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INTRODUCTION AND OVERVIEW

1.1 INTRODUCTION

There is a considerable interest in creativity and thinking in different societies including the United Arab Emirates (UAE). Such interest stems from the desire for improvement and the planning necessary to address social problems (Eihab, 1993:3). As a result, psychologists have studied creativity to help individuals and, hence, society to address these problems. The second half of the twentieth century witnessed a considerable interest in the topic. Scientists such as educationists, sociologists and psychologists have endeavoured to meet the needs of society to find creative solutions to its problems (Eihab, 1993:8).

Educationists strongly agree about the importance of enhancing students' thinking abilities. Hence, they regard the fundamental objective of education is to develop these abilities. The importance of the latter has increased in many educational establishments in many countries as a result of poor student outcomes. The development of students' thinking is necessary to help society to keep abreast of the scientific and technological progress of the Information Age (Belleh, 1993:15).

Many studies (Nashawati, 1996; UAE Ministry of Education, 2000) show reference that students' achievements are poor in subjects that require complex mental abilities. This has led to the conclusion that schools concentrate mostly on lower levels of Bloom's cognitive domain, such as recall and comprehension (Nashawati, 1996:84). To overcome such a deficiency, educators have reverted to developing thinking skills, taking into consideration related factors that affect this development such as children's learning styles, the school curriculum, methods of teaching and evaluation tools. Consequently, the improvement of students cognitive abilities has become the most important goal of education. To that effect many specialized committees were established

in the UAE to propose ways to develop and enhance students' thinking abilities through education (UAE Ministry of Education, 2000:24-25).

Research demonstrates reference that children begin to show their complex thinking abilities before they go to school. Educators need to find a suitable environment to enhance these abilities (Hart, 1975; Baumrind, 1991:62). Strategies to do this include the following:

- Expose children to some problems and ask them to try to solve them.
- Organize a suitable environment for thinking.
- Respond to students' thoughts and questions in an atmosphere of confidence and acceptance.
- Consolidate experience and encourage attempt and risk behavior.
- Present models for creative behavior that students are required to develop.

Developing the education system is the key to the modernization of society. It is understandable that international competition nowadays also includes education development. It is no surprise that the launch of the USSR spaceship in 1957 led the USA to review its education system to be able to compete and consequently lead the world. As we live in a world of challenge in all areas, adopting such a stance becomes necessary to help society progress. Specialists must analyze these challenges and problems to delimit the factors that affect them in order to establish a treatment or preventive program (Alhersh, 1992:21).

The subject of this study is creative thinking and its importance in education. Most students in schools depend on receiving ready information from their teachers. They regard their only part is how to memorize, repeat, remember and write down the information in examinations aimed to measure what has been memorized. If curriculum subjects require specific thinking skills, teachers tend to volunteer to solve and explain them to their students. Students are rarely called upon to think critically (Belleh, 1993:11).

Most textbooks focus on listing and explaining information without giving enough opportunity for thinking activities or creative problem solving. Students are usually unable to transfer their learning knowledge to new situations. This is clearly noticed when they are given some problems that require simple deduction, effort and analysis or conclusion. They cannot do this because they do not possess the necessary skills. The educational institution is not the only cause of such students' shortcomings in the UAE (UAE Ministry of Education, 2000:32). Other factors contribute to it, such as restrictive styles of upbringing and cognitive attributions. An example of this kind of upbringing is overprotection and encouragement of dependency (Zahran, 1999:246).

This style is frequently a widespread phenomenon as most households in the UAE depend completely on servants and maids to carry out most household chores. Members of the families have almost nothing to do. Due to this kind of dependency, they cannot address simple problems (Niyadi, 2001:25).

Conversely, authoritarian parents do not let their children ask, suggest, discuss, or try to do things their own way. Children raised in this way just want to avoid punishment. A consequence of this style is the tendency to carry out simple easily accomplished tasks and not to reflect or challenge. Weakness in creativity is noticed in both types of these families (UAE University, 2000:114).

The same can be said about negligent parents. Those are less involved in their children's upbringing. They tend to be rejecting and neglecting at the same time (Darling, 1999:1). Characteristics of these children are often: a lack of self-respect, irresponsibility, carelessness and anarchy. Moreover, they struggle to develop good thinking abilities. These parenting styles result in the emergence of a new generation of students who are not competent in creative and innovative skills but depend on what is presented to them. They usually attribute their failure or success to external factors. This seems to be a result of family upbringing styles (Darling, 1999:2-3).

Cognitive attribution refers to the way people explain causes of their own behavior. Some parents encourage independence by allowing their children to make decisions, go about as they want and allow their children to solve their daily problems. These children often explain any consequence of their behavior as their responsibility. On the contrary, those who do not have these privileges, explain any results of their behavior as caused by external factors (Alzogoul, 2002:245).

1.2 TOPIC OF THE STUDY

The development of thinking skills in general is an important goal of education for the development of the student in totality. It is considered as the most important subject in UAE 2020 Vision of Education (UAE Ministry of Education, 2000:2). This vision is a strategic plan to improve the education system in UAE up to the year, 2020. It concentrates on quality of outputs, developing thinking strategies, creativity and independence (UAE Ministry of Education, 2000:3).

This vision is firstly being implemented in pilot model schools that care about talented students in order to grasp the difficulties that may faced during the application of this policy. These schools are provided with better facilities, better qualified teachers, special curricula and activities (UAE Ministry of Education, 2000:3). If the experiment succeeds, it will be generalized and implemented in all state schools. This will require workshops (in-service training) for professional development of teachers to prepare them for their new role according to the modern vision of education. Teachers will be enabled to change and develop their skills to deal with modern technology as applied in education. This vision aims at preparing students to become creative (UAE Ministry of Education, 2000:52).

However, schools are not the only environment that fosters creativity; upbringing styles have an influence on creative thinking. Yet another factor, namely locus of control, which relates to an individual's personality, has an influence on creativity (Alhersh, 1992:9).

The family is considered the most important social structure in society. It affects children's personality as they interact with their parents. Through play and many activities shared with their brothers and sisters, their parents and siblings guide and care for them. This affects their personalities, their social and psychological make up, their way of thinking and the manner in which they tackle problems and they use their mental abilities (Malhas & Abdouni, 1997:355).

Thus, this study deals with the effects of upbringing style and locus of control on students' creative thinking. The relationship between upbringing styles on locus of control is investigated.

Families use several upbringing styles. The study explores the way the existing styles (variables of this factor) affect student's creative thinking; which style affects the development of creativity positively or negatively and which style affects the development of independence, self-confidence and initiative.

The study also focuses on children's external or internal locus of control. These characteristics are the outcomes of the interaction of several psychological, mental, social, environmental factors. This study seeks to determine the effect of this factor on students' creative thinking.

1.3 RESEARCH PROBLEM

The development of society requires the development of its education system. One of the possible ways to do this is to enhance the thinking skills of students who will represent the society's resources in future. This demands the participation of the main social institutions, namely the school and the family. They can both influence the way the students think.

1.3.1 BACKGROUND TO THE PROBLEM

The UAE has been endowed with oil wealth and good leadership. They decided to benefit from such wealth to develop society; such decisions have helped the nation to prosper. To achieve such development there was need to attract experts from different backgrounds and various cultures in all fields to participate and help in building the nation's economy, industry, commerce, education and health services. Such a situation has created many problems and challenges (Ghabash, 1999:74).

The clearest problem is cultural, as the nationals became a minority in their country. Expatriates from different countries, who come to work in UAE, are four times the numbers of nationals. The society's culture faces a big challenge, as it strives to be preserved and not or disappear in face of other incoming cultures, value systems, traditions, languages and the like (Ajjawy, 1999:144-145).

As a result, many serious problems which affect UAE society have arisen. The following are but a few: family disintegration, as a result of high divorce rates, parental negligence and absence of care for children, drug and alcohol abuse, sexual aggression and a rapid rise in student dropout at early stages of schooling. Low levels of achievement usually attributed to the lack of motivation have created a socio-educational problem of what is known as special private tuition. Children take private lessons in their own homes. This has encouraged the students' laziness and ignorance of schoolwork. The education system has also suffered as a result of diversity of nationalities and backgrounds. This can be seen in the types of schools related to different cultures and nationalities. Legislator and educators wonder about the type of education system to adopt (e.g., multicultural, mixed or segregated types of schools). Private schools represent a serious problem discussed repeatedly in the press. For example, the Al Khaleej newspaper, the most widely distributed and read newspaper considers private schools as a national, disastrous and insoluble problem. (AI Khaleej, no.9426, 10/03/2005:8-9). The schooling system concentrates on surface processes of learning, hence the development of thinking skills and creativity is uncommon in schools (UAE University, 1997:112-114).

These problems have instigated different scientific, educational, political and social institutions to address these challenges. Those interested in education have put forward an idea for educational reform. Its important points are the review of all education inputs to guarantee strength, depth and quality outputs. Concentration on several thinking abilities is the most dynamic aspect of the newly proposed action plan of reform (UAE Ministry of Education, 2000:9).

To tackle such challenges and problems, leadership has appointed committees and research teams to analyze scientifically and to suggest ideas to make appropriate decisions. To improve educational outcomes, the 2020 vision of Education has been established to improve all the components of the education system. Special emphasis is laid on developing thinking. It is considered to be used as a strategic goal and a scientific life approach with a view to achieving and solving daily problems and managing life. This goal requires the development of special curriculum content, teacher retraining and preparing and supplying schools with modern instruments and tools (Hamdan. 2000 :42)

To materialize and implement these ideas, model schools have been established. They are to encourage the achievement of the new goals of developing creativity and thinking abilities. Those schools attend to the following: How can we care for the talented? What are the creative environment prerequisites? How can we develop curricula, teachers, school environment, family care and media? What is the general philosophy of the society to make creativity a lifestyle? (UAE Ministry of Education, 2000:14).

1.3.2 PROBLEM STATEMENT

The study focuses on the importance of developing students' creative thinking. The interest is based on the quality outcomes rather than the quantity outcomes of education. The problems and future challenges faced by society require a new generation who can deal with these problems, solve them and think about measures to control other problems.

Creative thinking is affected by many factors, but this study focuses on the effect of only two factors. They are:

- Family upbringing style
- Locus of control

Thus, this research seeks to answer the following questions:

- What is the effect of the family upbringing type (authoritative/authoritarian) on the creative thinking of grade 9 students in schools in the UAE?
- What is the effect of the type of locus of control (internal/external) on the creative thinking of grade 9 students in the schools in the UAE?
- What is the effect of the interrelationships of family upbringing type and locus of control on the creative thinking of grade 9 students in the schools in the UAE?

It was anticipated that the results of this study would indicate how creative thinking is affected by upbringing styles and locus of control, and whether these factors and their interrelationships have an effect on creative thinking. This study attempts to suggest some guidance to families regarding how:

- To treat children and how to use appropriate styles to manage their families.
- To delineate the role of these styles in developing creative thinking.
- To provide teachers with guidelines to use in classroom management that create a space of safety, confidence and creativity.
- To assist educational administration to facilitate a creative environment in schools for students and teachers alike.



The Ministry of Education could adopt the following measures to foster creativity through:

- The preparation of intensive professional development seminars about how to deal with students.
- Knowledge of how to use effective methods that can help children to develop creativity.
- Adaptation of curricula to enhance these goals.
- Adjustment of content to facilitate the development of creativity.
- Promotion of parental development by:
 - Seminars to explain the importance of creative thinking, its role in life and how it is affected by upbringing styles.
 - Advising parents about how internal locus of control is developed in behavior and personality and its role in developing creative thinking.
 - Requesting media establishments to provide cultural and scientific programs that facilitate the development of this ability.
 - Involving researchers in their social and educational studies to show the importance of family role in developing thinking abilities and to concentrate on the styles of upbringing that provide this environment of creativity.
 - In brief, encouraging the teaching of thinking skills in the school and family and practising creativity strategies in problem solving or future planning.

1.3.3 AIM OF STUDY

The aim of this study is to:

- Ascertain whether upbringing style and locus of control affect students' creativity.
- Ascertain whether the relationship between upbringing styles and locus of control of students in the UAE influences their creative thinking.

• Suggest ways to enhance educational outcomes by recommending strategies and guidelines to nurture creative thinking in students and society.

1.4 DELIMITATION OF THE STUDY

As thinking is an important goal in any education system, the study endeavours to determine how thinking is affected by factors that relate to the school and family. Schools, as the 2020 Vision portrays, should concentrate on quality of outputs, developing thinking strategies, creativity and independence.

Schools care about talented students. These schools are to be provided with better facilities, better qualified teachers, curricula and activities. This requires workshops for professional development of teachers to prepare them for their new role. Thus, they are enabled to change and develop their skills to deal with modern technology applied in education. However, schools are not the only environment that fosters creativity. The style of upbringing adopted by the family affects thinking and creativity. Cognitive style, such as locus of control, relates to an individual's personality and also affects thinking. Families influence children's personalities, their social and psychological make-up and their way of thinking.

This study then deals with the effects of upbringing style and locus of control on students' creative thinking. The relation ship between upbringing style and locus of control is investigated. The study is conducted in state preparatory schools in the UAE and the tests are applied to ninth grade students. The population age ranges from 14-16 years.

The researcher is currently teaching in a Higher Education Institution in the UAE. He is Arabic speaking and many of the sources used were written in Arabic and relevant sections translated for the purpose of this thesis. Sections of the thesis were written in Arabic and thereafter translated into English.

1.5 EDUCATION SYSTEM OF THE UAE

1.5.1 EDUCATIONAL OBJECTIVES OF UAE SOCIETY

There has been a tremendous interest in the development of the education system since the establishment of the UAE. This is part of a wider conviction of the necessity to develop the individual as the pivot of the society. The main objectives of education are:

- Practical application of the aspired ideas to develop good citizenship and establish a rational approach.
- The preparation of learned (educated), civilized individuals according to the modern framework of human thought and technical progress.
- Loyalty to the country, the Arabic and Islamic nation.
- Equality of individuals to access to knowledge.
- The equality of the distribution of educational and extra curricular services and the opportunity to access them.
- Implementation of integrated modern education services adapted to the requirements of the UAE environment.
- Participation in offering everything that contributes to developing the citizen's personality and instills moral values appropriate to the social conditions.
- Balancing quality aspects with quantity requirements in technical and administrative performance.
- Harmonization of educational and instructional policies with the country's developmental policies within an integrated planning perspective.
 (Ministry of Education, 2000:46-48).

1.5.2 TYPES OF EDUCATION IN UAE SOCIETY

General education prepares students for academic study and vocations. Subjects offered are language, mathematics, science and social sciences. Religious education offers the same

subjects as the general stream in addition to extra Islamic subjects. Vocational education prepares students for jobs. Adult education offers education to those who have missed schooling during their childhood. It concentrates on eradicating illiteracy. Special education offers programmes for those with special needs.

This study concentrates on general education and thus, its stages are enumerated (Ministry of Education, 1993:65):

- Kindergarten stage from age 3 -5
- Elementary stage from age 6 -12
- Preparatory stage from age 13 -15
- High school stage from age 16-18

1.5.3 PHILOSOPHY AND AIMS OF THE UAE EDUCATION SYSTEM

The aims of the education system according to the UAE Ministry of Education (2003:8-9) are:

- Deepening belief in God and following commands, teachings and values of Islam. This aim is considered as the first guide in the student's specific and general behavior.
- Developing the student's ability to analyze problems logically through the application of scientific methods.
- Emphasising concepts of national education and social responsibility.
- Assuring adaptation in the student's life.
- Endeavouring to assure harmony in the society by fostering loyalty to the society. This can be achieved by:
 - Making students aware of their economic, social, cultural and political environment and familiarizing them with the heritage of the country and its history.
 - Showing respect for private ownership and public propriety
 - · Appreciation of the importance of honest work
 - Encouragement of vocational work.
 - Developing the individual's conception of his/her educational abilities and developing his/her ability in self-study and continuous learning.
 - Acquisition and developing skills to ensure the safety of the body and the mind for self and others' protection.

• Preparing students to accept and practise their future role in the next stage of life.

1.5.4 CURRICULUM

The preparatory stage curriculum comprises the following topics (UAE Ministry of Education, 2003:15):

- Islamic education
- Arabic language
- English language
- Mathematics
- General science
- History
- Geography
- National education
- Physical and Art education
- General life skills (particularly computer science)

1.5.5 TEACHERS

Most teachers in UAE schools have a Bachelor's degree in different specializations. Priority is given to those who hold teacher education qualifications. As the Ministry of Education attaches importance to staff development, teachers are encouraged to take intensive programs to keep abreast of development of knowledge and new strategies in instruction. It also emphasizes the necessity for teachers to upgrade their computer skills to implement them in teaching (Alharbi, 1999:103).

1.5.6 METHODS OF TEACHING

There are many methods of teaching that are used in instruction. The suitability of the method depends on the subject, stage, level of students and the content. Most teachers use the following methods (Ministry of Education, 1998:56-57):

- Lecture method
- Conversation method
- Discussion method
- Cooperative learning method
- Teaching with visual and audio media

1.6 DEFINITION OF CONCEPTS

1.6.1 THE FAMILY UPBRINGING STYLE

Every family can generally be defined as a small, relation-structured group. This makes it possible to consider different family types in the literature on a more concrete and specialized level. Changes in society, however, make it impossible to identify types of family within certain fixed periods of time. The educative significance of these different family types as social phenomena has to be considered in every case (Barber, 1996:3296).

