer conflict situations between the child and the parents;
- are able to express respect for the emotions and values of others;
- accept themselves more and perceive themselves as unique; and
- have better defence against drugs, alcohol and negative experiences.

In additional, emotional self-regulation is an important aspect a child should acquire so as to help him/her to accomplish a goal. Once again, problem solving, a sub-division of emotional-intelligence, is a strategy which may help the child achieve self-regulation.

## **5.7 Emotional self-regulation**

Emotional self-regulation refers to the strategies the individual uses to adjust his/her emotional state to a comfortable level so that the individual can accomplish his/her goals (Berk, 2003). Various cognitive capacities are needed, such as attention focusing and shifting and the ability to inhibit one's thoughts and behaviour (Eisenberg, Fabes, Murphy, Maszk, Smith & Karbon, 1995). Berk (2003) cites the example of an individual who decides not to see a movie due to its frightening elements – this individual is engaging in emotional self-regulation.

In the middle childhood period, emotional self-regulation occurs rapidly especially after school entry. The child must learn to deal with his/her negative emotion(s) that threat self-worth, especially because during this period, accomplishments are compared and peer acceptance is vital (Berk, 2003).

According to Kliewer, Fearnow and Miller (1996), the ten-year old child will by now have developed techniques to manage emotions. Problem solving and

support seeking are the two main techniques the child will use when faced with a problem. Children at this stage perceive that they have relative control over it problem solving. However, with situations beyond their control, distraction or redefining the situation helps (Berk, 2003). Internal strategies to manage emotions are more often used now because of their ability to reflect on their thoughts and feelings (Brenner & Salovey, 1997).

Saarni (1999) observes that as soon as emotional self-regulation is developed, the child will acquire emotional self-efficacy. The child is therefore in control of his/her emotional experience. Berk (2003) adds that this will then foster a more favourable self-image and become more optimistic and this in return will empower the child to face his/her emotional challenges.

If the child develops emotional self-regulation, the child will be able to adjust his/her emotional state and accomplish his/her goals. Problem solving and support seeking are the techniques used with regard to emotional self-regulation. However, when emotional self-regulation has been achieved, emotional self-efficacy will also develop. The positive aspects of this, are better self-image and improved optimism. Problem solving as a technique used for emotional self-regulation and as a component of emotional intelligence will be discussed in the following sections.

## **5.8 Problem solving**

Problem solving involves the individual arriving at a solution to a problem. The left and right hemispheres play a role in a person's problem solving. Rational, critical and creative thinking is also important in finding a solution. In order to obtain a solution, various steps and tactics may help the individual. These aspects will be discussed so as to illustrate problem solving.

### **5.8.1 The brain: Advantages and disadvantages with regard to left and right hemisphere dominance**

Theories on the use of one's brain capacity changed considerably since the 1950s to the 1990s (Gelb, 1991). Psychologists in the 1950s estimated that a person will only make use of 50 % of his/her brain capacity; while in the 1960s and 1970s, it was said that only 10 % is used. In the 1990s, it was estimated that only 0,01 % or even less is used.

Beekman (2000) maintains that even though a person's brain cells die all the time, the more an individual uses his/her brain, the more synaptic connections are formed; this is known as mind power or thinking. Alder (1997) also found that the more an individual makes use of his/her brain, the more that person's thinking capacity can increase.

The corpus callosum, which undergoes a lot of change during early childhood, supports the integration of various aspect of thinking such as problem solving, memory and language. The corpus callosum is a bundle of fibres that connects the hemispheres, through which communication between the hemispheres can occur (Berk, 2003). Therefore, when faced with problem solving and decision making, the whole-brain approach is essential (Beekman, 2000). The whole-brain approach refers to combining the strengths of both hemispheres instead of only relying on one hemisphere and therefore not making full use of one's brain potential (Beekman, 2000). Alder (1997) believes that one should make use of both hemispheres in order to perform at one's peak. Buzan (1991) also believes that the whole-brain approach works best and refers to geniuses such as Albert Einstein and Leonardo da Vinci who made use of the whole-brain approach.

There are certain advantages and disadvantages with regard to left and right hemisphere domination for problem solving and decision making. Beekman (2000) formulates these advantages and disadvantages as follows:

Left Hemisphere	Right Hemisphere
<b>ADVANTAGES</b>	
The individual thinks more systematically and more structured.	The individual will think in "leaps".
Decisions are based on facts.	The individual will think creatively with new questions and solutions.
The individual will get things done and not become easily distracted.	The individual will get others involved and works quickly.
Work is done thoroughly and precisely.	New ideas will be tried and the individual will often take risks.
<b>DISADVANTAGES</b>	
The individual lacks imagination.	Important details are often forgotten.
Feelings are not trusted; only facts.	The individual will not easily criticise ideas.
The individual will often get preoccupied with details.	Planning is not done and there are also no goals or priorities.
Risks are not taken.	The individual may be rather demanding of his/her friends and/or co-workers.

Strategies used to solve a problem will be discussed in detail so as to illustrate that problem solving involves various other aspects such as rational, critical and creative thinking. In each, the hemisphere used will be mentioned.

### **5.8.2 Rational, critical and creative thinking**

Traditionally, when faced with a problem, the individual's first reaction will be to find out what caused it and then to remove it (De Bono, 1995). However, sometimes there is no simple solution to a problem and the individual will have to make use of other strategies such as *rational, critical and creative thinking* and

also making use of the whole-brain approach (Beekman, 2000). Each will be described:

**(a) Rational thinking:**

Rational thinking may be seen as a left hemisphere skill (Beekman, 2000). Rational thinking implies that the individual must think logically, be realistic, sensible and reasonable and lastly also be able to think wisely (Collins, 1992). Lipman (1991) argues that when engaging in rational thinking, the individual must firstly follow a plan of action, work systematically and when finished, evaluate the results and lastly correct and if necessary, adjust the plan. Lipman (1991) also provides the following essence of rational thinking for engaging in effective problem solving:

- the individual must be aware of the problem;
- the problem must be identified and formulated;
- the individual must set goals and also decide on the end result;
- a hypothesis must then be formulated and a methods should be decided on;
- consequences should be anticipated;
- alternative solutions must be selected;
- a plan of action must be drawn up;
- the plan must be executed; and then
- the effect should be evaluated.

Dewey, who is considered the “father” of rational thinking, proposes different stages of rational thinking:

- Firstly become aware of the problem.
- Then, the individual should identify and define the problem.
- Thirdly, generate possible solutions.

- Lastly, provide a conclusion after verifying the solution (in Arndt, 1929).

**(b) Critical thinking:**

Smith (1992) postulates that critical thinking is an attitude and a frame of mind. It is also a left hemisphere skill and refers to evaluating and judging the logic, usefulness and reliability of the facts or information. Critical thinking is necessary to make decisions (Beekman, 2000) and demands that the individual have knowledge regarding the relevant subject and be competent (Beekman, 2000). When thinking critically, the individual should not jump to a conclusion, but rather collect information and think the matter through, and then weigh up the facts and evidence (Beekman, 2000). Gravett (1994) believes that critical thinkers are both analytical and autonomous thinkers and will analyse the issues. Beyer (1988) and Ennis (1992) describe the following skills needed for critical thinking:

- The individual must distinguish between variable facts.
- The individual must be able to distinguish between relevant and irrelevant information.
- The accuracy of the statement should be determined as well as the credibility of the source.
- Biases should be identified.
- The strength of the argument should be determined (Beyer, 1988).
- The individual should be able to defend his/her position on an issue.
- The individual must be able to ask appropriate "why" questions.
- The individual must be well informed.
- The individual must be open-minded (Ennis, 1992).

**(c) Creative thinking:**

Creative thinking is a right hemisphere skill (Beekman, 2000). Ochse (1994) explains that creative thinking involves both *associate thinking* and *imaginative thinking*. Associative thinking means that the individual is able to identify commonalities as well as to see the relation between facts or ideas. The individual should be able to establish new relationships and concepts and to find new solutions. Imaginative thinking, however, refers to one's ability to visualise an image from reality, non-reality or the idea. Beckman (2000) identifies four techniques to facilitate creative thinking:

- (a) mind mapping;
- (b) visualisation;
- (c) brainstorming; and
- (d) meditation.

Only a short description of each will be given.

**(a) *Mind mapping***

Mind mapping is a left and right hemisphere skill and it helps the individual to organise information and present it visually. The colours and images the individual uses is more right hemisphere dependent, while the logic used to order the information, depends on the left hemisphere (Beekman, 2000). The function of mind mapping is to create new ideas, planning and enabling the individual to remember the facts more by means of the images (Beekman, 2000). Mind mapping also allows one to open up the power of one's mind and it also taps into the whole-brain (Wycoff, 1991).

### ***(b) Visualisation***

Visualisation is a right hemisphere skill and refers to one's ability to picture and imagine things in one's mind; like a movie. The **RADAR** technique can be used for creative thinking in problem solving. The function of this technique is to make a "mind movie" and to enable the individual to find a solution.

#### **RADAR technique:**

R = Firstly, the individual must relax and close his/her eyes.

A = Now, the individual must visualise a blank screen and see a picture, in which the individual is also in it.

D = The individual must then direct the picture and see what is happening.

A = Then, see him-/herself as the central person and that everything works out.

R = Lastly, the individual must reward him-/herself (Beekman, 2000).

### ***(c) Brainstorming***

Brainstorming is also a right hemisphere skill and helps the person to generate numerous ideas. This technique can either be done alone or in groups (Beekman, 2000).

### ***(d) Meditation***

When meditating, thoughts can flow freely and creatively, as the individual is relaxed. When relaxed new understandings may be experienced (Beekman, 2000) and the conscious mind is cleared of all stress and worrying thoughts (Van Elfen, 1993).

### 5.8.3 Three phases in problem solving

Feldhusen and Treffinger (1980) describe three phases in the problem solving process:

1. **Awareness**, which can be seen as a motivating factor.
2. **Problem formulation**, where the problem is defined and ideas arise from plausible solution strategies.
3. **Searching**, where the information is gathered which is to be associated with the formulation of viable hypotheses.

### 5.8.4 Five tactics in finding new perspective

Cropley (1992) discusses five tactics for finding new perspectives on problems:

1. **Reverse the problems**. Reversing the way a problem is seen can help to obtain valuable insights or solutions.
2. **Consider the end result**. This technique is similar to reversing the problem, but here this individual's attention is focused on the desired end result. The problem is then thought of from that point of view.
3. **Focus on the dominant idea**. Focusing on the heart of the problem may lead to simple, but effective solutions as sometimes in the problem solving situation, the real problem is lost and therefore need to strip away all irrelevant details.
4. **Discard irrelevant constraints**. Ideas are sometimes blocked by self-imposed constraints that are assumed by the individual.
5. **Use fantasy**. Fantasy can be useful in obtaining divergent ideas but when children believe that play is a waste of time, children may avoid fantasy.

### 5.8.5 Six steps in problem solving

Various models have been proposed for problem solving (Mahoney & Arnkoff, 1978; D'Zurilla & Nezu, 1982). Sharoff (2002) has found that the steps given in the models for problem solving are similar. Sharoff (2002) provides the following outline of these steps:

1. **Problem identification:** During this step, the individual will perceive something as a problem and will gather information regarding the problem.
2. **Alternative solution thinking:** This step refers to identifying both short- and long-term options that can help with resolving the problem. Brainstorming plays a role here.
3. **Consequential thinking:** Consequential thinking is the third step in that the individual will make use of this step to identify consequences of the various options considered.
4. **Best option:** The fourth step is then to select the best option available.
5. **Means-end:** Means-end refers to finding the best tactics for the plan.
6. **Self-reinforcement:** Lastly, self-reinforcement is required to sustain the plan.

Based on the above-mentioned, it may be concluded that the more a person makes use of his/her brain, the more mind power or thinking the person has and ultimately, the more the individual's thinking capacity will increase. Problem solving involves making use of both hemispheres of the brain. However, in addition to this, the individual will also have to make use of strategies such as rational, critical and creative thinking. Lastly, once these are in place, various problem solving steps have to be taken so as to ultimately get the best solution to the problem.

## 5.10 Summary

When exploring the term *emotional intelligence*, it becomes clear that it involves numerous branches and that it includes aspects such as creativity, self-esteem and problem solving. It is therefore evident that the term *emotional intelligence* is much more diverse than may be expected.

Emotional intelligence is the individual's ability to not only understand his/her feelings, but to identify it, and to communicate it to others. Problem solving, a branch of emotional intelligence, is a cognitive process involved in the emotional facilitation of thought and by making use of this, the individual can creatively solve problems and ensure that no harmful consequences occur.

Emotional development and the development of the child in itself are also interlinked and the child develops by forming new relationships and identifying him/herself. At the emotional level, the child may also be very emotional and confused, depending on the age group.

The effects of emotional intelligence are vast and in combination with emotional self-regulation strategies, the individual will be able to develop a strong self-worth and deal with his/her negative emotions at an appropriate level, by making use of problem-solving skills among others.

Problem solving requires a whole-brain approach to perform at one's peak. In addition to this whole-brain approach, rational, critical and creative thinking is necessary. Finally, the steps one takes to ensure correct problem solving are also crucial to ensure that the most creatively correct solution is found.

The following chapter will illustrate the relevance of the creativity programme.

## *Chapter 6: Relevance of the Creativity Programme*

### **6.1 Introduction**

As early as in 1959, creativity was deemed an important characteristic for someone to have. Furthermore, everyone has the potential to be creative, although creativity seems to decrease with age. Research done by means of the Torrance Test of Creative Thinking shows that children within the age group of 0-3 are 98% creative-superior, while 10-year old children are only 32 % creative-superior. More drastic drops are found among 15-year old children, who present only with 10 % creative-superior results. A mere 2 % creative-superiority is seen in adults (Neethling, 1997).

The researcher therefore believes that the creativity programme is essential to enhance the creativity in the middle childhood period, as a low percentage of creativity is found in this period. However, the researcher agrees with Neethling (1997) that a process is needed in the pre-school phase already and that it should continue throughout the school career of the child so that the individual will ultimately be able to create his/her own future. The use of creativity and creative thinking will enable the child to achieve this (Neethling, 1997). Torrance (1974) also emphasises that making use of creativity will help the child to learn differently, namely to learn based on environmental experiences. This programme can ultimately be modified or used as a basis to create a new programme for both pre-school and high school.

Various models will be discussed to show how the content of the programme is seen as a component of creativity and how the programme is relevant.

## **6.2 Relevance of the programme in terms of models in the literature**

The researcher makes use of two models, namely **Guilford's Structure of Intellect Model (SOI)** and an **Interaction Thinking-Feeling Model: The Cognitive-Affective Interaction Model (CAI)**. Each of these models will be discussed in detail, while reference is made to **Torrance's (1974) creative thinking** and the **Interactionist Model** of Woodman and Schoenfeldt (1989).

Guilford's SOI Model explains the intellectual growth and development of children. As this model does not describe the characteristics of children as they relate to the learning process, another model, the CAI was developed by Williams (1972). Williams (1972) states that emphasis must be placed on unifying the entire global aspect of a child, namely the intellect, with the person. The CAI-Model is similar to the SOI-Model in that it also comprises of three interrelated dimensions.

The three dimensions of the SOI-Models are:

- operations;
- products; and
- contents.

The three dimensions of the CAI-Models are:

- D1= curriculum;
- D2= pupil's behaviour; and
- D3= strategies.

Each of the models will now be discussed.

## 6.2.1 Guilford's Structure of Intellect Model (SOI)

The SOI Model implies an interrelated classification of human abilities, which will contribute to a child's creative productivity (Williams, 1972), especially with regard to creative thinking (Woodman & Schoenfeldt, 1989). Creative thinking may be subcategorised as fluent, flexible, original and elaborative thinking. These are all cognitive processes that fall under divergent productive thinking (Woodman & Schoenfeldt, 1989).

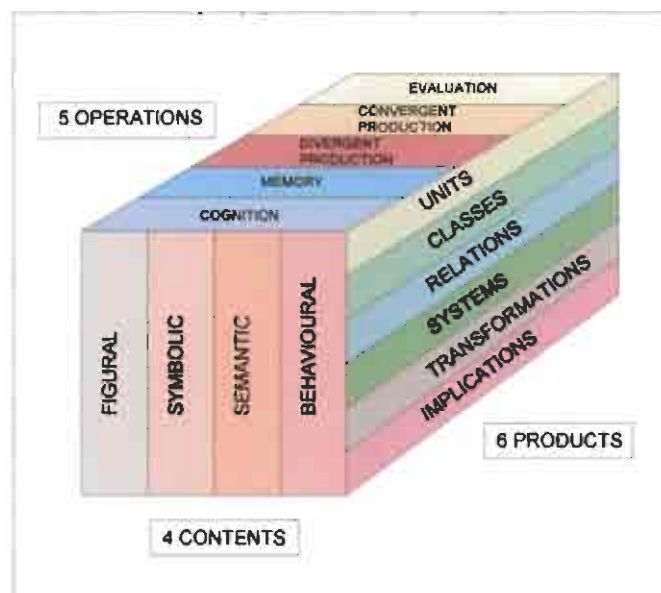


Figure 6: Guilford's Structure of Intellect Model (SOI) (Williams, 1972 p. 66).

The three dimensions will be discussed to show the relevance of the model and how it relates to the CAI-Model.

### Dimension 1: Intellectual Operations

The five mental operations are cognition, memory, convergent production, divergent production and evaluation. These operations are intellectual activities which the mind performs upon data, content or information. Therefore, it is the

things the individual's brain will do to various kinds of content upon which it works. Children need to know how to either use or act upon information or content he/she may encounter in his/her life. Operations cannot come about without content, which will help the child to produce something (Williams, 1972). Each of these operations will be described in tabular form.

Table 1: Intellectual operations

Operation	Cognition	Memory	Convergent Productive Thinking	Divergent Productive Thinking	Evaluation
<b>Definition</b>	It refers to an individual's ability to: <ul style="list-style-type: none"> <li>* discover</li> <li>* recognise</li> <li>* comprehend, or</li> <li>* become aware of information</li> </ul>	(1) It refers to the individual's ability to reproduce exactly that which he/she discovered through cognition. (2) It stores and retains knowledge that was cognised. (3) When needed, the information will be recalled.	Here, a response will be generated from the cognised, stored information. Production is however confined to the one right answer or solution from the data.	Now the individual will have the ability to scan the information that was stored by searching for many possible solutions. The individual will also be able to think in different ways and also be able to go off into new directions by deferring judgment while generating solutions or responses.	Refers to the ability to make choices and decide whether the solution fits the problem and being able to set criteria for judging.
<b>Function</b>	<ul style="list-style-type: none"> <li>* generates curiosity</li> <li>* provides discovery</li> <li>* requires comprehension</li> <li>* causes awareness</li> </ul>	The storage and retention of the material in the same form it was cognised.	The individual will be able to select the best choice from a selection of alternatives. EG. True-false or multiple choice exams.	1. <b>Fluent Thinking:</b> - A flow of thinking that emphasises a rate of ideas within one class. Types: <ul style="list-style-type: none"> <li>* Ideational</li> <li>* Associational</li> <li>* Expressional</li> </ul> 2. <b>Flexible</b>	<ul style="list-style-type: none"> <li>* cause decision-making</li> <li>* will seek improvements to things or behaviour</li> <li>will be able to note deficiencies in ideas, objects</li> <li>* promote critical-</li> </ul>

				<p><b>Thinking:</b> A flow of thinking w.r.t. a variety of ideas across different classes.</p> <p>Types: * Spontaneous * Adaptive</p> <p><b>3. Original Thinking:</b> A qualitative idea or response that is marked by unusual, clever, uncommon associations.</p> <p><b>4. Elaborative Thinking:</b> Improvements added on so as to make one's own ideas or ideas from others more beautiful or exciting.</p>	mindedness.
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## Dimension 2: Content

Content refers to types of **information** the mind acts upon. There are four of these, namely figural content, symbolic content, semantic content and behavioural content as illustrated in the table below.

Table 2: Content

Content	Figural	Symbolic	Semantic	Behavioural
<b>Definition</b>	This refers to information such as images/pictures, to which meaning has been learned.	This is the information in the form of signs which refers to some type of meaning.	Information in the form of words, sentences or meaningful pictures which convey verbal communication. The information used is used to express	This is the non-verbal communication in which individuals express attitudes, needs and happenings, pain

			ideas or feelings.	and emotions b.m.o. interactions.
<b>Example</b>	Red light = stop	<ul style="list-style-type: none"> <li>* Notes of a musical scale</li> <li>* A code which represents a hidden message.</li> </ul>	<ul style="list-style-type: none"> <li>* words</li> <li>* sentences</li> </ul>	<ul style="list-style-type: none"> <li>* smile</li> <li>* sigh</li> <li>* moral judgment express by actions</li> </ul>

### Dimension 3: Products

Products which the mind produces are the result of contents processed by mental operations. There are six products: units, classes, relations, systems, transformations and implications (Williams, 1972). Williams (1972) explains the six products by means of examples using the divergent thinking operation, as this mental operation contributes the most to creative thinking (see Table 3).

Table 3: Products

Products	Units	Classes	Relations	Systems	Transformations	Implications
<b>Examples</b>	Draw something that depicts sorrow by using the colour black. (Divergent thinking and figural unit)	By having a mixed-up list of numbers, letters, the individual must sort it out into similar classes. (Divergent thinking and symbolic class)	Write down synonyms for a given word. (Divergent thinking and semantic relations)	Create a non-verbal dramatization depicting how you feel about the weather today. (Divergent thinking and behavioural systems)	With four adjacent squares made of toothpicks, take away some to leave a specified number of squares without having any left. (Divergent thinking and figural transformations)	Invent gestures of how you can express feelings if your facial muscles are paralyzed. (Divergent thinking and behavioural implications)

## 6.2.2 An interaction thinking-feeling model: The Cognitive-Affective Interaction Model (CAI)

The three dimensions, namely D1: Programme contents; D2: Strategies; and D3: Behaviours will be discussed to illustrate the Cognitive-Affective Interaction Model (CAI).

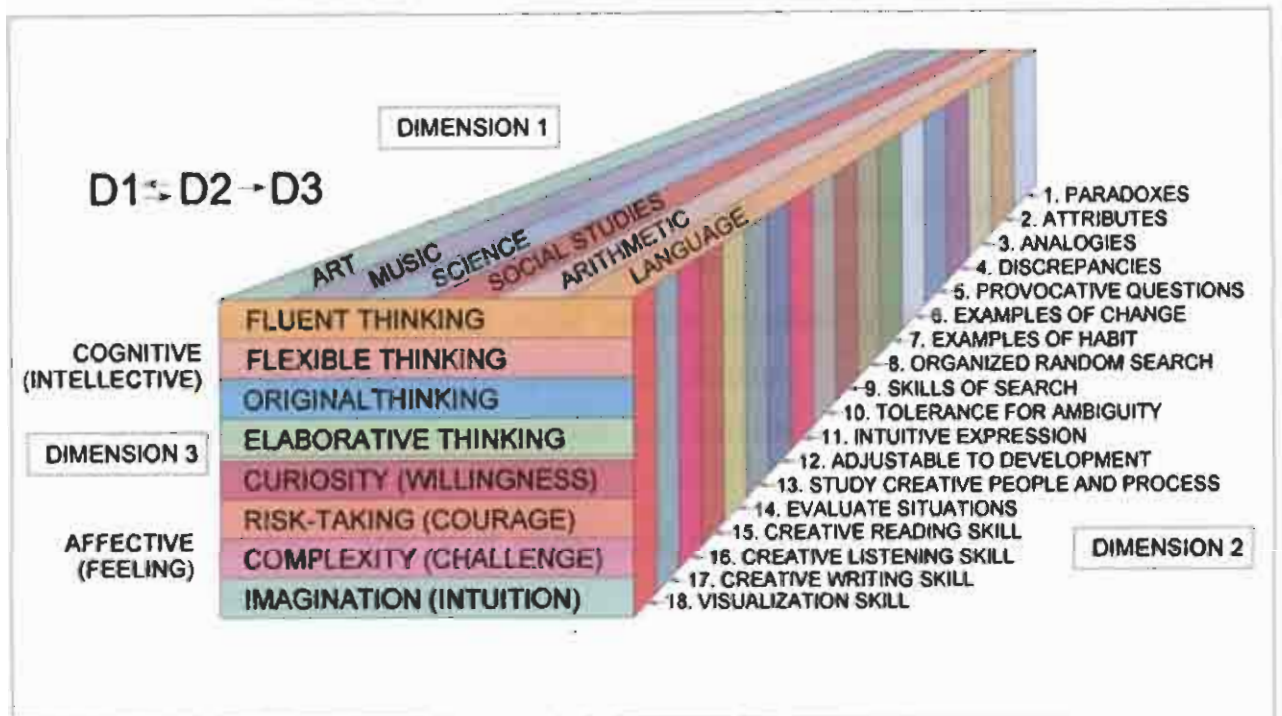


Figure 7: Cognitive-Affective Interaction Model (CAI) (Williams, 1972 p. 86).

These dimensions will be discussed in detail, as much of the programme is based on this model.

### Dimension 1: Programme contents

For the purpose of this research, D1= The curriculum, is not used, but rather substituted with the contents of the programme, namely:

- coping;
- self-concept;

- problem solving; and
- creativity.

## **Dimension 2: Strategies**

The strategies are regarded as a means of using the programme content to help the child to foster thinking and feeling behaviours. Not all strategies were used in the programme, but for the clarity of the model, each strategy will be discussed briefly. Williams (1972) explains the strategies as:

1. **Paradoxes:** This refers to situations which are opposed to common sense and discrepancies in belief but that are true.
2. **Attributes:** The individual must ascribe qualities and look at inherent properties and conventional symbols or identities.
3. **Analogies:** The pupil must look for similarities between things and situation of likeness.
4. **Discrepancies:** The pupil must point out gaps in knowledge and the missing links in information.
5. **Provocative questions:** The pupil must enquire, so as to incite knowledge exploration and discover new knowledge.
6. **Examples of change:** This refers to the dynamics of things and providing opportunities, so as to make alterations and modifications.
7. **Habit:** This refers to discussing what the effects of habit-bound thinking will be and working against being rigid in one's ideas.
8. **Random search:** The pupil must use a familiar structure to lead to a new one and the pupil must also explore other ways and not just focus on the familiar.
9. **Skills of search:** By making use of trial and error search, the individual must describe the results.
10. **Ambiguity:** The individual's thoughts are challenged.

- 11. Intuitive expression:** The individual will express emotions and have hunches about knowledge.
- 12. Adjustment to development:** The individual will be given the opportunity to learn from his/her mistakes.
- 13. Study creative people and processes:** The pupil must look at the processes which have led to creation and even analyse traits of creative individuals.
- 14. Evaluate situations:** By deciding on a solution, the individual will look at consequences and implications.
- 15. Creative reading skill:** By means of reading, the skill of idea generation can be developed.
- 16. Creative listening skill:** By means of listening, ideas can be generated.
- 17. Creative writing skill:** Writing can help the pupil to develop skills of self-expression and also to write his/her ideas clearly.
- 18. Visualisation skills:** By visualising, the pupil can look at things in different perspectives and even express ideas in three-dimensional form.

All of these strategies may be regarded as divergent thinking and feeling processes. A child's creativity will flourish if his/her divergent production is stimulated. A convergent thinker, however, does not make much use of intuition, imagination or guessing, which are important for creativity (Williams, 1972).

### **Dimension 3: Behaviours**

This dimension is sub-divided into two sections: cognitive (intellective) and affective (feeling). Each are further sub-divided into four areas (see table 4).