In view of this, a discussion of the notion of authoritarian parents and democratic parents and their family roles is provided.

1.6.1.1 Authoritarian parents

These parents value obedience, commanding the child what to do and what not to do and rules are clear and unbending. The parent pours the 'right' information into the child who is considered an empty vessel. Misbehavior is strictly punished.

Predominant for most of Western history, authoritarian parenting is effective in societies experiencing little change and accepting one way to do things, for example in agrarian-industrial societies. A master teacher (often the parent) instructs the child on each act (e.g., sowing seeds and weeding the fields). The child learns by imitating the expert (Mohammed, 2001:13-14).

This style is mismatched in a rapidly changing society which values choice and innovation. Rebellion often results from strict punishment. Spanking, which models violence as a solution to problems, is contradictory in a society which claims to value peaceful solutions. Children raised to follow the 'expert' easily copy anyone, including undesirable peers (Darling, 1999:2)

1.6.1.2 Authoritative parents

These parents establish basic guidelines for children. By clarifying issues, they give reasons for limits. Learning to take responsibility is a high priority. Children are given lots of practice in making choices and are guided to see the consequences of those choices. Misbehavior is handled with an appropriate consequence or by problem solving with the child to find an acceptable way to get desires met. Out-of-control children have 'cool-off' time, not punishment. Children are part of deciding how to make amends when someone or something has been hurt. Assertive-democratic parenting is considered the best for today's fast-changing Information Age where choice is constant and there is no longer just one 'right' way. Children raised by this style learn to accept responsibility, make wiser choices, cope with change and are better equipped to succeed in a workforce which relies on cooperative problem-solving (Malhas & Abdouni, 1997:356).

As an operational term the family upbringing is defined as the father's parenting style in the upbringing of children from the students' viewpoint as reflected in their responses. Test items reflected distinguish two styles:

- Democratic (Authoritative): the person who gains above median in the test.
- Dominant (Authoritarian): the person who gains below median in the test.

1.6.2 LOCUS OF CONTROL

In the 1960s, psychologist John Rotter developed an inventory to measure locus (location) of control. Since then, hundreds of studies have been done on this topic. Key questions raised are: What is locus of control? How does it relate to our behavior? Locus of control is the perceived source of control over our behavior. People with internal locus of control believe they control their own destiny. They tend to be convinced that their own skill, ability and efforts determine the bulk

of their life experiences. In contrast, people with external locus of control believe that their lives are determined mainly by sources outside themselves – fate, chance, luck or powerful others (Touq & Adas, 2000:214).

A person's life is profoundly influenced by whether he/she perceives control over his/her life as predominantly internal or external. Locus of control influences the way the person views him/herself and his/her opportunities (Jibriel, 1996:370).

The operational definition of the term of locus of control is the score that the person gains in the test, measured on the scale between 0 - 23, the person can be known as:

- Internal locus of control: persons who gain a score 0 11.
- External locus of control: persons who gain a score 12 23.

1.6.3 CREATIVE THINKING

A style of thinking aimed to discover new relationships or extraordinary methods of problem solving. Much thinking done in formal education emphasizes the skills of analysis, teaching students how to understand claims, follow or create logical argument, figure out the answer, eliminate the incorrect paths and focus on the correct one. However, there is another kind of thinking that focuses on exploring ideas, generating possibilities, looking for many right answers rather than just one. Creativity is (Harris, 1998: 2):

- An ability: ability to imagine or invent something new.
- An attitude: the ability to accept change and newness.
- A process: creative people work hard and continually to improve ideas and solutions.

Several methods have been identified for producing creative results. These methods are:

- Evolution: The method of incremental improvement.
- Synthesis: Two or more existing ideas are combined into a third, new idea.
- Revolution: Some times the best new idea is a completely different one, a marked change from the previous ones.

- Reapplication: Look at something old in a new way.
- Changing direction: Many creative breakthroughs occur when attention is shifted from one angle of a problem to another. This is sometimes called creative insight (Harris, 1998: 2).

Operational definition of creativity is the sum of abilities and skills which include flexibility, fluency, reality and sensitivity to problems.

1.6.4 PREPARATORY SCHOOL

It is the second stage in general education. Student enter this stage after successfully completing the elementary stage. Students' ages ranges from 12 at the beginning of this stage to 15 at its end. Three grades constitute this stage:

- Grade seven (first preparatory).
- Grade eight (second preparatory).
- Grade nine (third preparatory).

Two important points about this stage should be noted:

- This stage is the end of the compulsory education.
- This stage occurs at the beginning of the early adolescence period in human development. Puberty and sexual development begin. The effects of this stage are clear in social, psychological, cognitive development and their impact on personality (Zahran, 1999:245).

1.7 ARRANGEMENT OF THE CHAPTERS

The dissertation is organised as follows:

Chapter 1 Introduction, problem formulation, aims and overview of research.

- Chapter 2 Discussion of family composition and upbringing styles in UAE.
- Chapter 3 Discussion of locus of control.
- Chapter 4 Discussion of creative thinking.
- Chapter 5 Research design.
- Chapter 6 Findings and discussion.
- Chapter 7 Conclusions, recommendations and limitations of the study

FAMILY COMPOSITION AND UPBRINGING STYLE IN UAE SOCIETY

2.1 STRUCTURAL CHARACTERISTICS OF UAE SOCIETY AND ITS DYNAMICS

2.1.1 INTRODUCTION

The United Arab Emirates was established in 1971 as a federation of seven emirates: Abu Dhabi, Dubai, Sharjah, Ras al-Khaimah, Ajman, Umm al-Qaiwain and Fujairah. The rulers comprise the Federal Supreme Council, FSC, which elects the country's President and Vice President at fiveyearly intervals from amongst its members. The Council of Ministers is chosen by the Prime Minister in consultation with the President, and is the executive arm of Government. The Federal National Council, or parliament, has 40 members, drawn from each of the emirates, and has a legislative and supervisory role and can amend proposed federal legislation. The judicial structure is headed by the Federal Supreme Court. There are also local governments in each of the emirates, while each major urban centre has a municipality for local affairs. The traditional 'majlis' system of open discussion between the tribal leaders and their people has evolved into an important, although informal, part of the UAE's governing system. Few nations on earth have experienced more complete and far-reaching change over the past few decades than the UAE. Today a land of six-lane highways and glittering streams of motorcars, where space-age cities of ivory-white and crystal glass emerge like a mirage from the haze of desert and sea, this federation of seven ancient Emirates – Abu Dhabi (the capital), Dubai, Sharjah, Ras al-Khaimah, Umm al Qawain, Ajman and Fujairah – is not only the world's fourth largest oil-producer, but also its richest state per head of population, and the new commercial hub of the Middle East (UAE Ministry of Education, 2003:8-9).

The states of the federation bounded on the north by the Arabian Gulf, on the east by Sultanate of Oman, and on the west by Qatar and Saudi Arabia. The total area of the UAE is about 83,600 sq. km (with a total of 200 islands). United Arab Emirates is a member of the Gulf Co-operation Council (G.C.C.) (Alqasimy, 1997:62).

2.1.2 STRUCTURAL CHARACTERISTICS OF UAE SOCIETY

2.1.2.1 The people of the United Arab Emirates

The UAE had an estimated population of 2,523,915 in 2004, with a density of 30 persons per sq km (78 per sq mi). Some 88 percent of the country's population is urban. Abu Dhabi is the largest city and is the capital of the UAE. It serves as the financial, transportation, and communications centre of a major petroleum-producing area. Abu Dhabi is also a significant port and is home to a majority of the federal government ministries. Dubai is the main trading centre of the entire Persian Gulf, has the principal port facilities of the UAE as well as its busiest airport, and has several federal ministries. Al Sharjah is an important port and industrial centre. The emirate of Abu Dhabi contains nearly 40 percent of the total UAE population (Mohammad, 2002:86).

Several aspects of the UAE's population are unusual. The population in 1995 was 15 times larger than it was in 1965, largely due to the immigration of oil workers. Four-fifths of the UAE's inhabitants are foreign workers and their dependents. The UAE also has a very young population, due to the influx of young foreign workers, cultural preference for large families and improved medical care (UAE Ministry of Information and Culture, 2004:16).

2.1.2.2 Ethnic groups

a. Arabs and their characteristics

Arabs are people living in North Africa and the Middle East, from western Morocco, to Oman and from Turkey in the north to Yemen and Sudan in the south. They are living in an area of 10 million km², and they number 300 million. This makes them by far the largest population in the region. About 4 million Arabs live in Europe, and 2 million in the Americas (Nicholas and Saad Eddin, 1977:32; Handal, 1983:28-29).

The Arabic heartland is Hijaz (now western Saudi Arabia) and also Yemen. Those people are living in an area of major movements of people, with trade performed along the caravan routes, which had Mecca in Hijaz as one of the central towns. Those people came from Africa, Mesopotamia, Phoenicia, and Egypt (Nicholas and Saad Eddin, 1977:35; Handal. 1983:29).

History has shown that wherever Arab culture has taken hold, the domination of the Arabic language and culture has made the number of people calling themselves Arabs increase dramatically. Apparently the indigenous population seems to have disappeared (Nicholas and Saad Eddin, 1977:36; Handal. 1983:32).

When reading historical works, one asks, where did the Assyrians, the Egyptians, the Mesopotamians go? The answer is banal enough, they started to speak Arabic, and call themselves Arabs. The whole process took centuries in most regions, but in areas close to Hijaz, more of 'original' Arabs seem to have immigrated, and this has speeded up the Arabization process (Nicholas and Saad Eddin, 1977:38; Handal, 1983:34).

Ethnically, Arabs are mostly dark haired with brown eyes, and medium light skin. But there are Arabs that are black, and Arabs that are quite blond. These differences are regional, and a result of the process described above. Moreover, the number of ethnically pure Arabs might be down to a single digit percentage (Nicholas and Saad Eddin, 1977:38; Handal, 1983:36).

More than 95% of Arabs are Muslims, while less than 5% are Christians. An estimated 55% live in urban areas, while 45% live in rural areas. Less than 1% lives as nomads, and of these many are nomads only in the dry season (Nicholas and Saad Eddin, 1977:39; Darweesh. 1998:81).

b. Other ethnic groups

The native population of the UAE is Arab; and generally a different tribe dominates each emirate. About two-thirds of the UAE's non-native population are Asians (largely Indians, Pakistanis, Sri Lankans, Bangladeshis, and Filipinos), and the other third are Iranians or Arabs (primarily Jordanians, Palestinians, and Egyptians). Although the disproportionate number of expatriates has caused some concern over its possible impact on security and on social and cultural values, the level of tensions between the various ethnic communities is slight (Mohammad, 2002:91).

2.1.2.3 Religion and language

a. Religion

Islam is a religion with more than 1,400 million believers. It is dominant in East- and North Africa, Middle East, Central Asia and in Indonesia. The word 'Islam' is best translated with 'submission [under the will and guidance of God]', but it has a deeper meaning by coming from the same Arabic root (s-I-m) as 'salam', peace, and 'salama', safety and security. Hence, the word 'Islam' explains large parts of the central core of the religion (Gema, 1999:125).

The original foundation of Islam is the Koran. Soon after Mohammed's death, stories about his life were collected, investigated, organizated and interpreted. This activity, resulting in the Sunna or Hadith, became a second source for the theology and moral of Islam (Gema, 1999:128).

Islam, according to the religion itself, dates back to Adam, the first man created and the first Muslim. But over time, the true teaching was lost, hence a number of revelations, of which the one given to Muhammad is the last (Gema, 1999:128). Ibrahim (Judaism/Christianity: Abraham) has a central place in the history of Islam, and is the founder and builder of the Ka'ba in Mecca, which is defined by Islam as the centre of the world (Gema, 1999:129). Islam holds elements from other religious traditions which preceded it.

Islam is defined by the following five pillars (Al-Ashqar, 2003:25):

- Shahada, the creed stating that "There is no God but Allah, and Muhammad is his messenger".
- Salat, the prayer, which is to be performed five times a day. This prayer is performed after strict rules: bending and uttering phrases from the Koran, as well as facing the direction towards the *ka^caba* in Mecca.
- Zakat, alms. This is a prescription which is practised in very different ways in Islam today.
- Sawm, fast during the month of ramadân.

• Hajj, pilgrimage to Mecca. This is an obligation for all Muslims in good health and with the necessary means.

Islam penetrates all walks of life to conduct all human activities in a sound and wholesome manner, acceptable to God and beneficial to man. The manifestation of power and splendor, which are considered so important for people in this world, will be of no value to Allah. In the Hereafter, Allah will judge a person by his faith, devotion and piety. It is, therefore, essential that we should concentrate on the reformation of our own hearts, minds and souls by sincerely turning to Allah for His Mercy through firm belief and obedience as these are parts of righteousness (Al-Ashqar, 2003:28-29).

In Islam, piety, righteousness, and true faith are interrelated. Moreover, its teachings cover all aspects of this life and the life after death. It is the only way to salvation. Unfortunately, many Muslims who are ignorant of Islam according to the Qur'an and the Sunnah have such a poor Islamic identity and perspective that they cannot bear to fulfil their Islamic obligation under the critical eye of the hostile world. Instead of clarifying the misconceptions that non-Muslims have on Islam and the Muslims, they themselves support the distorted views by not practising Islam faithfully. One misconception pertains to the concept of family life in Islam (Al-Ashqar, 2003:32-34).

b. Language

Arabic is the official language of the UAE. English is also widely spoken, as are Hindi, Urdu and Persian. Islam is the official religion of the country and all Emiris and a majority of the expatriates are Muslims. The constitution guarantees religious freedom and there are some Christian churches in the UAE (Edmund and Ibrahim, 1997:79).

2.1.2.4 Way of life and culture

Cultural identity in the UAE is a rich blend of traditional Arab, Islamic and contemporary elements. Following the foundation of the state and the increased availability of educational opportunities private and public cultural centers and libraries began to spring up around the country, helping to promote cultural awareness and assisting in the preservation of the country's rich heritage. The main objective of the Ministry of Information and Culture is to promote and support the country's cultural activities at home and abroad (Sharaf, 1995:48).

The culture and society of the UAE are a blend of traditional and modern elements. The religion of Islam and the heritage of a traditional, tribal society form the basis of a stable and essentially conservative social structure. There is, however, a decidedly tolerant and cosmopolitan atmosphere—most notable in the emirate of Dubai—that gives resident non-Emiris opportunities to enjoy their own cultural and religious organizations. For most older women the home remains the sphere of activity; younger women, benefiting from their access to modern education, are playing an ever-wider role in society. An estimated 16 percent of the UAE's labour force is female and women are increasingly represented in government posts (Edmund and Ibrahim, 1997:145-148).

Reflecting the mix of modern and traditional influences, clothing styles are both Western and indigenous. Most Emiri men wear the dishdasha, a white, loose-fitting garment that is comfortable in hot weather. Most women wear the enveloping black abaya and a face mask called the burka, although this tradition is beginning to be abandoned by younger, educated women. Most of the population enjoys modern air-conditioned housing, either in apartments or villa-style houses. The small rural population lives in a more traditional style, and a few Bedouins still live nomadically in tents. Similarly, cuisine represents a blend of traditional Arab dishes, such as grilled lamb with spiced rice, with increasingly popular American and European fast foods. Even though such traditional sports as falconry and camel racing remain popular, newer sports, particularly soccer, have been enthusiastically embraced. Most Emirates enjoy family-centered entertainment, including television-viewing at home. Movie theatres exist but are chiefly patronized by expatriates (Edmund and Ibrahim, 1997:157-162; Alsheikh Hasan, 1983:124).

Traditional social rituals remain important, especially the Eid al-Fitr and the Eid al-Adha, the festivals that mark the end of *Ramadan* (the month of fasting) and the conclusion of the *hajj* (pilgrimage to Mecca) on the Islamic calendar. On special occasions Emiris perform traditional dances to musical accompaniment. The commitment to preserving traditional arts and culture is evident both at the popular level and in the political leadership. Each emirate devotes considerable resources to maintaining museums and libraries. Throughout the year, the Abu Dhabi Cultural Foundation sponsors major events on artistic, social, and other themes that are designed to place before audiences both Arab and other cultural fare. The Foundation's Centre for Documentation and Research is a national archive where scholars from around the world can do research on the history of the UAE, going back to earliest times. Al Sharjah has a fine arts
museum and has long been home to a lively theater and literary scene (Richard 1978:245; Algumzy. 2003:87-88).

2.1.2.5 The clan

Regard for the well-being of the clan is a key element in Arab psychology. Most students of Arab culture are familiar with the following proverb. "I and my brothers against my cousins; I and my cousins against the stranger." That dictum, apart from commenting on hierarchical loyalties, recalls two relevant facts about Arab society. The first is that the extended family (or kin group) is the fundamental unit of political and social action. The second is that related kin groups may be allies or enemies depending upon the existing economic and political conditions. Kin ties enhance the security of the individual. However, they also exact commitments from him. An Arab may deny his own children for the sake of a brother, nephew, or cousin when clan interests so dictate (UAE University, 1997:148-149).

Regard for the welfare of the clan has also influenced attitudes of many Arabs on reproduction, there being considerable inducement to have numerous offspring. The popular notion that Arabs lament the birth of females is a distortion. Daughters eventually marry and leave their clan, yet their betrothal is an important part of alliance building. Inherited status normally outweighs personal achievements in determining one's place in society. Kinship determines a person's identity, status, and prospects for success in life. The individualism which is so prevalent in America and most Western culture has no role in Arab culture (UAE University, 1997:152-154; Alqumzy. 2003:142).