**Table 4: Behaviours**

**A: Cognitive-Intellective**

Fluent Thinking	Flexible Thinking	Original Thinking	Elaborative Thinking
<p>This refers to:</p> <ul style="list-style-type: none"> <li>* a flow of thoughts</li> <li>* a number of responses</li> </ul>	<p>This refers to:</p> <ul style="list-style-type: none"> <li>* a variety of ideas</li> <li>*an ability to shift categories</li> <li>* detour of thoughts</li> </ul>	<p>This refers to:</p> <ul style="list-style-type: none"> <li>* unusual responses</li> <li>* clever ideas</li> <li>* to produce away from the obvious</li> </ul>	<p>This refers to:</p> <ul style="list-style-type: none"> <li>* to add onto an idea</li> </ul>

**B: Affective-Temperament**

Willingness to take risks	Preference for complexity	Curiosity	Imagination
<ul style="list-style-type: none"> <li>* The individual will allow him-/herself to fail or even be criticised.</li> <li>* Take guesses</li> <li>* No structure is found here</li> <li>* The individual is unconventional</li> </ul>	<ul style="list-style-type: none"> <li>* The individual will seek challenges by means of:                             <ul style="list-style-type: none"> <li>- seeking alternatives</li> <li>- being able to see gaps between things</li> <li>- delving into problems or ideas</li> </ul> </li> </ul>	<p>The individual is:</p> <ul style="list-style-type: none"> <li>- inquisitive</li> <li>- will toy with an idea</li> <li>- be open for hunches</li> </ul>	<ul style="list-style-type: none"> <li>* The individual will visualise and build mental images.</li> <li>* The individual will also dream in a fantasy world and make use of intuition.</li> </ul>

Aspects regarding the Interactionist Model and Torrance Test of Creative Thinking will be presented below.

**6.2.3 Torrance’s creative thinking and an Interactionist Model**

In addition to the models mentioned, Torrance (1974), in his Torrance Test of Creative Thinking, also makes use of fluency, flexibility, originality and elaboration: the same are also used in Guilford’s SOI-Model and the CAI-Model with regard to the Cognitive-Intellective section of Dimension 3. Guilford explains thinking as a flow or as a number ideas, but elaborates more on the thinking in the fluency and flexible thinking types. The types of thinking are also categorised as Divergent-Productive Thinking. The CAI-Model, however, categorises thinking under Cognitive-Intellective, with no sub-divisions.

Torrance (1974) explains **fluency** as the ability to produce as many as possible ideas for the required task; **flexibility** entails the ability to produce various kinds

of ideas and to be able to make use of strategies or even shift from one approach to another. These ideas are then sorted into categories. **Originality** is the ability to produce ideas away from the obvious and **elaboration** entails that detail be added to the original stimulus or object.

These types of thinking are important so as to enhance the creative process and even though additions may be made to some of the thinking types, the essence of it remains similar. The contents of the programme entails, among others, self-esteem/concept and problem solving. The **Interactionist model** of Woodman and Schoenfeldt (1989) illustrates how self-esteem and problem solving are sub-components of creativity. Self-esteem falls into the Personality Dimension/Trait category, while problem solving can be found in the cognitive style/ability section of the model. This illustrates in which way these elements are components of creativity. Strategies in the CAI-Model will also be used to illustrate this.

An outline of the programme will be provided in chapter 7 and its relevance will be explained.

### **6.3 Summary**

Creativity is an important aspect in an individual's life and even though everyone has the potential to be creative, creativity seems to decrease with age. In the development of the creativity programme, reference was made to two models, namely Guilford's Structure of Intellect Model (SOI) and the Interaction Thinking-Feeling Model: The Cognitive-Affective Interaction Model (CAI). In addition to that, the Creative Thinking, of Torrance, and the Interactionist Model, were also incorporated so as to provide a programme that combines all aspects necessary for the children to improve on their skills.

The following chapter will discuss the method of research, illustrate how the evaluation process took place and discuss the rationale of each of the measuring instruments.

## *Chapter 7: Method of research*

### **7.1 Introduction**

In this chapter, the aims, research design, the study population and lastly the sample group will be discussed. In addition to this, the rationale, nature and psychometric characteristics of the measuring instruments will be discussed. A short motivation will also be provided for each measuring instrument, explaining the reason for its inclusion in this study. Lastly, the statistical techniques used in the data processing will also be discussed.

### **7.2 Aims**

The aims of the study are:

- To determine the construct validity and reliability of the measuring instruments which will be used in this research.
- To determine whether the compilation of a creativity programme is feasible.
- To determine whether the implementation of a creativity programme will enhance creativity, self-concept, coping and problem solving (which is a component of emotional intelligence) in children in the middle childhood.

### **7.3 Research Design**

For the purpose of this study a two-group pre-test, post-test design was used which entails that the study population is divided into different groups, namely the control group and the experimental group (Huysamen, 1985). The researcher divided these groups equally by means of a random sample. The experimental

group underwent the creativity programme, while the control group was not subjected to the creativity programme. The age of the participants in both the control and the experimental groups ranged from ten to thirteen years, which is representative of grade 4 to grade 7 learners.

#### **7.4 Study Population**

The study population for this research consisted of children in their middle childhood, thus, ranging from grade 4 (age 10) to grade 7 (age 13). The study population consisted of children in a local school in Potchefstroom in the North West province. A random sample of 150 children was drawn, of which consent to participate was received from 106. However, because of factors such as incomplete questionnaires and extramural activities, only 59 questionnaires could eventually be used for data processing. The study populations are representative of the various race and socio-economic strata.

#### **7.5 Sample group**

The sample group was drawn by means of class lists provided by the school. From the class lists for grades 4-7 a group of 150 learners were randomly selected and also randomly divided into a control and an experimental group. A letter of consent, which explained the nature of the study, was sent to the parents of those learners that were identified to participate in the study. Of the 150 randomly selected learners, only 106 gave consent. However, due to unforeseen circumstances such as incomplete questionnaires, extramural activities and the failure to complete the programme, not all of the questionnaires could be used to verify if the programme was a success, when the groups were compared as well as the results of the pre- and post-testing. Of the 106 learners who started the research, the questionnaires of only 24 in the control group and only 35 in the experimental group could be used, giving a total of 59 questionnaires.

The distribution of the data used for the research is provided in the table below.

Grade and gender	Experimental group		Control group		Total group	
	N	% of total	N	% of total	N	% of total
<b>Grade 4:</b>						
Boys	2	6	3	13	5	9
Girls	6	17	3	13	9	15
<b>Grade 5:</b>						
Boys	4	11	3	13	7	12
Girls	5	14	4	17	9	15
<b>Grade 6:</b>						
Boys	5	14	4	17	9	15
Girls	9	26	3	13	12	20
<b>Grade 7:</b>						
Boys	2	6	2	8	4	7
Girls	2	6	2	8	4	7
<b>Total:</b>	35	100	24	100	59	100

## 7.6 Research procedure

### 7.6.1 Phases in the research process

The research consisted of the following phases:

Phase 1: The principal of the school identified was approached, so as to obtain her support. The children who participated in the study were drawn by means of a random sample. A letter explaining the aim of the research was sent to the parents so as to obtain their permission for their child to participate in this study.

- Phase 2: Parents were informed that they would have to complete a questionnaire, namely the Stress Response Scale (SRS).
- Phase 3: The pre-testing of both the control and experimental group was completed at the school. The questionnaires were complete under the supervision of the researcher and a psychometrist.
- Phase 4: The five week programme was presented daily at the school by the researcher, after school hours.
- Phase 5: The post-testing of both the control and the experimental group was completed. The questionnaires were completed under the supervision of the researcher and a psychometrist.
- Phase 6: Processing of the data was done by the North West University Statistical Consultation.
- Phase 7: The programme was presented to the control group.

## **7.7 Measuring Instruments**

The following measuring instruments were used:

- **Test Battery for children:**
  - Torrance Test of Creative Thinking (consisting of verbal and figural tests)
  - BarOn Emotional Quotient Inventory: Youth Version
  - Tennessee Self-Concept Scale (TSCS)
  
- **Test Battery for parents:**
  - Stress Response Scale (SRS)

For a clearer understanding of the abovementioned tests, each will be discussed with reference to their rationale, description, psychometric characteristics and the motivation for their inclusion.

## **7.7.1 Torrance Test of Creative Thinking**

### **7.7.1.1 Rationale**

The Torrance Test of Creative Thinking was designed to measure creativity. Although there are various definitions of creativity, in almost every definition the production of something new is indicated. Torrance's (1974) definition of creativity involves five visible steps:

- being sensitive to problems, gaps in the knowledge and missing elements;
- searching for the solution(s);
- making hypotheses;
- testing and retesting these hypotheses; and
- the communication of the results.

Thus, the definition describes a natural human process (Torrance, 1974).

### **7.7.1.2 Description**

The Torrance Test of Creative Thinking consists of four batteries of test activities. There are two verbal tests and two figural tests, which are divided into verbal and figural forms A and B. These tests, both the verbal and figural, can be administered to individuals ranging from kindergarten to graduate students (Torrance, 1974). In this study, both the verbal and figural tasks were administered and each will therefore be discussed.

The verbal tests which were used were the **Product Improvement Activity** and the **Unusual Uses for Tin Cans**. The figural tests used were the **Circles** and the **Picture Completion**.

- **Product Improvement:**

The Product Improvement activity is regarded as one of the most dependable measures of creativity, and is also a very complex task. This task is not only interesting but allows the individual to play with ideas which he/she would not necessarily express in a more serious, structured task. Ten minutes are allowed for this task. The task entails that the individuals list the cleverest, most interesting and unusual way for changing the toy so that children will have more fun playing with it. Scores for fluency, flexibility, originality and elaboration are totalled (Torrance, 1974).

- **Unusual uses of tin cans:**

This task enables the individual to free his/her mind and to think of various interesting and unusual uses for a tin can. The individual gets ten minutes in which to think of as many unusual uses as possible for the tin can, without being limited to any one size of a can. The activity yields scores for fluency, flexibility, originality and elaboration (Torrance, 1974).

- **Circles:**

The circles task probes the individual's ability to disrupt or destroy an already complete form. This activity yields satisfactory test-retest scores. Here, the individual has to see how many objects or pictures can be made from the circles within ten minutes. Once again, fluency, flexibility, originality and elaboration are totalled (Torrance, 1974).

- **Picture completion:**

Here, the individual has to add lines to the incomplete figures and create a picture within ten minutes. An incomplete figure may elicit tension and here, the individuals must control his/her tension in order to produce an original response. Each figure is scored for flexibility, originality and elaboration, which are then totalled. Children who fail to complete the ten figures tend to be high elaborators and are characterised as overly anxious (Torrance, 1974).

### **7.7.1.3 Psychometric characteristics of the Torrance Test of Creative Thinking**

Various researchers have conducted test-retest reliability on the Torrance Test of Creative Thinking. Goralski (1964), in Torrance (1974) used a battery of most of the tasks in the Verbal and Figural and reported reliability coefficients of 0.82, 0.78, 0.59 and 0.83 for fluency, flexibility, originality and the total battery respectively. In another test battery which was relatively the same as Goralski's (1964), Eherts (1961), in Torrance (1974), reports a test-retest reliability coefficient of 0.88.

Regarding the validity of the Torrance Test of Creative Thinking, acceptable scores have been found. Different validity coefficients have, however, been found in various studies (Torrance, 1974).

### **7.7.1.4 Motivation for the inclusion of the Torrance Test of Creative Thinking**

The Torrance Test of Creative Thinking measures creativity, and the basis of this study is a creativity programme. The test battery for this study included two verbal and two figural components. The researcher thought it fit to include the

four tests, so as to gain optimal exposure to creativity and to stimulate the thinking of the subjects.

## **7.7.2 BarOn Emotional Quotient Inventory**

### **7.7.2.1 Rationale**

The BarOn Emotional Quotient Inventory is an instrument that is designed to measure emotional intelligence in young people ranging from age seven to eighteen. This instrument measures a cross-section of abilities and competencies that constitutes the core features of a person's emotional intelligence (Bar-On & Parker, 2000).

### **7.7.2.2 Description**

The BarOn Emotional Quotient Inventory is reliable and valid and consists of a long and a short form. The short form was administered in this research and consisted out of thirty items. It contains six scales, namely the Intrapersonal Scale, Interpersonal Scale, Adaptability Scale, Stress Management Scale, Positive Impression Scale and Total EQ. The short form is suited for group testing and when repeat testing is planned. It is easily administered and scored and the entire administering process takes about fifteen minutes (Bar-On & Parker, 2000).

### **7.7.2.3 Psychometric characteristics of the BarOn Emotional Quotient Inventory**

Based on the test-retest reliability for both the long and short form, the test-retest reliabilities are excellent. The test-retest reliability coefficients for the short form range from 0.84 for the Intrapersonal Scale, 0.81 for the Interpersonal Scale,

0.85 for Adaptability, 0.88 for Stress Management, 0.87 for the Total EQ and 0.77 for Positive Impression (Bar-On & Parker, 2000).

Validity for the BarOn Emotional Quotient is good and the scales identify core features of emotional intelligence in children and adolescents (Bar-On & Parker, 2000).

#### **7.7.2.4 Motivation for the inclusion of the BarOn Emotional Quotient Inventory**

It was decided to include the BarOn Emotional Quotient Inventory in order to determine whether the creativity programme would help to increase the emotional intelligence of the learners. Another motivation for its inclusion was that this component is sub-divided into other sections, such as problem solving, being able to express one's feelings etc. This Inventory duly represents advancement in the assessment of emotional intelligence in children, as the assessment in emotional intelligence is a relatively new phenomenon. The BarOn Emotional Quotient Inventory: Youth Version is the first instrument to have been published that assesses the emotional intelligence in children and teenagers.

#### **7.7.3 Tennessee Self-Concept Scale**

##### **7.7.3.1 Rationale**

The Tennessee Self-Concept Scale is a measuring instrument that is answered by children and adults, thus containing an adult and a child form. The Tennessee Self-Concept Scale helps to identify strengths and weaknesses in the overall self-concept and also in the specific areas of self-concept (Fitts & Warren, 1996).

### **7.7.3.2 Description**

Both the Child and the Adult Form consist of self-descriptive statements that range from "Always False", "Mostly False", "Partly False" and "Partly True", to "Mostly True" and "Always True". The Child Form consists of 76 items and can be completed by children in the age group seven to fourteen. The TSCS can be completed in a group and takes approximately 20 minutes. Scores consists out of two summary scores, namely Total Self-Concept and Conflict, and six Self-Concept Scales, viz. Physical, Moral, Personal, Family, Social and Academic (Fitts & Warren, 1996).

### **7.7.3.3 Psychometric characteristics of the Tennessee Self-Concept Scale**

For over the past thirty years the TSCS has shown consistent validity and reliability scores (Fitts & Warren, 1996). Test-retest reliability scores range from 0.72 for the Total Self-Concept score and the reliability for the Self-Concept Scales range from 0.71 for Physical, 0.69 for Moral, 0.79 for Personal, 0.74 for Family, 0.78 for Social and 0.76 for Academic (Fitts & Warren, 1996). Validity has been shown and was proven even when compared to other psychological instruments (Fitts & Warren, 1996).

### **7.7.3.4 Motivation for the inclusion of the Tennessee Self-Concept Scale**

The TSCS complies with both reliability and validity indexes and measures the Self-Concept of the child. The inclusion of the TSCS helps to obtain the aforementioned information for the research.

## **7.7.4 Stress Response Scale**

### **7.7.4.1 Rationale**

The Stress Response Scale is a useful instrument that helps to measure children's emotional adjustment. The SRS was developed from a model that describes the response styles used by children under stress (Chandler, 1986).

### **7.7.4.2 Description**

The Stress Response Scale consists of 40 items that rate behaviour. The scale is completed by either a parent or someone who is familiar with the child's behaviour. The scale is used with children ranging from between five and fourteen. The items are rated by frequency of occurrence, ranging from "never" to "always" (Chandler, 1986).

### **7.7.4.3 Psychometric characteristics of the Stress Response Scale**

In a study by Lantz-Hecker (1988) (in Chandler, 1986), it was shown that there are no significant differences between the ratings done by parents and teachers. Reliability was also found to be good regarding test-retesting scores. Test-retest coefficients for the five subscales ranged from 0.79 for Acting out, 0.90 for Passive-Aggressive, 0.85 for Overactive, 0.78 for Repressed and 0.87 for Dependent. In a subsequent study, the following was found, 0.83 for Acting out, 0.83 for Passive-Aggressive, 0.72 for Overactive, 0.80 for Repressed and 0.73 for Dependent (Chandler, 1986).

Various studies have found that the SRS is useful in diagnostic assessments and also useful in psychoeducational decision making (Chandler, 1986).

#### **7.7.4.4 Motivation for the inclusion of the Stress Response Scale**

The Stress Response Scale was included to provide information regarding the child's emotional adjustment. The scores therefore provided important information regarding whether the programme has helped to improve the child's emotional adjusting, based on the pre- and post-testing.

### **7.8 Research objectives and hypotheses**

The following aims and hypotheses were formulated for the research:

- **Aim 1:**

**Aim:** To determine whether the measuring instruments used in the research are valid and reliable.

**Hypothesis:** The hypothesis corresponding with the first aim is that the measuring instruments are reliable and valid.

- **Aim 2:**

**Aim:** To determine whether the compilation of a creativity programme is feasible.

**Hypothesis:** The compilation of a creativity programme is feasible.

- **Aim 3:**

**Aim:** To determine whether the implementation of a creativity programme will enhance creativity, self-concept, coping and problem-solving, which is a component of emotional intelligence in children in the middle childhood.

Hypothesis: The implementation of the creativity programme will enhance creativity, self-concept, coping and problem-solving, which is a component of emotional intelligence in children in the middle childhood.

## **7.9 Data processing**

The processing of the data was done by the North-West University Statistical Consultation Service. In order to understand the processing of the data, the methods used will be discussed.

### **7.9.1 Reliability and validity of the measuring instruments**

Salkind (2000) describes reliability and validity as the hallmarks of good measurement. Reliability means that the test must be able to measure the same thing more than once, with the same results and in the outcome (Salkind, 2000).

To determine reliability, the **Cronbach alpha coefficient**, which is an index of internal consistency, is used. Validity is measured by using **factor analysis**. Each will be discussed separately so as to illustrate the two concepts.

#### **7.9.1.1 Cronbach alpha coefficient**

As already mentioned, the Cronbach alpha coefficient is an index of internal consistency. According to Huysamen (1994), the function then of this index is to show the degree to which the test items measure the same attribute. Therefore, a high internal consistency implies a high degree of generalisability across the items of the test as well as across other tests that involve similar items.

When interpreting data, the following deductions can be made regarding to the Cronbach alpha coefficient.

- 1 = definite reliability regarding to the measuring instrument
- > 0.5 = acceptable
- < 0.5 = doubtful whether the measuring instrument is a reliable measure regarding the measuring of that particular variable (Huysamen, 1998)

According to Smit (1996), there are various factors that may influence the reliability coefficient. They are, inter alia, the length of the test; the construction of the test; the influence of guessing; the administration procedures of the test and the range of individual differences.

The Cronbach alpha coefficient will be used to determine the reliability of the BarOn Emotional Quotient Inventory, the Tennessee Self-Concept Scale and the Stress Response Scale. Because the responses of the Torrance Test of Creative Thinking are qualitative, reliability cannot be determined.

#### **7.9.1.2 Factor analysis**

Smit (1996) defines factor analysis as the statistical technique used to determine the minimum number of factors to explain the intercorrelations between the variables. Factor analysis therefore provides information regarding the number of factors that explain the intercorrelations between the tests, factor loadings and communalities (Smit, 1996). As such, factor analysis can provide information regarding factor loadings, communalities and the number of factors that can explain the intercorrelations between the tests (Smit, 1996).

Validity may be affected by various factors such as the range of the distribution of individual differences in the performance of the standardised sample population; the influence of the reliability of a test; the affect of the test length and the application of statistical techniques used (Smit, 1996).

## 7.9.2 Descriptive statistics

Descriptive statistics can be defined as the characteristics of the sample (Salkind, 2000). The descriptive statistics that were used in the data were those of skewness and kurtosis, as well as the arithmetic mean and standard deviation.

*Skewness* refers to the distribution curve, which refers to the degree of symmetry or asymmetry. A positive skewness refers to the curve being asymmetrical due to the low frequencies at the upper end and high frequencies at the lower end of the horizontal axis, while a negative skewness refers to frequencies piling up at the upper end of the curve trailing off to the lower end (Huysamen, 1976).

*Kurtosis* measures the peakedness of a distribution and can be described by means of three types of curves. The leptokurtic curve refers to the curve being more peaked than the other; the platykurtic curve is a less peaked curve than the other and the mesokurtic curve is a normal distribution curve (Huysamen, 1976).

The *arithmetic mean*, as described by Huysamen (1983), refers to the point in a distribution in which the algebraic total of the deviation of all the n-scores is equal to nil, while the *standard deviation* refers to the indication of the degree to which the data is centred on the average should the measurement form a normal curve (Smit, 1983). Steyn, Smit, Du Toit and Strasheim (1994) further explain that the distances of the individual values from the arithmetic mean are reflected by the standard deviation and that the greater the standard deviation, the greater the distance will be between the values and the arithmetic mean.

## 7.9.3 ANCOVA: Analysis of covariance

ANCOVA is the acronym for the Analysis of Covariance. ANCOVA is a special form of analysis of variance. Everitt and Hay (1992) describe ANCOVA as that the means of the dependent variable (the post-test in this study) in the various

groups are adjusted to correspond to the same mean values of the covariates (the pre-test in this study) and then compared with the usual analysis of variance tests. Furthermore, the main assumption of this type of analysis is linearity. The second assumption is that the linear relationship between the dependent variable and the covariates is the same in each group. ANCOVA is therefore often used to adjust differences between naturally occurring groups in investigations.

The ethical aspects regarding the research will be discussed below.

### **7.10 Ethical aspects**

Numerous ethical aspects were addressed during the research.

- Informed consent was obtained by the parents of the participants, as well as by the headmistress of the school.
- Participation was voluntary and the participants could withdraw at any time.
- The pre- and post-testing was conducted by a registered psychologist and the data was anonymous so as to ensure the privacy of the participants.
- The results were made available for the participants.
- For the duration of the research no harmful risks were present.
- The participants of the control group were allowed the opportunity to participate in the programme after the research has been completed.

### **7.11 Compilation and presentation of the creativity programme**

The creativity programme is composed of four sections, namely coping, self-concept, problem solving and creativity. The programme, including the evaluation by means of the measuring instruments, lasted five weeks. The

control group was only involved during the first and the last week, which involved the evaluation of the measuring instruments.

The exercises in the programme were compiled from existing literature, but many of these exercises were modified by the researcher. Some of the exercises were designed solely by the researcher (e.g. word search). The programme included a glossary and an evaluation form. After the completion of the programme, the children were provided with a certificate of recognition and appreciation of completing the creativity programme (cf. addendum).

An outline of the programme and the sessions will be provided. The outline of the programme will indicate the weeks and the sessions within the respective weeks. Thereafter the main themes will be indicated and subdivided into their respective themes. The activities of each sub-theme will also be indicated, as well as the duration of the activity. In order to illustrate the relevance of the activity, the strategy and the creative thinking skills will be provided as well. The strategy and the creative thinking skills are indicative of the models provided in chapter 6.

The aims of the activities will be discussed and thereafter an outline of the programme will be provided.

Table 5: Outline of the creativity programme

<b>Theme</b>	<b>Activity</b>	<b>Aim</b>
<i>Coping:</i> 1. Identifying stressors and types of coping	1. 4 coping styles 2. Brainstorming coping strategies 3. Word search	- To identify stressors. - To identify new coping strategies and implement it into his/her life. - To review that which they have learnt and to consolidate learning.
2. Relaxation	1. Relaxation	- To identify the difference between a relaxed state and tension and to realise that the more relaxed a person is, the more creative a person can be and also cope more effectively.

<p><b>Self-Concept:</b></p> <p>1. Who am I?</p>	<p>1. Lifeline</p> <p>2. I am....</p> <p>3. Market place</p> <p>4. Word name</p>	<p>- Self-discovery and discovering him-/herself and exploring strengths and weaknesses.</p> <p>- Identifying characteristics that are unique to him/her.</p> <p>- Acknowledgment of characteristics and identifying how growth can take place by acquiring other characteristics/qualities, thereby living an even fuller life.</p> <p>- Combining the previous activities and concluding it with a visual and mental reminder.</p>
<p>2. Self-talk</p>	<p>1. Negative self-talk</p>	<p>- Identifying his/her negative self-talk and realising how it influences the self-concept.</p> <p>In addition to this, the activity also enhances Problem solving techniques.</p>
<p>3. Goals for improvement and accepting myself</p>	<p>1. My goals</p> <p>2. My own article</p> <p>3. Puzzle of myself</p>	<p>- By incorporating all he/she has learnt and put it into practice by thinking of ways to enhance him-/herself.</p> <p>- This activity helps to consolidate the previous exercises.</p> <p>- A visual reminder of his/her qualities.</p>
<b>Problem-solving:</b>		
<p>1. Problems and tunnel vision</p>	<p>1. What do you see?</p>	<p>- To illustrate how a person's creativity and problem-solving ideas can be influenced by preconceived ideas, tunnel vision.</p>
<p>2. Problem solving</p>	<p>1. Road to problem-solving</p> <p>2. Brainstorming</p>	<p>- To realise that problem-solving occurs best when following the correct steps and when solving problems, creativity is also stimulated and ideas are formed.</p> <p>- Brainstorming by means of steps to problem-solving, thinking creatively and creating original solutions.</p>
<p>3. Putting into practice</p>	<p>1. Problems</p> <p>2. Bag of objects</p>	<p>- To find solutions to practical problems and realising that by using problem solving techniques, solutions can be found.</p> <p>- To think beyond the obvious and to think creatively, as well as make use of problem solving techniques.</p>
<b>Creativity:</b>		
<p>1. Creating something new</p>	<p>1. Ink blot picture</p> <p>2. New invention</p>	<p>- To illustrate that by using imagination something new can be formed.</p> <p>- To reinforce the creativity aspect of developing and creating something new and unique.</p>

2. Creativity and cartoons	1. Cartoon strip	- To focus on being creative and using his/her imagination.
3. Fun, fun, fun	1. Improving the toy  2. Mind stretchers	- Creativity and problem-solving techniques are reinforced and the individual is given the opportunity to learn from others as well.  - To think beyond the obvious and to encompass all they have learned.

An outline of the creativity programme:

Week	Session	Theme	Activities	Duration	Requirements	Creative Thinking	Strategy
		<b>COPING</b>					
1	1	1. Identifying stressors and types of coping	1.1 4 Coping styles	20 min	Worksheet 1	Fluent thinking	Creative reading/listening/writing skills
	2		1.2 Brainstorming own coping strategies	15 min	Worksheet 2	Fluent, original and elaborative thinking (building on example given)	Brainstorming as creative problem-solving technique and creative writing skill
	3		1.3 Word search	20 min	Worksheet 3	-	Consolidation of learning
	4	2. Relaxation	2.1 Relaxation	60 min	Relaxation music. Worksheet 1 cushion	-	Visualization skills and creative writing skill
		<b>SELF-CONCEPT</b>					
2	5	1. Who am I?	1.1 Lifeline	10 min	Worksheet 1 crayons, pencils and eraser	Fluent and elaborative thinking	Creative investigation/skills of search, attributes, creative writing skills, creative art
	6		1.2 I am ....	15 min	Worksheet 2, crayons, pencils and eraser	Fluent thinking	Attributes, intuitive expression, creative art and creative writing skills
	7		1.3 Market place	15 min	Worksheet 3	Fluent and elaborative thinking	Creative writing skill/listening skill and intuitive expression

8			1.4 Word name	15 min	Worksheet 4, crayons, and clay	Fluent, flexible and original thinking	Visualization, creative self and intuitive expression, creative art
9		2. Self-talk	2.1 Countering self-talk	40 min	Worksheets 1 and 2	Fluent and flexible thinking	Creative investigation/intuitive expression, creative reading and writing skill
10		3. Goals for improvement and accepting myself	3.1 My goals	15 min	Worksheet 1	Fluent and elaborative thinking	Attributes, creative writing skills and creative self-discovery
11			3.2 Article	30 min	Worksheet 2, crayons, pencils, soothing music	Fluent, flexible, original and elaborative thinking	Creative listening, visualisation, creative art, creative writing skill and attributes
12			3.3 A puzzle of myself	15 min	Worksheet 3, crayons, scissors, Pritt/glue, cardboard and music	-	Creative art

		<b>PROBLEM-SOLVING</b>					
4	13	1. <b>Problems and tunnel vision</b>	1.1 What do you see?	10 min	Worksheet 1	Fluent, flexible and original thinking	Creative writing skills, visualization and tolerance for ambiguity
	14	2. <b>Problem solving</b>	2.1 Road to problem solving	20 min	Worksheet 1	Fluent, flexible and elaborative thinking	Brainstorming as creative problem-solving technique, creative writing skill, skills of search, evaluation, creative listening skill.
	15		2.2 Brainstorming	25 min	Worksheet 2	Fluent, flexible, elaborative and original thinking	Visualisation, brainstorming, tolerance for ambiguity, creative writing skill
	16	3. <b>Putting into practise</b>	3.1 Problems	15 min	Worksheet 1	Fluent thinking	Brainstorming, creative reading skill, tolerance for ambiguity, evaluate situations
	17		3.2 Bag of objects	30 min	5 bags filled with objects	Fluent, flexible, elaborative and original thinking	Creative imagination, tolerance for ambiguity, creative reading and creative listening skills

5		<b>CREATIVITY</b>							
18	1. <b>Creating something new</b>	1.1 Ink blot picture	20 min	Worksheet 1, paint, crayons, pencils	Fluent, flexible, original and elaborative thinking	Visualisation and creative art			
19		1.2 New invention	30 min	Worksheet 2, Pritt/glue, crayons and pencils	Flexible, original and elaborative thinking	Creative imagination, organised random search			
20	2. <b>Creativity and cartoons</b>	2.1 Cartoon strip	60 min	Worksheet 1	Fluent, flexible and original thinking	Creative writing skills, creative art, creative visualisation and imagination			
21	3. <b>Fun, fun, fun</b>	3.1 Improving the toy	20 min	Worksheet 1	Elaborative, original, fluent, flexible thinking	Tolerance for ambiguity, creative writing, brainstorming, examples of change, creative listening			
22		3.2 Mind stretchers	15 min	Worksheet 2	Original thinking	Discrepancies and tolerance for ambiguity			

## **7.12 Problems experienced during the research**

A few problems were experienced during the testing and presentation of the creativity problem. These will be discussed below.

- Some of the parents did not complete their section of the questionnaire and due to this, it had to be discarded.
- Some of the children had to attend sport activities while the programme was presented, and as a result some of the children could not complete the programme.
- Marking some of the questionnaires was time-consuming and this delayed the process.

Even though problems were encountered, the presentation of the programme went well and the data was interpreted. The results of the programme will be discussed in the following chapter.

## **7.13 Summary**

In this chapter the aims and the research design were explained. To gain further insight in the participants, the study population and sample group were described. Thereafter the research procedure was provided, as well as the measuring instruments that were used during the research. Lastly, the data processing was explained and details were given about the ethical aspects and the compilation of the programme.

The following chapter will discuss the results and will offer an interpretation of the results of the research.

## *Chapter 8: Results and Discussion*

### **8.1 Introduction**

In this chapter, the results of this research will be interpreted and described. The measuring instruments will be explained by means of tables, and for each table a key will be provided to further explain each of the headings.

The aims of this study will be discussed separately. The reliability and validity of the measuring instruments will be evaluated and discussed, as well as the descriptive statistics and the results of the ANCOVA scores.

### **8.2 Aim 1: The reliability and validity of the measuring instruments**

In order to determine the reliability of the measuring instruments, the Cronbach alpha coefficient will be used. The validity is measured by means of factor analysis.

Cronbach alpha coefficient is an index of internal consistency and shows the degree to which the test items measure the same attribute. A high internal consistency will imply a high degree of generalisability across the items of the test as well as over other tests that consist of the similar items (Huysamen, 1994). The Cronbach alpha coefficient will be used to determine the reliability of the BarOn Emotional Quotient Inventory, the Tennessee Self-Concept Scale and the Stress Response Scale. Because the responses of the Torrance Test of Creative Thinking are qualitative, reliability cannot be determined.

Factor analysis is seen as a statistical technique that is used to determine the minimum number of factors to explain the intercorrelations between the variables and it will provide information regarding factor loadings, communalities and the number of factors that can explain the intercorrelations between the tests (Smit, 1996).

The reliability and validity of each test will be discussed.

### **8.2.1 Reliability and validity of the Torrance Test of Creative Thinking (Torrance, 1974)**

The responses of the Torrance Test of Creative Thinking are qualitative and therefore the Cronbach alpha coefficient calculation cannot be used to determine its reliability. In order to determine reliability in such a case, Torrance (1974) suggests the use of the test-retest. The results of the test-retest will be discussed at a later stage (cf. 8.3).

### **8.2.2 Reliability and validity of the BarOn Emotional Quotient Inventory (BarOn & Parker, 2000)**

**Table 8.2.2.1: Results of the Cronbach alpha coefficients and factor analysis**

<b>Variable</b>	<b>A</b>	<b>% variance explained by the factors</b>	<b>Highest communality</b>	<b>Lowest communality</b>	<b>Number of factors extracted</b>
Av	0.589	57.2%	0.781	0.456	2
Bv	0.727	61.2%	0.743	0.405	2
Cv	0.702	62.9%	0.731	0.342	2

Dv	0.786	49.2%	0.699	0.250	1
Ev	0.779	68.3%	0.784	0.499	7
Fv	0.481	68.5%	0.753	0.641	3

**Key:**

**Variables:**

- Av – Intrapersonal Scale
- Bv – Interpersonal Scale
- Cv – Stress Management Scale
- Dv – Adaptability Scale
- Ev – Total EQ
- Fv – Positive Impression Scale

$\alpha$  : Cronbach alpha coefficient

The scores of the Cronbach alpha coefficient are indicative of good reliability. In order for the test to be reliable, a value of 0.5 and above should be scored: the scores range from 0.786 to 0.481, therefore indicating reliability. The highest score was for the Adaptability Scale, while the lowest was found on the Positive Impression Scale. These scores are slightly lower than scores found in the study done by Bar-On and Parker (2000). Their test-retest reliability coefficients for the short form showed scores of 0.84 for the Intrapersonal Scale; 0.81 for the Interpersonal Scale; 0.85 for Adaptability; 0.88 for Stress Management; 0.87 for the Total EQ; and 0.77 for Positive Impression (Bar-On & Parker, 2000).

Regarding factor analysis, the percentage variance explained for the Intrapersonal Scale (Av) is 57.2% and the communalities vary between the highest of 0.781, and the lowest of 0.456.

Therefore, it can be reported that the factors that are extracted are 57.2% of the variance between the items declared, thus indicating that the factors that are

extracted are more than half of the variance is declared in the data. There are 2 extracted factors: consequently, certain items are represented well in the factors (0.781) while others are not represented that well in the factors (0.456). Because there are insufficient guidelines about which percentage variance is acceptable, the researcher accepted the guideline provided by Naudé (2001), who made an arbitrary judgement suggesting that 30% is regarded as low. Accordingly, it is an indication that the items are represented well in the factors that are extracted. The factor analysis therefore indicates that the variable measures the Intrapersonal Scale of the child.

The percentage variance for the Interpersonal Scale is 61.2%. The communalities vary between the highest of 0.743 and the lowest of 0.405. There are 2 extracted factors, and there are therefore items that are represented well in the factors (0.743) while others are not represented that well in the factors (0.405). Accordingly, it can be deduced that the factors that are extracted are more than half of the variance in the data which is declared. Factor analysis regarding this variable indicates that the Interpersonal Scale of the child can be measured.

The Stress Management Scale has a percentage variance of 62.9%. The highest communality is 0.731 and the lowest communality is 0.342. There are 2 extracted factors; there are therefore items that are represented well in the factors and others that are not represented that well in the factors. Because the scores indicate that more than half of the variance of the data is declared and that the communalities are above 30%, it can be deduced that factor analysis measures the variable Stress Management of the child.

The percentage variance explained by the factors for the Adaptability Scale, Total EQ and the Positive Impression Scale are 49.2%, 68.3% and 68.5% respectively. The factors that are extracted in the Adaptability Scale declare

nearly half of the variance in the data, while the Total EQ and the Positive Impression Scale both represent more than half of the variance in the data.

Based on the highest and lowest communalities in these three scales, it can be deduced that there are items that are represented well in the factors and others that are not represented that well in the factors, thus, illustrating that the variables can be measured by factor analysis.

However, the lowest communality score of 0.250 on the Adaptability Scale is regarded as low, according to the guideline provided by Naudé (2001). This indicates that the factor analysis of this variable, namely Adaptability Scale is slightly lower than the other variables and that the items of this variable might not necessarily provide a decisive answer regarding the child's score on the Adaptability Scale.

Collectively, it can be said that the BarOn Emotional Quotient shows good reliability and validity scores. Consequently, with repeated evaluation the measuring instrument should deliver similar results which will provide information regarding the variables of the child.

### **8.2.3 Reliability and validity of the Tennessee Self-Concept Scale (Fitts & Warren, 1996)**

**Table 8.2.3.1: Results of the Cronbach alpha coefficients and factor analysis**

Variable	A	% variance explained by the factors	Highest communality	Lowest communality	Number of factors extracted
scv	0.71	63.7%	0.769	0.370	3

idnv	0.86	67.9%	0.811	0.535	6
satv	0.76	62.5%	0.761	0.456	4
bhvv	0.77	63.7%	0.798	0.478	6
phyv	0.67	62.8%	0.740	0.475	4
morv	0.77	58.2%	0.702	0.457	2
perv	0.77	57.9%	0.763	0.463	3
famv	0.76	59.5%	0.787	0.189	3
socv	0.76	67.1%	0.856	0.493	4
acav	0.72	61.8%	0.781	0.438	3
fakgv	0.50	64.5%	0.729	0.487	2

**Key:**

**Variables:**

- scv - self-criticism
- idnv - identity
- satv - satisfaction
- bhvv - behaviour
- phyv - physical self-concept
- morv - moral self-concept
- perv - personal self-concept
- famv - family self-concept

**socv** - social self-concept  
**acav** - academic self-concept  
**fakgv** - faking good

$\alpha$ : Cronbach alpha coefficient

The Cronbach alpha coefficient scores of the Tennessee Self-Concept Scale are reliable, with the scores ranging from 0.50 to the highest of 0.86. The scores found in this study are relatively similar to those found by Fitts and Warren (1996), are relatively similar in that their test-retest reliability scores varied between 0.55 and 0.83.

Based on the scores rendered by the factor analysis, the following can be deduced: There are eleven variables and the percentage variance explained varies from 67.9% (identify scale) to 56.2% (moral self-concept). The extracted factors are in the region of 2, 3, 4 and 6 extracted factors. The communalities vary from 0.856, the highest (for the Social Self-concept Scale) to 0.189, the lowest (for the Family Self-concept). There are therefore items that are represented well in the factors and other items which are not represented that well in the factors. According to the percentage variance explained for all of the variables, it can be deduced that the factors which are extracted represent more than half of the variance in the data. It is therefore found that the variables can be measured and that validity is present.

The variable Family Self-concept is the only variable with a low communality score below 30%. The lowest communality in this variable is 0.189, indicating that the items in this variable might not necessarily provide a decisive answer regarding the child's Family Self-concept scores.

Collectively, it may be concluded that the scores for the Tennessee Self-Concept Scale are indicative of reliability and validity. This measuring instrument should therefore provide similar results should retesting take place, similar results should be found regarding the self-concept in its various forms.

## 8.2.4 Reliability and validity of the Stress Response Scale (1986)

Table 8.2.4.1: Results of the Cronbach alpha coefficients and factor analysis

Variable	A	% variance explained by the factors	Highest communality	Lowest communality	Number of factors extracted
Impulsive Acting Out	0.846	69.4%	0.778	0.590	4
Passive Aggressive	0.870	65%	0.810	0.446	3
Repressed	0.693	52.1%	0.599	0.402	1

**Key:**

**Variables:**

Impulsive Acting Out

Passive Aggressive

Repressed

$\alpha$  : Cronbach alpha coefficient

According to the above scores, reliability has been proven. Test-retest scores found by Chandler (1986) indicated 0.79 for Acting Out, 0.90 for Passive-Aggressive and 0.78 for Repressed. The scores found in this study are similar.

There are 4 extracted factors found in the Impulsive Acting Out variable. The percentage variance explained by the factors is 69.4%, thus indicating that the factors that are extracted represent more than half of the variance explained in the data. The highest communality is 0.778 and the lowest communality is 0.590 which indicate that there are items that are represented well in the factors (0.778) and items that are not represented as well in the factors (0.590). The conclusion

can be made that the variable presents with validity, which implies that the Impulsive Acting Out variable of the child can be measured by this instrument.

The Passive Aggressive Scale shows a percentage variance of 65%, indicating that the factors that are extracted represent more than half of the variance explained in the data. There are three extracted factors and the communalities vary from 0.810, the highest, to 0.446, the lowest. Therefore, certain items are well represented, while other items are not. According to these scores, there is validity and this variable will be able to measure the Passive Aggressive score of the child.

Lastly, the Repressed variable indicated one extracted factor, with a 52.1% variance. This indicates that the factors that are extracted represent more than half of the variance explained in the data. The highest communality is 0.599 and the lowest is 0.402, indicating that certain items are represented well in the factors and that others are not. However, factor analysis confirmed that the variable can be measured.

It can therefore be concluded that this measuring instrument represents reliability as well as validity; should an evaluation be done repeatedly, similar results should be found and similar information should be given regarding the three variables.

### **8.3 Aim 2: The compilation of a creativity programme**

The compilation of a creativity programme was feasible and was compiled by means of existing literature as well as the researcher's own input. Based on Guilford's Structure of Intellect Model (SOI) and the Interaction Thinking-Feeling Model: The Cognitive-Affective Interaction Model (CAI), the researcher was able to ensure that the activities consisted of strategies that will help the participant's foster feeling and thinking behaviours, such as random search and creative

listening skills (cf. 6.2.2 and 7.11). In addition to this the activities also focused on cognitive aspects such as fluency, flexibility, originality and elaboration (cf. 6.2.2).

In accordance with these guidelines, the researcher was able to compile a programme that could include the appropriate strategies to help the participants improve their creativity, self-concept, problem solving and coping skills.

## **8.4 Aim 3: Effect of the creativity programme: Results of pre- and post-testing**

The results of the pre- and post-testing will be discussed in this section. The ANCOVA results will be given as well as results of the descriptive statistics.

### **8.4.1 Torrance Test of Creative Thinking: Comparison between the control and experimental group regarding the pre- and post-testing**

#### **8.4.1.1 Analysis of Covariance (ANCOVA)**

**Table 8.4.1.1 Analysis of Covariance (ANCOVA): Comparison between the control and the experimental group with respect to pre- and post-testing**

<b>Variable</b>	<b>ANCOVA results</b>	<b>Adjusted post-test means Control</b>	<b>Adjusted post-test means Experimental</b>
<b>Activity 2:</b>			
Flu2:	F(1;56) = 8.31 (p = 0.0056) Statistically significant on a 5% level	8.892	9.703

Flex2:	F(1;56) = 6.76 (p = 0.0019) Statistically significant on a 5% level	7.270	8.420
Orig2:	F(1;56) = 21.08 (p = <.0001) Statistically significant on a 5% level	4.234	7.470
<b>Activity 3</b>			
Flu2:	F(1;56) = 3.58 (p = 0.0637) Statistically non-significant on a 5% level	4.780	6.522
Flex2:	F(1;56) = 1.97 (p = 0.1662) Statistically non-significant on a 5% level	3.834	4.780
Orig2:	F(1;56) = 6.47 (p = 0.0137) Statistically significant on a 5% level	1.870	3.920
<b>Activity 4</b>			
Flu2:	F(1;56) = 0.07 (p = 0.7902) Statistically non-significant on a 5% level	13.763	13.420
Flex2:	F(1;56) = 0.57 (p = 0.4531) Statistically non-significant on a 5% level	6.552	6.993
Orig2:	F(1;56) = 6.95 (p = 0.0108) Statistically significant on a 5% level	6.111	9.470
<b>Activity 5</b>			
Flu2:	F(1;56) = 4.94 (p = 0.0302) Statistically significant on a 5% level	26.380	31.430
Flex2:	F(1;56) = 1.11 (p = 0.2975) Statistically non-significant on a 5% level	11.782	12.692
Orig2:	F(1;56) = 3.44 (p = 0.0689)	37.774	43.898

	Statistically significant on a 5% level		
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**Key:**

- Activity 2 – Picture Completion
- Activity 3 – Circles
- Activity 4 – Product Improvement
- Activity 5 – Unusual uses of tins

Based on the above table, the following can be deduced. Activity 2 – Picture Completion - showed statistically significant scores on all three levels, namely fluency, flexibility and originality, thus indicating that the experimental group showed a significant increase in their responses. Regarding Activity 3 – Circles - a significant score was found for Originality, indicating that the subjects' attempts on this test were original and not the obvious. Even though the children did not produce significantly more ideas on this test, they produced a greater variety of types of original ideas. This is a definite sign of creativity, as creativity is defined as *creating something new*. Activity 4 – Product Improvement - and Activity 5 – Unusual Uses of Tin Cans - are verbal tests, while the aforementioned are figural (non-verbal) tests. Activity 4 – Product Improvement - also only produced significant scores on Originality, once again indicating that although the children did not produce many ideas, the scores obtained were all indicative of original and not obvious ideas. Activity 5 - Unusual Uses of Tin Cans - showed a significant correlation with Fluency and Originality. The children were then able to improve on their number of ideas for this task, as well as improve on their originality. Based on these results, the creativity levels of the children improved significantly.

The descriptive statistics will provide information regarding the comparison between the control and the experimental groups.

## 8.4.1.2 Descriptive Statistics

**Table 8.4.1.2.1 Descriptive Statistics: Comparison between the control and the experimental group with respect to pre- and post-testing**

Activity	Variable	Mean	Std Dev	Kurtosis	Skewness
C:2	Flu1	8.42	2.21	0.94	-1.46
	Flex 1	7.54	2.25	-0.29	-0.88
	Orig 1	3.21	1.82	-0.74	0.28
	Flu2	8.88	1.65	2.93	-1.81
	Flex2	7.33	2.26	1.20	-1.02
	Orig2	3.25	2.42	-0.85	0.30
C:3	Flu1	6.13	3.43	-0.48	0.30
	Flex 1	4.63	2.53	-0.52	0.37
	Orig 1	3.04	4.19	3.20	1.76
	Flu2	5.13	2.98	-1.14	0.09
	Flex2	4.00	2.25	-0.67	0.20
	Orig2	2.08	2.54	-0.49	0.88
C:4	Flu1	9.63	4.14	-0.19	0.24
	Flex 1	5.63	2.00	-0.80	-0.04
	Orig 1	4.08	3.36	-0.31	0.75
	Flu2	14.08	7.47	-0.20	0.67
	Flex2	6.67	2.46	0.66	0.36
	Orig2	5.58	5.02	3.45	1.76
C:5	Flu1	17.38	10.17	-0.15	0.87
	Flex 1	8.58	4.15	-1.09	.045
	Orig 1	23.50	17.14	0.99	1.15
	Flu2	24.17	13.47	-0.52	0.71
	Flex2	11.54	3.89	0.42	0.04
	Orig2	31.13	21.21	-0.39	0.83

E:2	Flu1	8.54	2.03	2.87	-1.69
	Flex 1	7.20	2.19	-0.06	-0.84
	Orig 1	4.91	2.99	-0.52	0.13
	Flu2	9.71	0.62	3.09	-2.07
	Flex2	8.37	1.40	2.13	-1.34
	Orig2	8.14	4.14	-0.92	-0.27
E:3	Flu1	5.23	3.37	-0.75	0.32
	Flex 1	4.11	2.68	-0.46	0.48
	Orig 1	1.80	2.42	0.64	1.37
	Flu2	6.29	4.66	-0.33	0.68
	Flex2	4.69	3.32	-1.09	0.43
	Orig2	3.77	3.44	0.77	0.99
E:4	Flu1	9.09	4.51	-0.33	0.49
	Flex 1	5.37	2.46	-0.66	0.28
	Orig 1	4.86	5.50	1.94	1.49
	Flu2	13.20	5.72	-0.90	0.22
	Flex2	6.91	2.99	0.39	0.68
	Orig2	9.83	8.41	3.63	1.74
E:5	Flu1	21.11	15.68	0.32	1.06
	Flex 1	9.23	4.97	-0.63	0.38
	Orig 1	30.80	26.32	0.44	1.15
	Flu2	32.94	17.58	1.34	0.86
	Flex2	12.86	4.65	0.57	0.06
	Orig2	46.40	24.04	-0.90	0.20

**Key:**

**Activity:** C = control group

E = experimental group

**Variables:**

Flu – fluency

Flex – flexibility

Orig – originality

1 = pre-test

2= post-test

Activity 2 – Picture Completion

Activity 3 – Circles

Activity 4 – Product Improvement

Activity 5 – Unusual uses of tins

The scoring of the Torrance Test of Creative Thinking consisted of four aspects, namely Fluency, Flexibility, Originality and Elaboration. *Fluency* (Flu) refers to the individual's ability to produce as many as ideas as possible for the task. *Flexibility* (Flex) is the individual's ability to produce various ideas as well as to use a variety of strategies or to be able to shift from one approach to another. It is therefore the amount of categories in which the responses are sorted. These categories are found in the manual and listed as such. *Originality* (Orig) is concerned with the individual's ability to produce ideas that are away from the obvious. *Elaboration* (Elab) is measured by means of guidelines provided in the manual. Elaboration is given when details are added to the original stimulus figure, boundaries or surround space.

Four activities were used for the research. These tasks consisted out of two verbal tests, namely Product Improvement and Unusual Uses of Tin Cans, and two figural tests, namely Circles and Picture Completion. Activity 2 involves Picture Completion, Activity 3 involves Circles, Activity 4 involves Product Improvement and Activity 5 involves Unusual Uses of Tin Cans. "C" refers to the Control group, while "E" refers to the Experimental group. There may have been a degree of subjectivity because no mask is available to score the tests. However, the guidelines are very clear in the manual.

Both the skewness and kurtosis show deviations from normality, ranging from positively skew through to negatively skew; while there are also deviations from the normal distribution of peakedness regarding kurtosis.

Scores for the groups will be discussed collectively.

## **Picture Completion (figural test)**

### **Activity 2: Fluency**

The mean fluency for this activity in the control group is 8.42. The control group therefore responded with an average of 8 (when rounded) responses on this test in the pre-testing. During the post-testing, there was a slight improvement, to 8.88. However, in the experimental group, the post-testing showed a significant 10 (when rounded) responses. The pre-testing in the experimental group was 9 (when rounded).

These results therefore imply that the participants presented with below average scores, should the scores be converted into t-scores, with regard to the amount of responses.

### **Activity 2: Flexibility**

The flexibility or amount of categories scores for the control group decreased, in that the pre-testing showed scores of 7.54 and in that the pre-testing scores are 7.33. Once again, in the experimental group, the pre-testing score (7.20) increased and the post-testing flexibility score of 8.37 was achieved after the implementation of the programme. However, if the scores are converted to t-scores, they will reflect a below-average score.

The fluency and flexibility scores may be interpreted as that for the average 10 responses given, 8 different categories were utilised. Although both the scores are interpreted as below-average, the scores compare well with each other in that realistically, there could be 8 categories found in the 10 responses provided by the participant.

## **Activity 2: Originality**

The control group presented with pre-testing originality scores of 3.21 and post-testing scores of 3.25. The experimental group showed a significant increase in the originality scores. The pre-testing originality score was 4.91 and increased in the post-testing score to 8.14, thus indicating an improvement in the experimental group's ability to be original. Based on the fluency and flexibility scores, it seems that within the 10 responses given by the experimental group (post-testing), nearly every response given could receive a point for originality.

Collectively, it can therefore be said that the experimental group improved significantly after the implementation of the creativity programme in this activity. The improvement made by the control group was therefore not as significant.

## **Circles (figural test)**

### **Activity 3: Fluency**

In Activity 3, the control group's scores for the pre-testing were higher than those found in the post-testing scores. The scores in the experimental group increased when retested. Based on the fluency scores, the control group was initially able to respond with 6 responses, while the experimental group only responded with 5 responses. However, in the post-testing, the amount of responses in the control group decreased and they scored only 5 on this test, while responses in the experimental group increased and they scored 6 in the post-testing. Should these scores be converted to t-scores, the results can be interpreted as below-average.

In the study done by Naudé (2001) the fluency scores were 15, while Brink (2003), the fluency scores were 12 and 13 respectively. These scores are much higher than those found in the current research, but the scores also indicated below-average t-scores. It should also be taken into consideration that

the research done by Naudé (2001) and Brink (2003) consisted of a much larger sample group.

### **Activity 3: Flexibility**

The flexibility scores reflected much the same as the fluency scores, as the control group did not improve on the amount of categories, while the experimental group did however improve on this amount. The pre-testing scores reflect 5 (when rounded) in the control pre-testing, and 4 in the post-testing. The experimental group scored 4 in the pre-testing and 5 in the post-testing, when rounded. Once again, this indicates an improvement after the presentation of the programme. The scores noted in research done by Naudé (2001) are 8 and in Brink (2003) it is 7 - the current scores are slightly lower. For every 6 responses given in this test, the participants provided 5 categories (based on the experimental group's post-testing scores).

### **Activity 3: Originality**

The experimental group showed a significant increase in their originality scores. The pre-testing showed a score of 2 (when rounded) and the post-testing scores revealed 4 (when rounded) thus, illustrating that the children are able to produce ideas that are original and not obvious. This points towards an increase in their creativity. The control group scored 3 in the pre-testing, and a lower score of only 2 in the post-testing.

Naudé (2001) presented originality scores of 11, while Brink (2003) had 9 and 10 respectively. Even though the originality score of the current study is lower, the experimental group's post-testing scores increased significantly, which illustrates the positive influence of the creativity programme.

Even though the creativity levels of the children are low, it is significant that the post-testing results improved, especially the originality scores.

### **Product Improvement (verbal test)**

#### **Activity 4: Fluency and flexibility**

Both the control and the experimental group showed an increase in their fluency and flexibility scores when retested. This is a verbal test and the children were able to produce more responses and categories. However, the originality scores produced more significant results.

The control group was able to produce 14 responses with 7 categories in the post-testing, while the experimental group presented with 13 responses and 7 categories, thus, indicating a realistic amount of categories for the amount of responses. Should these scores be converted to t-scores, the scores will be indicative of below-average scores.

#### **Activity 4: Originality**

The experimental group showed a significant increase in their originality scores. The pre-test showed a score of 5 (when rounded), while in the post-testing, a score of 10 was found, which amounts to a doubling of the originality scores. The control group showed an increase, but not significantly. Their pre-testing scores revealed 4, while the post-testing showed a score of 6 (when rounded). According to the scores of the experimental group (post-testing), a pint was gained for originality for nearly every response.

The scores found in this activity is indicative of poor creativity scores, but once again, the scores improved after the creativity programme, and the originality scores significantly improved, illustrating that the quality of the responses were

original and not the obvious. Hence, the children seemed to be implementing that which they learned in the programme, namely to think beyond the obvious.

### **Unusual Uses of Tin Cans (verbal test)**

#### **Activity 5: Fluency**

Both the control and the experimental group showed an increase in their scores for fluency. The control group responded with 17 ideas in the pre-testing and 24 ideas in the post-testing. The experimental group produced 21 ideas in the pre-testing and 33 (when rounded) in the post-testing. The experimental group were able to produce more ideas than the control group even though both increased their scores in this verbal test.