2.1.2.6 Authority

Throughout the Arab world, authority is generally related to age and sex. The Arabs associate age with experience and wisdom. Thus, the head of the clan is normally the oldest competent male member. When he dies or becomes incapacitated, his place will likely be taken by his oldest son or one of his own brothers (UAE University, 1997:156). When a son succeeds his father as family head, he thereby gains authority over his mother. Arab society is dominated by males--at least in public. Wives are expected to obey and serve their husbands and to defer to them in public, although in many cases they 'get their own way' at home. Children are taught to obey and respect their parents as well as the other adult members of the clan (Alqumzy, 2003:151-152).

2.1.2.7 Polygamy

Although it is on the decline polygamy is still a way of life for many Arabs. Women are generally kept veiled and secluded. Marriages are arranged by the family, and the duties of women are seen as service to the males of the household and giving birth to male offspring. Because of more liberal views on education and employment of women in the cities, the situation there is gradually changing (UAE University, 1997:162; Alqumzy, 2003:101).

2.1.2.8 Face

The following aspect of much Arabic social interaction is considered by many to be a fault--the preoccupation with 'face'. It is felt by many people in this region that what you do is not nearly as important as who sees you do it. In public, a man is expected to be reserved, restrained, balanced, stoic, generous and helpful, and a woman is expected to be nearly invisible. It is only in privacy, secluded among family and a few close friends, that people are really at ease. In this question of face, foreigners do not really count (UAE University, 1997:165; Alsheikh Hasan, 1983:78).

Honour and dignity are tied to the good repute of one's family and especially to that of its women. Among the younger generations, however, a gradual trend toward a more liberal life is evident. Most of Arab society is a man's world, where the role of women is severely restricted (UAE University, 1997:165).

A person's reputation is of utmost importance, reflecting not only on him personally, but on his whole family. The reputation of the family can be sabotaged by one errant member. It is partly for this reason that women are watched so closely and are under strict control. A strong respect for the family and pride in its heritage is instilled in children from earliest childhood so that they will not be guilty of besmirching the family name (UAE University, 1997:166).

Respect for parents is close to being a law of nature in this society. Heaven, it is said, is under your mother's feet, and your father is virtually unassailable. You should not smoke in front of your father or argue with him or even speak loudly in his presence. Every word and act should show deference to him, and to actually strike a father would be considered a crime for which you could

be jailed. Every possible effort must be expended, throughout life, to avoid public humiliation. Because of this emphasis on what the world sees, when money changes hands between friends, it is best done in private (Alqumzy, 2003:162-164).

For instance, if you are borrowing money from a friend, you would prefer that he give it to you when you are alone, and he, in turn, would prefer that you repay him under the same conditions. This would also be true if you had asked a friend traveling abroad to bring something back for you. If it is a small item, he will probably not accept money, but for more expensive items, or if he is buying many items for many people, he probably would take the money, but he would not want others to see him accepting it. Evidently, you never are so generous that you would not like appear even more so (Alqumzy, 2003:162-164).

2.1.2.9 Personal dignity

Unlike Westerners who revel in personal initiatives and achievements, Arabs in general make considerable efforts to enhance their own individual dignity. The status of many Arabs and preserving 'face' is dependent upon the image they uphold in public. That is accomplished by adherence to a set of behavioural rules which collectively amount to virtue. The Arab man of virtue is expected to be hospitable and generous (even to relative strangers), to uphold his personal honour and avoid shame (at almost any cost), to shun manual labour and to uphold the code of sexual honour (Alqumzy, 2003:164).

2.1.2.10 Shame

In the traditional Arab sense, Raphael Patai (The Arab Mind) has defined it as "the psychological drive to prevent or quickly escape negative judgments by others." The feeling of shame is so abhorrent that many Arabs will deny the truth, even when patently obvious, to preserve 'face'. Any threat to the Arab sense of honour and dignity can lead to prolonged animosity (Yousef, 1994:65).

2.1.2.11 Status and prejudice



The religion of Islam is rightly regarded to be egalitarian with respect to the status of believers. Even so, religious egalitarianism is often negated by ethnic discrimination within Arab society. There is subtle prejudice against black-skinned natives--be they Arabs of mixed ancestry or descendants of former slaves or other immigrants from Black Africa (Yousef, 1994:65-66).

Among the Bedouins, both nomadic and recently settled clans, there is a pecking order. Relative status is determined partly by genealogy and partly by politico-economic strength. The honoured tribes are those which claim to have 'pure' Arab blood, possess large herds, or control important trade routes. The despised tribes are those which, due to sustained adversity, undertake some contemptible occupation. Among both sedentary and nomadic clans, certain families traditionally fulfil the leadership role (Yousef, 1994:66).

2.1.3 DYNAMICS OF UAE SOCIETY

2.1.3.1 Social issues

Although disparities do exist between the emirates, there is almost no poverty in the UAE because Sheikh Zayed, the president of UAE has devoted a large part of Abu Dhabi's wealth to the welfare of the poorer emirates. Drug abuse and other crimes are not uncommon, but are confined mainly to the expatriate community (Alasy, 1993:38)

2.1.3.2 Education

It is no secret that there was little development anywhere in the Arabian peninsula prior to the discovery of oil. The reason is simple: there was no money for it. The economy in those days was a simple one, based upon pearl diving, fishing, coastal trade and the most rudimentary agriculture (Alasy. 1993:39-40). In 1962 when oil production began in Abu Dhabi, the country lacked virtually everything: schools, hospitals, airports, seaports, a dependable supply of safe drinking water, electricity plants and, most importantly, proper housing for the majority of the people. Indeed in the whole country there was not a single kilometer of tarmac road. There had been peace, but a peace without prosperity (Ministry of Education in UAE, 2003:79; Lutah. 1995:48).

In 1962 there were only 20 schools in the country with less than 4 000 students, and most of those boys. By the time the UAE was established in 1971, there were still less than 28 000 students and education was pretty well confined to the towns. Today there are over 290 000 children at government schools all over the country. Each village has its primary school for young children and in the towns, secondary schools with boarding facilities mean that students of both sexes can complete their secondary education (Ministry of Information and Culture in UAE, 2004:132-133; Lutah, 1995:49).

In the past, post-secondary education was government-financed and meant going abroad to other Arab countries or even to Britain or America. At present, however, the UAE can offer higher education at home. In 1977 the Emirates University was set up in *AI Ain*. Since that time there have been some 14 500 graduates with half of them women. Hundreds of new graduates are turned out each year (The Emirates Centre for Strategic Studies and Research, 1999:226).

Early on, the government realized the importance of technical and vocational training for its citizens (both male and female) so that they could help in meeting the demands of the local job market (Ministry of Information and Culture in UAE, 2004:157).

To help meet these demands, in 1988 a system of Higher Colleges of Technology was set up. These offer a more technically oriented course of study. As in the university and the government schools, tuition at the Colleges is free and curriculum has been produced in consultation with potential employers such as banks, airlines and the local oil industry (Lutah, 1995:52-53). A new Certificate and Diploma program was introduced in 1995-96 which offered a year-long course of basic studies for those who lack adequate preparation to enter the four year Higher Colleges course (Ministry of Information and Culture in UAE, 2004:161).

Additional technical education and training is also available in institutions such as the Dubai Aviation College, the Emirates Banking Training Institute or the Career Development Centre of the Abu Dhabi National Oil Company (Ministry of Information and Culture in UAE, 2004:161).

Outside the government sector, there exists a wide range of private schools with an enrolment of some 150 000 students. A number of these teach in the language of one of the expatriate communities living in the UAE and follow the curriculum of their countries. For example, there are English, French, German and Urdu schools preparing children for life in their home countries (UAE Ministry of Education, 1996:45-48). In the last few years, a number of universities and colleges from overseas have begun to offer partial or full degree courses through affiliates in the UAE. This means that a full range of education is available for both citizens and expatriates (Ministry of Information and Culture in UAE, 2004:65).

The former President of the UAE, Sheikh *Zayed*, said: "Youth is the real wealth of the nation". Thus, if the income from oil can be used to create an academically and technically qualified citizenry, there can be no doubt of the wisdom of the immense expenditure (Ministry of Information and Culture in UAE, 2004:12).

It should be worthy to mention some issues related to education which can be summarized into two categories which are discussed as follows:

1. Status of and problems in education

There is no doubt that quantitative expansion in education in the early days of the union that came in response to the increasing societal demand for education has yielded a number of strategic issues and key problems regarding the quality of the education system. These are not direct consequences of quantitative expansion alone. They also came as a result of a number of challenges and social new developments. The most important of these are:

(a) Political challenges

The most important of these is the maximized growing role the UAE plays in the Gulf area, regionally and internationally. This is the result of the country's wise policy and the wisdom of its leadership. The UAE has occupied an outstanding position among other countries. The UAE has become the element of rationalization and balance in the Arab politics. Commercial relations with Arab and foreign countries have been boosted. The UAE has greatly increasingly contributed to comprehensive development efforts in sister and friendly countries. National banks and funds have played an important role in this respect (UAE Ministry of Education, 2000:29-30).

(b) Social challenges

This is related to the social function of education and the role it plays in sustaining and keeping national and cultural identities. This role of education has been maximized in the last quarter of the 20th century due to the uni-polarity of the New World Order. In this period, the global

economy has changed into market economy. The GATT and globalization with their political, cultural and economic aspects have had a great impact on education. This impact may pose threats to national cultures and identities of developing countries by tending to dissolve them (UAE Ministry of Education, 2000:30).

(c) Economic challenges

The most important of these is the economic instability and fluctuations due to oil-price drop in the 80's and 90's. Another challenge is the budget deficits in oil exporting countries. These countries used to have surplus of capital. Some have become loan-takers. These economic challenges hinder development efforts in Third World countries. These have always suffered from poverty, ignorance and diseases due to scarcity of economic resources, pressing foreign loans and the pressure of international organizations to restructure their economic systems. This has made the poor class suffer more. The UAE has always been in the lead among countries helping the poor and the needy. The UAE thinks highly of the human dimension in development. The UAE is always committed to Islamic principles of fraternity, solidarity and helping the poor and weak (UAE Ministry of Education, 2000:30).

(d) Rapid development of information and technology as a result of information and communication boom

This, together with the New World Order (due to globalization) where there are no borders or boundaries, has made high quality education and technology the only means to adapt to this world change. This makes competition in global economy possible. Many developing countries including the UAE have realized that education is the winning card in global competition. More attention has been given to education. The UAE has called for making drastic change in education system development so as to make a leap in producing creative and innovative nationals who are able to make knowledge, adapt with change and make progress (UAE Ministry of Education, 2000:30).

(e) Educational challenges

These involve drastic changes in the philosophy of education, objectives, content, learning strategies and tools. New concepts contradicting previous ones have been introduced. On top

of these new concepts is sustainable, all life-long education. Another is self and independent learning. A third is computer assisted learning and other technology multimedia. Creative learning, contemplative learning and learning for work and co-existence with other cultures are new concepts. These require strategic changes in the education system through comprehensive and integrated programs that aim at developing all elements of education. These elements cover objectives, policies, curricula, programs, teaching materials, methodologies, evaluation tools, operational and administration systems. This requires maximum use of communication and information technology with the aim of achieving high quality education both quantitatively and qualitatively (UAE Ministry of Education, 2000:30-31).

Education and development are interrelated. Highlighting the role of education in making progress, raising the standard of living and in sustainable development emphasizes the fact that education has economic functionality. All educational institutions should seek every possible means to become developmental institutions and respond efficiently and effectively to development requirements and labor market needs both quantitatively and qualitatively. Their role should not be confined to adjust development to its needs. Now that today's economy depends on knowledge and technology not only on capital and workforce, developed education creates opportunities and prospects for work and production (UAE Ministry of Education, 2003:54).

All these local and global challenges necessitate a developing education system that can adapt and overcome emerging problems. Otherwise education will be isolated from our modern age and unable to meet societal needs. A developing education system can solve societal problems. Thus, it should be a developmental, mobile and dynamic system. This is aptly expressed in John Dewey's dictum: *"Education reform can be made only by more education"* (Abdelhameed, 2000:8).

2. Strategic issues and exigent problems facing the UAE education system

(a) Continuous social demand for government public education

This requires adapting a quantitative expansion policy to continue to provide the necessary educational services.

(b) School curricula

Despite continuous reviewing and updating, the present school curricula have not been developed with regards to objectives, content or methodologies. These curricula remain only cognitive in nature, dominated by the experiences of the past. They only promote memorization and recitation skills of learners. Thus, learners have become passive in that they take and do not give, memorize and do not think. The content of these curricula is not modern. This was best described as curricula for graduating half-learned students. Students pass exams and simply remember nothing from what they have learned. These curricula lack the educational elements and skills for developing national affiliation, social and spiritual values.

Cognitive preparation is not enough to produce citizens aware of their rights and duties. The present curricula do not prepare learners for tomorrow and the future. They do not develop innovative creative and imaginative skills. They deprive learners of their right for self-learning, individualization and creativity. Repetition and redundancy are further limitations of the present curricula.

(c) Traditional roles played by those in charge of the education system

The teacher is a prompter who fully controls the teaching/learning situation leaving no space for interaction, creativity or even innovation. The supervisor plays the role of a detective and faultfinder. He/she deals with mistakes in a typically non-scientific way. He/she best sees his/her authority in rewarding or punishing teachers and not in developing their skills and promoting sense of professional affiliation. The school principal sees himself/herself best in managing work. His/Her sole aim is discipline and punctuality. He/she lacks the vision of institutional leadership. If we want education to change and develop, these roles have to be changed. Human resources have to be developed in a modern, up to date way. Educational research conclusions and educational technology have to be considered and utilized.

(d) Interest in quantity at the expense of quality

The aim of school has become increasing the number of graduates regardless of their mastery of basic skills that enable them to study in higher education institutions or join the labor market. This strategic issue has made prioritization and budget-planning and re-planning necessary to

reactivate quality education. Among high quality education pre-requisites are objectives, curricula, teaching materials and educational technology. Teacher competencies and methodologies, evaluation means and tools, benchmarked tests are key elements in quality education development. Without these elements being catered for, education will remain verbal and formal where instruction is regarded as a means of passing memory tests and parroting information. In this teaching model the focus is on the teacher rather than the learner, and on teaching the book within the allotted time.

(e) Review of performance and professional status of teaching staff

There are professional discrepancies among expatriate teachers' preparation programs. Many national teachers are only partially prepared. Moreover they are dissatisfied with their jobs due to the hard working conditions and lack of social support and financial incentives. The educational leadership has to face this problem decisively. Effective training and refresher programs have to be designed and launched. Teacher economic problems have to be solved through a series of social and financial incentives.

(f) The present education environment and modern teaching

The environment of the present system is unable to utilize modern technology with its interactive education multimedia, computers, information networks and the Internet services that have been introduced into classroom elsewhere. Introducing modern technology in education requires financing, good training programs and introducing self-learning tools and providing the necessary resource centers to change the traditional chalk and board into interactive instruction. The attitudes of institutional administration and the teaching staff have to be changed too. Administration has to allow for ongoing learning that does not end at the end of school day and teachers have to admit that the learners are able to learn by themselves. To do so, the learner has to learn how to learn. Thus, the teachers' role is to identify and diagnose learning problems and guide the learner to use more learning resource centers.

These are the most important strategic problems. The educational leadership tries to demonstrate its vision and strategies to handle these problems. These problems are interactive and interrelated. Without strategic planning and effective means these problems cannot be solved. Their negative consequences will continue and their impact on the education system will remain negative. They will also limit and hinder development and disperse efforts. This is the core of the future vision of the UAE Ministry of Education. It involves awareness of the present issues and problems, adoption of long-term strategic objectives, design of reform plans and proposal of development to cope with future challenges (Ministry of Education, 2003:84-85).

2.1.3.3 Environmental issues

The government of the UAE has sponsored a massive forestation scheme designed to reduce soil erosion, protect crops from wind damage, and beautify cities. Wildlife previously hunted almost to extinction has been preserved through recent conservation efforts. However, the UAE is a major exporter of reptile skins and in recent years has been identified as a hub of international illegal wildlife commerce (Mohammad, 2002:214).

The UAE is contributing to increasing levels of air pollution in the Persian Gulf region. The UAE derives 100 percent (1998) of its electricity from thermal plants that burn fossil fuels, thereby releasing pollutants into the atmosphere. The country has one of the world's highest per capita rates of carbon dioxide emissions from industrial processes, at 33.3 metric tons per year (1996), as well as of petroleum consumption per capita, at 50.4 barrels per year (1998). Pollution from petroleum processing facilities and oil spills also affect the coast (Edmund and Ibrahim, 1997:245).

There are no renewable sources of fresh water in the UAE; most of the country's water comes from desalinization plants. Almost all residents have access to safe drinking water and sanitation services. The government has ratified international environmental agreements pertaining to climate change, desertification, endangered species, hazardous wastes, marine dumping, and ozone layer protection (Ministry of Information and Culture in UAE, 2004:179).

2.1.3.4 Climatic conditions

The UAE lies in the arid tropical zone extending across Asia and northern Africa, however the Indian Ocean has a strong influence on the climatic conditions in the area, since the country borders both the Arabian Gulf and the Gulf of Oman. This explains why high temperatures in summer are always accompanied by high humidity along the coast. Noticeable variations in climate occur between the coastal regions, the deserts of the interior and mountainous areas (UAE Ministry of Education, 2003:28).