Compared with the scores in a South African context, according to studies done by Bond (2001), Brink (2003) and Naudé (2001), these scores are higher. Naudé (2001) and Brink (2003) each presented with a fluency scores of 12. The post-testing scores in the current research presented a score of 33 for the experimental group (post-testing). The researcher is therefore of the opinion that even with a smaller sample group, the fluency scores can be regarded as very good. However, should the scores be converted to t-scores, in which 50 is regarded as average, these scores, as well as the scores found in the research of Bond (2001), Naudé (2001) and Brink (2003), are below average. This illustrates that scores in the South African context are much lower than those found in other countries.

The aim of the study was to determine whether the implementation of a creativity programme would increase creativity, among others. A significant improvement was indeed found in the experimental group, which proves that the programme did have an influence on the results of the post-testing, especially regarding the fluency scores.

### **Activity 5: Flexibility**

The flexibility scores for both the control and the experimental groups showed that there was an increase in the number of categories in which the ideas were placed. However, the increase was not as significant as the above-mentioned increase. The control group presented with 8.58 for the pre-testing and 11.54 for the post-testing, while the experimental group presented with 9.23 for the pre-testing and 12.86 in the post-testing.

These scores are better than the scores found in the research by Naudé (2001) and Brink (2003), who both reported 7 categories. The post-testing scores for the experimental group in this research, were 13 (when rounded) for the amount of categories. When interpreting both the fluency and the flexibility scores, it may therefore be argued that for the 33 responses given by the post-testing in the experimental group, the responses were categorised into 13 categories. Despite the fact that the scores are below average when interpreted individually, they compare well with one another, in that the scores are realistically connected with one another – in other words, it is possible to have 13 categories within 33 responses.

### **Activity 5: Originality**

A significant increase was found in the originality scores for the experimental group. The pre-testing score was 31 (when rounded) and the post-testing was 46 (when rounded). The control group also showed an increase but the amounts are not as significant as those of the experimental group: their scores are 24 (when rounded) for the pre-testing and 31 for the post-testing.

Both Brink (2003) and Naudé (2001) presented with 10 for originality scores. The scores for the experimental group (post-testing) indicated 46, which means that there is a significant difference between the current research and those by

Brink (2003) and Naudé (2001). These scores indicate that with every response given, one or more points could be obtained for originality.

For this activity, the creativity levels were not as high, but due to the implementation of the creativity programme, the fluency as well as the originality scores improved significantly. When the scores are viewed collectively, it seems that the children improved the most regarding originality, in that they were able to produce new, non-obvious ideas. The experimental group showed significant increases in their scores regarding originality, thus illustrating that after the completion of the programme, the children were able to produce original ideas in both verbal and figural tests. Activity 2, Picture Completion – a figural test – showed the biggest significance in the increasing of the scores for the experimental group. The control group did not perform well in Activity 3, Circles – a figural test – in that their scores decreased in the retest. Even though the children did not increase their scores significantly regarding the fluency scores (the ability to produce many ideas) in all the tests, they did improve them, even if only slightly. Significance in fluency was found in Activity 2 and Activity 5.

Results for the non-verbal tests, namely Picture Completion and Circles, improved with regard to fluency, flexibility and originality, while the verbal tests, namely Product Improvement and Unusual Uses of Tin Cans only improved with regard to fluency and originality. Various theories may be presented to explain this. It could be that due to the fact that many of the children's mother tongue is not English and that their non-verbal skills are better than their verbal skills, as they might have found it difficult to verbalise their ideas and express themselves in English. Another possibility is that many children might not be stimulated verbally, but rather in a non-verbal manner and that they accordingly experience difficulty to express themselves.

Rose and Lin (1984) observe that the verbal aspect of creativity is more affected by programmes which improve creativity, because most programmes focus on

the verbal aspect. However, after the implementation of the programme, the opposite was found, although the verbal aspect also improved. The activities in the programme were a combination of verbal and non-verbal activities. The fact that the flexibility of the verbal aspect did not improve significantly could be due to the fact that although the children provided numerous different solutions, the solutions often belonged to the same category. It is possible that the children wanted to expand on the solution but were prevented from doing so by problems to clearly express themselves in English.

Based on these results, it may be concluded that the creativity levels did increase, especially with regard to the ability to produce new, non-obvious ideas. In spite of this increase, however, the creativity levels were still low – similar findings were made by Bond (2001), Naudé (2001) and Brink (2003). A creativity programme developed by (Venter, 1998) (who also made use of the Torrance Test of Creative Thinking to determine whether the implementation of her programme increased creativity) found that the creativity programme did not enhance the creativity levels of the children. She ascribed this to the fact that the time frame for the programme was insufficient to instill the learning of creativity; another hypothesis was that some of the children in the group might not have been sufficiently motivated and therefore did not respond as expected to the programme. Likewise, in the current study some of the children in the experimental group might not have been very eager and keen to participate and this could have influenced the results. In another creative programme, which focused on the creative arts therapy (Steenberg, 1995), it was found that the creative art therapy helped to increase the self-concept as well as behavioural problems. Therefore, it may be argued that certain activities in the programme may enhance creativity while certain factors, such as time, may have an influence on the creative learning process and should that be taken into consideration. The researcher feels that because creativity can be learned, it should not be presented for a short period only, but the children must incorporate it in their lives on a daily basis: even if their creativity improved only slightly, they

would have received a foundation. With continued practice, their skill will grow and develop.

## 8.4.2 Tennessee Self-Concept Scale: Comparison between the control and experimental group regarding the pre- and post-testing

### 8.4.2.1 Analysis of Covariance (ANCOVA)

Table 8.4.2.1.1 Analysis of Covariance (ANCOVA): Comparison between the control and the experimental group with respect to pre- and post-testing

Variable	ANCOVA results	Adjusted post-test means Control	Adjusted post-test means Experimental
Sc	$F(1;56) = 0.52$ ( $p = 0.4745$ ) Statistically non-significant on a 5% level	24.251	23.399
Idn	$F(1;56) = 0.00$ ( $p = 0.9814$ ) Statistically non-significant on a 5% level	81.899	81.840
Sat	$F(1;56) = 0.47$ ( $p = 0.4942$ ) Statistically non-significant on a 5% level	58.440	59.841
Bhv	$F(1;56) = 1.80$ ( $p = 0.1853$ ) Statistically non-significant on a 5% level	75.460	77.860

Phy	F(1;56) = 0.69 (p = 0.4705) Statistically non-significant on a 5% level	44.310	45.590
Mor	F(1;56) = 1.11 (p = 0.2964) Statistically non-significant on a 5% level	95.260	36.452
Per	F(1;56) = 0.00 (p = 0.9519) Statistically non-significant on a 5% level	42.940	43.043
Fam	F(1;56) = 0.94 (p = 0.3352) Statistically non-significant on a 5% level	42.920	44.230
Soc	F(1;56) = 0.04 (p = 0.8480) Statistically non-significant on a 5% level	50.480	50.160
Aca	F(1;56) = 0.54 (p = 0.4670) Statistically non-significant on a 5% level	38.570	37.554
Tot	F(1;56) = 0.66 (p = 0.4190) Statistically non-significant on a 5% level	252.087	257.283
Fakg	F(1;56) = 0.02 (p = 0.8923) Statistically non-significant on a 5% level	26.684	26.559

**Key:**

**Variables:**

- sc** - self criticism
- idn** - identity
- sat** - satisfaction
- bhv** - behaviour
- phy** - physical self-concept
- mor** - moral self-concept
- per** - personal self-concept
- fam** - family self-concept
- soc** - social self-concept
- tot** - total self-concept
- aca** - academic self-concept
- fakg** - faking good

Pr > F: ANCOVA scores

Based on the Analysis of Covariance (ANCOVA) scores, no significant improvement was found, but this does not mean that the participants did not improve on their scores. It only reflects that the improvement was not very significant. The descriptive statistics will explain each variable in detail and will make in improvement visible, albeit a non-significant improvement.

### 8.4.2.1 Descriptive Statistics

Table 8.4.2.2.1 Descriptive Statistics: Experimental group – pre- and post testing

Variable	Mean	Std Dev	Skewness	Kurtosis
Scv	26.14	6.75	0.24	-0.65
Scn	23.71	4.42	0.19	0.02
Idnv	70.91	15.84	0.71	-0.46
Idnn	77.14	13.85	0.58	-0.67

Satv	47.23	10.91	0.77	-0.32
Satn	50.26	8.95	0.44	-0.57
Bhvv	60.63	12.48	0.34	-0.84
Bhvn	66.31	9.86	0.48	-0.79
Phyv	37.29	8.10	0.45	-0.07
Phyn	40.69	7.26	0.05	-1.03
Morv	28.31	7.43	0.40	-0.93
Morn	31.09	5.40	0.67	0.76
Perv	36.97	9.58	0.47	-1.12
Pern	39.23	8.45	0.80	-0.39
Famv	37.80	8.54	1.00	0.71
Famn	41.80	7.51	1.41	2.10
Socv	38.40	8.77	0.45	-0.76
Socn	40.91	8.01	0.16	-0.94
Acav	30.29	7.98	0.67	0.09
Acan	33.09	7.37	0.76	-0.16
Totv	209.06	43.63	0.72	-0.37
Totn	266.80	35.60	0.38	-0.088
Fakgv	19.26	3.60	0.19	-0.62
Fakgn	19.97	3.13	0.21	-0.85

**Key:**

**Variables:**

<b>scv</b>	- self criticism pre-test	<b>scn</b>	- self criticism post-test
<b>idnv</b>	- identity pre-test	<b>idnn</b>	- identity post-test
<b>satv</b>	- satisfaction pre-test	<b>satn</b>	- satisfaction post-test
<b>bhvv</b>	- behaviour pre-test	<b>bhvn</b>	- behaviour post-test
<b>phyv</b>	- physical self-concept pre-test	<b>phyn</b>	- physical self-concept post-test
<b>morv</b>	- moral self-concept pre-test	<b>morn</b>	- moral self-concept post-test
<b>perv</b>	- personal self-concept pre-test	<b>pern</b>	- personal self-concept post-test
<b>famv</b>	- family self-concept pre-test	<b>famn</b>	- family self-concept post-test
<b>socv</b>	- social self-concept pre-test	<b>socn</b>	- social self-concept post-test
<b>totv</b>	- total self-concept pre-test	<b>totn</b>	- total self-concept post-test
<b>acav</b>	- academic self-concept pre-test	<b>acan</b>	- academic self-concept post-test
<b>fakgv</b>	- faking good pre-test	<b>fakgn</b>	- faking good post-test

**Table 8.4.2.2.2 Descriptive Statistics: Control group – pre- and post testing**

<b>Variable</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Skewness</b>	<b>Kurtosis</b>
Scv	23.50	5.46	0.35	-0.61
Scn	23.79	5.10	0.16	-1.03
Idnv	76.08	9.79	0.36	-1.10
Idnn	80.08	8.96	1.10	1.68
Satv	51.38	4.31	0.75	1.54
Satn	51.17	7.46	0.60	-0.62
Bhvv	65.25	7.28	0.05	-0.40
Bhvn	68.04	5.59	0.39	-1.04
Phyv	40.54	5.43	0.42	-1.31
Phyn	41.58	5.12	0.63	-0.49
Morv	30.42	4.23	0.85	1.72

Morn	31.17	3.28	0.07	-1.17
Perv	38.58	5.28	0.51	-0.68
Pern	40.58	4.95	0.51	-0.27
Famv	41.88	3.94	0.27	-0.79
Famn	42.92	5.26	1.17	1.34
Socv	41.29	6.54	0.36	-0.51
Socn	43.04	4.80	0.59	-0.46
Acav	31.75	5.77	0.47	0.63
Acan	33.38	5.13	0.50	-0.39
Totv	224.46	21.09	0.04	-1.12
Totn	232.67	20.60	0.86	0.62
Fakgv	18.88	2.92	0.10	-0.80
Fagn	19.58	3.44	0.18	-1.00

Before the scores are interpreted, the explanation for the variables will be provided. Fitts and Warren (1996) provide an explanation for each.

- *Self-criticism (sc)* is illustrated by statements such as "I get angry sometimes"; statements that are mildly derogatory and statements which most people would admit to when they answer the questionnaires candidly.
- The *Identity score (Idn)* refers to the "who am I" items, in which the individual will describe his/her identity.

- The *Satisfaction score (sat)* entails items that describe how satisfied the individual feels with his/her perceived self-image.
- The *Behaviour score (Bhv)* is reflected in the individual's perception of his/her own behaviour and also in how he/she functions.
- The *Physical Self-concept Scale (Phy)* refers to how the individual views his/her body, physical appearance, skills, health and sexuality.
- *Moral self-concept (Mor)* describes the self from a moral-ethical perspective, in that the items entail feelings of being a "good" or "bad" person and also examines their moral worth.
- *Personal Self-concept (Per)* will reflect the child's feelings of adequacy, personal worth and will evaluate the personality apart from the body.
- The *Family Self-concept Scale (Fam)* will reflect how the individual feels worthy and valued as a family member.
- *Social Self-concept (Soc)* refers to how the self is perceived in relation towards others. In children, this social self-concept refers to peers, apart from the family teachers.
- *Academic Self-concept (Aca)* measures how the individual perceives him-/herself in the school setting and also in how he/she believes they are seen by others in that specific setting.
- The *Total Self-concept (Tot)* is an important score for the TSCS in that it reflects the overall self-concept of the individual.

- The *Faking Good Scale (Fakg)* implies that the individual will project a falsely positive self-concept.

Both the skewness and kurtosis show deviations from normality, ranging from positive to negative skewness; while there are also deviations from the normal distribution of peakedness regarding kurtosis.

When comparing the scores to the norms provided by Fitts and Warren (1996), in which a t-score has a mean of 50 and a standard deviation of 10, the following can be deduced. The scores for the control and the experimental groups are relatively similar, with the exception of Total Self-concept, in which there was a relative difference in the scores.

The Self-criticism score for both the control and the experimental group, even with the post-testing scores, revealed a low t-score ( $t=20-30$ ) and this may reveal either that the child is defensive and trying to present a favourable picture of him-/herself or it may represent a healthy openness for self-criticism.

The Identity t-score is higher than 70 for both the control and the experimental group. This score is higher than the score found for Satisfaction and therefore indicates that the individual has a desire to change with a self-view that can most probably tolerate challenges, but, a t-score higher than 70 may indicate an inflexibility of a person's self-concept that can impede the person's process of change and personal growth.

For the Satisfaction score, a t-score of 50 was obtained. Even though the Identity and Behaviour t-scores are above 60, a low Satisfaction score is nevertheless present. The Satisfaction score reflects the individual's level of self-acceptance. The t-score found here is not above 60 and may therefore indicate that the individual may at times not be motivated to seek change in his/her areas of troubled self-concept, but may be motivated to change the self-concept.

The t-score ranging between 60 and 70 for Behaviour (Bhv), while the scores for Satisfaction and Identity are above 60, reveals that impulse control may not necessarily be a problem.

A low t-score for Physical Self-concept was found and indicates dissatisfaction with the body. A person's physical appearance is associated with self-esteem, and dissatisfaction with one's body will probably indicate that the individual has a low self-esteem.

The Moral Self-concept score reflected a low t-score, which is indicative of individuals perceiving in themselves an impulsivity that will override moral considerations. Thus, referring to an inadequate level of impulse control or even referring to moral standards that are unrealistically high.

A low t-score in the Personal Self-concept indicates that the individual experiences a variable self-concept. Such individuals are reactive to temporary circumstances and to the opinions and behaviour of others.

The Family Self-concept Scale yielded low t-scores, which indicate that the individuals may feel either alienated from or disappointed in their families.

Social awkwardness is indicated by a low Social Self-concept t-score. This points toward the individual having a perceived lack of social skill.

A low Academic Self-concept score may be ascribed to various factors. For instance, the individual may be depressed, may be experiencing learning disabilities or may have unrealistic expectations regarding how they should perform.

The Total Self-concept scores for both the control and the experimental groups are very high. A high Total Self-concept score reflects a sense of failure and

unhappiness due to a possible discrepancy between the individual's overall self-concept and actual level of functioning. It may mean that the individual finds it difficult to appreciate that his/her own actions may indeed cause the difficulties or failures they experience. Therefore, the desire to change and grow may be absent and as a result the individual's ability to learn from events is superficial and task specific. Such individuals often appear overly confident and tend to overcommit themselves in certain areas in their lives. Such individuals tend to be unable to benefit from the support of others when support is needed.

A high t-score in the Faking Good score would mean an invalid protocol. Because the of this study is low for this area, it may be accepted that the individuals are not trying to project a falsely positive self-concept.

The scores for the TSCS make it apparent that the children's self-concept in the areas as mentioned above is poor. Various reasons can be suggested for this - the child could for instance not have enough support from his/her peers and parents, which may make the child feel insecure about him-/herself. In a study by Van Heerden (2004) regarding self-concept in the middle childhood period, it was found that self-concept will increase if the child has social support. This social support refers to the parents, peer groups and teachers. According to Van Heerden (2004), there is no difference between the genders with regard to the self-concept. Another possible reason for the poor self-concept scores could be the influence of television and advertisements, in which so-called "perfect" people are depicted. The child may covert this image and may experience immense pressure to conform to that image, with result that their self-concept may decrease. The self-concept will suffer even more if the peers project the same picture and if there is no support from the parents.

Even though their scores did increase, the researcher is of the opinion that the children will have to be helped on an individual level, so as to increase their self-concept, especially because of their possible fear of being ridiculed by others and

a fear of disappointing others. The scores creativity and of the self-concept combined could possibly indicate that an individual who is able to think along original and not obvious lines, will be able to see beyond the obvious solution when developing ways to improve his/her self-concept. Above it was pointed out that the creativity programme of Steenberg (1995), which focused on the creative arts therapy, found that creative art therapy helped to increase the self-concept, thus illustrating that with a creative intervention, the self-concept can improve. This emphasises that creativity can have a positive influence on developing children's self-concept.

### 8.4.3 Bar-On Emotional Quotient: Comparison between the control and experimental group regarding the pre- and post-testing

#### 8.4.3.1 Analysis of Covariance (ANCOVA)

Table 8.4.3.1.1 Analysis of Covariance (ANCOVA): Comparison between the control and the experimental group with respect to. pre- and post-testing

Variable	ANCOVA results	Adjusted post-test means Control	Adjusted post-test means Experimental
A	F(1;56) = 0.76 (p = 0.3857) Statistically non-significant on a 5% level	14.446	13.751
B	F(1;56) = 5.84 (p = 0.0190) Statistically significant on a 5% level	20.082	18.460

C	F(1;56) = 0.12 (p = 0.7280) Statistically non-significant on a 5% level	15.017	14.731
D	F(1;56) = 0.74 (p = 0.3920) Statistically non-significant on a 5% level	18.082	17.344
E	F(1;56) = 3.42 (p = 0.0695) Statistically non-significant on a 5% level	67.622	64.290
F	F(1;56) = 0.02 (p = 0.8971) Statistically non-significant on a 5% level	15.322	15.240

**Key:**

**Variables:**

- A – Intrapersonal Scale
- B – Interpersonal Scale
- C – Stress Management Scale
- D – Adaptability Scale
- E – Total EQ
- F – Positive Impression Scale

An explanation of the variables will be provided, before the statistics are discussed.

- The *Intrapersonal scale* measures the individual ability to understand his/her emotions and to express and communicate these feelings and needs.

- The *Interpersonal scale* refers to the individual having satisfying interpersonal relationships, being a good listener and being able to understand and appreciate the feelings of others.
- The *Adaptability Scale* refers to being flexible, realistic and effective in managing change. These individuals will be able to find positive ways of dealing with everyday problems.
- The *Stress Managements Scale* probes the individual's ability to remain calm and to work under pressure. Such an individual is rarely impulsive and will generally be able to respond to a stressful situation without an emotional outburst.
- The *Total EQ* score is a reflection of how effective an individual is in dealing with daily demands and how happy he/she is.
- The *Positive Impression scale* indicates to which extent the individual may be attempting to create an overly positive self-impression.

Only the *Interpersonal scale* showed a statistically significant score and will be reflected in the interpretation of the descriptive statistics. However, because the others are not statistically significant does not mean that no improvement was present – it simply means that there was a more significant improvement on the scores in the Interpersonal scale.

The descriptive statistics are provided below to illustrate the variables in a different light.

### 8.4.3.2 Descriptive statistics

Table 8.4.3.2.1 Descriptive Statistics: Control group – pre- and post testing

Variable	Mean	Std Dev	Skewness	Kurtosis
Av	13.54	4.36	-0.16	-0.93
An	14.17	2.70	0.43	-0.30
Bv	18.58	3.48	-0.35	0.30
Bn	20.21	2.19	0.09	-0.90
Cv	14.58	3.69	-0.64	0.41
Cn	14.96	4.02	0.45	-0.89
Dv	16.58	4.06	-0.57	0.78
Dn	18.04	2.91	0.57	-0.16
Ev	63.29	11.77	-0.80	1.70
En	67.38	7.35	0.30	-0.96
Fv	14.25	3.38	-0.10	-0.59
Fn	15.08	2.15	-0.55	-0.66

**Key:**

**Variables:**

- A – Intrapersonal Scale
- B – Interpersonal Scale
- C – Stress Management Scale
- D – Adaptability Scale
- E – Total EQ
- F – Positive Impression Scale

**Table 8.4.3.2.2 Descriptive Statistics: Experimental group – pre- and post testing**

Variable	Mean	Std Dev	Skewness	Kurtosis
Av	14.80	3.11	-0.45	-0.39
An	13.94	3.56	-0.06	-0.98
Bv	17.86	4.35	-0.18	-1.20
Bn	18.37	3.10	-0.26	-0.18
Cv	14.74	4.30	-0.33	-0.36
Cn	14.77	3.96	0.60	0.09
Dv	16.71	4.13	-0.20	-0.28
Dn	17.37	4.34	-0.70	-0.57
Ev	64.11	8.91	0.05	-0.88
En	64.46	9.16	-0.48	-0.15
Fv	15.49	2.91	0.15	-1.08
Fn	15.40	2.92	-0.31	-0.04

**Key:**

**Variables:**

- A – Intrapersonal Scale
- B – Interpersonal Scale
- C – Stress Management Scale
- D – Adaptability Scale
- E – Total EQ
- F – Positive Impression Scale

Based on the standard scores guideline provided in the manual (table 3.1, BarOn & Parker, 2000:18), certain deductions can be made the (standard scores have a mean of 100 and a standard deviation of 15). All the scores on the 6 scales are low and this is indicative of impaired emotional and social capacity. The lower the scores, the lower the level of emotional intelligent behaviour. The results of the Positive Impression scale are not above the mean of 130 and thus indicate that the individuals in the study population are not trying to provide overly positive responses. The Total EQ scores are also low, which indicates impaired emotional and social capacity.

Compared to the TSCS, these results show that if the subjects' self-concept show low scores, their ability to express and understand emotions could be hampered. They may project others emotions onto themselves or withdraw because they feel inept and do not understand the emotions of others. Because they have unrealistic expectations of themselves, they may not be as flexible and realistic in dealing with and managing with change. As a result of a poor self-concept, as explained above, there is a possibility of depression in which case the individual may find it difficult to deal with daily demands and may not be as happy as he/she could otherwise have been.

By enhancing their creativity so that they can find different creative ways to deal with certain situations and by enhancing their self-concept, it seems plausible that the emotional intelligent behaviour of the individual will increase as well. The creativity levels, especially those of originality, were good; therefore the individuals should be able to improve both of the aforementioned aspects.

The scores increased in the post-testing. Both the skewness and kurtosis show deviations from the norm ranging from positive to negative skewness; while there are also deviations from the normal distribution of peakedness regarding kurtosis.

Results of the Stress Response scale will be discussed below.

#### 8.4.4 Stress Response Scale: Comparison between the control and experimental group regarding the pre- and post-testing

##### 8.4.4.1 Analysis of Covariance (ANCOVA)

Table 8.4.4.1.1 Analysis of Covariance (ANCOVA): Comparison between the control and the experimental group with respect to pre- and post-testing

Variable	ANCOVA results	Adjusted post-test means Control	Adjusted post-test means Experimental
Impulsive Acting Out	$F(1;56) = 2.12$ ( $p = 0.1513$ ) Statistically non-significant on a 5% level	14.670	17.030
Passive Aggressive	$F(1;56) = 2.22$ ( $p = 0.1420$ ) Statistically non-significant on a 5% level	12.003	14.141
Repressed	$F(1;56) = 2.09$ ( $p = 0.1541$ ) Statistically non-significant on a 5% level	8.092	6.910

The three above variables did not differ significantly between the control and experimental group during the pre- and post-testing, as according to the Analysis of Covariance (ANCOVA). The parents of the participants completed the questionnaire. The results according to the ANCOVA as well as the descriptive statistics showed lower post-testing scores, and this may be ascribed to the fact

that the parents did not thoroughly go through the questionnaire or that the pre- and post-testing questionnaires were not completed by the same parent and that parents could have different perceptions of the child. The possibility that the questionnaires were not completed by the same adult was confirmed by the fact that in some cases one parent signed at the end of the pre-testing questionnaire, while the other parent completed the post-testing questionnaire.

In the descriptive statistics, which are provided below, the means and standard deviations will be compared to a normative group provided in the manual (table 13-14, Chandler, 1986:22-23). Reference will be given to the scores for both boys and girls, as the data for the present study is combined and not separate for boys and girls.

#### 8.4.4.2 Descriptive Statistics

Table 8.4.4.2.1 Descriptive Statistics: Control group – pre- and post testing

Variable	Mean	Std Dev	Skewness	Kurtosis
Impulsive Acting Outv	16.38	8.26	0.21	-0.48
Impulsive Acting Outn	13.58	5.37	0.43	-0.72
Passive Aggressivev	12.13	6.00	-0.35	-1.29
Passive Aggressiven	10.63	4.48	0.93	0.76
Repressedv	7.50	2.72	0.20	-1.00
Repressedn	6.63	2.99	0.21	-0.52

**Key:**

V – pre-test

N – post-testing

**Table 8.4.4.2.2 Descriptive Statistics: Experimental group – pre- and post testing**

<b>Variable</b>	<b>Mean</b>	<b>Std Dev</b>	<b>Skewness</b>	<b>Kurtosis</b>
Impulsive Acting Outv	20.23	9.27	0.21	-0.47
Impulsive Acting Outn	17.77	8.85	0.72	0.33
Passive Aggressivev	17.34	9.26	0.29	-0.58
Passive Aggressiven	15.09	7.21	0.32	-0.79
Repressedv	10.71	3.70	0.13	-1.44
Repressedn	7.91	4.22	0.34	-0.24

**Key:**

V – pre-test

N – post-testing

Both the skewness and kurtosis showed deviations from the norm, ranging from positively to negatively skew; while there were also deviations from the normal distribution of peakedness regarding kurtosis.

According to the comparative mean and standard deviations, the Impulsive Acting-out score in the girls' normative group are lower compared to that of the experimental and control group. The mean score in the girls' normative group is

15.25, while the experimental group presented with 20.23 (pre-test) and 17.77 (post-test), and the control group scored 16.38 (pre-test) and 13.58 (post-test). When comparing the means to the normative scores for boys, the normative group showed a mean score of 20.32. The experimental pre-test scored similar results of 20.23. A high score for this variable describes children as selfish and demanding. They are often involved in fights and they are impulsive and stubborn (Chandler, 1986). The score the groups obtained indicates an average score, meaning that the participants will not necessarily react to the extreme, but should easily be lead by the environment. Scores founded by Naudé (2001) also indicated low scores of 18.33.

For the Passive Aggressive score, there is a difference in the mean regarding the normative mean scores for boys and girls. Compared to the normative girl norms, the experimental group ranges between similar to higher, while the control group is relatively lower. The normative girls mean score is 16.72. Compared to the boys' normative mean score, which is 21.71, the present study mean score is lower. The Passive Aggressive score measures the passive aggressive behaviour of the child and this group of children is often described, according to Chandler (1986) as underachievers who will postpone work until the last minute; they often have a poor attitude towards their schoolwork and homework is not completed (Chandler, 1986). The results of this score are low and it can be deduced that the children fit the aforementioned profile. The results of Naudé (2001) are slightly better and may be regarded as average when compared to the norm.

The Repressed mean score for the girls normative mean is 10.31, while the boys' normative mean score is 10.86. The experimental group is higher (pre-test) and similar to that of the boys' normative group mean, while the control group's mean is lower than both the normative groups provided. This score is representative of the way in which children repress their emotions. These children are often described as sensitive, easily hurt, scared of new situations and easily upset

(Chandler, 1986). The scores obtained in the present study are below average, thus indicating that they are prone to repress their emotions, and therefore to being sensitive, easily hurt and afraid of new situations. In the study by Naudé (2001), an average score was found, which was slightly better than the scores obtained in the present study.

The collective results therefore indicate a poor ability to cope with stress. If the mean and standard deviation scores of the present study are compared with those of the normative group, a relatively similar pattern is found of the way in which individuals adapted in response to stress.

T-scores which are applied to the results are low and will indicate that as far as the Impulsive Acting-out score is concerned, the children may exhibit temper outbursts, be prone to be impulsive and struggle to accept criticism. A Passive-aggressive low score reveals procrastination and uncooperativeness. Lastly, a low score in the Repressed scoring describes the individual as being sensitive, easily hurt, afraid of new situations and lacking self-confidence.

A global interpreting of the scores indicate that with a low self-concept, the aforementioned features will surface. Furthermore, an individual with poor emotional intelligence behaviour is not able to express and understand his/her emotions, will be sensitive to ridicule and criticism and may present with temper outbursts, for example, due to the lack of insight in emotions. All the tests can therefore be interlinked with one another and the results of each test confirm the results of the other test(s).

## **8.5 Evaluation of aims and hypotheses**

A short evaluation of the results of the aims of the research will be presented below.

### **8.5.1 Aim 1: Reliability and validity of the measuring instruments**

The Cronbach alpha coefficient was used to determine the reliability of the measuring instruments but this could not be used to measure the reliability of the Torrance Test of Creative Thinking, because of the nature of the test. Instead, reliability was measured for the BarOn Emotional Quotient Inventory, the Tennessee Self-Concept Scale and the Stress Response Scale. In this way the hypothesis that the measuring instruments are reliable has been proven to be true.

### **8.5.2 Aim 2: The compilation of the creativity programme**

The compilation of the creativity programme proved to be feasible in that the researcher was able to compile a programme consisting of four components, namely coping, self-concept, problem solving and creativity. The relevance of these activities is described in chapter 7. The effect of the programme was determined by the pre- and post-testing of the control and the experimental group and will therefore be discussed in Aim 3 below.

### **8.5.3 Aim 3: Effect of the creativity programme with regards to the results of the pre- and post-testing**

The Analysis of Covariance (ANCOVA) was used to determine whether there was a statistical significance between the pre- and the post-testing. Descriptive statistics were used to compare the results of scores of the control and the experimental group (pre- and post-testing).

According to the *Torrance Test of Creative Thinking*, statistical significance was found in each of the activities, with the exception that in Activity 2, significance

was found in the fluency, flexibility and originality scores; while in Activity 3, it was found only in the originality scores. Activity 4 revealed significance in the originality scores and in Activity 5, significance was found in the fluency and the originality scores. Based on the ANCOVA results, creativity levels improved significantly when the control and the experimental groups were compared, as well as when the pre- and post-testing scores were compared. Even though the individuals were not able to improve on the amount of responses in all the activities, the children were able to improve on the originality scores in all the activities, thus indicating that their ability to think of different, non-obvious responses improved significantly. As a result, the quality of the responses improved.

The experimental group showed significant increases in their scores from the the pre- and the post-testing, illustrating good results after the implementation of the programme. In the post-testing, the control group showed a slight increase in their scores, with the exception of activity 3, where the post-testing scores were lower than the pre-testing scores. The increase of their scores were, however, not as significant as those found in the experimental group. Although the children may not have shown exceptional creativity levels, the fact that they improved on their scores, especially consistently with originality, is an indication that creativity was present and that it improved. The researcher believes that if the children would receive continued stimulation, their scores will increase significantly.

The ANCOVA scores for the *Tennessee Self-Concept Scale* did not show statistical significance. However, this does not mean that there was no improvement, but rather reflects that the improvement on the scores were not significant.

The scores of the TSCS showed that the individuals in the study did not try to falsely provide a positive self-concept and the scores may be regarded as a

valid. Based on the scores, it was found that the self-concept was poor. The scores found in the post-testing improved slightly, but not significantly. The researcher believes that this aspect can improve, but it should rather be dealt with individually. This is because children with a poor self-concept may often fear being ridiculed and be weary of the opinions of others, and therefore they may not perform accordingly. The individual appears overly confident in order to compensate for the poor self-concept and if they have to admit the opposite, in front of their peers, they might feel vulnerable and open for ridicule. Consequently, the individual may feel safer if this issue is addressed on an individual basis. The researcher also believes that the programme provided a platform which they can use as a basis and that they can elaborate on it individually, so as to improve their self-concept. Furthermore, their ability to be creative, especially their ability to think of new, non-obvious answers, could help them to think of creative ways to improve their self-concept and not just to rely on the norm.

Based on the BarOn Emotional Quotient, the ANCOVA showed statistical significance on the Interpersonal scale, but not on the other variables. The descriptive statistics show that there is a low level of emotional intelligent behaviour and are therefore indicative of impaired emotional and social capacity. If the individuals are unable to fully understand their emotions and express them accordingly and if they have a poor self-concept, it will be difficult for them to, change. This is because an individual who fails to understand the emotions may possibly believe that he/she is "ok", even when experiencing the opposite in interaction with other individuals. In addition to this, the individual may even withdraw because he/she feels inept or does not understand the emotions of others. Having unrealistic expectations of the self and being rigid may make it difficult to manage stress and to deal with daily demands. However, the researcher believes that if creativity is enhanced in the individual's life, such an individual can find creative ways to deal with certain situations and by improving

the self-concept, the emotional intelligent behaviour of the individual should improve.

The Stress Response Scale was completed by the parents of the participants. No significant scores were found on the variables. The results of the descriptive statistics for the pre-testing proved to be higher than those for the post-testing. Because the scores of the above tests improved, it may be argued that the parents did not go through the questionnaire thoroughly and secondly, it was found that the same parent who completed the pre-testing questionnaire did not complete the post-testing questionnaire. It is the opinion of the researcher that parents do not perceive the individual in the same way and that the two parents are involved with the child in different ways, and that this may have influenced the results. However, compared the scores to a normative group provided in the manual, the response pattern to stress is relatively similar. The t-scores for this section are low and indicate a poor stress level, in which the children will exhibit temper outbursts, act impulsively and find it difficult to accept criticism. Due to a poor self-concept, they also experience a fear of rejection by others is found. In addition to this, the individuals may show signs of procrastination, sensitivity, being easily upset and being afraid of new situations. Even though they may come across as being overly competent, this image may have been created to compensate for their true feelings. If they can improve on the aforementioned tests, this aspect should improve as well. In particular, if their emotional intelligent behaviour improves, their ability to deal with stress should improve as well.

## **8.6 Summary**

The measuring instruments showed good reliability scores. Statistical significance was found in certain instances, and improvements were found when comparing the control and the experimental groups pre- and post-testing. Even though low scores were found for creativity, the post-testing scores improved,

illustrating that after the implementation of the programme, creativity did improve. Originality scores improved throughout the activities, illustrating the ability to provide responses that are original and not the obvious. The self-concept of the individuals was poor, but improved in the post-testing, as well as the scores found in the BarOn. The SRS scores, which were completed by the parents did not increase, but various reasons were suggested for this (cf. 8.4.3). When all the aspects are taken into consideration, it appears that the programme had an effect on the individuals and should there be a follow-up, but on an individual level, this should lead to further improvements found.

Conclusions and recommendations will be provided in the following chapter, in which conclusions from both the study and the literature will be provided.

## *Chapter 9: Conclusions & Recommendations*

### **9.1 Introduction**

This chapter will consist of the summary of the aims and conclusions from the study and literature. Problems that were experienced during the study will be discussed and lastly, recommendations will be provided.

### **9.2 Summary of the objectives and literature**

This study deals with creativity and the way in which a creativity programme may improve various aspects in children found in the middle childhood period, ranging from grade 4 to grade 7. These aspects are creativity, coping, self-concept and problem solving, which is a component of emotional intelligence. The literature study focused on these aspects, as well as models to help provide a guideline, to compile the programme effectively.

As creativity was the focal point of the study, much in-depth information was provided to illustrate this concept to its fullest. Various definitions exist for creativity and since 1959 creativity has been viewed as an important characteristic. It is regarded as ageless and as an ability which anyone can possess. However, the extent of this ability varies and if it is not stimulated, it can decrease; by the same token, it may increase if it is stimulated in a person. Being creative means that the individual is in the process of producing new ideas and in this process, the individual journeys through various stages ranging from preparation for and completing the cycle by receiving and creating new ideas. For the purpose of this study, creativity was defined as bringing something new into being by consistently producing and exploring new ideas. Therefore, it may be defined as gaining insight, developing new ideas and ultimately developing

original and valuable ideas. This means that everyone has the ability to be creative.

There are numerous theories exist to explain the term *creativity* and its origins. The views of psychoanalysts, behaviourists, humanists and developmental theorists and the systems views and the interactionist model were provided to shed light on this issue. The researcher evaluated these views and critiqued them according to her own perceptions and framework.

Literature indicates that various factors may indeed either foster or inhibit a person's creativity, and that development of creativity consists of numerous stages. Various theorists describe different variations of these stages, and a selection of these was discussed in the research.

Based on different literature, a creative person can be described as someone who will seek change, act impulsively at times, challenge ideas and rules and who will be able to adapt to circumstances. In addition, it was also found that on a cognitive level, creative people think metaphorically, are flexible, engage in logical thinking skills and are also visual.

Various components of creativity, such as play, art, thinking, motivation and the influence of the hemispheres of the brain were discussed. It was pointed out that creativity can play a role in coping and the example was given of brainstorming, which is a coping skill but also a skill related to creativity, because it involves the experience of a flow of ideas and the creation of new and unique ideas. This provided the link for the other component of this research, namely coping. Creativity may play a role in a person's ability to cope, because through creative thinking skills, the individual can create a flow of unique and original ideas to solve a problem. The term *coping* formally came into its own during the 1960s and 1970s and there are now over thirty definitions to describe this concept. For the purpose of the study, coping was viewed as twofold in that it is a process that

changes over time, but also a cognitive and behavioural effort through which the individual manages his/her demands. The appraisals the individual makes regarding the situation also plays a role in determining whether the situation is experienced as stressful or not, and the resources and strategies which a person uses will help with the coping process.

Various theories were provided to illustrate the various interpretations of coping. Depending on the development of the child, various coping strategies will surface. In the middle childhood, the child will engage in positive self-talk as an emotion-focused coping strategy. Direct problem-solving strategies also increase and the influence of peer support takes preference to that of the caregiver. Factors such as gender also play a role in the type of coping strategies. It was found that girls tend to seek more social support and sympathy and will be more open to talk about their feelings than boys. In accordance with the developmental stages, various coping strategies were discussed.

A link was also found in the literature regarding coping and emotional intelligence, as individuals' emotional competences play a role in how resilient the individual is in coping successfully. These emotional competences refer to how the individual perceives, expresses, understands and manages emotional phenomena. A person's emotions create mental sets that are adaptive for solving problems, and in problem-solving techniques, all three components are interacting, namely coping, emotional intelligence and creativity. Though creative behaviour, creative solutions can be found to cope in various situations; and a positive self-concept will help the individual to develop good coping skills.

The term *self-concept* was discussed and it was indicated that it refers to the image the individual has of him-/herself and that this aspect continuously develops through life. Self-concept can be defined as the individual's image he/she has of him-/herself and includes various aspects, such as the person's attitudes and views of him-/herself. All these factors play a role in forming the

self; while self-esteem (an aspect of self-concept) involves having a clear and realistic view of yourself. A person's creative behaviour may also enhance his/her self-esteem.

The middle childhood is regarded as a critical period in the development of the child's his/her self-concept. Various factors such as parents, peers, skills and school may inhibit the development of a person's self-concept. An individual who views him-/herself positively will feel worthy and good, but should the opposite be true, the child will experience a feeling of unhappiness and unworthiness. Between the ages of seven and thirteen, the child will develop a capacity for abstract thinking, and as the child learns about others and about him-/herself and his/her place in the world, a sense of identity is developed. Factors such as a feeling of belonging, risk taking, feeling special and being able to make one's own choices will lead to a definite increase in one's self-esteem. It is therefore imperative that these factors be nurtured. Creativity can enhance a person's self-concept, and emotional intelligence is also interlined with self-concept, as it introduces creative problem-solving skills (a component of emotional intelligence) which should improve the individual's self-concept.

Lastly, the term *emotional intelligence* was explored and emphasis was placed on problem-solving, as it is regarded as a component of emotional intelligence. Problem-solving techniques were also used in the creativity programme. There are numerous branches of emotional intelligence. The term firstly refers to the individual's ability to understand, identify and communicate his/her feelings, but it also interacts with aspects such as creativity, problem solving and coping.

Various theories were provided to explain the development in the middle childhood, as well as to provide information regarding emotional development. The emotional development of the child from the ages of six to eleven involves that the individual wishes to belong and be included in group participation. During this phase, periods of emotionality can also be expected. The child will

thrive on acceptance and acknowledgement during this phase and constantly works hard on understanding and controlling his/her emotions. Children with emotional intelligence skills are healthy, have good peer relations, experience more positive feelings, experience less conflict with parents, are able to express respect for the emotions of others and tend to accept themselves more and perceive themselves as unique.

An emotional intelligent individual is able to, for example, find access to social support networks when stressed and thereby use these support networks to cope successfully. A person's emotions also create mental sets that are adaptive for solving problems and this will result in different information processing styles. Therefore, when a person is happy, mental sets are facilitated that can be used for creative tasks, but when a person is sad, problems are solved more slowly. Problem solving, a component of emotional intelligence, is a cognitive process and will enable the individual to solve problems creatively. By combining the effects of emotional intelligence and emotional self-regulation strategies, the individual will be able to develop a strong self-worth and even be able to deal with his/her negative emotions on an appropriate level. Problem solving involves various strategies, such as rational, critical and creative thinking, and each was discussed. In addition, the phases in problem-solving were provided. The different hemispheres of the brain are also involved in the problem solving aspect. Various researchers indicate that the whole-brain approach is better when solving problems, because it combines the strengths of both hemispheres and therefore makes use of all of one's potentials.

Once the above concepts were clearly explained, it was possible to create a programme that involved all these aspects.

### **9.3 Development of a creativity programme and the empirical research**

For the development of the creativity programme, two models were used, namely Guilford's Structure of Intellect Model (SOI) and the Interaction Thinking-Feeling Model: The Cognitive-Affective Interaction Model (CAI). These models provided strategies to support the inclusion of the activities of the programme. These strategies are regarded as a means by which the programmes contents can help the child to foster thinking and feeling behaviours. The programme therefore combined all aspects necessary to improve on their skills. The programme consisted of four components, namely creativity, problem solving, self-concept and coping. The programme was presented over five weeks, after school hours.

In order to determine whether the programme was successful, pre- and post-testing took place and there were a control and an experimental group. The sample group was drawn by means of class lists. The measuring instruments used in the study were therefore based on the aforementioned concepts. The measuring instruments in this study included the Torrance Test of Creative Thinking (which tested the children's creativity) and the Tennessee Self-Concept Scale (which determined the self-concept of the individuals). The BarOn Emotional Quotient tested the emotional intelligence and the Stress Response Scale (answered by the parents of the participants) determined the stress levels of the children.

There were three aims in this study. The first aim was to determine whether the measuring instruments were reliable and valid. The second aim was to determine whether the compilation of a creativity programme was feasible and the third aim was to determine whether creativity, self-concept, coping and problem-solving (a component of emotional intelligence) would improve after the implementation of the programme.

In order to determine reliability, the Cronbach alpha coefficient was used and validity was tested by means of factor analysis. Reliability and validity were found for all of the measuring instruments. However, reliability could not be determined on the Torrance Test of Creative Thinking, as the responses for this measuring instrument are qualitative.

To determine the results of the pre- and post-testing, the Analysis of Covariance (ANCOVA) and descriptive statistics were used. Statistical significance was found in certain instances, and improvements were found when the control and the experimental groups were compared with regard to their pre- and post-testing. Low scores were found for creativity, but the post-testing scores improved, which illustrates that creativity did improve after the implementation of the programme. The Originality scores improved throughout the activities of the creativity tests, illustrating the ability to provide responses that are original and not the obvious. According to the scores for the self-concept of the individuals, the scores were poor but improved in the post-testing. The same applies to the scores of the BarOn. However, the SRS scores, which were completed by the parents, did not increase. Based on the aforementioned scores, it appears that the implementation of the programme had an effect on the post-testing scores.

## **9.4 Conclusions of the empirical study**

The results of the research and the discussion thereof were provided in chapter 8. The most important results will be summarized.

### **9.4.1 Reliability and validity of the measuring instruments**

Literature indicates that when test-retesting was done regarding the reliability of the instruments, good reliability scores were found. The validity for the measuring instruments, measured by factor analysis, was confirmed because the factors which were extracted represented more than half of the variance declared

in the data. Furthermore, the communalities indicated that certain items were represented well, while other items were not represented well. Overall, it appears that the variables can be measured, thus indicating validity.

According to the BarOn Emotional Quotient Inventory, the scores found in the study ranged from 0.786 to 0.481, thus indicating reliability. The highest score was found by the Adaptability Scale, while the lowest score was the Positive Impression Scale. These scores are slightly lower than scores found in the study done by Bar-On and Parker (2000). Their test-retest reliability coefficients for the short form showed scores of 0.84 for the Intrapersonal Scale, 0.81 for the Interpersonal Scale, 0.85 for Adaptability, 0.88 for Stress Management, 0.87 for the Total EQ and 0.77 for Positive Impression (Bar-On & Parker, 2000).

The Cronbach alpha coefficient scores for the Tennessee Self-Concept Scale are reliable and range from 0.50 to the highest of 0.86. The scores in this study are relatively similar in the test-retest reliability scores found by Fitts and Warren (1996), namely from 0.72 for the Total Self-Concept score to 0.71 for Physical, 0.69 for Moral, 0.79 for Personal, 0.74 for Family, 0.78 for Social and 0.76 for Academic.

Lastly, reliability of the Stress Response Scale According has been proven. Test-retest scores found by Chandler (1986) indicated 0.79 for Acting out, 0.90 for Passive-Aggressive and 0.78 for Repressed. The scores in this study are similar.

Thus, the first aim of the study was reached and the first hypothesis was proved to be correct, namely that:

- The measuring instruments in this study are reliable and valid.

#### **9.4.2 The feasibility of compiling a creativity programme**

Literature findings supported the inclusion of the activities found in the programme in that the researcher ensured that the activities followed the guidelines provided by Guilford's Structure of Intellect Model (SOI) and the Interaction Thinking-Feeling Model: The Cognitive-Affective Interaction Model (CAI). The activities of the programme helped to improve the skills provided in the programme. The effect of the programme is visible in the results of the pre- and post-testing. Creativity studies in the South African context for the middle childhood period (Bond, 2001; Naudé, 2001; Brink, 2003) found that creativity was poor and although several responses were provided, the responses were rather ordinary. In the present study, the originality scores improved significantly in the post-testing. Various researchers point out that creativity can increase, if an individual is stimulated. Van der Berg (1993), for instance, argues that creativity can be developed and by stimulating an individual creatively, the development of latent abilities can be increased. Millar (2002) also indicates that everyone has the ability to be creative, although VanDemark (1991) observes that various factors may influence creativity. In a South African context factors such as poverty, socio-economic status, television and computers all play a role in creativity. Children who are not given the opportunity to realise their creativity will ultimately experience a decrease in their creativity, which will in turn affect coping, self-concept and even emotional intelligence (especially problem-solving, as a component of emotional intelligence).

In the scores for pre- and post-testing, statistical significance was found in the measuring instrument, Torrance Test of Creative Thinking. Activity 2 showed statistical significance on the fluency, flexibility and originality scores; Activity 3 indicated statistical significance on the originality scores; Activity 4 indicated statistical significance on the originality score and the Activity 5 indicated statistical significance on the fluency and originality scores. The scores are below average, when their t-scores are compared to those of Naudé (2001) and

Brink (2003) and to the norms indicated in the manual. However, the Unusual Uses of Tin Cans showed an interesting difference, in that the scores for the present study indicated higher scores than those of Naudé (2001) and Brink (2003). Although the scores pertaining to creativity were low, the post-testing scores increased significantly, thus indicating that after the programme, the creativity levels did increase.

Sharoff (2002) stated that when an individual integrates coping skills into the plan he/she chooses to solve a problem, the results of the problem solving will become evident. By coping successfully, the individual will find solutions for the problem(s)/challenge(s). There are various types of coping, such as problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). In emotion-focused coping, emotional intelligence is vital because the individual must be able to identify and understand his/her emotions before he/she can express or communicate it. If the individual can identify and express his/her emotions, the individual will be able to manage emotional distress and find strategies to cope with the distress. The coping scores found in the study were not good. This could be attributed to the subjects' poor ability to express their emotions as well as to their poor problem-solving skills, which were tested by the emotional intelligence test and which also showed poor results. This could possibly be due to a poor self-concept and fear of asking for guidelines on how to cope in situations. A child with a poor self-concept will be reluctant to reveal this weakness and this fear may cause the individual to withdraw and ultimately to fail to cope appropriately.

Coping scores found in the measuring instrument Stress Response Scale (which was completed by the parents) indicated no statistically significant scores. The results indicate that the children are unable to understand emotions, they are sensitive to ridicule and criticism and they lack insight regarding their emotions. They may even present with temper outbursts. The researcher is of the opinion

that even though the scores are low, if the children had completed the questionnaire, their post-testing scores could have improved.

The developmental phases in the emotional development of a child between six and eleven years indicate, that the child thrives on acceptance and acknowledgement. In this phase of self-concept development, the child will begin to understand the emotions of others and will learn much about him-/herself. A sense of identity is also formed in this period (Osborne, 1996) and if significant others, such as peers, parents and teachers, show positive signs of acceptance and acknowledgement, self-concept should increase; however, should the significant others indicate the opposite, the development of the self-concept will decrease. Davis (1996) argues that self-esteem is linked to creativity, and creative behaviour tends to build a child's self-esteem in that this behaviour validates thoughts and feelings (Smith, 1993).

Results founded in the Tennessee Self-Concept Scale show no statistically significant scores, but improvements were found when the pre- and post-testing scores were compared. Despite the scores being low, it was apparent that the children did not try to project a false self-concept.

In the middle childhood period, the child will start to highlight their feelings and will be able to name the emotions they are experiencing. Nevertheless, the child has to continuously work on understanding and controlling his/her emotions. Emotional intelligence is an important aspect in a child's life and a child who can identify and understand his/her own thoughts and feelings should be able to have a relationship with another person on an emotional level. This implies that such an individual will be able to understand the emotions of others as well.

The scores of the BarOn Emotional Quotient Inventory are low. This test measures the child's ability to understand his/her emotions and to have a satisfying interpersonal relationship with others; the flexibility of the child; the

child's ability to work under pressure; and whether the child can effectively deal with daily demands. The only statistical significant score was found in the Interpersonal Scale. The low scores indicate that the individuals will not be able to understand emotions; they are not flexible; and they will not be able to remain calm in difficult situations. The scores in the pre- and post-testing did, however, improve slightly.

Literature indicates that creativity, self-concept, coping and problem-solving (a component of emotional intelligence) are interlinked with each other and by increasing one, others should increase as well. In spite of the low scores of the study, it makes sense that if one component is low, the others should also be low, because these components have an influence on one other. After the implementation of the programme, the post-testing results showed an increase, which leads the researcher to conclude that an even bigger increase would occur if the children are stimulated even further. Thus, the second and third aims of the study have been reached, and the second and third hypotheses have been proven to be correct, namely:

- The compilation of a creativity programme is feasible.
- The implementation of the creativity programme will enhance creativity, self-concept, coping and problem-solving, which is a component of emotional intelligence in children in the middle childhood.

Problems that were experienced in the research will be discussed in the next section.

## **9.5 Problems experienced in the research**

During the research, the following specific problems were experienced, which could have influenced the results:

- The results of the study were compared to norms which were provided by literature pm studies which were performed abroad, and not to norms developed for the South African context. This could possibly have had an effect on the overall nature of the results.
- Even though the participants were all from an English-medium school, many of the children's mother tongue was Afrikaans or Tswana. This could also have had an influence on the results of the study.
- In the pre- and post-test, the Stress Response Scale was not completed consistently by one parent and as a result varying results were recorded for the pre- and post-tests. If the same parent who completed the pre-test questionnaire had also completed the post-test questionnaire, different scores could have been found.
- Due to extra-mural activities, the children often missed some of the sessions and some were unable to complete the study. If the questionnaires could have been completed during school hours, and if the programme could have been presented during school hours as well, the results could have been better.

## **9.6 Recommendations**

The following recommendations are made with regard to ways in which the presentation of the programme could be enhanced, so that children may benefit from it even more:

- The questionnaires as well as the programme should be translated in various languages so as to develop a South African norm for the questionnaires and to empower all individuals in various concepts by means of the programme in their mother tongue.

- After the programme has been presented, the children should receive individual follow-up sessions, in order to further enhance the skills taught in the programme.
- Parents should be made more aware of creativity and talks should be presented to encourage the implementation of creativity in all areas of their children's lives.
- The programme should not be limited to individuals in the middle childhood only but should be extended to assist people of all ages and it should therefore be adapted for adolescents and adults.

## **9.7 Conclusion**

Creativity is an exciting field to study and explore. The study presented a wide variety of challenges as well as personal improvement regarding creativity for the researcher. The study therefore contributed to the researcher's knowledge concerning all the components of the study and it emphasised how important it is to develop creativity in the youth of South Africa and to empower them with creativity.

The improvement of the post-testing scores is encouraging and the researcher feels that if obstacles were impede the testing, can be removed, better scores may be recorded. The researcher therefore believes that the programme has laid a foundation for the children to advance their creativity based on what they learned. The children were allowed to keep the handouts given to them during the various sessions and can therefore use it as a reference in future.

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*Addendum 1: Letter to the parents*

2 February 2005

Dear Parent

Your child may possibly be selected to participate in a doctoral study done by Tanya Boshoff, a Clinical Psychologist. The study entails a programme in which various aspects, such as creativity, coping, self-concept and problem solving, will be improved.

Before the initial programme will take place, the child will have to answer various questionnaires. Parents will also be expected to answer a questionnaire. These questionnaires will then be repeated after the programme so as to determine whether the programme has improved the above-mentioned aspects. A random sample will be done to select the candidates for the programme. Your child may then either be selected for the testing component only or for both the testing and the programme. Should your child only be selected for the testing, you may request that your child undergo the programme component at a later stage.

The information gathered by these questionnaires and the results obtained by the programme will be of vital importance, as it will enable psychologists to further studies in creativity and thus enhance the child's creativity, which is vital for both school and everyday activities.

The study will be undertaken with strict confidentiality. Your child's name will not be on the questionnaire, but he/she will only be identified by a candidate number.

Your child will complete the first questionnaires on 7 February 2005 directly after school and the programme will commence on 8 February 2005 and will be presented for five consecutive weeks. These sessions will take place after school, Monday to Thursday, and will last between 15 minutes and 40 minutes.

Please complete the attached form and kindly return it to the school by Thursday, 3 February 2005, in order for the testing to commence on Monday, 7 February 2005, and for the programme to commence on 8 February 2005. (Participants involved in the testing component only, as well as those selected for both the testing and the programme, will be notified on Friday, 4 February 2005).