2.1.3.5 Economy

Since the 1960s the UAE has progressed from a largely subsistence economy to a developed one that provides one of the world's highest standards of living. The main engine for the extraordinary growth and development of the economy has been the oil sector, although non-oil trade has also played a significant role and all the emirates have begun to diversify their economies. The 2002 gross domestic product (GDP) was \$71 billion. The total workforce of the UAE was estimated at 1,583,256 in 2002, with 59 percent working in services. A unique feature of the UAE's economy is its dependence on foreign labour. More than 90 percent of the workforce is made up of expatriates (Ministry of Information and Culture in UAE, 2004:206).

2.1.3.6 Mining

Oil and gas directly contribute only 34 percent of the UAE's GDP, but make up nearly 80 percent of its export earnings. The country produces 938 million barrels of oil per year. Proven reserves amount to approximately 100 billion barrels of oil and about 5.7 trillion cu m (about 200 trillion cu ft) of natural gas. At present rates of production, the UAE's oil will last for more than 100 years and its gas for more than 200 years (Ministry of Information and Culture in UAE, 2004:217).

2.1.3.7 Manufacturing and services

In addition to petrochemical production, other manufacturing has become important, with rapid growth in aluminum production, paint and clothes manufacturing as well as food processing. There is a very active private commercial sector in the UAE, and Dubai's trading services and

other businesses are a major factor in the country's economy. Community and social services such as teaching and government employment are significant sources of livelihood. Tourism has grown rapidly in the past few years; many Europeans and others are attracted by mild winter weather, extensive beaches, areas of scenic and historic interest, and opportunities for shopping in the *suqs* (markets). Hotels and other tourist facilities are modern and equipped with all the latest amenities (Ministry of Information and Culture in UAE, 2004:238).



2.1.3.8 Agriculture

Agriculture and livestock raising make up only two percent of the GDP. These pursuits are important, however, because the UAE has achieved a significant level of self-sufficiency in several food categories, including vegetables, eggs, and dairy products. The country is a major date producer for both domestic consumption and export. Many of the farms are small, but since agriculture is supported by generous government subsidies it is no longer a subsistence activity (Ministry of Information and Culture in UAE, 2004:261).

2.1.3.9 Energy

Due to its vast petrochemical resources, the UAE obtains its electricity almost exclusively from oil- and gas-burning power plants. The UAE's plentiful fuel supply has made extensive desalination facilities and other energy-intensive activities possible (Ministry of Information and Culture in UAE, 2004:274).

2.1.3.10 Transportation

The UAE has rapidly developed a highly efficient transportation infrastructure. With a total of 1 088 km (676 mi) of roads, modern highways connect all the emirates with each other and with Oman and Saudi Arabia. Dubai International Airport is the largest of the UAE's six international airports. Dubai owns Emirates Airlines and Abu Dhabi jointly owns Gulf Air with Bahrain and Oman. The country has 15 ports, including Mînâ' Jabal 'Alî in Dubai, one of the largest artificial deepwater ports in the world. Automobiles are the most commonly used form of transportation (Ministry of Information and Culture in UAE, 2004:283).

2.1.3.11 Communications

There are five locally based radio stations and three television stations in the UAE; Arabic, English and Urdu are used in broadcasts. International programming is available via satellite channels. The UAE is served by seven daily newspapers, with a combined daily circulation of 384 000. The press, while subject to some censorship, is one of the freest in the Middle East (Ministry of Information and Culture in UAE, 2004:288).

2.1.3.12 Foreign trade

In 2000 the UAE earned \$53.5 billion from exports, while imports cost \$35.6 billion. Oil and gas exports amount to only about half of the country's export earnings, indicating the country's success in diversifying its economy. In addition to oil, gas, and petrochemical products, exports include aluminum, paint, and various fruits and vegetables. Principal purchasers of exports are Japan, South Korea, Singapore, India, Oman, and Iran; chief sources for imports are the United States, Japan, the United Kingdom, Italy, South Korea, and India. Through its membership in the Organization of Petroleum Exporting Countries (OPEC) the UAE has supported a moderate oil-pricing policy calculated to maximize its long-term benefit. The UAE also belongs to the Organization of Arab Petroleum Exporting Countries (OAPEC) that seeks to coordinate Arab oil policy. The UAE is a founding member of the Gulf Cooperation Council (GCC), committing the UAE, Saudi Arabia, Kuwait, Bahrain, Qatar, and Oman to increased economic cooperation (Ministry of Information and Culture in UAE, 2004:298).

2.1.3.13 Currency and banking

The currency of the UAE is the *dirham*, divided into 100 *fils*. Its official rate has been fixed at 3.671 dirhams to the U.S.\$1 since November 1980. The UAE Central Bank in Abu Dhabi is the bank of issue (Ministry of Information and Culture in UAE, 2004:302).

2.2 THE FAMILY STRUCTURE

2.2.1 INTRODUCTION

The family is the cornerstone in building the community and the base on which the nation stands. Society takes care of family building and provides rulings for family life (e.g., the duties of spouses, children, relatives, rules of spending, divorce and inheriting) from the beginning of the engagement until the marriage contract. Thus, the family is surrounded with care and protection and assured of its protection and love (Hassan, Abdel Samee'a, Saeed and Mohammed, 2002:274).

In an Arabian family, gender and age play a major role in specifying responsibilities. The father is usually the head of the family and the provider for its needs, while the mother plays a major role in raising children and taking care of the house. This structure is not always the norm; in recent years, both the father and the mother provide for family needs, while household chores are taken care of by maids and servants. In the past, most major family decisions were made by the father, but recently some of these decisions are made jointly by both the father and the mother. Sons and daughters are taught to follow the inherited traditions and are given responsibilities that correspond with their age and gender. Sons are usually taught to be protectors of their sisters and to help the father with his duties inside and outside the house, while daughters are taught to be the source of love and emotional support in the family, as well as helping their mother to take care of household chores. However, the winds of change do not spare any culture; the changes that have entered the structure of some Arabian households is not due to economic factors, but education for both men and women that is mandated by law in the Arabian countries (Thabit, 1983:227-232)

Education from kindergarten to university is free to nationals and sometimes residents of these Arabian countries. Although culture, traditions and Islam strongly stress the importance of the woman's role in taking care of the house and raising children, it is a mistake to think that Arabian women are confined to this role. Before Islam there were many successful Arabian businesswomen and they still exist throughout the Arabian region. However, because of cultural reasons, they conduct business in an inconspicuous way. A daughter lives at her family house as long as she is not married; once she is married she moves to her husband's home. Sons might move to their own houses when they get married, but at least one son will still live at the family house even if he is married in order to take care of the parents. When a woman gets married, no changes are made to any part of her name (Rashid, 1985:192-197)

Arabs teach their children cultural values and customs since early age. For every age there is an adequate responsibility of social behaviour and duties that expands in range as they grow older. Children bring joy and smiles to everyone. Family members, relatives, friends and neighbours share in taking care of each other's children. Although the responsibility of raising a child naturally lies with the parents, others do join in helping out. A known Arabian proverb, "He who grows on something, will grow old with it" means the behaviour that children are taught will be the behaviour they will desmonstrate as they grow older (Helmi, 1999:88-90).

2.2.2 CONCEPT OF THE FAMILY

The concept of the family in the Arab societies is derived from its religion (Islam). The family is the basic unit of the society. It is expected to realize the worship of Allah by establishing his laws and carrying out his rules. It is based on mutual psychological and social support of the parents to each other in order to produce a righteous dynasty of believers. They are expected to satisfy their offsprings' needs, protect and educate them (Qutb, 1994:84-86).

One of the most central issues in Islam is the responsibility towards the community. The Koran and the Sunna contain many rules on how to act in life, what to do and what not to do. The core of Islam is the family. Society is understood as concentric circles (The Emirates Centre for Strategic Studies and Research, 1999:174-178).

Islam considers family as the basic unit of the society. The quality of social life that a community has depends on the kind of family that constitute the society. If the members of the families are righteous, we expect the society to be righteous. Actually, everyone is born in a state of purity or Islam (the nature to worship Allah as the Only God) (Qutb, 1994:96-102).

Before Islam, the family was based on mistreatment and oppression. All affairs were controlled only by men or in other words, the males, and women and girls were oppressed and humiliated. An example of that is that if a man died and left behind a wife, his son by another wife had the right to marry her and control her life, or to prevent her from getting married. Men were the only ones who could inherit; women and children had no share. They viewed women, whether they were mothers, daughters or sisters, as a source of shame, because they could be taken as prisoners, thus bringing shame upon the family. Hence a man would bury his infant daughter alive, as is referred to in the Qur'aan, where Allah says (interpretation of the meaning):

"And when the news of (the birth of) a female (child) is brought to any of them, his face becomes dark, and he is filled with inward grief! He hides himself from the people because of the evil of that whereof he has been informed. Shall he keep her with dishonor or bury her in the earth? Certainly, evil is their decision" [Quran; al-Nahl 16:58].

The family in the broader sense, i.e., the tribe, was based on supporting one another in all things, even in wrongdoing. When Islam came, it did away with all that and established justice, giving each person his or her rights, even nursing infants, and even the miscarried fetus who was to be respected and prayed for (i.e., given a proper funeral) (Qutb, 1994:114-118).

When Islam was established, it paid a great deal of attention to the establishment of strong families and protecting them from things that could harm them, and preserving family ties whilst giving each member of the family an important role in life. Islam honours women, whether as mothers, daughters or sisters (Qutb, 1994:119). It honours women as mothers. It was narrated that Abu Hurayrah (may Allah be pleased with him) said: A man came to the Messenger of Allah (peace and blessings of Allah be upon him) and said, "O Messenger of Allah, who among people is most deserving of my good company?" He said, "Your mother." He asked, "Then who?" He said, "Your mother." He asked, "Then who?" He said, "Then your father." (Narrated by al-Bukhaari, 5626; Muslim, 2548).

Islam honours women as daughters. It was narrated from Abu Sa'eed al-Khudri that the Messenger of Allah (peace and blessings of Allah be upon him) said: "Whoever has three daughters or three sisters, or two daughters or two sisters, and takes good care of them and fears Allah with regard to them, will enter Paradise." (Narrated by Ibn Hibbaan in his Saheeh, 2/190). Moreover, Islam honours women as wives. It was narrated that 'Aa'ishah said: the Messenger of Allah (peace and blessings of Allah be upon him) said: "The best of you are those who are best to their wives, and I am the best of you to my wives." (Narrated and classed as hasan by al-Tirmidhi, 3895).

Islam gave women their rights of inheritance and other rights. It gave women rights like those of men in many spheres. The Prophet (peace and blessings of Allah be upon him) said: "Women are the twin halves of men." (Narrated by Abu Dawood in his Sunan, 236, from the hadeeth of 'Aa'ishah; classed as saheeh by al-Albaani in Saheeh Abi Dawood, 216).

Islam encourages men to treat their wives well, and gives women the freedom to choose their husbands; it gives women much of the responsibility for raising the children. Islam gives fathers and mothers a great deal of responsibility for raising their children. It was narrated that 'Abd-Allah ibn 'Umar heard the Messenger of Allah (peace and blessings of Allah be upon him) say, "Each of you is a shepherd and is responsible for his flock. The leader is a shepherd and is responsible for his flock. The man is the shepherd of his family and he is responsible for his flock. The woman

is the shepherd of her husband's household and is responsible for her flock. The servant is a shepherd of his master's wealth and is responsible for his flock." He said, I heard this from the Messenger of Allah (peace and blessings of Allah be upon him) (Narrated by al-Bukhaari, 853; Muslim, 1829).

Islam pays a great deal attention to implanting the principle of respect for fathers and mothers, taking care of them and obeying their commands until death. Allah says (interpretation of the meaning): "And your Lord has decreed that you worship none but Him. And that you be dutiful to your parents. If one of them or both of them attain old age in your life, say not to them a word of disrespect, nor shout at them but address them in terms of honour" [al-Isra' 17:23].

Islam protects the honour, chastity, purity and lineage of the family, so it encourages marriage and forbids free mixing of men and women. Islam gives each family member an important role to play. So fathers and mothers take care of the children and give them an Islamic upbringing; children are to listen and obey, and respect the rights of fathers and mothers, on the basis of love and respect. Even our enemies have borne witness to the strength of family ties among the Muslims. And Allah knows best (Qutb, 1994:145-156).

The family structure is not only a woman, and is not a man either; but it is an integrated structure, a feminine task for the woman and a complementary task for the man. If they cooperate, confer with each other and each one fulfils his/her mandate in educating and instruction, most families would not be attacked by adynamia, failure, weakness and destruction (Alwan, 2000:46).

An example of this is the wisdom and intelligence of Abu addardaa' (may Allah be pleased with him) while he was talking with his wife:" When you see me angry, calm me down, and when I see you angry I will calm you down, otherwise we would not be friends" (Alwan, 2000:62).

Thus, the concept of the family is portrayed by the purposes the Scripture has delineated. The holy Quran and speeches of the prophet (peace be upon him), lay down important purposes of establishing a family. These are as follows:

Firstly: establishing Allah's laws, carrying out his rules, satisfying him and establishing the Muslim house which builds its life on worshipping Allah.

Secondly: fulfilling psychological calmness and peace. The Almighty said:" It is He Who created you from a single person, and made his mate of like nature, in order that he might dwell with her (in love)."[7:189].

Thirdly: Following the command of Allah's messenger (peace be upon him) by producing a righteous dynasty of believers.

Fourthly: satisfying the need of the children for love.

Fifthly: protecting the child instinct from immorality and deviation.

Because the child is born with pure soul and a good heart, so we have (as Muslims) to teach our families their faith and to arm them with the weapon of fearing Allah to achieve a better society and a stronger nation (Alwan, 2000:80-82).

2.2.3 FAMILY COMPOSITION

The family has been the basis of the Arab social structure. The concept of family is much broader than what is denoted in most western societies (a social unit consisting of husband, wife, and children). An Arab's family is his kin group (or clan), which probably includes several households and all male first cousins on his father's side. The members of this group usually live in close proximity to each other, meet frequently, celebrate feasts and other occasions together and coordinate their business and political activity (Helmi. 1999:88-90).

Traditional Muslim extended families can be very large. It is not unusual for four generations to live together. In a society undergoing rapid changes, the family provides security, advice and comfort. The support offered by extended families means that there is a limited need for institutions such as seniors' homes or day-care centres in Emirate society (Rashed. 1985:39).

The life of the family is kept extremely private. In the traditional Arab world the family is a tight unit where children respect their parents and the roles of men and women are clearly defined (Rashed. 1985:39-40).

2.2.3.1 The extended family

The family type in the UAE and that of most of Arabs and Muslims is the extended family, not the nuclear family. According to Islam, the nuclear family consisting only of husband, wife and children does not have the resources: the human resources, the wisdom, the resources of friendship that the extended family brings to the scene. Morever, according to Islam, we love our brothers, our sisters, our parents, our grandparents, our cousins, uncles, nephews, nieces and so forth, because these constitute the extended family of Islam. The extended family of Islam is the noblest, the greatest, and the most valuable social institution that the world has ever seen. In the view of Mavis, Richard and Marion (1988); Alex (1991) and the UAE University (1997:174-175) the evolution of the nuclear family and the embracing of individualism, has led to the loss of these above-mentioned values in Western society and consequently, families suffer.

2.2.3.2 Consequences of extended family

According to Rashid (1985:192-197); Alwan (2000:112-123) and Helmi (1999:69-71), the extended family has many consequences that can be summarized as follows:

Firstly: Because we live with our parents and our elders, we love them, they have brought us up, they have played with us when we were young, they have told us stories, they were patient with us and they have educated us, guided us, advised us, so we love them because we are in constant communion with them. There could not be a more cruel death for people than that of being taken to the old folks' home to die slowly, away from their own progeny, from their own dependants and there could not be a worse fate for any man or woman than to be deprived of the relationship and affection of their own children. But you see, respect for elders has to be cultivated and it will not be cultivated by separation, hence this is the great benefit of the Muslim extended family.

Secondly: the extended family permits no generation gap among Muslims. In the same family there are babies, teenagers, adults and elders, maybe elders of the first level and elders even of the second level (grand and grand-grand fathers or mothers) and, since they live together, they are in constant communion with one another. This allows for the acculturation and socialization

required by sociologists. Acculturation and socialization means the passing on from one generation to another of social norms and social values.

Thirdly: a great consequence of the extended family is the fact that considering that human beings are social animals, as the philosophers used to say, they need company, they need solace. One needs somebody love, to play with, to complain to, and to cry with. Now where else but in the extended family can one find that somebody? An extended family facilitates adjustment.

Fourthly: is where loyalty to a group is learnt. People are helped to be altruistic, express their emotions, love, loyalty and fidelity to a group. This is, of course, the microcosm of the Ummah (Nation), in other words, to defeat our individualism. People are individualists, this is something inside them, and it is an instinct. People are all advocates. Everybody wants to promote himself and meet his own needs and so on and so forth. This is natural, **Allah** has put that inside people, but Allah has also planted people in an extended family in order to curb those instincts, to discipline them, to make something good come out of them instead of the egotistic pursuit which brings ruin. Without the extended family there can be no **Ummah** (nation) because there can be no **Ummatic** feeling bred in the members and the result would be dissolution.