Your child's participation in this study is of great importance and will be greatly appreciated. The completion of this study is dependent on the attendance of each child for the full duration of the programme.

The findings of the results will be made available at your request.

For any further information, please feel free to contact either Prof. Esmé van Rensburg or myself.

Thank you for your participation.

Yours truly,

.....  
Prof. Esmé van Rensburg  
Senior Lecturer (NW University)  
(018) 299 1727

.....  
Tanya Boshoff  
Clinical Psychologist  
(018) 297 8181



*Addendum 2: Creativity Programme for children  
in the middle childhood*

*Creativity  
Programme for  
children in the  
middle  
childhood*

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Tanya Boshoff

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# COPING

## INTRODUCTION

Coping plays a major role in a person's life, in that the way a person copes will predict how a stressor will be dealt with either **successfully** or **unsuccessfully** be dealt with. Coping therefore helps the individual to either manage or alter the problem and also helps to regulate his/her emotional response to the problem (Du Toit, 1997).

There are primarily two forms of coping, namely **problem-focused** and **emotion-focused coping**. Problem-focused coping is involved in solving problems while emotion-focused coping refers to either managing or reducing the stressor (Du Toit, 1997; Lazarus & Folkman, 1984).

Other types of coping include **seeking support**, **avoidance** (which is not viewed as a very good coping strategy because it is applied when the person wants to avoid confronting the problem) and **problem solving**, which allows the person to feel in control and find solutions to a particular problem (Kleinke, 1998; Holahan & Moos, 1987).

Examples of coping are:

PROBLEM-FOCUSED COPING	EMOTION-FOCUSED COPING
Problem solving	Exercising
Gathering information	Relaxation
Seeking advice	Support groups
Setting goals	Looking at the bright side
Interpersonal conflict resolution	Cognitive reframing

(Du Toit, 1997)

**Positive self-talk**, which is common between the ages of seven and twelve years, is an emotion-focused coping strategy. **Problem-solving**, which is a problem-focused coping strategy, also becomes more prominent during this stage (Fields & Prinz, 1997).

**Brainstorming**, which is a creative thinking skill, is important for solving problems. Brainstorming will help the child to generate many ideas and solutions. A child who can brainstorm effectively, will proceed beyond the borders of conventional thinking, and divergent productive thinking will take place. The latter involves making use of creative thinking, namely fluent, flexible, elaborative and original thinking. Therefore, the child will experience a flow of ideas and will not be rigid with his/her ideas, but will experience a continuous flow of thoughts. The child may then also create unique and original ideas and build upon existing ideas (Torrance, 1974).

# **PROGRAMME**

## **THEME 1: IDENTIFYING STRESSORS AND TYPES OF COPING**

Activity 1: Four coping styles

Activity 2: Brainstorm own coping strategies

Activity 3: Word search

## **THEME 2: RELAXATION**

Activity 1: Types of relaxation and relaxation exercise

## THEME 1: IDENTIFYING STRESSORS & TYPES OF COPING

### Activity 1: Four coping styles

- **Objective:**

The learner will become aware of stressors and how different coping styles will influence the outcome of the stressor.

- **Materials:**

Copy of the Coping Case Studies.

- **Instructions:**

- Do one scenario with the whole group.
- Divide the group into smaller groups of about 5-7 learners.
- Each group should read all three scenarios and discuss the questions provided on the worksheet within the group.
  - (a) What are the stressors?
  - (b) What style is being used?
  - (c) How does the coping strategy influence the outcome of the stressor?
- After discussing it in the group, each group reports back to the larger group.
- Explain to the group that when discussing the stressors, they are making use of brainstorming techniques.
- The procedures they must follow to do this are:

- Think of as many ideas as you can.
  - Do not be afraid to say what comes to mind – say it!!
  - Do not stop and wonder or ask whether it will work or if it makes sense.
  - Write all ideas down.
-

### Activity 1:

 **Time:** 20 min.

- After doing the first scenario together, hand out the exercises.
- The goal is for the learners to identify the stressors/problems.
- Brainstorming, a creative problem-solving technique, is practised in groups.
- Write down the answer to the activity.
- After 20 min. the groups get together and discuss the answers.

### Reflection:

- The aim of this exercise is for the learners to start identifying stressors and to realise that if they make use of wrong coping styles, the problem will not be solved and will possibly be made even worse.
- By making use of creative problem-solving as a coping strategy, the learners will be able to solve a problem and thereby cope more effectively.

(Exercise adapted from: Burns, R. (1988). Coping with stress. Maskew Millar Longman: Cape Town and from Du Toit, M. (1997). Constructive vs. Destructive coping Strategies. In M. Du Toit, A. Nienaber, D. Hammes-Kirsten, T. Kirsten, E. Claassens, W. du Plessis & M. Wissing. A Lifeskill and Coping programme for adolescents. A manual for teachers. (pp. 181-224). Potchefstroom: PU for CHE.)

## THEME 1: IDENTIFYING STRESSORS & TYPES OF COPING

### Activity 1: Worksheet

#### Scenario A:

*Monday: Whow! My alarm didn't go off, so I didn't have time to eat breakfast. I was late for school. Mr Smith asked me why I was late and I snapped at him and said that he should try to walk to school. I had to do a project for Mr Smith as well and could not even go to my rugby practise. Mr Smith said it must be on his desk first thing tomorrow morning or else I will get no marks. Just who does he think he is? At home, I yelled at everyone. I am too tired to work and decide to do it when it suits me.*

#### Scenario B:

*Monday: Whow! My alarm didn't go off, so I will not have time to eat breakfast and will be late for school. I decided then to not go to school. I told mom that I am sick. I had to do a project for Mr Smith and it is not finished yet, so I decided to rather go back to sleep. I hope I do not see Mr Smith tomorrow. I can't do it now anyway. What's the use of even trying? I am rather going to watch television. It will help me to forget about everything.*

#### Scenario C:

*Monday: Whow! My alarm didn't go off and I will be late for school. I decided then to not go to school. I went directly to Mr Smith and told him what had happened. He wasn't too upset. I also told him about the problems I am experiencing with the project. He told me about some other books I can use which will help me. After school I went to the library and got those books. I started with the project and am much further and nearly finished. Whew!*

**Scenario D:**

*Monday: Whow! My alarm didn't go off and I will be late for school. I decided to walk slowly to school and missed half of the day. I had problems with my project and found others who also have problems. Oh well, at least I am not the only one. We all got together after school and started speaking about the project. We decided to ask for a postponement. I hope Mr Smith will be in a good mood tomorrow.*

**Questions:**

**(a) What are the stressors?**

A:.....  
.....  
.....

B:.....  
.....  
.....

C:.....  
.....  
.....

D:.....  
.....  
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**(b) What coping styles are used?**

A:.....  
.....  
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B:.....  
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C:.....  
.....  
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D:.....  
.....  
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**(c) How do the coping strategies influence the outcomes of the stressors?**

A:.....  
.....  
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B:.....  
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C:.....  
.....  
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D:.....  
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## THEME 1: IDENTIFYING STRESSORS & TYPES OF COPING

### Activity 2: Brainstorming coping strategies

- **Objective:**

To identify how they cope and by hearing how others cope, the learners are given the opportunity to broaden their coping strategies and to try out new coping strategies.

- **Materials:**

Copy of worksheet 2.

- **Instructions:**

- Ask the group to divide into smaller groups.
- Ask the group to write down how they cope in situations.
- Before the groups start, the facilitator may give a few examples, so as to get the group thinking.
- Examples:
  - taking a long bath
  - laughing
  - crying
  - exercising
  - asking friends for help.

- After discussing it in small groups, the groups rejoin and discuss their findings in the big group.
- Identify the most common coping strategies, as well as the most unusual.

### **Activity 2:**

 **Time:** 15 min.

- Hand out the exercise and explain to group what they must do.
- The goal is for the learners to identify new coping strategies and learn from one another.
- Once again, brainstorming techniques are practised.
- Write down the coping strategies.

### **Reflection:**

- During the course of this exercised the learners will identify new coping strategies and will be able to implement them into their own lives.

(Exercise adapted from Rooth, E. (1995). Lifeskills: A resource book for facilitators. Braamfontein: Nolwazi Educational Publishers.)



**Questions:**

**(a) What are the most commonly used coping strategy/strategies?**

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**(b) What are the most unusual coping strategy/strategies?**

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## THEME 1: IDENTIFYING STRESSORS & TYPES OF COPING

### Activity 3: Word search

- **Objective:**

To review the progress of the sessions, as well as to reinforce the skills that were used previously.

- **Materials:**

Copy of worksheet 3 with Word Search Grid.

- **Instructions:**

- The learners may work in groups of two each.
- The group must fill in the words according to coping strategies.
- Only look at the solution when the group's grid is completed.

### **Activity 3:**

 **Time:** 20 min.

- Hand out the grid to the learners and explain to the group what they must do.
- The group must find the coping strategies that are hidden in the grid.
- Do not look at the solution until everyone has completed the grid.
- The goal is for the learners to reinforce the skills/strategies they have learned.

### **Reflection:**

- The word search will help the learners to review that which they have learned and ultimately to consolidate learning.

(Exercise adapted from Hobday, A. & Ollier, K. (1998). Creative Therapy: Activities with children and adolescents. Leicester: British Psychological Society.)

**THEME 1:**  
**IDENTIFYING STRESSORS & TYPES OF COPING**

**Activity 3: Worksheet 3**

**Word search Grid:**

P	H	T	A	E	R	B	C	S	I
R	E	A	D	X	C	R	G	U	D
O	L	L	J	R	Y	A	A	C	E
B	P	K	P	S	V	I	Y	C	N
L	A	U	G	H	I	N	G	E	T
E	X	E	R	C	I	S	E	S	I
M	T	P	S	A	B	T	C	S	F
S	C	R	E	A	M	O	N	F	Y
O	S	O	P	L	D	R	A	U	H
L	P	R	P	S	O	M	D	L	T
V	A	W	L	I	Q	J	I	K	L
I	M	A	U	O	N	E	O	S	A
N	O	M	L	Y	I	G	V	I	E
G	S	F	J	R	E	L	A	X	H

**Words to find:**

- **Read** a book.
- To **cry** is a coping skill.
- **Relax** by taking long bath
- When you are struggling, **talk** to someone.
- Set yourself **goals**.
- Make sure you eat **healthy** foods.
- Make sure you **exercise** daily.

- **Laughing** is a good way to let go of any stress.
  - Do not be afraid to ask for **help**.
  - **Brainstorm** with friends to try and solve the problem.
  - Make use of **problem solving** techniques.
  - **Coping** skills help you to cope in a situation.
  - Make sure you use **successful** coping skills.
  - **Avoidance** is a negative coping skill.
  - To let out any frustrations, you can even **scream**.
  - It is important to **identify** what the real problem is.
  - Take a deep **breath** in and then breathe out when doing relaxation exercises.
-

**SOLUTION:**

P	H	T	A	E	R	B	C	S	I
R	E	A	D	X	C	R	G	U	D
O	L	L	J	R	Y	A	A	C	E
B	P	K	P	S	V	I	Y	C	N
L	A	U	G	H	I	N	G	E	T
E	X	E	R	G	I	S	E	S	I
M	T	P	S	A	B	T	C	S	F
S	C	R	E	A	M	O	N	R	Y
O	S	O	P	L	D	R	A	U	H
L	P	R	P	S	O	M	D	L	T
V	A	W	L	I	Q	J	I	K	L
I	M	A	U	O	N	E	O	S	A
N	O	M	L	Y	I	G	V	I	E
G	S	F	J	R	E	L	A	X	H

## THEME 2: RELAXATION

### Activity 1: Relaxation

- **Objective:**

By learning to relax, the learners can become aware of the difference between a tense body and a relaxed body and of the emotions which may accompany relaxation, and thus they may become aware of the role of these factors in a person's life.

- **Materials:**

Relaxation music played by the facilitator.

Worksheet 1 explaining relaxation and visualisation.

Copy of worksheet 2, in which they must write down what they experienced when doing the relaxation exercise with regard to their body and mind.

- **Instructions:**

- The learners must find a place where they can lie down and feel comfortable.
- No one is to lie near to someone else.
- The learners, together with the facilitator must read the worksheet regarding the explanation of relaxation and visualisation.
- The facilitator must allow time for any questions or uncertainties to be expressed.

## **Activity 1:**

 **Time:** 60 min.

- After reading and explaining relaxation, the learners must become comfortable and engage in a relaxed state.
- The goal is for the learners to start breathing correctly and to notice the contrast between tense and relaxed muscles.
- After relaxation, the learners must write down what they experienced and discuss it within the group.

### **Reflection:**

- The aim of this activity is for the learners to identify the difference between a relaxed state and tension and thereby also to notice that the more relaxed they are, the better they are able to think creatively and to find possible solutions. A relaxed person is better able to cope effectively.

## THEME 2: RELAXATION

### Activity 1: Worksheet 1

#### *What are relaxation exercises?*

- Correct breathing helps you to cope with stress as it helps you to breathe in oxygen and breathe out carbon dioxide.
- When you breathe incorrectly, you can find that your muscles tense up, that you feel tired and that you may even feel anxious.
- With correct breathing, you learn to relax your body and to quieten your mind.
- By making use of your imagination, you can also feel more positive, think clearly and become more relaxed.
- Daydreams are also types of visualisations or making use of one's imagination (Davis, Eshelman & McKay, 1995).
- There are different types of relaxation exercises. They are **visualisation exercises** as well as **muscle relaxation exercises**, in which you tense all your muscles and then relax them. You may start with your toes and go all the way up to your face, tensing and relaxing and in this manner your body will start relaxing.
- While relaxing and feeling your muscles relax, you may even tell yourself "I am relaxed", thereby really feeling and believing what is happening in your body.
- When making use of a visualisation exercise, be creative, see the exercise as if you are making a movie in your mind in which you can change the picture just as you want to.

- Visualisation can help you to sort out a problematic situation. You will visualise it in your mind, role-play the actions and visualise what you will say and do.
- The most important thing to remember is to relax and make your mind blank. Remember – you are the one who is controlling your thoughts. If you are visualising, create the appropriate picture and when relaxing your muscles, make sure you breathe correctly and tell yourself that you are relaxed, while doing (and feeling) the exercise.

## Activity 1: Worksheet 2

### Questions:

- (a) What did you experience, especially with regard to your body, when doing (1) the muscle relaxation and (2) the visualisation relaxation exercise?

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- (b) How did you feel (with regard to your muscles and feelings) before and after the relaxation exercise?

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- (c) Anything you would like to add?

.....

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## Examples of Relaxation Exercises



### *Passive progressive relaxation:*



"Start by taking five big breaths....Start with your diaphragm....Feel the air as it expands yours diaphragm...Now move up to the lower lobes of your lungs....Good....Great....Now take the air to the upper lobes of your lungs.....Fill your lungs completely.....Now let the air out...first from the upper lobes.....now from the lower lobes.....now the diaphragm....Good....Do that four more times, and while you do, breathe in relaxation.....and breathe out tension.....Feel your hands as you do.....You might feel a tingling in your hands as the oxygen reaches every cell in your body....Good....Just keep breathing deeply.....Deeper and deeper.....Relaxed."

"Now that you're beginning to relax, I'd like you to pay attention to the top of your head.....Feel the muscles relax.....Now move down into your forehead.....Allow all the muscles in your forehead to relax.....Feel your eyes becoming heavier and heavier.....so very, very heavy.....that you almost feel you couldn't open them if you tried....very heavy.....Good. Gently relax, moving down your face and the sides of your head.....Relax those muscles completely.....Feel your jaw.....Allow your jaw muscles to give up their hold....Don't try to force anything.....Just allow them to relax and give up their hold....You may find you have to swallow or scratch an itchy spot. Just allow yourself to do that....Everything you do will help you to become more and more deeply relaxed....You may hear noises around you...people talking, doors closing....Don't try to push those sounds away.....Just relax and stay connected to my voice....Every noise you hear will help you to become more...and more deeply relaxed."

"Pay attention to your neck and shoulders....Allow all the muscles there to relax completely. Imagine your shoulders sagging down into the mat....as your relaxation goes deeper and deeper....Now take your relaxation down into your upper arms.....Let it flow gently down through your elbows, into your forearms, and right into your wrists.....Good....Now, just imagine for a moment that your arms and hands are becoming heavier and heavier.....You

may notice they're also becoming warmer....so warm....as you become more and more deeply relaxed."

"Return to your shoulders now, and begin to let your relaxation flow gently down through your upper back and chest....Feel all the muscles giving up their hold completely as you become more and more relaxed....Take your relaxation down and down through your torso, past your waist....Let those muscles relax completely.....Continue down, and down through your buttocks and groin, and into your thighs...Feel your thigh muscles relaxing....Let the warm feeling flow gently down through your knees...into your calves and shins....past your ankles.....and into your feet....Allow your legs to become heavier and heavier....Feel them becoming warmer and warmer....so very heavy and so very warm....deeper and deeper relaxed."

"Now your body is beautifully and completely relaxed....Feel your body....Memorize these feelings of deep and complete relaxation...It feels so good."

*(From: Barlow, C.A., Blythe, J.A. & Edmonds, M. (1999). A Handbook of interactive exercises for groups. Boston: Allyn & Bacon.)*



## *Visualisation relaxation exercise*

- THE BEACH



You're walking down a long wooden stairway to a very beautiful, expansive beach. It looks almost deserted and stretches off into the distance as far as you can see. The sand is very fine and light....almost white in appearance. You step onto the sand in your bare feet and rub it between your toes. It feels so good to walk slowly along this beautiful beach. The roaring sound of the surf is so soothing that you can just let go of anything on your mind. You're watching the waves ebb and flow...they are slowly coming in...breaking over each other...and then slowly flowing back out again. The ocean itself is a very beautiful shade of blue...a shade of blue that is so relaxing just to look at. You look out over the surface of the ocean all the way to the horizon, and then follow the horizon as far as you can see, noticing

how it bends slightly downward as it follows the curvature of the earth. As you scan the ocean you can see, many miles offshore, a tiny sailboat skimming along the surface of the water. And all these sights help you to just let go and relax even more. As you continue walking down the beach, you become aware of the fresh, salty smell of the sea air. You take in a deep breath...breathe out...and feel very refreshed and even more relaxed. Overhead you notice two seagulls flying out to sea...looking very graceful as they soar into the wind...and you imagine how you might feel yourself if you had the freedom to fly. You find yourself settling into a deep state of relaxation as you continue walking down the beach. You feel the sea breeze blowing gently against your cheek and the warmth of the sun overhead penetrating your neck and shoulders. The warm, liquid sensation of the sun just relaxes you even more...and you're beginning to feel perfectly content on this beautiful beach. It's such a lovely day. In a moment, up ahead, you see a comfortable looking beach chair. Slowly, you begin to approach the beach chair....and when you finally reach it, you sit back and settle in. Laying back in this comfortable beach chair, you let go and relax even more, drifting even deeper into relaxation. In a little while you might close your eyes and just listen to the sound of the surf, the unending cycle of waves ebbing and flowing. And the rhythmic sounds of the surf carries you even deeper...deeper still....into a wonderful state of quietness and peace.

***(From: Bourne, E.J. (2000). The anxiety and phobia workbook. Oakland: New Harbinger Publications. )***

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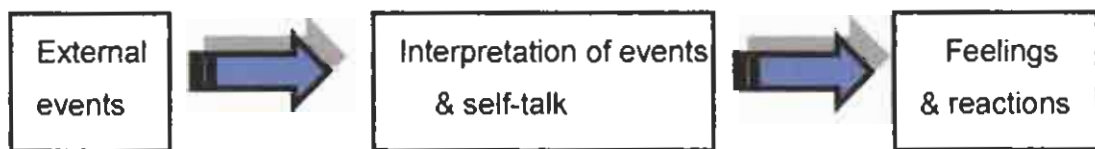


# SELF-CONCEPT

## INTRODUCTION

The term self-concept describes how you *feel* and *think about yourself*, but also involves your *beliefs* and *images you have about yourself*. Your self-concept or self-esteem is formed by how you *view* yourself and by how *others see you* and their *feedback* (Rooth, 1995). Therefore, the more positive you view yourself, the more positive your self-concept will be. Your self-concept plays an important role in that it influences your *behaviour* (Rooth, 1995).

*Self-talk* also plays a role in your development of self-concept. That which you tell yourself in response to a situation determines your *behaviour* and *feelings*. Often you may feel that it is due to the external situation that you feel so bad or down, but it is actually your interpretation and thoughts that forms the basis of your thoughts (Bourne, 2000). What you tell yourself, together with your beliefs, will affect your self-concept. You can therefore change your self-esteem by means of changing your self-talk (Bourne, 2000). It can be illustrated as follows:



A positive self-concept is very important. Firstly, it forms the basis of your ***mental well-being***. Your behaviour changes when your self-concept changes. Therefore, by having a positive self-concept, it will help you to become the best person you can be. Secondly, it makes your ***interpersonal relationships*** more positive, and lastly, a positive self-concept will lead you to ***effective behaviour*** and ***good coping skills*** and it will create a ***driving force*** towards a ***better life*** (Hammes-Kirsten, 1997).

# **PROGRAMME**

## **THEME 1: WHO AM I?**

Activity 1: Lifeline

Activity 2: I am.....

Activity 3: Market place

Activity 4: Word name

## **THEME 2: SELF-TALK**

Activity 1: Countering self-talk

## **THEME 3: GOALS FOR IMPROVEMENT AND ACCEPTING MYSELF**

Activity 1: My goals

Activity 2: Article

Activity 3: A puzzle of myself

## THEME 1: WHO AM I?

### Activity 1: Lifeline

- **Objective:**

- To learn more about him/herself, therefore gaining self-knowledge.
- To learn that everyone is different with regard to, for example, fears, preferences, characteristics etc.
- Get to know yourself better.
- Notice how unique each individual is.
- By knowing yourself, the individual will know what their strengths and weaknesses are and how it improves them.
- To prevent comparing with others, but accepting that everyone is unique and thereby accepting themselves.
- Enhances self-confidence by talking about it.

- **Materials:**

Copy of Worksheet 1  
Crayons, pencils and erasers.

- **Instructions:**

- Each learner should receive the handout for the exercise and ensure that each learner has enough crayons.

- Tell the learners to draw a lifeline of their life from when they were born until now.
- Write all the important events down that happened in their life.
- Be creative: encourage the learners to draw something that depicts the event as well.
- Use different colours.
- Afterwards, write down the answers to the questions.
  - (a) Write down anything you forgot and then remembered while doing this exercise
  - (b) Which event stood out the most for you?
  - (c) What emotions (e.g. happy, sad, confused etc.) did you experience while doing this exercise?

### **Activity 1:**

 **Time:** 10 min.

- Hand out the exercise.
- The goal is for the learners to identify important events and in turn remember things about him/herself.
- Therefore, self-discovery occurs.

### **Reflection:**

- The learner will start with a self-discovery of him/herself and remember things, which might have been forgotten or regarded as unimportant. This is seen as the first step of discovering who they are, before they look at what their strengths and weaknesses are.

(Exercise adapted from De Klerk, R. & Le Roux, R. (2003). Emosionele Intelligensie. 'n Praktiese gids vir ouers en onderwysers vir kinders en tieners. Cape Town: Human & Rousseau and Barlow and C.A., Blythe, J.A. & Edmonds, M. (1999). A handbook of interactive exercises for groups. Boston: Allyn & Bacon).

THEME 1:  
WHO AM I?

Activity 1: Worksheet 1

- *My lifeline* -

**Questions:**

**(a) Write down anything you forgot and then remembered while doing this exercise.**

.....

.....

.....

.....

.....

.....

**(b) Which event stood out the most for you?**

.....

.....

.....

.....

.....

.....

**(c) What emotions (e.g. happy, sad, confused etc.) did you experience while doing this exercise?**

.....

.....

.....

.....

.....

.....

## *An example of a lifeline.*



**My family and the  
life of .....**

Born in Cape Town (1985)



Went to school (1992)



Got my first bicycle (1992)



Moved to Potchefstroom (1993)



Met new friend Ellen (1993)

Woofles died (1995)

Sister Lana was born (1997)




Play first team hockey (1997)

Won trophy for best academic achiever (1998)

Went on first date (1998)





**THEME 1:  
WHO AM I?**

**Activity 2: I am ....**

- **Objective:**

To identify aspects such as emotions and characteristics about him-/herself.

- **Materials:**

Copy of Worksheet 2.  
Crayons, pencils, erasers.

- **Instructions:**

- Each learner should receive a handout of the exercise.
- Explain that they should write down characteristics of themselves – both positive and negative.
- They may make use of the examples just to get started.

## **Activity 2:**

 **Time:** 15 min.

- Hand out the exercise and explain to group what they must do.
- The goal is for the learners to identify what their positive and negative characteristics are – therefore introspection takes place.
- Tell the group that they may look at the examples so as to get started.
- Remind the group that there is no wrong answer and that they must be honest and willing to learn things about themselves.

### **Reflection:**

- In the previous exercise, the learners identified events which stood out for them, while in this exercise, the learner now gets the chance to identify characteristics which are unique to him/her.
- More self-discovery therefore takes place.

(Exercise adapted from Rooth, E. (1995). Lifeskills: A resource book for facilitators. Braamfontein: Nolwazi Educational Publishers.)

**THEME 1:  
WHO AM I?**

**Activity 2: Worksheet 2**

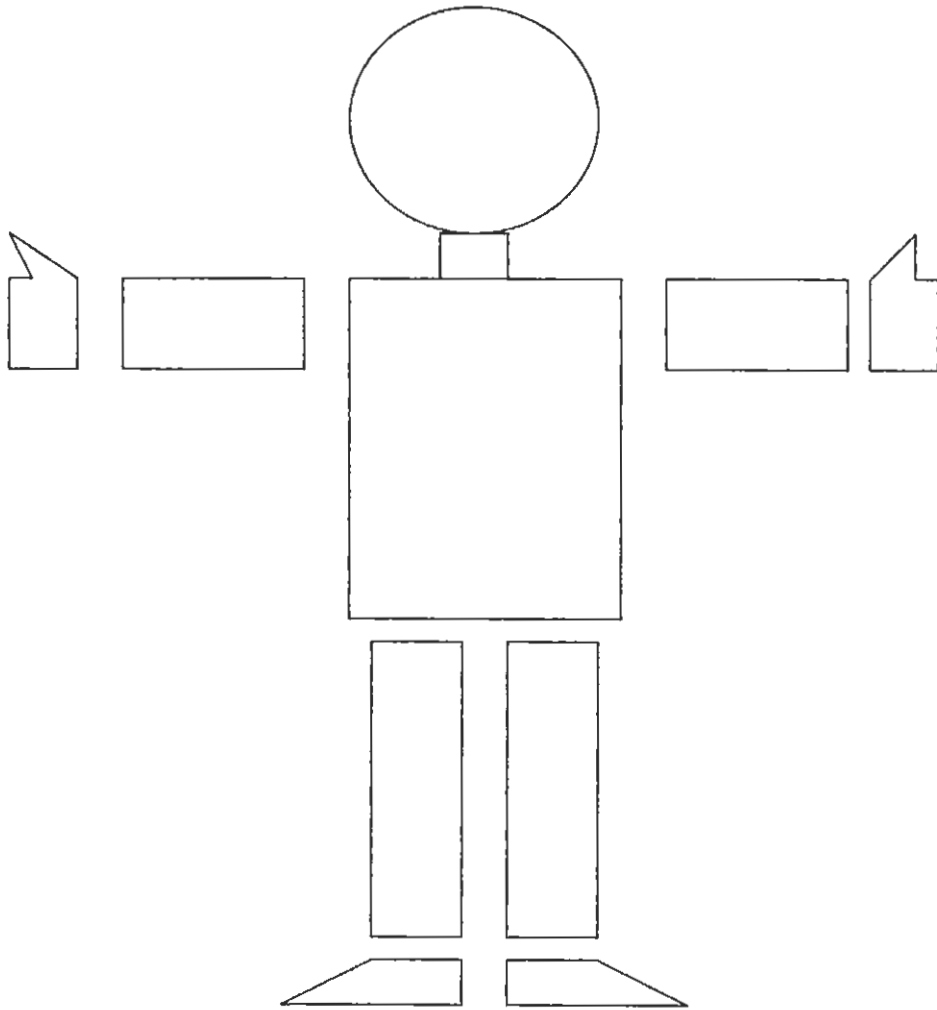
**Examples of characteristics:**

- I have red/blonde/black/brown hair
- My hair is straight/curly
- My eyes are blue/brown/green
- I have a bad temper
- I am friendly
- I like running, cycling, dancing
- My favourite food is.....
- I am naughty/fearful/loyal/a leader etc.