2.2.4 **FAMILY DYNAMICS**

The father traditionally acts as the disciplinarian and authority figure. He remains aloof from the task of raising children in their early years. He concerns himself with the upbringing of sons once they have been weaned but leaves the upbringing of daughters to the women of the family. The mother assumes most of the burdens of child rearing --at least until her offspring are weaned. She pampers sons, not daughters, as nearly all Arabs generally have a preference for male offspring. Children of both sexes are taught to conform to the norms and conventions of Arab society. They are not encouraged to seek individuality (Qatamy and Adas, 2003:315)

Three characteristics of UAE family dynamics particularly stand out: gender roles, the role of elders and the decision-making process. These are discussed in the ensuing paragraphs.



2.2.4.1 The role of family elders

It has already been noted that UAE has a patriarchic society, maintaining a respect for age and seniority that has all but disappeared in Western society. The wisdom and authority of elders is seldom challenged, and younger men and women must wait their turn, often until their sixties or older, before they are accorded the role of family patriarchs and matriarchs (Mohammad, 2002:219).

This is not to say that there are no signs of change. Life expectancy has risen with modern health care, and elders are not relinquishing their leadership roles as soon as they once did. These trends have helped create a generation of young people who are increasingly frustrated in seeking to create meaningful lives of their own. Indeed, the most onerous authority figure for a young wife can often be her mother-in-law or her husband's grandmother, not her husband who, in matters dealing with the home, is as much under his own matriarchal domination as is his wife. Nevertheless, although young people find domination by their elders increasingly frustrating, it is still a dominant characteristic in family dynamics (UAE University, 1997:202-205).

2.2.4.2 Gender roles

Traditional gender roles in UAE society share a number of common characteristics with other traditional societies, the most notable of which is that men's roles are outside the home as family providers, protectors, and managers, and women's roles are in the home. Men are predominant outside the home -- in business and public affairs and business, and women are to a large degree predominant within the home, particularly in parental decisions. Increasingly, however, the lines of distinction are being blurred. For example, as the population explosion has greatly reduced the per capita income, many young wives are finding employment outside the home, and husbands are assuming duties in the home unthinkable a generation ago (Thabit, 1983:158-159).

Marriage customs are also changing. Many women are waiting longer before marrying, and although most marriages are still 'arranged', most young people are now personally acquainted with their intended spouses. Young couples today can meet surreptitiously, often with the help of siblings, communicate by cellular phone, and then if mutually agreeable, ask their mothers to arrange the marriage (Thabit 1983:184-187).

By tradition, however, married women do not assume their husband's surname, and if they are divorcees or widowed, may be reunited with their own families (Sociological Society, 1993:121-122).

2.2.4.3 The decision-making process

The traditional method for reaching and legitimizing group decisions in UAE is through consultation (shura) among those within the group whose opinions are considered important. From consultation emerges consensus, and is binding on all members of the group. Within the extended family, the principal consensus makers are senior members or elders (Khaleefa, 1990:55).

This ancient Arabian process of consultation and consensus was given religious sanction in Islam. From texts in the Qur'an and the Sunna (Prophetic traditions of the Prophet Muhammad), comes the belief that God would never permit a consensus of the Islamic community to be in error. Consensual decision-making is still the norm in UAE, whether in family, government or business decisions (Khaleefa, 1990:56).

Senior women may also participate in family consultations and consensus making, not only on issues involving the home but also on issues involving family businesses and on occasion where the family is involved, even in politics (Khaleefa, 1990:56).

With oil revenues, the public sector now dominates the national economy, moreover, the government made an effort to award contracts to provide goods and services to the merchant families as one of the means of distributing public wealth to the people. In recent years, a new class of venture capitalists has appeared, many of them younger members of the old families. In the absence of income taxes, they have continued to create private wealth even as government contracts have declined (Khaleefa, 1990:57).

In sum, the extended family, as the basic structural unit of UAE society, continues to be a major influence on all aspects of UAE social, political and economic life despite the centrifugal forces of modernization eroding its cohesion. Given the rapid rate of social change that is occurring, the remarkable thing about the traditional society is that it has survived intact as long as it has (Helmi, 1999:76).

2.3 FUNCTIONS OF THE FAMILY

The family is the most important unit of social organization in contemporary UAE society. It also is a relatively cohesive institution at the centre of economic activities. The family provides protection, food, shelter, income, reputation and honour. The present-day UAE family is not extended in the strict sense. It is rare for three or more generations to live together in the same household. However, relatives generally remain closely tied in a web of intimate relationships. They continue to live in the same neighbourhood, to intermarry, and to group together on a kinship basis. Although the family is losing ground where social change is occurring most rapidly (such as in cities), family loyalty still dominates all aspects of UAE life. Economic motivation and considerations of prestige and family strength all contribute to the high value that UAE places on large families. Family members may be held responsible for the acts of every other member (Ministry of Information and Culture UAE, 2004:327).

Although men and women have different roles, women have not always simply stayed at home. In the traditional societies that existed before the discovery of oil, women played an active role in agriculture. In the coastal areas where fishing and pearling were the main occupations, men were often away from home for long periods of time. Women were left to raise children, care for the old, look after crops and livestock and deal with tribal matters. (Ahmed, 1993:142).

UAE families are patriarchal and hierarchal (with respect to sex and age). The father possesses complete authority and responsibility. He expects respect and unquestioning compliance and shows little tolerance of dissent. Fathers generally remain aloof from the task of raising children in their early years. The UAE Arab family is the society in miniature: the same patriarchal and hierarchical relations and values also prevail at work and in religious, political, and social associations (UAE University, 1997:230-233).

2.3.1 THE UNIVERSAL FUNCTIONS OF THE FAMILY

The family is the institution most closely associated with the process of socialization. Obviously one of its primary functions is the care and rearing of children. We experience socialization first as babies and infants living in families; it is here that we develop an initial sense of self. Most parents seek to help their children become competent adolescents and self-sufficient adults,

which mean socializing them into the norms and values of both the family and the larger society. In this process, adults themselves experience socialization as they adjust to becoming spouses, parents, and in-laws (Mavis et al, 1988:65). The family fulfils a number of functions and provides recreational outlets. Yet there are six paramount functions performed by the family; these functions are (Richard, Robert, Penny and Susannah, 1996:242; Alex, 1991; Kathrerina and Barbara, 1988):

- **Reproduction**. For a society to maintain it self, it must replace dying members. In this sense, the family contributes to human survival through its function of reproduction.
- **Protection**. Unlike of the young animal species, human infants need constant care and economic security. Infants and children experience an extremely long period of dependency, which places special demands on older family members. In all cultures, it is the family that assumes ultimate responsibility for the protection and upbringing of children.
- **Socialization**. Parents and other kin monitor a child's behaviour and transmit the norms, values, and language of culture to the child. As conflict theorists point out, the social class of couples and their children significantly influences the socialization experiences to which they are exposed and the protection they receive.
- **Regulation of sexual behaviour**. Sexual norms are subject to change over time and across cultures. However, whatever the time period or cultural values in a society, standards of sexual behaviour are most clearly defined within the family circle. The structure of society influences these standards so that, characteristically in male-dominated societies, formal and informal norms permit men to express and enjoy their sexual desires more freely than women may.
- Affection and companionship. Ideally, the family provides members with warm and intimate relationships and helps them feel satisfied and secure. A family member may find such rewards outside the family from peers, in school and at work and may perceive the home as an unpleasant place. Nevertheless, unlike other institutions, the family is obligated to serve the emotional needs of its members. We expect our relatives to understand us, to care for us, and to be there for us when we need them.
- **Providing of social status**. We inherit a social position because of the "family background" and reputation of our parents and siblings. The family unit presents the newborn child with an ascribed status race and ethnicity that is a factor in determining

his or her place within a society's stratification system. Moreover, family resources affect children's ability to pursue certain opportunities such as higher education and specialized lessons.

2.3.2 ROLE OF WOMEN

UAE society traditionally assigns women a subordinate status. The majority of women continue to occupy the private domain of the household. Wives are expected to obey and serve their husbands and to defer to them, especially in public. Supported by religious ideology and teachings, the prevailing standards of morality stress values and norms associated with traditional ideas of femininity, motherhood and sexuality. At the heart of the role of women is the belief that a family's honour is tied to a woman's modesty and faithfulness (Mohammad, 2002:224).

2.3.3 ROLE OF MEN

Men are privileged in UAE Arab society, wielding almost all authority. Important masculine values and virtues, dating from the nomadic past, include personal bravery, a willingness to bear hardships and to come to the aid of family and friends no matter what the circumstances and fathering children (preferably sons) (Mohammad, 2002:225).

2.3.4 ROLE OF CHILDREN

The hierarchical structure of the Arab family requires children to obey their elders and meet their expectations. Sons are especially welcome in Arab families because they are the carriers of the family tradition, and because their economic contribution is greater than that of daughters. Sons are usually taught to be protectors of their sisters and to help the father with his duties inside and outside the house, while daughters are taught to defer to their brothers, and to help the mother to take care of household chores. Arab families also teach their children to attach tremendous importance to blood ties and bonds of loyalty. During adolescence, there traditionally is a separation of sexes. Boys have greater freedom than girls and begin to be drawn into the company of their fathers and the world of men during this time (Mohammad, 2002:228).

2.4 UPBRINGING STYLES

Parents are a very diverse group. They come from a variety of backgrounds and traditions. For this indicator, unless otherwise specified, a two-parent family refers to parents who are married to each other and living in the same household. They may be biological, adopted, or step-parents. Single-parent families refer primarily to families where only one parent is present, but may include some families where both parents are present but unmarried. No-parent families refer to families where no parent of the child lives in the household. These family types hold true for most Western societies. In the Gulf countries, the predominant type is the extended family as enumerated earlier (Elliot, Timothy and Robin, 1994; James and Vander, 1990;Thomas and Kenrick, 1984; cf. 2.2.3.1).

Individuals learn how to parent from their own parents, from role models, and from society. Their experiences shape the way they relate to their children and the way they relate to the outside world. The way a family is structured is called the parenting style (Malhas and Abdouni, 1997:354-363).

People start developing their parenting styles even before their child is born. By the first year or two of parenting, styles are clearly evident. But for many parents, it is in the 'preschool years' that they become aware of their own styles (Sue, 1995:3).

For some, this is because developmental changes in the child demand changes in parenting. For other parents, awareness comes from noticing other parents' ways in a growing circle of contacts. As more time is spent in groups away from home, parents compare themselves with others and see that they are more lenient or more strict (Weiss and Schwarz, 1996:2103).

It should not be assumed that everyone had the same upbringing and/or that everyone has the same child rearing style. Some families are permissive, some are authoritative and others may establish clear limits and expectations but allow children considerable self-determination within these boundaries. 'Attachment parenting' (providing clear guidance with love) is in vogue now, and a nanny candidate applying for a job with a family subscribing to this philosophy needs to understand it and be comfortable with implementing it in the parent's absence. (Baumrind 1991:66-68, John 1989:113-117).

2.5 DIFFERENT STYLES OF UPBRINGING

Researchers have identified three general styles of parenting. These three styles have been found to be associated with different behaviours and personality traits of children. The three styles of parenting are called: authoritative, authoritarian, and permissive parenting.

2.5.1 AUTHORITATIVE PARENTING STYLE

The first type of parenting style is the authoritative (democratic) style. These parents believe in giving their children choices. They balance their demands with freedom. Authoritative parents have simple rules and reasonable consequences for breaking the rules. Parents spend time discussing with their children the reasons for the rules (Touk and Adas, 2001:345-345).

This style of parenting is like a backbone. The spine has to be strong enough to hold the upper body upright but can bend and flex as the situation warrants. For example, an authoritative parent might set a 9:00 bedtime for his school-aged child. But he will extend the bedtime if the family has a special guest visiting or if the child has an outside event that keeps him/her out later than usual (Weiss and Schwarz, 1996:2101-2114).

This style of parenting is characterized by parents who allow their children quite a bit of freedom but do have clear standards of behaviour. They will reason with their children and listen to their views but will not be afraid to insist on some behaviour and will be firm in setting limits and sticking to them. They tend to have warm relationships with their children and are sensitive to their child's needs and views. They are quick to praise their child's achievements and are clear in their expectations of their child (Weiss and Schwarz, 1996:2101-2114).

The outcomes for children have been studied and the style of parenting that produces the most positive results is the authoritative style. Children whose parents employ this approach have been found to be happy, self-reliant and able to cope with stress. They also tend to be popular with their peers and have good social skills and confidence. They tend to set their own standards and are achievement orientated. Children in authoritative families learn that their opinions are important. Because they are allowed to make small mistakes when they are young, older children

make better decisions when the stakes are higher. These children tend to be independent and responsible (Nancy, 1999:1-7)

2.5.2 AUTHORITARIAN PARENTING STYLE

Authoritarian parents are very strict. They have many rules. Authoritarian parents will yell, blame, and threaten their children to get what they want. The children are not allowed to ask questions or to have their own opinions. Because they are expected to obey, they do not learn to think for themselves or to make good decisions. This parenting style is like a brick wall. It is rigid and unmoving. It is designed to keep children inside with little or no freedom (Weiss and Schwarz, 1996:2101-2114).

This style of parenting is quite strict with the child being expected to behave and the consequences of misbehaviour are harsh. The rules are enforced rigidly but are not often explained clearly or the child's wishes or opinions listened to. The emphasis is on unquestioning obedience and respect for authority. Discipline in these households tends to be harsh and punitive (Weiss and Schwarz, 1996:2101-2114).

While children of authoritarian parents tend to be obedient, orderly and not aggressive they do not have the self-esteem and self-control of their peers brought up by authoritative parents. Their relationship with their parents is not as close either. It has been suggested that this type of parenting is especially difficult for boys who tend to be more aggressive and lose interest in school earlier. Children whose parents are authoritarian do not get praised often and as they grow older they tend to be motivated to do things for reward or punishment rather than for reasons of right or wrong (Weiss and Schwarz, 1996:2101-2114).

Children in authoritarian homes are often afraid of their parents. As the children get older, they learn to hide their misbehaviour from their parents/ mothers and fathers. For example, when children get a failing grade on a school assignment, they will hide the paper to avoid punishment. Soon they realize that they can break the rules as long as they do not get caught. Teenagers often become rebellious in order to break free of the brick wall (Nancy, 1999:1-7).

2.5.3 PERMISSIVE PARENTING STYLE

In contrast to authoritarian parents, permissive parents have few rules and no consistent limits. Permissive parents give in to their children. If parents make a rule, they fail to enforce it. This style invites chaos. The permissive parent is like a jellyfish, without no shape or structure. In a permissive family, the children are in charge (Weiss and Schwarz, 1996:2101-2114). Permissive parents say things like, "He'll go to bed when he is tired." Or "She likes to eat cake for breakfast." Since children who grow up with permissive parents are used to doing whatever they want, they have trouble getting along with others. They can become spoiled and selfish (Baumrind, 1991:66-68).

Parents who choose this laissez-faire method of parenting may do so for several reasons. They may have grown up with strict, authoritarian parents and so decide to have no discipline. Their permissiveness is a reaction to their harsh upbringing. Another reason parents choose this lenient style is because they are under extreme stress and do not have energy to make rules and enforce them. Parents who are under the influence of alcohol or drugs may also fail to set consistent limits (Baumrind, 1991:66-68).

Parents in this group allow their children to freely express themselves and do not enforce clear rules on acceptable or otherwise behaviour. They often accept or ignore bad behaviour and make few demands on their children for mature independent behaviour. Their relationship with their children is warm and accepting. When setting limits they try reasoning with their child rather than using power to assert their wishes (Weiss and Schwarz, 1996:2101-2114).

The outcomes for children of permissive parents do not also seem to be as good for those children of authoritative parents. While these children can present as being happy, they do not cope with stress very well and will get angry if they do not get their own way. These children tend to be immature. They can be aggressive and domineering with their peers and do not tend to be achievement orientated (Nancy, 1999:1-7)

2.6 RELATIONSHIP OF UPBRINGING STYLES WITH TYPES OF THINKING

Relationship of upbringing styles with parenting style has been found to predict child well-being in the domains of social competence, academic performance, psychosocial development and



problem behaviour. Research based on parent interviews, child reports and parent observations consistently finds (Nancy, 1999:1-7):

- Children and adolescents whose parents are *authoritative* rate themselves and are rated by objective measures as more socially and instrumentally competent than those whose parents are non-authoritative.
- Children and adolescents whose parents are *uninvolved* perform most poorly in all domains.

In general, parental responsiveness predicts social competence and psychosocial functioning, while parental demandingness is associated with instrumental competence and behavioural control (i.e., academic performance and deviance). These findings indicate:

- Children and adolescents from *authoritarian* families (high in demandingness, but low in responsiveness) tend to perform moderately well in school and be uninvolved in problem behaviour, but they have poorer social skills, lower self-esteem, and higher levels of depression.
- Children and adolescents from *permissive* homes (high in responsiveness, low in demandingness) are more likely to be involved in problem behaviour and perform less well in school, but they have higher self-esteem, better social skills, and lower levels of depression (Nancy, 1999:1-7).

The authoritative style encourages independence, is warm and nurturing, control occurs along with explanation, and adolescents are permitted to express their views. The authoritative style is characterized by behavioural principles, high expectations of appropriate behaviour, clear statements about why certain behaviours are acceptable and others not acceptable, and warm student-parent relationships (Eihab, 1993:84-86; Mohammad and Abdul Qader, 1997:258-265).