**Instructions:**

- Use the picture of a person to write down what your positive and negative characteristics are.
- OR: you may be creative and draw yourself to illustrate what your characteristics are.
- Remember: Be creative.

*I am . . . . .*



*I am . . . . .*

## THEME 1: WHO AM I?

### Activity 3: Market place

- **Objective:**

After identifying their own positive qualities, the learners must say them aloud and acknowledge it.

- **Materials:**

Copy of Worksheet 3.

- **Instructions:**

- Each learner should first write down their qualities, which were identified in the previous exercise, in the jars.
- Then divide the group into  $\pm$  5 groups of about 10 in each group.
- Each learner in the group must shout out their characteristics to barter and bargain with.
- Example: If learner X has a singing talent, he/she can bargain it for 2 other characteristics, e.g. 2 smiles/jokes
- Emphasise that no characteristic is lost, but more are added.
- When a characteristic has been received, write it in jar marked RECEIVED.
- These new qualities are something which you might want to acquire and upon which you can work after receiving it.

- The learner should also ask the individual from whom he/she received that characteristic, how to implement it in their lives and make it their own.

### **Activity 3:**

 **Time:** 15 min.

- Hand out the exercise and explain it to the group.
- The goal is for the learners to acknowledge and be proud of their qualities/characteristics and thereafter to identify qualities which they would like to have and ultimately to work on them so that they can increase their own qualities jar.

### **Reflection:**

- This exercise helps the children to acknowledge their own characteristics/qualities and to identify how they can grow even more by acquiring other characteristics/qualities. The child therefore learns that by acquiring more, they can make their lives fuller and challenge themselves to develop more qualities/characteristics daily.

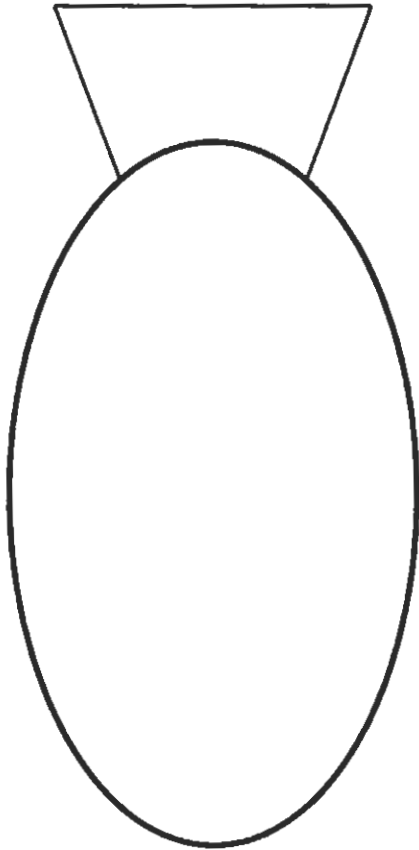
(Exercise adapted from Rooth, E. (1995). Lifeskills: A resource book for facilitators. Braamfontein: Nolwazi Educational Publishers and Hobday, A. & Ollier, K. (1998). Creative therapy: Activities with children and adolescents. Leicester: British Psychological Society.)

**THEME 1:  
WHO AM I?**

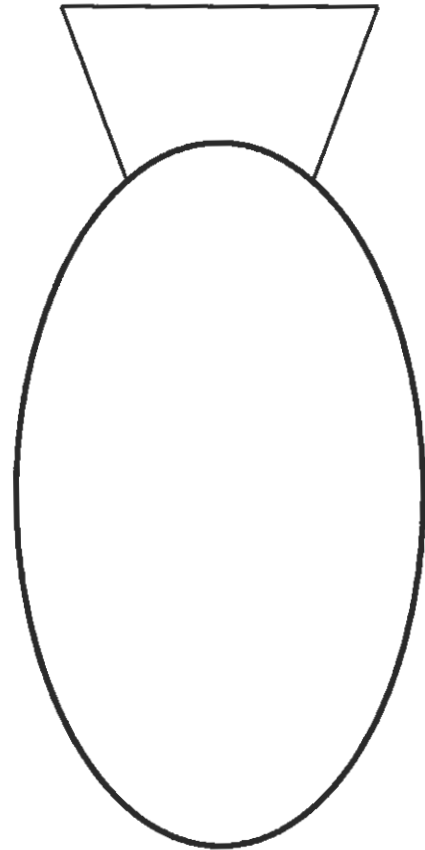
**Activity 3: Worksheet 3**

*Welcome to the Market*

**MY QUALITIES**



**RECEIVED**



## THEME 1: WHO AM I?

### Activity 4: Word name

- **Objective:**

- Based on the positive qualities which were identified, the learners must write down something which describes him/herself best based on their initials.
- It will help to enhance their positive qualities and to be remembered in a creative way.
- It will help to stimulate their creativity and small motor development.

- **Materials:**

Copy of Worksheet 4, crayons and clay.

- **Instructions:**

- Each learner must write down on the worksheet their initials and associate each initial with a positive word, which describes them best.
- Example: T.S. = Tremendously Sparky
- Thereafter, the learners must decorate the label and with the clay they must mould it to illustrate one of their best qualities.
- It is important to emphasise that the children must be creative and use their imagination.

- The mould they make is a visual illustration of their best quality, while the names are a creative reminder.

#### **Activity 4:**

 **Time:** 15 min.

- Hand out the exercise to the learners.
- The goal is for the learners to use their creativity and write down a creative word to illustrate something positive about themselves.
- Once again, the element of creativity is applied when the learners have to decorate it, and when they use clay to illustrate a positive quality, both creativity and small motor development are stimulated.

#### **Reflection:**

- This exercise combines all the previous activities and concludes with a visual and mental reminder, with regard to both the name, play and clay.

(Exercise adapted from Rooth, E. (1995). Lifeskills: A resource book for facilitators. Braamfontein: Nolwazi Educational Publishers.)

**THEME 1:  
WHO AM I?**

**Activity 4: Worksheet 4**

*My initials*

## THEME 2: SELF-TALK

### Activity 1: Negative self-talk

- **Objective:**

- To identify their negative self-talk and to realise how it influences them and their reactions.
- The learners will also realise that the manner in which they interpret the situations in which they find themselves or the way in which they interpret themselves, will influence their self-concept.

- **Materials:**

Copy of Worksheet 1 and 2 with the four types of negative self-talk and ways to counter it.

- **Instructions:**

- Illustrate by means of metaphors the four types of negative self-talk.
- Each learner must read through the four different types of negative self-talk.
- The learners must be given a few minutes to just reflect on it.
- The group must discuss it with the facilitator and examples must be given.
- Thereafter, they must answer the questions which follow.

- Ask the learners to be honest when answering the questions.  
There is no wrong answer.

### **Activity 1:**

 **Time:** 40 min.

- Hand out the exercise.
- The goal is for the learners to identify their own negative self-talk and to realise how it affects them.

### **Reflection:**

- This exercise helps the learners to identify their negative self-talk and in turn to realise how it influences their self-concept.
- It also enhances their problem-solving techniques, as the learners have to think of ways to counter the negative self-talk.

(Exercise adapted from Bourne, E.J. (2000). The anxiety and phobia workbook. Oakland: New Harbinger Publications.)



**PERFECTIONIST:**

- Mr Ant works all day and wants to do his best in everything he does.
- Look how busy he is.
- I wonder if he doesn't get tired?



**WORRIER:**

- \* Mr Bulldog.....shame.....look at him frown
- \* He looks as if he is worrying too much.
- \* I wonder what could be so bad that it makes him worry so much?



**CRITIC:**

- Look at how cross Mr Wolf looks.
- Look....he is saying bad things about himself.
- He is shaking his paw at himself and saying nasty things about everything he has done today.



**VICTIM:**

- \* Oh no!! Mr Fly is stuck in the spiders web.
- \* Look, he is not even trying to get himself out.
- \* He is feeling sorry for himself. Shame!

**THEME 2:  
NEGATIVE SELF-TALK**

**Activity 1: Worksheet 1**

*A: The worrier (promotes anxiety)*

- This individual always thinks of the worst-case scenario.
- It makes you fear things more.
- You will even start to anticipate and overestimate the worst results.
- It creates catastrophic ideas/images.
- Such a person often says "What if ... " or "Oh no,..."

**How does it affect me?**

1	2	3	4	5
Not at all		Little		Very much

**What do I worry about?**

.....

.....

.....

.....

*B: The critic (promotes low self-esteem)*

- This is that part of you which always judges and evaluates your behaviour.
- It emphasises your weaknesses.
- It reminds you that you are a failure.

- It ignores your positive qualities.
- It often says: "You are stupid" or "Can't you ever get it right."

**How does it affect me?**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Not at all</b>		<b>Little</b>		<b>Very much</b>

**How do I criticise myself?**

.....

.....

.....

.....

***C: The victim (promotes symptoms of depression)***

- You often feel helpless and hopeless.
- It feels as if you are not making any progress.
- You start to feel unworthy.
- You feel that nothing will ever change.
- You often say: "I can't" or "I will never be able to"

**How does it affect me?**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Not at all</b>		<b>Little</b>		<b>Very much</b>

**How do I feel when I view myself as a victim?**

.....

.....

.....

***D: The perfectionist (promotes stress and burnout)***

- You often feel that your efforts are not good enough.
- You always tell yourself that you SHOULD work hard, you SHOULD do better etc.
- You do not want to accept failures and do not see that it is part of life.
- You push yourself too much.
- You often say: "I should" or "I have to" or "I must".

**How does it affect me?**

<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>Not at all</b>		<b>Little</b>		<b>Very much</b>

**Where are you a perfectionist?**

.....

.....

.....

.....



**HINT:**

- Look at areas such as:
  - school
  - homework
  - friends
  - family
  - teachers etc.

**THEME 3:  
GOALS FOR IMPROVEMENT AND ACCEPTING  
MYSELF**

**Activity 1: My goals**

- **Objective:**

To set goals based on how the learners want to change their negative qualities and how to enhance their positive qualities.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- Each learner should start to formulate their goals on how they want to improve their self-esteem (i.e. the learner's opinion of how he/she sees him-/herself )
- Each learner must work on his/her own.

## **Activity 1:**

 **Time:** 15 min.

- Hand out the exercise.
- The goal is for the learners to develop goals so as to improve their self-esteem.
- In conjunction with this exercise, problem-solving techniques are used.
- There are no wrong answers.
- Everyone works alone so that the learner can concentrate and focus on ways to improve him-/herself.
- Encourage the learners to be creative.

## **Reflection:**

- This exercise helps the learners to incorporate all that they have learned and to start putting it into practice by thinking practically of ways to enhance themselves.



**THEME 3:  
GOALS FOR IMPROVEMENT AND ACCEPTING  
MYSELF**

**Activity 2: My own article**

- **Objective:**

- To learn to accept him/herself.
- To own their qualities.

- **Materials:**

- Copy of Worksheet 2.
- Crayons, pencils.
- Soothing music.

- **Instructions:**

- Tell the learners that they must relax and listen to the soothing music.
  - While doing that, they must think into the future.
  - Imagine that you are someone else and that you have to write an article about the actual you, illustrating and highlighting all your positive qualities and what you meant to other people.
  - After the learners have been given time to think about it, they must start to write it down and then share it with the group.
-

- Remind all of what they have learned so far and use it to help them with the article.

## **Activity 2:**

 **Time:** 30 min.

- Hand out the activity page and explain to the learners what they must do, by imagining that they are someone else in the future who has to write an article about themselves in the past.
- When doing so, they must write down what their positive qualities were and what they meant to people.
- Emphasise that they must approach it seriously and they must also work alone.
- Emphasise that there are no wrong articles and that no one is to criticise the another.

## **Reflection:**

- This exercise helps to consolidate all of the previous exercises.

(Exercise adapted from Hammes-Kirsten, D. (1997). Constructive vs. Destructive coping Strategies. In M. Du Toit, A. Nienaber, D. Hammes-Kirsten, T. Kirsten, E. Claassens, W. du Plessis & M. Wissing. A Lifeskill and Coping programme for adolescents. A manual for teachers. (pp.72). Potchefstroom: PU for CHE)

**THEME 3:  
GOALS FOR IMPROVEMENT AND ACCEPTING  
MYSELF**

**Activity 2: Worksheet 2**

# **The Herald**

**Year: 2104  
Saturday 21 January**

*The Life Of .....*

**THEME 3:  
GOALS FOR IMPROVEMENT AND ACCEPTING  
MYSELF**

**Activity 3: Puzzle of myself**

- **Objective:**

- This is the conclusion of the self-concept theme.
- In this exercise, the learners will incorporate all they have learned and discovered and put it in a puzzle form.

- **Materials:**

- Copy of Worksheet 3.
- Crayons, music, scissors and Pritt/glue.
- Sheet of cardboard each.

- **Instructions:**

- Each learner must receive a copy of the worksheet.
- The learners must write down and draw all their positive qualities in the blocks provided.
- Be creative.
- Cut out the puzzle and reinforce on cardboard.

#### **Activity 4:**

 **Time:** 15 min.

- Hand out the exercise to the learners.
- The learners must write down and draw all their positive qualities in the blocks provided.
- There are no wrong answers.
- Be creative – the exercise must serve as a reminder of all that he/she has learned.
- Cut out the puzzle and reinforce on cardboard.

#### **Reflection:**

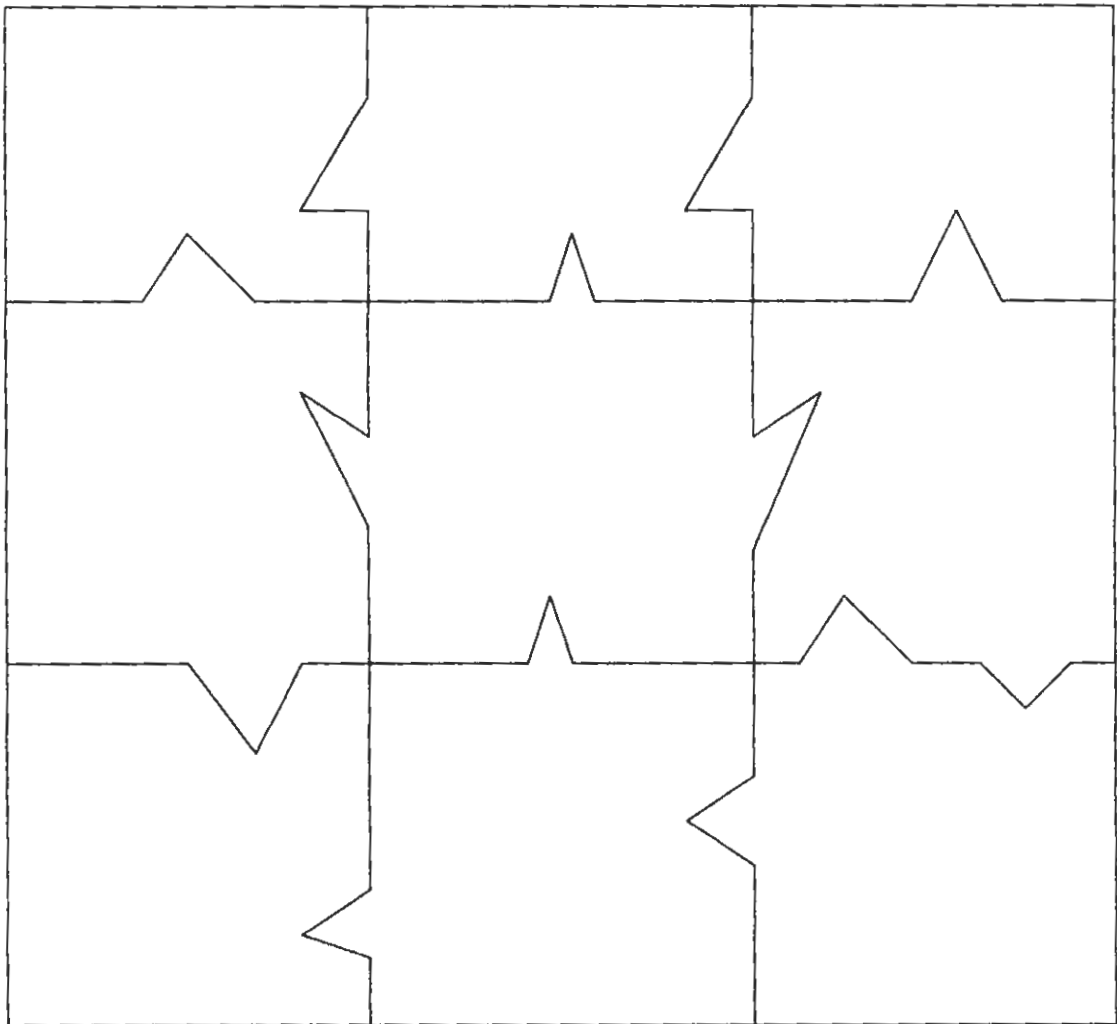
- The child can use the puzzle to show his/her parents, friends his/her positive qualities in a creative way.
- It also serves as a visual reminder of what those qualities are.

(Exercise adapted from De Klerk, R. & Le Roux, R. (2003). Emosionele Intelligensie. 'n Praktiese gids vir ouers en onderwysers vir kinders en tieners. Cape Town: Human & Rousseau and Barlow.)

**THEME 3:  
GOALS FOR IMPROVEMENT AND ACCEPTING  
MYSELF**

**Activity 3: Worksheet 3**

*Puzzle of myself*



## References: Self-concept

C.A., Blythe, J.A. & Edmonds, M. (1999). A handbook of interactive exercises for groups. Boston: Allyn & Bacon.

Bourne, E.J. (2000). The anxiety and phobia workbook. Oakland: New Harbinger Publications.

De Klerk, R. & Le Roux, R. (2003). Emosionele Intelligensie. 'n Praktiese gids vir ouers en onderwysers vir kinders en tieners. Cape Town: Human & Rousseau and Barlow.

Hobday, A. & Ollier, K. (1998). Creative therapy: Activities with children and adolescents. Leicester: British Psychological Society.

Rooth, E. (1995). Lifeskills: A Resource Book for facilitators. Braamfontein: Nolwazi Educational Publishers.



# PROBLEM-SOLVING

## INTRODUCTION

**Problems** - whether they are small and unimportant or big - complicate a person's life and they **occur every day**. If a problem is not solved, it may accumulate and **become even bigger** (Nienaber, 1997). Children should therefore learn how to solve problems and also to take **responsibility** for their **choices** (De Klerk & Le Roux, 2003).

**Growth** and **development** takes place when problems are solved (Nienaber, 1997). When a child faces problem solving, the **whole-brain approach** is the best to use, as it combines the **strengths of both hemispheres** instead of being dominated by one hemisphere and therefore not making full use of a person's brain potential (Beekman, 2000; Buzan, 1991).

Some examples of **advantages** and **disadvantages** of left and right hemisphere domination regarding problem solving are (Beekman, 2000):

<i>Left Hemisphere</i>	<i>Right Hemisphere</i>
<b>ADVANTAGES</b>	
The individual thinks more systematically.	The individual will think in "leaps".
Decisions are based on facts.	The individual thinks creatively with new questions and solutions.
Work done thoroughly and precisely.	New ideas tried and risks taken.
<b>DISADVANTAGES</b>	
Lacks imagination.	Important details often overlooked.
Facts only trusted; not feelings.	Does not easily criticise ideas.

Various steps are suggested for problem solving. Sharoff (2002) provides 6 of these steps. They are:

- 1. Problem identification**
- 2. Finding alternative solutions**
- 3. Think about the consequences of your options**
- 4. Find the best option/solution for the problem**
- 5. Identify the best tactics for your plan**
- 6. Self-reinforcement**

# **PROGRAMME**

## **THEME 1: PROBLEMS AND TUNNEL VISION**

Activity 1: What do you see?

## **THEME 2: PROBLEM-SOLVING**

Activity 1: Road to problem solving

Activity 2: Brainstorming

## **THEME 3: PUTTING INTO PRACTICE**

Activity 1: Problems

Activity 2: Bag of objects

## THEME 1: PROBLEMS AND TUNNEL VISION

### Activity 1: What do you see?

- **Objective:**

- To realise that people sometimes see things only because they are expected to see it or because they are only focusing on one aspect and thereby not seeing more solutions.
- To realise that by working as described above, people conforming to what is known and expected, and they limiting their creativity and ability to solve problems.
- To help the learners to understand that if they do not look wider, they may limit their problem-solving skills and only see the obvious, without looking further to see other options.
- Therefore, to help learners to look at problems from different angles.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- Each learner should receive the handout for the exercise and be told to work alone.
- Emphasise that there are no wrong answers.

- The learners must write down what they see in the space provided.
- They must also write down the answers to these questions:
  - (a) What did you see?
  - (b) How did you arrive at the answer?
  - (c) Can you think of anything else that you can see?

### **Activity 1:**

 **Time:** 10 min.

- Hand out the exercise.
- The goal is to realize how a person's perceptions and preconceived ideas affect problem-solving.
- There is no wrong answer.
- Look at the picture from different angles.
- Write down the answers to the questions in the space provided.
- The learners may use 10 minutes to complete the exercise; then the various answers are discussed and written on a black board to illustrate different ways of thinking.

### **Reflection:**

- The aim of the exercise is to illustrate how a person's creativity and problem-solving ideas can be influenced by preconceived ideas, tunnel vision and by failing to look at it from various angles.

(Exercise adapted from Rooth, E. (1995). Lifeskills: A resource book for facilitators. Braamfontein: Noiwazi Educational Publishers.)

THEME 1:  
PROBLEMS AND TUNNEL VISION

Activity 1: Worksheet 1

*- What do you see? -*



**Questions:**

**(a) Write down what you can see.**

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

**(b) How did you arrive at your answer? (e.g. could you see it immediately, did you think about it, did you close your one eye and then looked at it? etc.)**

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

**(c) Can you think of anything else that you can see?**

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

## THEME 2: PROBLEM-SOLVING

### Activity 2: Road to problem solving

- **Objective:**

- To become aware of the various steps a person takes to reach a desired solution for a problem.
- To teach the learners to think logically and then to implement their strategy in future problem-solving situations.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- Divide the group into smaller groups of approximately 5 children per group.
  - Appoint a leader to provide the answers after the time has elapsed.
  - The group must think of a problematic situation and by making use of the steps for problem solving, they must find a solution.
  - Thereafter, they must indicate how they arrived at the solution and lastly, they must indicate whether they want to add any additional steps to solving a problem.
-

## Activity 1:

 **Time:** 20 min.

- Hand out the cards to each group together with the answer sheet.
- The goal is to identify the steps to problem solving by thinking of a problematic situation and finding a solution by making use of certain steps.
- Learners must write down the steps and thereafter indicate whether they would like to add any additional steps.
- No criticism is allowed.
- The learners may take 15 minutes to complete the task. Thereafter, the group leader provides the solution to the whole group.

## Reflection:

- This activity helps the learners to realise that problem solving works best when the correct steps are followed.
- In addition to this, when solving problems, creativity is stimulated and ideas are formed.

(Exercise adapted from McElherne, L.N. (1999). Jump Starters: Quick classroom activities that develop self-esteem, creativity and cooperation. Minnesota: Free Spirit Publications, Inc.)

**THEME 2:  
PROBLEM-SOLVING**

**Activity 1: Worksheet 1**

**Instructions:**

- In your group, first identify what the correct steps are for problem solving by making use of the cards provided on the next page.
- After you have decided, make sure you know why you have decided it should be in that specific order.
- Write down the steps in the picture provided.
- Think of a problematic situation and then, by means of your problem-solving steps, solve/find a solution to the problem.
- Think whether there are any other steps you would like to add to these steps.

**Questions:**

**(a) Describe the problem and the solution of which your group has thought. What are the steps you followed?**

Problem:.....  
.....  
.....  
.....

Steps:.....  
.....  
.....

Solution:.....  
.....  
.....

**(b) Are there any additional steps you would like to add?**

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

**NB**  
Turn to the next page for the steps and indicate on the picture what your steps to problem-solving are.



Evaluate the outcome/result.

Decide on the best solution: decide which solution stands out and consider the consequences to your solution.

Be positive and have the right attitude.

Come up with various ideas: Brainstorm and look at different ways to solve the problem.

Plan and implement the solution.

Understand the problem: What is the problem? Why is it a problem? Who is affected by this problem?

Stop.



## Solution to Steps to Problem solving:



Be positive and have the right attitude.



Stop.



Understand the problem: What is the problem? Why is it the problem? Who is affected by this problem?



Come up with various ideas: Brainstorm and consider different ways to solve the problem.



Decide on the best solution: Decide which solution stands out and consider the consequences to your solution.



Plan and implement the solution.



Evaluate the outcome/result.

## THEME 2: PROBLEM-SOLVING

### Activity 2: Brainstorming

- **Objective:**

- To understand and implement the problem-solving steps.
- To look at the problem from various angles.
- To enhance the child's creativity.

- **Materials:**

Copy of Worksheet 2.

- **Instructions:**

- The learners must remain in the same small group, with approximately 5 in each group.
- A new group leader is chosen in the group.
- The group must make use of the problem-solving steps to brainstorm new, original ideas to indicate what they can see in the pictures.
- The group must write down what they see.
- The group leader must report back.
- The group must also answer the following questions:
  - (a) What did you see?
  - (b) Did you follow the problem-solving steps?

- (c) If yes, how did it help you to generate new ideas?
- (d) Which steps did you leave out?
- (e) Did all the members of the group get a turn to generate new ideas?

## **Activity 2:**

 **Time:** 25 min.

- Hand out the worksheet.
- The goal of this exercise is for the group to create new and original ideas by means of brainstorming.
- The steps for problem-solving can be used.
- No criticism is allowed.
- Be creative and daring.
- Write down the ideas and answer the questions that follow.
- There is no limit to how the learners may examine the cards.

## **Reflection:**

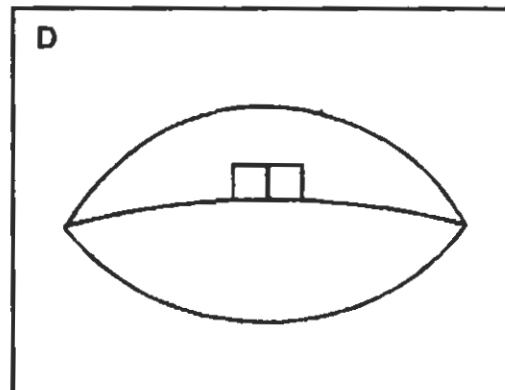
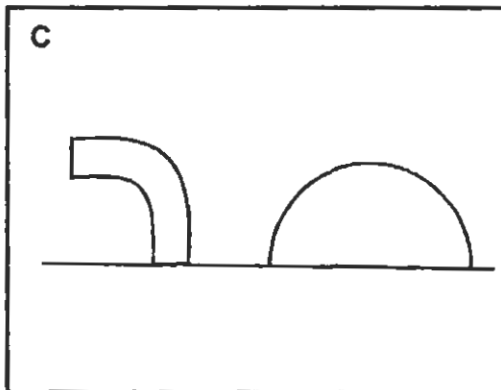
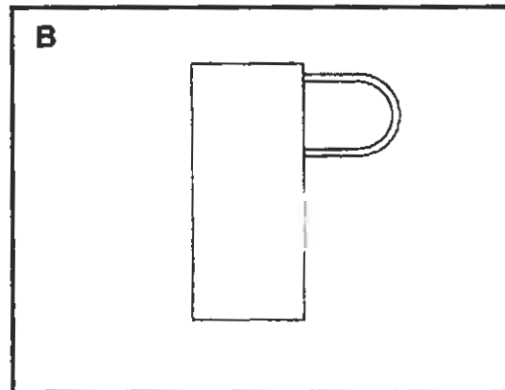
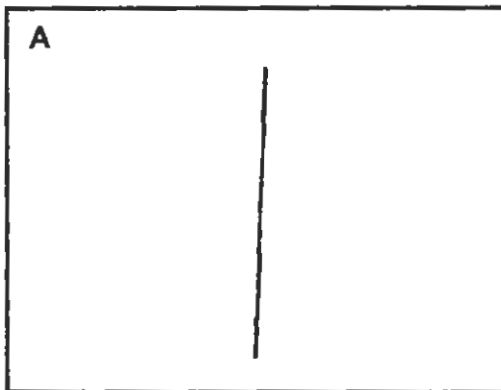
- This activity enables the learners to brainstorm by following the steps to problem solving and by thinking creatively (not tunnel vision), which will result in creating an original and unique solution.
- Learners are developing their creative skills.
- The child will ultimately learn that when faced with a problematic situation, the more solutions he/she has, the better the outcome will be.

(Exercise adapted from Nienaber, A (1997). Problem-solving. In M. du Toit, A. Nienaber, D. Hammes-Kirsten, T. Kirsten, E. Claassens, W. du Plessis & M. Wissing (Eds). A Lifeskills & coping Programme for Adolescents. A manual for Teachers. (pp. 141-160). Potchefstroom: PU for CHE.)

**THEME 2:  
PROBLEM-SOLVING**

**Activity 2: Worksheet 2**

*What can you see?*



## Questions:

(a) What can you see?

A:.....

.....

.....

.....

.....

B:.....

.....

.....

.....

.....

C:.....

.....

.....

.....

.....

D:.....

.....

.....

.....

.....

(b) Did you follow the problem-solving steps? (Tick the box)

Yes	
No	

**(c) If yes: how did it help you to generate new ideas?**

.....

.....

.....

.....

**(d) Did all the members in your group get a turn to generate new ideas?**

Yes	
No	

## THEME 3: PUTTING INTO PRACTISE

### Activity 1: Problems

- **Objective:**

- To find solutions to everyday problems by implementing the previous exercises.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- Each group (of approximately 5 per group) should receive the worksheet.
- The group leader must write down the answer and read out the solution after the given time.
- The facilitator reads the problems with the group and makes sure everyone understands what is expected of him/her.
- Answer the questions that follow:
  - (a) What solutions can be used to help in the situations?
  - (b) Were the steps for problem solving used?
  - (c) Were any difficulties experienced in finding the solution?

## **Activity 1:**

 **Time:** 15 min.

- Use the steps of problem-solving to find a solution.
- Tell the groups to think logically and at all possible angles.
- The goal of this exercise is for the group to implement all they have learned in practical, day-to-day problems and to find solutions to these problems.
- After the facilitator has read through all the problems, the group gets 15 minutes to suggest solutions to them.

## **Reflection:**

- People are faced with problems every day, and in this exercise the child will receive the opportunity to find solutions to some practical problems and to realise that solutions can be found by making use of problem-solving techniques.
- The problem-solving techniques will become more familiar and will be put into practice.

**THEME 3:  
PUTTING INTO PRACTISE**

**Activity 1: Worksheet 1**

**Problem 1:**

Your friend has been stealing money in the classroom. He/she really needs the money, but now the other children do not have money to buy sweets from the tuck shop. The teacher said that if the person who has been stealing does not come forward, the whole class will be punished. What can you do to help him/her?

**Problem 2:**

Your friend cheated in a class test and the teacher thinks it is you. What are you going to do?

**Problem 3:**

Your friend tells you that his/her parents are going to get divorced. He/she is confused and is crying a lot. Your friend tells you that he/she cannot handle all the tension at home and feels like running away from home. What can you do to help?

## Questions:

**(a) What solutions can be used to help in each situation?**

Problem 1:

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

Problem 2:

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

Problem 3:

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

**(b) Were the steps for problem solving used? (Tick the box)**

Yes	
No	

## THEME 3: PUTTING INTO PRACTISE

### Activity 1: Bag of objects

- **Objective:**

- To find solutions even with limited options.

- **Materials:**

5 bags filled with objects that may be used to find a solution to the problem.

- **Instructions:**

- Divide the group into five smaller groups.
- Each group must receive a bag with objects in it and an answer sheet.
- The bag with objects must be used to find a solution to the problem.
- The group must be creative.
- There are no wrong answers.
- Problem: The school is on an outing in the wilderness. When they arrive at their destination, they find that all their luggage has fallen out of the bus. Luckily, they find five bags, which are different from the others and which are filled with various

objects. The groups must use their objects to make a fire and shelter.

- Answer the questions:

- (a) How did the group solve the problem?
- (b) Did the group use all the steps for problem solving?
- (c) What was difficult in doing this task?
- (d) What did you learn by doing this task?

## Activity 2:

 **Time:** 30 min.

- Hand out the bags to each group.
- The aim of the exercise is for the group to once again put into practise that which they have learned, but with limited resources.
- This forces the group members to listen to one another and to look beyond the obvious.
- Make use of problem-solving steps to find a solution.
- Think creatively.
- There are no wrong answers.
- The group leader must report back to the group after answering the questions which were provided.

## Reflection:

- This exercise forces the group to think beyond the obvious and to make use of limited resources.
- It lets them think creatively and make use of problem-solving techniques.
- The problem-solving techniques are enhanced.

**THEME 3:  
PUTTING INTO PRACTISE**

**Activity 2: Worksheet 2**

*Bag of objects*

**Problem:**

The school has gone on an outing in the wilderness. When they arrive at their destination, they find that all their luggage has fallen out of the bus. Luckily, they find five bags, which are different from the others and which are filled with various objects.

**Instructions:**

- Each group must use their objects to make a fire and shelter.
- Use your imagination and be creative.
- There is no wrong solution.

### **Contents of bag 1:**

- magnifying glass
- knife
- coconut
- South African flag
- whistle
- adhesive tape

### **Contents of bag 2:**

- glasses
- straw hat
- marshmallows
- shoe laces
- CD
- apples

### **Contents of bag 3:**

- compass
- can of coca-cola
- inflatable raft
- oars
- video cassette
- book

### **Contents of bag 4:**

- torch
- table cloth
- watch
- feather duster
- spare tyre for a car
- coffee

### **Contents of bag 5:**

- flare
- carrots
- hand mirror
- umbrella
- towels
- family photo frame
- raincoat

**Questions:**

**(a) How did the group solve the problem?**

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

**(b) Did the group make use of the steps for problem solving?**

<b>Yes</b>	
<b>No</b>	

**(c) What was difficult in performing this task?**

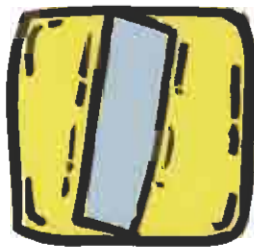
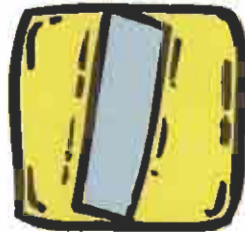
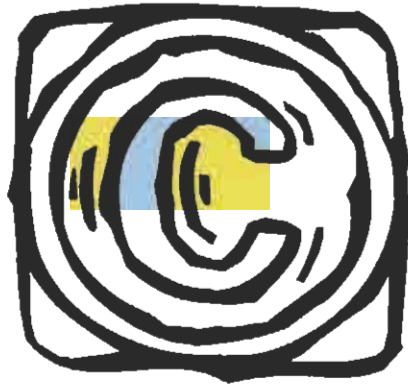
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**(d) What did you learn by doing this exercise?**

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

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- Buzan, T. (1991). Use both sides of your brain. New York: Plume.
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# CREATIVITY

## INTRODUCTION

The concept of creativity entails many aspects, such as **sight, feeling and hearing** (Torrance, 1988). Furthermore, it is a **process** (Eiffert, 1999) which involves **creating something new** or **bringing something new into being** (Ochse, 1989). Creativity can also be seen as something that is **fun and exciting** (Ritter & Brassard, 1998). It is an important **activity** in life (Simonton, 2000) and will therefore also help the individual to release his/her potential in a form of expression (Bond, 2001). Creativity is also seen as **ageless** and **everyone** can be **creative** (Millar, 2002), but in varying degrees of creativity, which may be **influenced** by experiences in a person's life. Other factors such as education, society, curiosity, imagination and even intuition all play a role in creativity (VanDemark, 1991).

Even though a creative action may not necessarily lead to anything, the person will still gain **insight, new thoughts or attitudes** (Eiffert, 1999).

It is believed that the child is highly creative between the ages of four and seven (Cornelius & Casler, 1991). As a large section of creativity may be lost between the ages of five and seven, it is essential that the person's creative ability must be **reawakened** and **trained** with encouragement (Eiffert, 1999).

By **playing**, children are also developing their **creative skills**. Because play is generative, the child is creating something new and it allows for **risks** to be taken (Wasserman, 1992). **Art** may also be regarded as a component of creativity, in that the child learns to **express** him/herself through the art (Millar, 2002) and also to **express** his/her **creative ideas** (Cornelius & Casler, 1991).

# **PROGRAMME**

## **THEME 1: CREATING SOMETHING NEW**

Activity 1: Ink blot picture

Activity 2: New invention

## **THEME 2: CREATIVITY AND CARTOONS**

Activity 1: Cartoon strip

## **THEME 3: FUN, FUN, FUN**

Activity 1: Improving the toy

Activity 2: Mind stretchers

## **THEME 1: CREATING SOMETHING NEW**

### **Activity 1: Ink blot picture**

- **Objective:**

- To let the learners think much broader and to emphasise the importance of using their imagination and of being creative.
- Thus, the children learn that they must not conform to only one viewpoint, but learn to challenge that which they know and try to develop new solutions, ideas and ultimately create something new.

- **Materials:**

- Copy of Worksheet 1.
- Paint, crayons, pencils.

- **Instructions:**

- Every learner must work alone.
- They must use the paint to form a non-shape blob on their paper.
- Thereafter, they must fold the page so that it replicates onto the other side.
- Once this has been completed, the child must use his/her imagination to see a picture or use it to make a picture.
- There is no wrong answer.

- Be creative!
- This exercise can be done twice.
- Answer the questions that follow:
  - (a) Describe your picture and give it a unique name.
  - (b) What did you enjoy the most and what was the most difficult thing to do?
- Afterwards, the facilitator can ask group if there is someone who would like to share his/her picture with the group.

### **Activity 1:**

 **Time:** 20 min.

- Hand out the exercise.
- The goal is for the learners to create something new out of nothing but a strange non-object.
- The learners must be creative. Once again emphasise that there is no wrong answer/picture.
- The learners can do this exercise twice.

### **Reflection:**

- The aim of the exercise is to illustrate that by using their imagination, something new can be formed.
- It allows the children to develop their creativity and to realise that by simply thinking broader, a new picture has been formed and this may in turn help them to develop and create new and exciting objects, inventions, ideas etc.

(Exercise adapted from Schoeman, A. (1997). Playful printing: Pret met drukwerk. Pretoria: Kagiso Publishers.)

**THEME 1:  
CREATING SOMETHING NEW**

**Activity 1: Worksheet 1**

(NB: Remember to fold the paper in half)

*My unique picture 1*

(NB: Remember to fold the paper in half)

## *My unique picture 2*

**Questions:**

**(a) Describe your picture and give it a unique name.**

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

Name:.....

**(b) What did you enjoy the most and what was the most difficult thing to do?**

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

## THEME 1: CREATING SOMETHING NEW

### Activity 2: New invention

- **Objective:**

- To become aware that something new can be created just by using one's imagination.

- **Materials:**

- Copy of Worksheet 2.
- Pritt/glue, crayons, pencils.

- **Instructions:**

- The learners must once again work alone on this exercise.
- The learners must use approximately 10 minutes and go outside to find things they can use to invent something new.
- The facilitator can provide ideas, such as making a new car, a new robot, a new computer, a new toy etc.
- Once the learners have fetched their objects from outside (such as leaves, sticks, stones, etc.), they can start inventing.
- The children must be creative and use their imagination.
- Then answer the questions:
  - (a) What did you invent?
  - (b) What did you make use of?
  - (c) What did you learn by doing this exercise?

- Afterwards, the children may present their new invention to the others in the group.

## **Activity 2:**

 **Time:** 30 min.

- Hand out the exercise and tell the learners what they must do.
- The aim of this exercise is for the children to use their imagination and develop something new and unique.
- There is no wrong invention.
- Be creative and use your imagination.

## **Reflection:**

- This activity reinforces the creative aspect of developing and creating something new and unique.
- By doing such exercises, the learners will realise that they can be creative as well, and it will in turn help to enhance their self-esteem and even their problem-solving skills.

**THEME 1:  
CREATING SOMETHING NEW**

**Activity 2: Worksheet 2**

**Instructions:**

- Go outside and find anything you think will help you to develop something new. Example: sand, leaves, stones, sticks etc.
- Once inside, use the objects you have picked up outside and start creating your unique invention.
- You can reinvent a new and improved car, robot, computer or toy, or create something completely new.
- Be creative and use your imagination.

**Questions:**

**(a) What did you invent?**

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

**(b) What did you make use of?**

.....  
.....

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

**(c) What did you learn by doing this exercise?**

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

## THEME 2: CREATIVITY AND CARTOONS

### Activity 2: Cartoon strip

- **Objective:**

- To enhance the child's creativity and language skills in a fun and exciting manner.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- The learners must work on their own.
- During this exercise the learners must develop their own cartoon.
- They must draw the cartoon and even provide words for the characters.
- The learners can choose from one of these themes, or make up one themselves:
  - (a) The day Father Christmas lost his presents.
  - (b) The introduction of a new car to the world.
  - (c) The day the robots took over the world.
  - (d) Fairyland.
  - (e) Your own cartoon.

- The children may at the end of the allocated time read their cartoon to the group.
- No one is, however, pressured to do so.
- Answer the questions that follow:
  - (a) What is the name of your cartoon strip?
  - (b) What did you enjoy doing the most?
  - (c) How did you go about thinking about a story?
  - (d) Was there anything that was difficult?

### **Activity 1:**

 **Time:** 60 min.

- Hand out the worksheet.
- The goal of this exercise is for the learners to be creative and improve their imagination and language skills.
- The children are given options so that they can finish in the allocated timeframe. However, the child may use his/her own theme for the cartoon.
- The children must answer the questions once they have completed their cartoon.

### **Reflection:**

- This activity focuses on being creative and using one's imagination in a fun and exciting way.
- Language skills are also enhanced in this exercise.

(Exercise adapted from Schoeman, J.P. & Van der Merwe, M.(1996). Entering a Child's world: A Play Therapy approach. Pretoria: Kagiso Publishers.)

**THEME 2:  
CREATIVITY AND CARTOONS**

**Activity 1: Worksheet 1**

*My very own cartoon*

**Questions:**

**(a) What is the name of your cartoon strip?**

.....  
.....

**(b) What did you enjoy doing the most?**

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

**(c) How did you go about thinking about a story?**

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

**(d) Was there anything that was difficult?**

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

## THEME 3: FUN, FUN, FUN

### Activity 1: Improving a toy

- **Objective:**

- To think broader and find more ways to improve something, like a toy, as mentioned in this exercise.
- This will also help the children to implement imaginative and creative thinking in various situations.

- **Materials:**

Copy of Worksheet 1.

- **Instructions:**

- Each learner must receive a copy of the worksheet.
- They must work alone.
- The learners must find ways to improve the stuffed toy so that it will be more fun for a child to play with.
- The ideas must be original and unique.
- There are no wrong answers.
- After 5 minutes, the learners must gather into groups of approximately 5 in each group.
- They must discuss how they would improve the toy.

- Thereafter, the group can tell the larger group of ways to improve the toy.
- Answer the questions that follow:
  - (a) What are your suggestions to improve the toy?
  - (b) Were there any suggestions in the group that were the same as yours? If yes, which?

### **Activity 1:**

 **Time:** 20 min.

- The aim of this exercise is for the learners to think of ways to improve something, thereby enabling them to make use problem-solving techniques and to be creative at the same time.
- The group is given the instructions and thereafter a discussion is held about some of the most unique and creative ways.

### **Reflection:**

- Creativity and problem-solving techniques are reinforced and the child is given an opportunity to learn from others as well, when the solutions are discussed in the group.

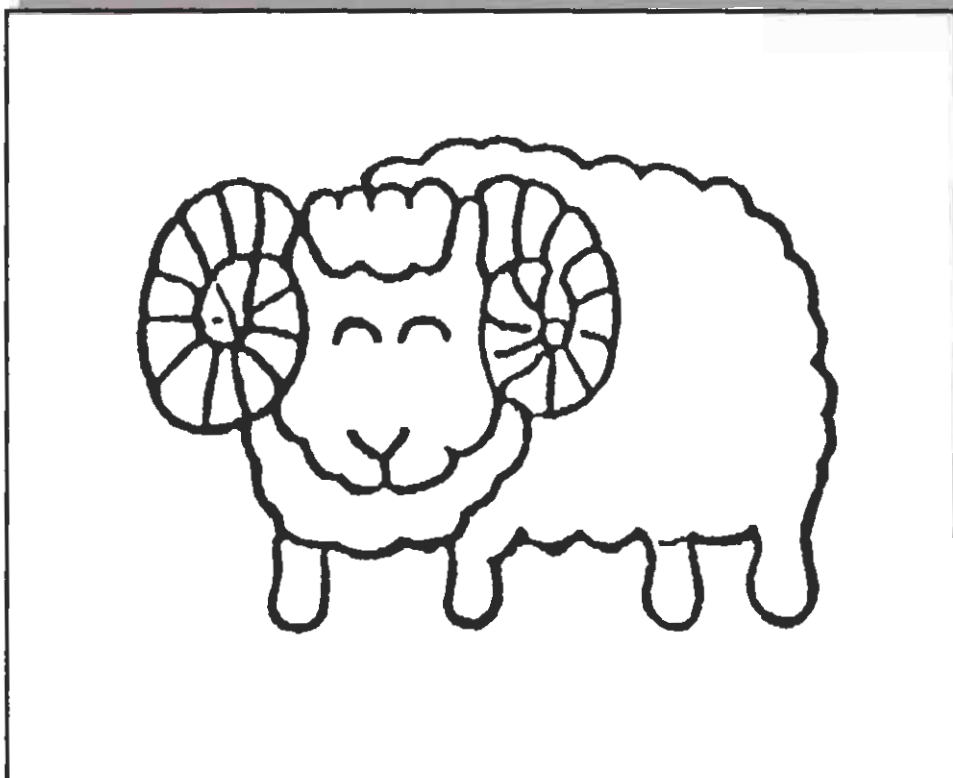
(From Bond, W. Creativity: Why didn't I think of that? Handbook of course presented. Senior Staff Officer Productivity, SADF, Pretoria.)

**THEME 3:  
FUN, FUN, FUN**

**Activity 1: Worksheet 1**

**Instructions:**

**You must improve this toy so that it will be more fun for you and your friends to play with. Think of as many ideas as you can to improve it. Afterwards, answer the questions that follow.**





**THEME 3:  
FUN, FUN, FUN**

**Activity 2: Mind stretchers**

- **Objective:**

- To find solutions to something which at first seemed impossible.

- **Materials:**

Copy of Worksheet 2.

- **Instructions:**

- The learners must work alone.
- They must complete their work within the time limit.
- Answers will only be given once the time has elapsed.
- Answer the questions that follow:
  - (a) Did you give up easily or did you try to get the answer?
  - (b) Which techniques did you use when doing these mind stretchers?

## Activity 2:

 **Time:** 15 min.

- Hand out exercise.
- Every learner must work alone.
- The aim of the exercise is to let the learners think wider and not to give up when it seems as if there is no answer.

### Reflection:

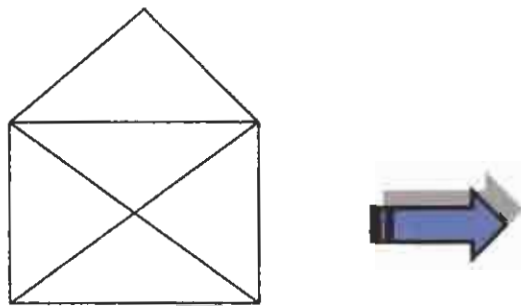
- This exercise forces the group to think beyond that which has been given to them.
- It is a fun and exciting manner for the learners to finish with this section.
- It encompasses and reinforces all they have learned.

(From Bond, W. Creativity: Why didn't I think of that? Senior Staff Officer Productivity, SADF, Pretoria.)

**THEME 3:  
FUN, FUN, FUN**

**Activity 2: Worksheet 2**

1. Draw this envelope with one continuous line, without going over the line anywhere.



2. What is the next logical number in this series?

3, 3, 5, 4, 4, 3, 5, 5



3. Break the code for each of the following words. Be creative!



e.g.:

S	A
N	D

= Sandbox



Do the following:

(a) T  
O  
U  
C  
H



.....

(b) H  
U  
R  
R  
Y



.....

(c) ECNALG



.....

**Questions:**

(a) Did you give up easily or did you try to get the answer?

.....

.....

.....

.....

**(b) Which techniques did you use when doing these mind stretchers?**

.....

.....

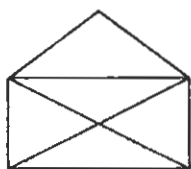
.....

.....

**NB. Only turn the page once the exercise has been completed!**

## Answers

1.



2. 1

3. (a) Touch down  
(b) Hurry up  
(c) Glance spelt backwards

## References for creativity:

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# GLOSSARY

Word	Definition
<b>A:</b>	
Anxiety	A nervous feeling caused by fear that something bad is going to happen; to worry; a worry or fear.
<b>B:</b>	
Burnout	Using up all your energy especially by working too hard.
<b>C:</b>	
Coping	To deal successfully with something; to manage.
Countering	To respond to something with an opposite view or to challenge the ideas.
Creativity	To create/develop something new or to produce a work of art; create something in an imaginative way.
<b>D:</b>	
<b>E:</b>	
Enhancing	To increase or improve further the good quality or value of something or somebody.
<b>F:</b>	
<b>G &amp; H:</b>	
Generate	To produce something or to make something exist or occur.
<b>I, J, K:</b>	

<b>L:</b>	
<b>M &amp; N:</b>	
<b>O, P, Q:</b>	
Perfectionist	A person who tries to get every detail correct.
Problem solving	To find solutions to problems which are difficult.
Promote	To help the progress of something; to encourage or support something.
<b>R:</b>	
<b>S &amp; T:</b>	
Self-concept	To have a good opinion about yourself.
Self-reinforcement	To strengthen or emphasise a feeling or an idea.
Stress	Pressure, tension or worry resulting from problems in one's life.
Stressor	Something, like an event, which causes worry or tension.
Systematically	Done or acting according to a plan or system.
<b>U, V, W:</b>	
<b>X, Y, Z:</b>	



# EVALUATION



I liked:



I didn't like:



3 things I learned:



What I will tell others:



# CERTIFICATE OF MERIT

*Awarded to*

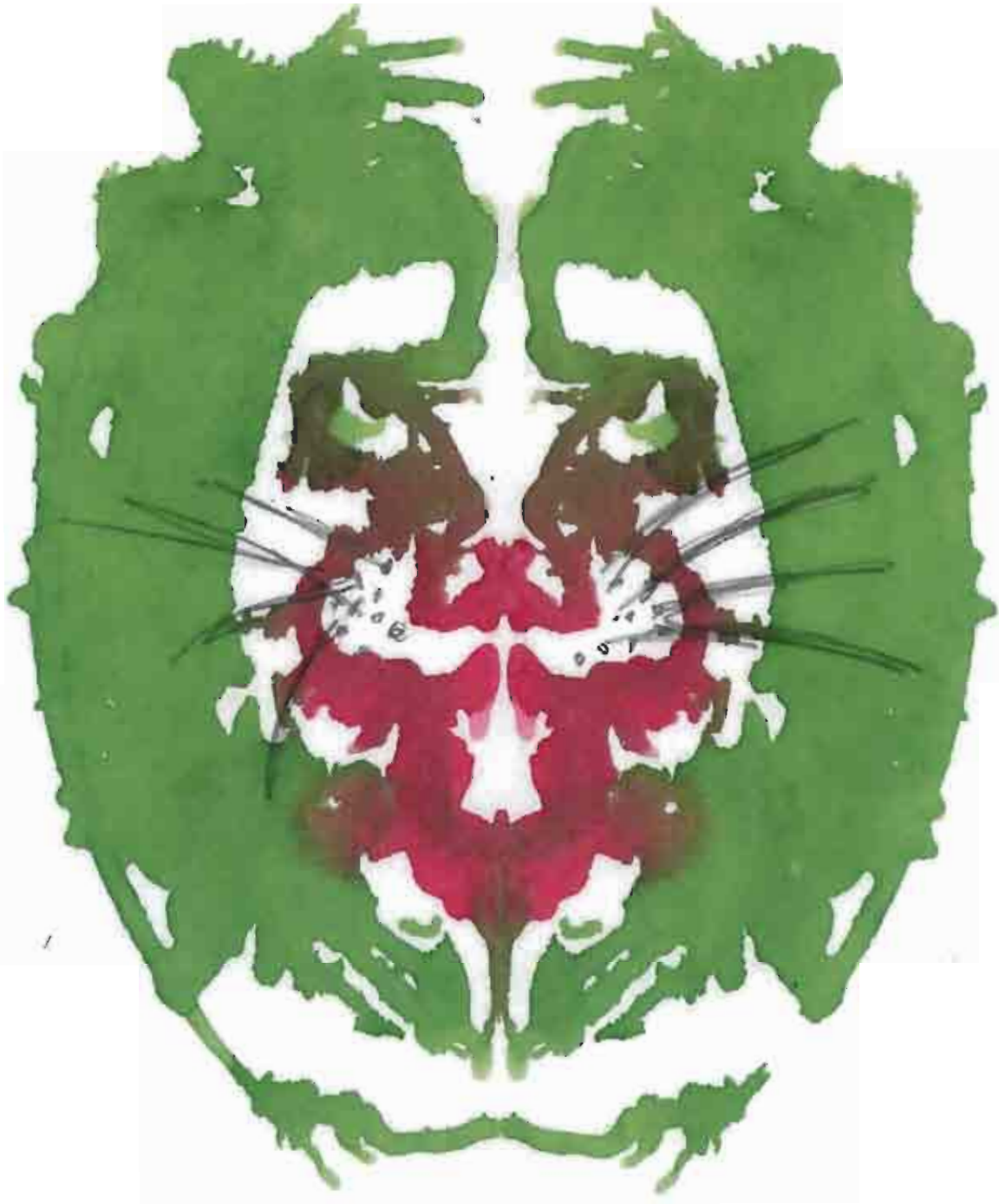
*In Recognition and Appreciation  
of completing the  
Creativity Programme  
Presented by Tanya Boshoff*

*7 February - 14 March 2005*

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*Examples of the work of  
participants in the  
research study*

---



My unique picture 2

(NB Remember to fold the paper in half)

**THEME 2:  
CREATIVITY AND CARTOONS**

**Activity 1: Worksheet 1**

**1 My very own cartoon**

24 50  
CSA 24  
24 50 24

the captain  
Shan Smith is  
up for it

Section A  
SA (63)  
AUS (60)  
ENG (57)

3 Looks like the  
referee is awarding a  
(PENALTY)

SA 32  
AUS 25

The score  
has risen for  
SA

Now let's see what  
AUS is to do

Things are getting hot

PRRT  
Halftime

The score ends  
SA 45  
AUS 45

The teams  
are shaking  
hands and  
happy with  
their scores

Full  
Time

PRRT  
PRRT