The authoritarian style tends to be characterized by numerous behavioural regulations, is often seen as punitive and restrictive, and children neither have a say in their management, nor are they seen to need explanations; the parent's character is sometimes perceived as being cold, even punishing. The permissive style is characterized by a lack of involvement, the environment is non-punitive, there are few demands on children, and there is a lot of freedom (Malhas and Abdouni, 1997:354-363).

The permissive style presents an environment where there are no demands on the child of any sort, and the children are actively supported in their efforts to seek their own ends using any reasonable means. These styles represent extremes, and most parents demonstrate a certain degree of inconsistency in their use of styles (Suwwied, 2003:142-145).

Research has shown that the type of management style usually contributes to certain characteristic behaviours. The authoritative style helps to produce children who are socially competent and responsible. The authoritarian style helps to produce children who are ineffective at social interaction, and somewhat inactive. Permissive style help to produce children that are immature, show poor self-restraint, and who exhibit poor leadership skills (Nancy, 1999:1-7; Zughool and Hindawey, 2002:207-209; Edward, 1997:244-249). Steinberg (1989) points out that a person in a democratic family had more competence in sociological and psychological aspects, has more responsibility and more creativity (Ahmad 1991:293-299). Eihab, (1993) in his study of the influence of upbringing style and personality and intelligence on creative thinking, found that there is a clear effect of the upbringing style on creative thinking, the students in authoritative families had more scores on creativity scale and the students in authoritarian families had less scores on creativity scale (Eihab, 1993:87-91).

2.7 SUMMARY

This chapter discussed three main topics related to the society, family composition in UAE and the types of upbringing.

The UAE society was shown to be characterized by Arabic ethnicity whether original or acquired. Islam was shown to be the dominant religion of this society and shaped many of its characteristics and structure. Religion and culture were clearly the factors that mostly had impact on the society as a whole. The family was shown to have been influenced greatly by these factors.

Despite the religiosity of this society, traditions seemed to play a greater role. The clan, authority, personal dignity, shame, status and prejudice facets of the social traditions appeared to play the greatest roles in family and social dynamics. It was made clear that the clan was the axis on

which individuals and family revolved. Everything seemed to be explained and understood within the realm of it as next of kin (the pivot of clanship) is the main bond to which individuals are attached (my family, my tribe). As the old Arab poet once said "I am from Ghuzaia (the name of the poet's tribe), if they go astray, so do I, and if they go right the same I will be". This shows how attached to clan and tribe Arabs are. Other factors such as face, personal dignity, and status are all related to that main axis: clan. One's status, face, and dignity which are usually understood to be related to what an individual is accountable for, was shown in the UAE and the Gulf countries to be related to one's clan. That is why such societies are trying hard to concentrate on issues of education and culture to benefit from those traditions in developing their societies. Issues such as education (e.g., the 2020 Vision in UAE), communication, and trade seemed to be of major importance as factors that can be utilised in the transition of the society to the modern era.

Thus, the family structure can be understood to be very much a reflection of such a society. The family is an important milieu. A person may not be accepted as an individual as such except that he/she is from a certain family or belonging to a certain tribe or clan. The person gets recognition, support, status, etc, from her/his family or clan.

The concept of family is attached to the concepts of Islamic teachings. By adherence to the teachings of The Almighty as well as by fulfilling natural duties, families cater for the psychological and basic needs of its members. The composition of the family was seen to be basically of the type known as extended family. More than one generation may share the same home or a compound of household (s). This type of family was described and its consequences were enumerated. Issues such as elderly authority and gender role were discussed. The role of the elders was shown to play an important role in authority and guidance. The functions of the family were enumerated. The role of women was seen to be mainly within the realm of the household, while the role of men was seen to represent the authority.

The chapter then discussed types of upbringing styles. The concept of upbringing was delineated. It seemed to be related to the way parents rear, raise, deal with and educate their children. Three types of upbringing were enumerated. They were, as follows:

• The authoritative or democratic style that was characterized by giving children choices to act or behave within rules and regulations that are discussed and explained.
- The authoritarian type that gives orders and allows no discussion. This is very restrictive to r children and little freedom is given. Obedience is the rule that governs the child's behaviour.
- Permissive or laissez-faire styles mainly leave children to do whatever they like. No rules are applied. The child seems to be 'the decider or decision-maker'.

Finally, the consequences of these styles on thinking were enumerated.

CHAPTER 3

LOCUS OF CONTROL

3.1 INTRODUCTION

The concept of locus of control was developed by the psychologist, Julian Rotter, in the 1960's, who devised the Internal-External Locus of Control Scale (I-E) which measures generalized expectancies for internal versus external control of reinforcement. People with an internal locus of control believe that their own actions determine the rewards that they obtain, while those with an external locus of control believe that their own behaviour does not matter much and that rewards in life are generally outside of their control. A low score indicates an internal control while a high score indicates external control (Zimbardo, 1985:274).

In psychology, locus of control is considered an important aspect of personality. The full name given to the concept by Rotter was Locus of Control of Reinforcement. Rotter bridged behavioural and cognitive psychology because he believed behaviour was largely guided by 'reinforcements' (rewards and punishments) and that through reinforcements individuals come to hold beliefs about what causes their actions. These beliefs then, in turn, guide what kinds of attitudes and behaviours people adopt (Rotter, 1966:227).

Locus of control refers to "the extent to which persons perceive contingency relationships between their actions and their outcomes" (MacDonald, 1973:169). People who tend to believe they can control external circumstances and their lives are referred to as internals, while those who believe their outcomes are controlled by external circumstances are referred to as externals. In other words, those oriented to an external locus of control attribute the power to control their lives to external events, such as fate, luck or other people, while those oriented to an internal locus of control believe they control their own lives. The locus of control concept reflects the internalized social dimension of individuals. This internalized social dimension may condition and

moderate the relationships between things and individuals (Locus of control - A class tutorial, 2004:2).

Hundreds of studies have shown individual differences in locus of control. Rotter saw locus of control as very general whereas subsequent research suggests that it may be specific to different domains (e.g., academic, health). Rotter also saw this Internal-External continuum as a personality trait whereas others disagree. Therapy based on Rotter's work often includes social skills training, as he believes that Low Expectancies discourage the individual from engaging in the world sufficiently to learn them (Gackenbach, 1996:1).

This chapter contains five sections related to the locus of control.

The first deals with the definitions of the locus of control in different areas of human activities.

- Locus of control is seen as a way of interpreting the ways behaviour is engaged in. This has been mainly related to consequences of behaviour (i.e., expectancies of reward and punishment).
- The second definition sees locus of control as personality trait. This deals with the internal belief that one holds about the determinants of one's behaviour.
- The third definition, very much related to the first, explains how a person perceives life events and what causes them.
- The fourth definition discusses locus of control in some areas of psychology, namely; controllability, social learning, attribution and self-efficacy.

The second part enumerates the different types of locus of control.

Internal locus of control is seen as the belief that one is in control of one's behaviour consequences, life and destiny. Characteristics of this type are delimited.

External locus of control, on the contrary, is seen to be the belief that external factors are responsible for one's behaviour and the consequences that follow. Attributes of such types are clarified.

The third part deals with attribution and how it is related to the locus of control. If locus of control may be seen as personality attribute, attribution is mainly considered as the perception of the environment around us as influencing our behaviour and skills. The only possible difference between the two may be that the locus of control refers to beliefs (engraved in our heads) while attribution is the way we understand and interpret the situation.

This part also clarifies the different kinds of attribution styles. They are concrete, fluctuating, and middle ground styles of attribution.

The fourth part deals with the characteristics of both internal and external locus of control. The characteristics relate to controllability of factors influencing one's life, the ability to adapt, one's responsibility about one's actions, the degree of being influenced by ideas of others, the degree of intelligence, and the ability to delay gratification, The characteristics also include things such as the concept of 'self as agent' which controls the use of our knowledge. The locus of control may also be seen as persona control or self- determination. The section ends with a summary of some main characteristics of both internal and external locus of control.

The fifth part of the chapter deals with the relationship of the locus of control with family upbringing and education. The first section looks at how the parents' ways of raising their children influence their offsprings' way of looking at and interpreting life events. On the other hand, parents' locus of control may influence the way they nurture their children, hence their locus of control. The second section clarifies the relationship of the locus control with education in areas of academic achievement, motivation and success.

3.2 **DEFINITIONS**

It is important to explore the literature with regard to some key concepts related to locus of control.

3.2.1 LOCUS OF CONTROL AS INTERPRETING BEHAVIOUR CAUSES

Locus of control is defined as an individual's generalized expectancies regarding the forces that determine rewards and punishments. Individuals with an internal locus of control view events as resulting from their own actions. Persons with an external locus of control view events as under the control of external factors such as luck (Michael Wise, 2005:1). For example, a person with an internal locus of control will attribute the failure to meet a desired goal to poor personal preparation, whereas, one with an external locus of control will attribute failure to circumstances beyond the individual's control. The way individuals interpret such events has a profound effect on their psychological well-being. If people feel they have no control over future outcomes, they are less likely to seek solutions to their problems. The far-reaching effects of such maladaptive behaviours can have serious consequences, which has led many social psychologists to examine the origin of locus control and its impact on the social world (Michael Wise, 2005:1).

3.2.2 LOCUS OF CONTROL AS PERSONALITY CONSTRUCT

Locus of control is a personality construct referring to an individual's perception of the locus of events as determined internally by his/her own behaviour vs. fate, luck, or external circumstances. It refers to the extent to which individuals believe that they can control events that affect them. Individuals with a high internal locus of control believe that events result primarily from their own behaviour and actions. Those with a high external locus of control believe that powerful others, fate or chance primarily determines events. Those with a high internal locus of control have better control of their behaviour and tend to exhibit different behaviours than externals and are more likely to attempt to influence other people; they are more likely to assume that their efforts will be successful. They are more active in seeking information and knowledge concerning their situation than do externals. The propensity to engage in different behaviours is stronger for individuals who have a high internal locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control than for those who have a high external locus of control (Qatamy, 1999:198-199).

3.2.3 LOCUS OF CONTROL AS PERCEPTION OF CAUSES OF LIFE EVENTS

It refers to an individual's perception of what are the main causes of events in life. More simply put, do you believe that you control your destiny or that it is controlled by others or fate? According to Philip Zimbardo (1985:275):

A locus of control orientation is a belief about whether the outcomes of our actions are contingent on what we do (internal control orientation) or on events outside our personal control (external control orientation).

3.2.4 LOCUS OF CONTROL AND DIFFERENT AREAS OF PSYCHOLOGY

Control is a concept that plays an important role in several psychological theories. It is central to Seligman's (1975) probability analysis of control, theories of learned helplessness, Rotter's (1954) social learning theory, Weiner's (1986) attributional analysis of motivation and emotion, and it is the key concept in Bandura 's (1977) self-efficacy theory (Michael Wise, 2005:1).

3.2.4.1 Locus of control and controllability

Seligman (1975) has defined the concept of control most explicitly. He defines an event as controllable when a person's voluntary responses have an impact on the consequences of that event. By contrast, an event is considered to be uncontrollable when no voluntary response has an impact on the event. For example, when an organism receives electric shocks regardless of its efforts to stop them, the electric shocks are uncontrollable to the organism. However, when the organism has the ability to prevent the shocks by pressing a button, the shock is considered to be controllable (Michael Wise, 2005:1).

Seligman explains his analysis through a mathematical approach. He views controllability as a function of two parameters. The first parameter concerns the probability that an event (e.g., the termination of a shock) will occur when a certain voluntary behaviour is performed. The second parameter concerns the probability that the event (e.g., the termination of the shock) will occur in the absence of the respective action (e.g., pressing a button). Referring to these two parameters, Seligman defines an event as controllable when the probability of its occurrence in the presence and in the absence of the response under consideration are equal. For instance, when the shock is terminated in 100 percent of the cases when the organism presses the button, the termination of the shock is 100 percent controllable. However, loss of control exists when

there is a lack of contingency between behaviours and outcomes. This can lead to motivational, emotional, and cognitive deficits (Michael Wise, 2005:1).

Such deficits can be traced to the discovery that loss of control leads to learned helplessness, a state similar to depression. Seligman (1975) assumes that experiences of uncontrollability, such as the loss of a loved one, can lead to the expectancy that future events will also be uncontrollable. This expectancy leads to learned helplessness and depression. Thus, according to this theory, depressed individuals differ from non-depressed persons in that they tend to expect to be unable to control events (Michael Wise, 2005:2).

However, in certain situations, lack of control can lead to a quite different psychological state known as reactance. Wortman and Brehm (1975) argue that the initial response to uncontrollable outcomes is an increase in motivation and performance in order to attempt to regain control. Thus, the child who experiences the death of a loved one may be motivated to become a doctor so that he or she can treat patients with similar problems and prevent the same thing from happening to other loved ones. The effects of reactance are limited though. Wortman and Brehm theorize that when perceived uncontrollable experiences continue to arise, the state of helplessness is likely to emerge (Michael Wise, 2005:1).

3.2.4.2 Locus of control and social learning theory

The locus of control concept is based on Rotter's (1954:1) social learning theory. Julian Rotter observed people in therapy and noticed that:

- Different people, given identical conditions for learning, learn different things.
- Some people respond predictably to reinforcement, others less so, and some respond unpredictably.
- Some people see a direct and strong connection between their behaviour and the rewards and punishments received
 (Locus of Control A class tutorial, 2004:1).



The core of his approach is called Expectancy Value Theory: the basic assumption is that our behaviour is determined not just by the presence or size of reinforcements, but by the beliefs about what the results of our behaviour are likely to be, that is, how likely you are to get the reinforcement. For example:

You're looking for a job when you finish your Psychology degree. You see an ad for one that pays \$40,000 and one that pays \$60,000. Classic behaviourism would say you'd go for the big money but according to Rotter's social learning theory there's something that behaviourism leaves out: What if you think you haven't got a hope of getting the job that's offering \$60,000 but a good chance of getting the \$40,000 one? So if you think your chance of getting the big job is 50/50 Rotter would say that mathematically it's worth \$30,000 to you, whereas if you think you're a shoo in for the other job (i.e. a 100% likely to get it) then that job is worth \$40,000 to you. So the lower paying job has a HIGHER EXPECTED VALUE. (Locus of Control – A class tutorial, 2004:1).

From this viewpoint, people hold expectancies and these expectancies influence behaviour. These expectancies are mental representations: based on past outcomes and the situation they now confront; these things then influence their judgment of the likelihood of getting their desired outcome. Thus, their expectancy judgments have a causal influence on their behavioural choices (Locus of Control – A class tutorial, 2004:1).

Rotter believed, as do most social learning theorists, that if a person sees a link between behaviours and reinforcers then his/her behaviour is affected by the reinforcers. If he or she does not see the link, then he or she reacts less predictably to reinforcers (and learning is not as likely to occur). The term Rotter coined for these beliefs about whether a behaviour will meet with a rewarding outcome was locus of control. Locus means 'place'. 'Internal' (high General Expectancy) locus of control people believe that through their behaviour they can control the likelihood of receiving reinforcers. 'External' (low General Expectancy) locus of control people do not see as much link between their behaviour and the likelihood of being rewarded (Locus of Control – A class tutorial, 2004:1).

Research within the framework of Rotter's (1954) social learning theory is not primarily concerned with the conditions that lead to uncontrollability. Instead, the psychological consequences of the

belief that one can or cannot control the causes of events are the focus of his work. Although Rotter takes a different angle to approach this topic, he defines control similarly to Seligman. He states that an individual has an internal locus of control if one perceives that the event is contingent upon one's behaviour or relatively permanent characteristics, whereas external locus of control is characterized by the belief that reinforcement is perceived as not being contingent upon action (Michael Wise, 2005:2).

This phenomenon is exemplified through the relatively stable personality dispositions of internal versus external locus of control. Internal locus of control leads to typical shifts in expectations of success following success or failure. Those who succeed have increased expectancies following success and decreased expectancies following failure. Individuals with an external locus of control show more atypical expectancy shifts. They exhibit decreased expectancies of success following success and increased expectations of success following failure (Michael Wise, 2005:2).

3.2.4.3 Locus of control and attribution theory

In Weiner's (1986) attributional analysis of motivation and emotion, the concept of controllability plays a central role in evaluative interpersonal actions. He postulates that observers' reactions to actors who experience failure, sickness, or need for help, are largely determined by the perceived controllability of the causes of these events (Michael Wise, 2005:2).

Attributions of failure to controllable causes, such as lack of effort, lead to anger, punishment, and reduced willingness to help, whereas the belief that the actor has no control over the cause of the negative event, such as failure due to lack of ability, leads to pity, help-giving and to lesser or no punishment. For example, a beggar who appears to be capable of finding work is unlikely to get many handouts because passers by will attribute his state to being lazy. However, a blind beggar is likely to get more donations because people will attribute his plight to forces beyond his control. This will lead them to pity the beggar and make them more likely to exhibit helping behaviour (Michael Wise, 2005:2).

3.2.4.4 Locus of control and self-efficacy

Bandura (1986) examined aspects of the self that influence self-regulation. His research examined the effects of self-efficacy beliefs, or the expectations that people hold about their abilities to accomplish certain tasks. Whether or not they will undertake a particular activity, attempt to do a particular task, or strive to meet a particular goal depends on whether or not they believe we will be efficacious in performing those actions (Taylor et. al, 1998). In other words, if individuals believe they have control over future events, then they will attempt to exert that control in order to achieve a positive outcome. It does not matter whether an outcome is or is not attainable, the perception of control determines if one will try to attain it. For example, if one believes that it is in one's control to meet an extremely difficult goal such as getting straight A's in school, one will try to get them even though the odds may be against one. On the contrary, one may drop out of school because one does not believe it is under one's control to determine if one passes one's classes, even though passing grades may clearly be within one's realm of abilities. Therefore, locus of control has a significant impact on Bandura's self-efficacy theories, and how individuals' expectations shape the goals they set for themselves (Michael Wise, 2005:2-3).

In summary, an individual's locus of control is based on the belief of whether his/her actions, or outside influences, have a greater bearing on the outcome of his/her actions. One's attribution style is held responsible for the outcomes of one's actions. Thus, locus of control can be understood as bipolar construct, ranging from external causes to internal causes (Marsh & Richards, 1987:45).

Internal Locus of Control	External Locus of Control
Individual believes that his/her behaviour	Individual believes that his/her
is guided by his/her personal decisions	behaviour is guided by fate, luck, or
and efforts.	other external circumstances

Source: Locus of Control – A class tutorial, (2004:2)

It is important to explore the types of locus of control and the characteristics of these types.

3.3 TYPES OF LOCUS OF CONTROL

A person's locus of control is the perception of the extent to which he or she is in control of the outcome of events in life. Outcomes can be seen as internally controllable by personal efforts or skills or as externally controlled by chance or outside forces. People who have a very external locus of control believe that their work or talents will have little effect on how things turn out (MacDonald, 1973; Qatamy, 2000:185).

Locus of Control is a measure of how individuals believe they can control their life, and where that control comes from. It is the perceived source of control over the behaviour. People with **internal** locus of control believe they control their own destiny. They tend to be convinced that their own skill, ability and efforts determine the bulk of their life experiences. In contrast, people with **external** locus of control believe that their lives are determined mainly by sources outside themselves - fate, chance, luck or powerful others (Rotter, 1954; Adas, 1999:156).

People can be classified comparatively as 'internals' or 'externals'. Chronological development within each individual generally proceeds in the direction of an internal locus control. As infants and children grow older they feel increasingly competent to control events in their lives. Consequently, they move from being more externally focused to a more internal locus (Simons, Irwin and Drinnins, 1987:Adas. 1999:157).

Locus of control is a generalized expectancy of the extent to which a person perceives that events in one's life are consequences of one's behaviour. People, described as 'internal', believe that they exercise more control over events and outcomes affecting them. In contrast, 'externals' tend to believe that they have little control over what happens to them. These expectancies are perceived to be the result of many past experiences (Nashawati, 1996:245).

3.3.1 INTERNAL LOCUS OF CONTROL

Locus of control, as discussed earlier, is an individual's belief system regarding the causes of his or her experiences and the factors to which that person attributes success or failure. It can be assessed by the Rotter Internal-External Locus of Control Scale. Individual's lives are profoundly influenced by whether they perceive control over their lives as predominantly internal or external. Locus of control influences the way one views oneself and one's opportunities (Simons, Irwin and Drinnins, 1987; Adas, 1999:157-158).

People who have a high internal locus of control believe they are the masters of their own fate and the decisions they make will affect their own lives. This often leads to a higher self-esteem when successes occur. However, depending on one's results, there can be consequences with internalizing failures. Someone with a high internal locus of control, who succeeds at a project, will take more pride in the project and himself or herself for the hard work put into it (Seligman, 1975; Nashawati, 1996:246).

People with a high internal locus of control tend to be more successful and have an easier time of learning new skills, as the skills matter to them, and are necessary in furthering their goals. If a person has an internal locus of control, that person attributes success to his or her own efforts and abilities. A person who expects to succeed will be more motivated and more likely to learn. This person will seek out information and is more likely to have good study habits and a positive academic attitude (Mamlin, Harris and Case, 2001:1).

People who have a high internal locus of control are very hard on themselves, taking responsibility for failures that they cannot control. College students with a strong internal locus of control believe that their grades are determined by their abilities and efforts. These students believe, "*The more I study, the better grades I get.*" They change their study strategies as they discover their deficiencies. They raise their expectations if they succeed, and they worry when they think they have no control over their assignments (Mamlin et al, 2001:1).

3.3.2 EXTERNAL LOCUS OF CONTROL

Students who have a high external locus of control often believe that it is solely the teacher's responsibility to teach them and not their responsibility to learn. Students who believe they cannot do a task or do it well might not even start. These are often the students with low self-esteem, since one's sense of self-worth grows through achievement, and achievement comes through effort (Mamlin, Harris and Case, 2001:1).

A person with an external locus of control, who attributes his or her success to luck or fate, will be less likely to make the effort needed to learn. People with external locus of control are also more likely to experience anxiety since they believe that they are not in control of their lives. College students with a strong external locus of control believe that their grades are the result of good or bad luck, the teacher's mood or God's will. They are more likely to say, "*No matter how much I study, the teacher determines my grade. I just hope I'm lucky on the test.*" Believing that luck essentially averages out, after they do well on a test, they lower their expectations. Likewise, when they fail a test, they are optimistic that the next test score will be better. These externals are less likely to learn from past experiences, and they have difficulty in persisting in tasks (Simons, Irwin and Drinnins, 1987; Adas. 1999:158-159).

Those with a high external locus of control believe that chance and other people have more influence over their lives than they do. This often leads to an attitude of 'who cares' and a low self-esteem. Someone with a high external locus of control, who succeeds at a project, will think the circumstances were right, or that they were lucky and things just happened to work out and will not credit the skills they used to make the project successful (Seligman, 1975; Nashawati, 1996:247).

People with a high external locus of control tend to ignore skill advancement, as their skills do not seem to matter in what happens to them, which can lead to a pattern of failures and depression (Mamlin et al, 2001:1).

It is thus clear that a person with a high external locus of control relies on external factors for success and failure. Growth in personality, expectations and skills are identified in such persons.

In the following section, the concept of attribution and its relation with locus of control and the types of attribution styles will be explored.

3.4 ATTRIBUTION AND LOCUS OF CONTROL

People's locus of control belief about themselves is also known as an 'attribution'. Attribution style is how we perceive the environment around the project and our own. Our attribution style determines which forces we hold responsible for our successes and failures. Both locus of control and attribution styles have great influence on our motivation, expectations, self-esteem, risk-taking behaviour, and even on the actual outcome of our actions (Locus of Control – A class tutorial, 2004:2).

Attribution refers to how people explain events that happen to themselves and others. Different kinds of attributional styles have been found to characterize and explain why people react quite differently, but predictably to events and how they explain the causes of those events. Basically people tend to have a self-serving bias. For example, with regard to internality-externality, people tend to make:

- internal attributions about themselves when they succeed (i.e., I did it myself)
- internal attributions about others when they fail (i.e., it was their fault)
- external attributions about themselves when they fail (i.e., Something else made me fail)
- external attributions about others when they succeed (i.e., they got lucky) (Locus of Control – A class tutorial, 2004:2).

3.4.1 TYPES OF ATTRIBUTION STYLES

3.4.1.1 Concrete

A person with a high concrete attribution style believes in stable forces. This person believes that no matter whether the environment is conducive or not, they can succeed (Locus of control. 2002).

However, with this style, they also believe that even if the factors were very negative, the failure was due to their own skills, and not the environment. This attitude for success is great, as it leads to a higher internalization of success. The downside is that when one fails with this attitude, there is nothing else to lay the blame on, and thus the failure is internalized, which can lead to depression and lack of further motivation (Locus of control, 2002).

3.4.1.2 Fluctuation

Someone who has a high fluctuation attribution style (also known as unstable forces) believes that the environment plays a greater role in success than their own skills (Locus of control, 2002).

This is a great style for dealing with failure. If the environment was unfavourable, then with a change of environmental conditions, the project can be retried with a chance of success. Failures are not internalized.

The downside is that when successes occur, they are also due to the environmental conditions, and not by one's own actions. This leads to not internalizing successes which can lead to less satisfaction with a project's completion as it was the environment that mattered more than one's skills (Locus of control, 2002).

3.4.1.3 A middle ground viewpoint

The question that can be asked is which of the above styles can best explain attributions? Parsons (1980) view can be adopted as he stated that:

- Concrete attribution style is best for internalizing successes.
- Fluctuation is best for dealing with failures.
- Neither is best, but a healthy dose of each can lead to a much greater satisfaction.
- The key is making sure one is using a fluctuating attribution style for failure, and concrete for successes (Locus of control, 2002).

The following section will concentrate on the different characteristics of persons with internal/external locus of control and contribution types.

3.5 CHARACTERISTICS OF PERSONS WITH INTERNAL/EXTERNAL LOCUS OF CONTROL

Locus of control is a concept that has a significant effect on our daily lives. Those with an external locus of control believe that their own actions do not influence future outcomes. This makes individuals less likely to work to reach their full potential due to the motivational, emotional, and cognitive deficits it creates. In fact, people with an external locus of control are more likely to suffer from depression and other ailments because they believe their actions cannot improve their current position. Those with an internal locus of control see the world through a more adaptive perspective. They believe that hard work and personal abilities will lead to positive outcomes. This makes them more likely to meet challenges and succeed in their future

endeavours. Even though one's actions may not have anything to do with an outcome, the belief that they do can greatly aid one's psychological well-being. Therefore, those that attribute a sense of personal responsibility for their future thoughts and aspirations are much more adept to living in the social world (Adas and Qatamy, 2003:242-244).

If a child with an internal locus of control does badly on a test, he or she is likely to blame either his/her own lack of ability or preparation for the test. By comparison, a child with an external locus of control will tend to explain a low grade by saying that the test was too hard or that the teacher graded unfairly (Touk and Adas, 2001:198).

Adults and children with an internal locus of control are inclined to take responsibility for their actions, are not easily influenced by the opinions of others, and tend to do better at tasks when they can work at their own pace. By comparison, people with an external locus of control tend to blame outside circumstances for their mistakes and credit their successes to luck rather than to their own efforts. They are readily influenced by the opinions of others and are more likely to pay attention to the status of the opinion-holder, while people with an internal locus of control pay more attention to the content of the opinion regardless of who holds it (Touk and Adas, 2001:198-199).

However, overly internal people, particularly those lacking confidence and efficacy in their abilities, can be neurotic, anxious and depressed. And many people with an external locus of control live happy lives. But, in general, psychological research has found that people with a more internal locus of control are better off, for example, they tend to get better paid jobs (Alhersh, 1993:64).

Some research (McCombs, 1991:6) suggests that what underlies the internal locus of control is the concept of 'self as agent.' This means that our thoughts control our actions and that when we realize this executive function of thinking we can positively affect our beliefs, motivation, and academic performance. "The self as agent can consciously or unconsciously direct, select, and regulate the use of all knowledge structures and intellectual processes in support of personal goals, intentions, and choices" (McCombs, 1991:6). McCombs asserts that "the degree to which one chooses to be self-determining is a function of one's realization of the source of agency and personal control" (McCombs, 1991:7). In other words, we can say to ourselves, "I choose to direct my thoughts and energies toward accomplishment. I choose not to be daunted by my anxieties or feelings of inadequacy" (McCombs, 1991:7).

Having a more internal locus of control is generally seen as desirable. Having an internal locus of control can also be referred to as 'self-agency', 'personal control' or 'self-determination'. Research has found the following trends (Mamlin et al, 2001:1):

- Males tend to be more internal than females.
- As people get older, they tend to become more internal.
- People higher up in organizational structures tend to be more internally controlled

With all the studies done in this area, research findings have shown the following characteristics to be more typical of internals (Gershow. 1989:1-2):

- Internals are more likely to work for achievements, to tolerate delays in rewards and to plan for long-term goals.
- As indicated above after experiencing success in a task, internals are likely to raise their behavioural goals. In contrast, externals are more likely to lower their goals.
- After failing a task, internals re-evaluate future performances and lower their expectations of success. After failure, externals raise their expectations.
- Internals are better able to resist coercion.
- Internals are more likely to learn about their surroundings and learn from their past experiences.
- Internals experience more anxiety and guilt with their failures and use more repression to forget about their disappointments.
- Internals find it easier to solve their own bouts of depression. Likewise, they are less prone to learned helplessness and serious depression.
- Internals are better at tolerating ambiguous situations.
- Internals are less willing to take risks.



- Internals are more willing to work on self-improvement and better themselves through remedial work.
- Internals derive greater benefits from social supports.
- Internals make better mental health recovery in the long-term adjustment to physical disability.
- Internals are more likely to prefer games based on skill, while externals prefer games based on chance or luck.

In general, a summary of the characteristics of locus of control and contributions types follows:

• Internal Locus of Control:

- High self-esteem.
- Takes responsibility for failure and success.
- The possibility of internalizing failures leading to frustration and giving up on projects.
- Attribution Style Quick Reference.

• External Locus of Control:

- Attribute success to external factors (luck, other people).
- Usually do not take credit for successes.
- Usually low self-esteem as one does not understand one is the one who is succeeding.
- Would increase self-esteem if understood one is in charge of one's own life.

• Concrete Attribution Style:

- Success/failure due to unchanging attributes such as skills and/or intelligence.
- Internalizes failures and blames failures on stable forces (skills/intelligence) and not unstable forces (effort/conditions), which can lead to depression and lack of motivation.

• Fluctuating Attribution Style:

- Higher self-esteem as failures are due to chance, not skills
- Low opportunities to learn from mistakes
- Not grounded in reality
- Lower chance to be depressed by failures
- Do not take responsibility for actions

• Middle Attribution Style:

- Some things were just bad luck.
- Sometimes something needs to change.
- Mixing factors lead to lower pressure on oneself for each failure, helping to keep one grounded, yet look at other possibilities (Locus of control, 2002).

The relationship between the locus of control, gender, upbringing style and education need to be explained and described.

3.6 THE RELATIONSHIP OF THE LOCUS OF CONTROL WITH GENDER, UPBRINGING STYLE AND EDUCATION

3.6.1 THE RELATIONSHIP OF LOCUS OF CONTROL WITH GENDER

Outcomes of different studies regarding gender differences in relation to locus of control have indicated contradictory results. Some of these studies did not find any different pattern for locus of control scores for males or females (Bar-Tal and Darom, 1979:266; Johnson and Kanoy, 1980:397). On the other hand, on the basis of other findings, Callaghan and Manstead (1983) have indicated that some gender differences have been found in locus of control and academic achievement (Callaghan and Manstead. 1983:16). For example, Stipek and Weisz (1981) in their review mentioned that there is a stronger association between internal locus of control and achievement for boys than for girls (Stipek and Weisz, 1981:120-121).

About attributions, different studies showed a difference between gender and locus of control. Parsons (1981) has pointed out that males tend to attribute their failures to external or unstable causes while females tend to attribute their failures to internal causes. This appears to be an oversimplification. In a review of the attribution literature several examples were cited. No gender difference was found in general internality for failure but found boys to be slightly more likely to attribute their failures to lack of effort than girls. Crandall et al, (1965) found girls to attribute failures to internal factors. Beck (1977), Diener and Dweck (1978), and Nicholls (1975) found no gender differences in either internality or lack of effort attributions. Similarly, inconsistent patterns emerge for the measures of attributions of failure to external causes (Marvin & Maurice, 1985:2-3).

This inconsistency can be noticed in the relationship of locus of control to academic level and gender. Females were found to be more apt to take responsibility for success and less apt to accept responsibility for failure. They were significantly more internal for success than for failure. This is, however, in contrast with Lochel's (1983) suggestion that females are more inclined to take responsibility for failure than for success. This difference can be explained by Parsons,

(1978) idea. He stated that low achieving boys tend to receive much negative reinforcement. In addition, they receive negative reinforcement for academic behaviours. Thus, they may not be as threatened by taking responsibility for failures since they may not differentiate between negative reinforcements for social behaviours and those for academic achievement (Marvin & Maurice. 1985:2-3).

It is therefore clear that locus of control is affected by gender. This, however, is not consistent over different areas. The academic level might result in different outcomes as internalization of success and failure is affected by the student's achievement level.

3.6.2 THE RELATIONSHIP OF LOCUS OF CONTROL WITH UPBRINGING STYLE

It is necessary to explore the influence of upbringing style on the locus of control. Therefore, factors related to upbringing and the influences on children with regard to their locus of control are examined.

There is a large body of research on locus of control indicating that not only do internals believe they can control their own destinies, they are more effective in influencing their environments in a wide variety of situations (Malhas and Abdouni, 1997:360). Research has also shown that family environment characterized by warmth, protection, and nurturance are more likely to lead to an internal locus of control while those with limited social power or material resources are more likely to develop external locus of control styles (Alhersh, 1993:25).

Saber (1999) in his research of the relationship between family styles and locus of control has concluded that families, characterized as authoritative style and who emphasized responsibility and independence in educating their children, found that most of their children are classified within the internal locus of control. While children of authoritarian parents tend to be obedient and they do not have the self-control of their peers who were brought up by authoritative parents (Alzoghoul, 2002:245).

Also Abdellatief (1997) in his study of the effect of family types on personality and locus of control found that children whose parents were authoritative were generally characterized as internals.

Children whose parents were authoritarian were, however, found to be externals. He concluded the reasons of his conclusion as:

- Parents of the authoritative style believe in giving their children choices. They balance their demands with freedom. They have simple rules and impose reasonable consequences for breaking the rules. They spend time discussing the reasons for the rules with their children. They encourage independence, responsibility and self competence.
- Parents of the authoritarian style are very strict. They have many rules. They blame and threaten their children to get what they want. The children are not allowed to ask questions or to have their own opinions. They do not learn to think for themselves or make good decisions. This parenting style encourages dependence, irresponsibility and low self concept (Alzoghoul, 2002:246-248).

The development of locus of control is associated with family style, cultural stability experiences and rewards (Ahmad, 1991:87). Many internals have grown up with families that modelled typical internal beliefs. These families emphasized effort, education, responsibility and thinking. Parents typically gave their children rewards they had promised them (Zahran, 1999:312).

As children grow older, they gain skills that give them more control over their environment. In support of this, psychological research has found that older children have more internal locus of control than younger children (Qatamy, 2000:234).

It is thus clear from research that an authoritative parenting style is more inclined to help children establish an internal locus of control, while authoritarian parents inhibit their children to gain internal locus of control.

3.6.3 THE RELATIONSHIP OF LOCUS OF CONTROL WITH EDUCATION

It has often been said that obtaining a good education is the key to being successful in the world. But what determines being successful while in school? While many things may contribute to school achievement, one variable that is overlooked is locus of control. In the context of education, locus of control refers to the types of attributions made for successes and/or failures in school tasks. If someone believes that his or her successes and failures are due to factors within their own control, such as effort or ability, then that person is said to have an internal locus of control. On the other hand, if someone believes that his or her successes and failures are due to factors outside of their own control, such as fate or luck, then that person is said to have an external locus of control. An example may best illustrate this distinction.

John and Katie each receive a D on a class test. John has an internal locus of control and attributes his grade to lack of studying. Katie has an external locus of control and attributes her grade to a poorly made test and an ineffective teacher, both of which are out of her control. Although it may seem like a trivial issue, locus of control can have a profound impact on school achievement. What did your quiz results tell you about yourself? If you scored high on externality, do you see yourself acting like Katie? If you scored high on internality, do you see yourself acting like John? After looking at the consequences of adopting either an internal or external orientation, a specific look will be taken at learning disabled students and adult students, as well as explaining a suggested intervention for changing a student's locus of control.

(Mandy, 2005:1-2)

For students to develop an internal locus of control, they must be able to attribute success to their own efforts. For example, Zughool and Hindawey (2002) suggest that students develop an individualized learning plan that lists their goals, how they plan to achieve those goals, a timeline, and the outcome (Zughool and Hindawey, 2002:198)

Students with an internal locus of control may be more likely to do well at distance learning situations that require a certain amount of independence from the learner. Students with an external locus of control will need more encouragement and guidance from the instructor (Beck, 1979:1351).

Research has shown that having an internal locus of control is related to higher academic achievement (Findley and Cooper, 1983:423-426). Internals earn somewhat better grades and

work harder. This includes spending more time on homework as well as studying longer for tests. This makes sense because if you believe working hard will pay off, then you are likely to do so.

What may cause someone to develop an external locus of control? According to Bender (1995), "Continued failure in spite of continued attempts at school tasks leads to an external locus of control. Further, a high external locus of control, in turn, leads to a lack of motivation for study and school in general". If someone has an external locus of control, he or she may feel that working hard is futile because their efforts have only brought disappointment. Ultimately, they may perceive failure as being their destiny (Basgall and Snyder, 1988:658). Developing an external locus of control also makes it easier to excuse poor performance without hurting the individual's self-esteem. By attributing their failure to fate, chance, or to the fault of someone else, they are able to escape the potential damage that may come from attributing it to personal flaws or lack of ability (Basgall and Snyder, 1988:658-660).

Anderman and Midgley (1997) noted that "students who believe that their poor performance is caused by factors out of their control are unlikely to see any reason to hope for improvement. In contrast, if students attribute their poor performance to a lack of important skills or to poor study habits, they are more likely to persist in the future." In other words, students with an external locus of control are more likely to respond to failure by giving up hope and not trying harder, whereas those with an internal locus of control are likely to respond to failure by trying harder to improve (Anderman and Midgley, 1997:43-45). In the introductory example, John would be more likely than Katie to study harder for the next test and do better. Katie does not see any reason to try harder because her poor performance was due to something out of her control. If students are taught to have a more hopeful attitude (develop an internal locus of control), their grades tend to rise (Noel, Forsyth and Kelley, 1987:48).

Locus of control also has an impact on responses to success. In one study (Kernis, 1984:789), subjects were led to make either internal or external attributions for their success at a given task. Those who made an internal attribution performed better on the same task than on a different task when tested again, whereas those who made an external attribution performed better on a different task than on the same task. This suggests that internals are more likely to continue working at a task that they have succeeded at, while externals are likely to stop working on the successful task and move on to a different task (Kernis, 1984:789).

Similarly, locus of control differences dictated response to positive verbal feedback in a study of elementary students (Lonky and Reihman, 1980:324). After participating in a self-chosen activity (i.e., an intrinsically motivated task), students received positive verbal feedback. Later, they were given the opportunity to participate in the same task again. Students with an internal locus of control spent more time at the task the second time around, whereas those with an external locus of control spent less time at the task. This suggests that if praise is given to externals for an intrinsically motivated task that their motivation actually declines when the praise is stopped (Kernis, 1984:789).

Locus of control has a great bearing on one's self-esteem, problem solving, stress, expectations, and motivations. Links have been found between locus of control and behaviour patterns in a number of different areas. Adults and children with an internal locus of control are inclined to take responsibility for their actions, are not easily influenced by the opinions of others, and tend to do better at tasks when they can work at their own pace. By comparison, people with an external locus of control tend to blame outside circumstances for their mistakes and credit their successes to luck rather than to their own efforts. They are readily influenced by the opinions of others and are more likely to pay attention to the status of the opinion-holder, while people with an internal locus of control pay more attention to the content of the opinion regardless of who holds it (Khory, 1996:54).

Some researchers have claimed that internals tend to be more intelligent and more successoriented than externals. In the elementary grades, children with an internal locus of control have been found to earn higher grades, although there are conflicting reports about whether there is a relationship between college grades and locus of control. There is also a relationship between a child's locus of control and his or her ability to delay gratification (to forgo an immediate pleasure or desire in order to be rewarded with a more substantial one later). In middle childhood, children with an internal locus of control are relatively successful in the delay of gratification, while children with an external locus of control are likely to make less of an effort to exert self-control in the present because they doubt their ability to influence events in the future (Zahran, 1984:187; Allen, 1982:110). One study found that students with an internal locus of control showed better adjustment to college in terms of academic achievement and social adjustment (Njus & Brockway, 1999:531). Another study found that community college students who succeeded at distance education had high internal locus of control (Dille and Mezack, 1991:25). A third study found that locus of control had a negative correlation with course withdrawal and failure, although the amount was not significant. In other words, the more students had an external locus of control, the more likely they were to withdraw from the course. The author suggests that additional research be conducted (Pugliese, 1994:24-25).

From this discussion it is clear that locus of control plays a major role in education. Internal loci of control students were generally found to attribute their achievement to their efforts and ability. They tend to be more motivated. On the contrary, externals attribute their achievement to external factors. Literature suggests that the possibility exists to assist students to develop into internals and thus enhance their efforts to achieve better.

3.7 SUMMARY

This chapter has enumerated different definitions of the locus of control, namely:

A way of interpreting behaviour, a personality trait, how a person perceives life events and what causes them, lastly in some areas of psychology, controllability of behaviour and the ways outcomes of those behaviours are influenced. Certain theories about locus of control were examined: social learning theory, attribution theory and Bandura's self-efficacy concept.

The second part enumerates the different types of locus of control. Internal locus of control is the belief in one's control of behaviour and its consequences, life and destiny. Characteristics of this type were delimited. External locus of control, on the contrary, is the belief that outside factors are responsible for actions and their consequences.

The third part looked at how attribution was related to the locus of control. This part also clarified the different kinds of attribution styles. They are: concrete, fluctuating attribution and middle ground styles.

The fourth part enumerated characteristics of both internal and external locus of control. The characteristics related to controllability of factors influencing one's life.

The fifth part of the chapter dealt with the relationship of the locus of control with family upbringing and education. The first section looked at how parents' ways of raising their children

influenced their offsprings' way of looking and interpreting life events. The second section clarified the relationship of the locus control with education in areas of academic achievement, motivation and success. Internals tended to be more success oriented.



CHAPTER 4

CREATIVE THINKING

4.1 INTRODUCTION

The improvement of thinking and types of thinking are considered as some of the most important objectives in education. A grave weakness noted in teaching is students' concentration on memorizing information. The real issue is how can students use the information in a new situation or how can they solve new problems (Zaitoon, 1987:25). A key focus in education as mentioned in chapter one is the focus on thinking: how can students be induced to become thinkers? How can their thinking skills be enhanced?

This chapter concentrates on creative thinking as a type of thinking; what it means; what are its components, methods, techniques and strategies and what is its relation with other types of thinking especially critical thinking. It is necessary to detect mental sets that jeopardize creative thinking, and define ways to create positive attitudes for creativity.

Creative thinking focuses on exploring ideas, generating possibilities and looking for many right answers rather than just one (Jarwan, 1999:26). This kind of thinking is vital to a successful working life. It is noted that creative thinking tends to be ignored until after college (Harris, 1998:1).

To understand the concept of creative thinking, it is necessary here to take a look at another kind of thinking that may be often used in schools, that is, critical thinking. This type of thinking emphasizes the skills of analysis, teaching students how to understand claims, follow or create a logical argument, figure out the answer, eliminate the incorrect paths and focus on the correct one. Two kinds of thinking are differentiated as follows (Harris, 1998:1):

Table 4.1 Difference between critical and creative thinking

Critical Thinking	Creative Thinking
Analytic	Generative
Convergent	Divergent
Vertical	Lateral
Probability	Possibility
Judgment	Suspended judgment
Focused	Diffuse
Objective	Subjective
Answer	An answer
Left brain	Right brain
Verbal	Visual
Linear	Associative
Reasoning	Richness, novelty
Yes but	Yes and

Source: Harris, (1998:1)

In many activities like problem solving, both kinds of thinking are important, as they are involved in its steps: analysis of the problem; generating possible solutions; choosing and implementing the best solution; and finally, evaluating the effectiveness of the solution. This process reveals an alternation between the two kinds of thinking, critical and creative. In practice, both kinds of thinking operate together much of the time (Harris, 1998:2; Alhorany, 2002:18-19).

Creative thinking and critical thinking are interrelated and form complementary aspects of thinking. Almost all of the thinking contains some critical and some creative aspects. For example, when a person tries to solve real life problem, he or she moves back and forth several times between creative and critical reflections as he or she develops solutions or weighs the consequences of any one solution. It is important, therefore, that any attempt to improve thinking abilities pays attention to both critical and creative aspects of thinking (Harris, 1998:1; Alsorour, 2002:224-225).

Creative and critical thinking processes are combinations of abilities, knowledge, values, attitudes, skills and processes. While the knowledge base required for critical and creative

reflection varies from subject to subject, the underlying values and attitudes remain constant across school subjects (Freeman, 1996; Zaitoon, 1987:34; Meador, 1993:35).

Although skills and processes are somewhat dependent upon specific subject matter for their form, these same values and attitudes are required in all subjects for their execution. It is also important to note that the content of each category is descriptive of the area but not a final or all inclusive list. Educators are encouraged to evaluate these lists and to generate others as they become more familiar with incorporating critical and creative thinking into their teaching (Davis, 1989).

Creativity is inventing, experimenting, growing, taking risks, breaking rules, making mistakes, and having fun (Mary, 1999:1). Most creative people learn how to be creative. They do it logically. They look at one perspective and think of another. They appreciate metaphors. They make cross-connections easily. They trigger their thinking one way and then apply it to the problem at hand (Queen, 1991; Mary, 1999:2).

Enhancing a student's creativity is a big step towards becoming more aware of how one's mind works. One's mind is very powerful and one can be its master (Delcourt, 1993; Mary, 1999:2).

All people have the answers inside themselves, but how to implement them could be difficult. The aim of concentrating on creative thinking in teaching is to enhance implementation of creative thinking. In general, creative thinking enables people to (Alsorour, 2002:227):

- Generate more ideas and solutions.
- Make decisions and solve problems more easily.
- Brainstorm and be one's own think tank.
- Experience more laughter and fun as they develop courage, trust and faith.

4.2 **DEFINITIONS**

It is important to explore the literature with regard to some key concepts related to creative thinking. In this section the following concepts will be defined: Creative thinking, brain storming and problem solving.

4.2.1 DEFINITIONS OF CREATIVE THINKING

It is important to define creative thinking and in the following paragraphs key elements regarding creative thinking will be explored.

4.2.1.1 Create

According to Adas & Qatamy, 2000:308; Davis, 1989:81 the term create is linked to the following actions:

- To bring into being
- To cause to exist
- Originate
- To give rise to
- Bring about
- Produce
- To form
- To introduce
- To invent
- To conceive
- To compose
- To author
- To initiate

4.2.1.2 Thinking

According to Adas & Qatamy, 2000:308; Davis, 1989:81 the term thinking relates to:

- The process of thought
- To consider, judge or believe
- The process of exercising the mind in order to make a decision
- To remember or recollect

• To make a mental choice between options

4.2.1.3 Creative thinking

According to Adas & Qatamy, 2000:308-309; Davis, 1989:82-83, creative thinking:

- Specific thought processes which improve the ability to be creative.
- Being in an optimal state of mind for generating new ideas.
- To think deliberately in ways that improve the likelihood of new thoughts occurring.
- To maximize the ability of the brain to think of new ideas.
- The ability to think of original, diverse and elaborate ideas.
- A series of mental actions which produce changes and developments of thought.
- The process of exploring multiple avenues of actions or thoughts. (Sometimes called divergent thinking because thought patterns and areas of belief are expanded.)

Creative thinking is a process which is used when a person comes up with a new idea. It is the merging of ideas which have not been merged before. New ideas are formed by developing the current ones within people's minds. Their brains are self-organizing systems which organize thoughts coming in depending on what is already there. New ideas can only be thought of within the context of what is already known. While this may seem to mean that people cannot have any really creative ideas, they will find that this is not really the case and that by combining computer techniques and their own minds, they will get the perfect combination of skills to create wildly creative yet meaningful solutions. This creative thought process can be accidental, deliberate or ongoing (Altity, 2001:51-52).

Creative thinking is a type of thinking described as qualities of good thinking processes. It is generally considered to be involved with the creation or generation of ideas, processes, experiences or objects (Altity, 2001:54).

Paul (1987) distinguishes between "weak sense" and "strong sense" thinking in the following way: people who have the abilities necessary for undertaking quality creative thought but use them only to their own advantage are creative thinkers in the weak sense; on the other hand; strong sense creative thinkers are committed to using their abilities to seek out the most accurate and fair positions regardless of or in spite of their own particular interests or desires. Such thinking

takes into account the needs, viewpoints and arguments of others and is built upon analysis of one's own motives.

4.2.2 DEFINITIONS OF BRAINSTORMING

Brainstorming forms an important part of creativity and it is therefore necessary to explore this concept in relation to creative thinking.

4.2.2.1 Brainstorm

According to these sources (www.brainstorming.co.uk; Isaksen & Treffinger, 1996), brainstorming includes:

- A sudden inspiration
- A bright idea
- A severe outburst of excitement
- Often the result of a transitory disturbance of cerebral activity
- A sudden mental aberration

4.2.2.2 Brainstorming

Brainstorming is "a conference technique by which a group attempts to find a solution for a specific problem by amassing all the ideas spontaneously by its members" (Osborn, 1991). It is a process designed to obtain the maximum number of ideas relating to a specific area of interest. It is also a technique that maximizes the ability to generate new ideas (www.brainstorming.co.uk; Isaksen & Treffinger, 1996).

This concept will be dealt with in more detail in section 4.7.1.

4.2.3 PROBLEM SOLVING

Problem solving is the process by which a situation is analyzed and solutions are formed to solve a 'probortunity' (i.e., problem/opportunity) and when steps are taken to remove or reduce the problem. The current problem and situation are analyzed, potential solutions are generated and a workable solution is determined and put into place. Problem solving is the process of analyzing situations of uncertainty to produce actual improvements or changes in the situation (www.brainstorming.co.uk, 2003; Davis, 1996).

The problem-solving process comprises many different elements that can be used in varying degrees depending on the 'probortunity' to be solved. Typical elements are (www.brainstorming.co.uk, 2003):

- Problem definition (part of understanding the problem)
- Situation analysis (part of understanding the problem)
- Idea generation
- Analysis of ideas
- Decision making
- Determining the next steps to be taken to introduce the solution into the workplace

Different problems need different uses of these elements and often in different orders and quantities. The structure of the problem-solving process can be very different for different probortunities. For example, you may need to define the problem in different ways to help establish the real challenge, if the opportunity is initially vague (www.brainstorming.co.uk, 2003).

Problem solving is not the same as decision making. Decision making is one process of problem solving and is only concerned in deciding between different existing ideas. Problem solving includes the actual formation of those ideas. Problem solving can involve varying degrees of the problem analysis and solution generation elements compared to the decision-making part (<u>www.brainstorming.co.uk</u>, 2003).

Another important element regarding creative thinking which needs to be explored in the next paragraph is creativity.

4.3 CREATIVITY

Creativity is bringing into being something which did not exist before, either as a product, a process or a thought (<u>www.sasked.gov.sk.ca</u>). People would be demonstrating creativity if they:

- Invent something which has never existed before.
- Invent something which exists elsewhere but they are not aware of.
- Invent a new process for doing something.
- Reapply an existing process or product into a new or different market.
- Develop a new way of looking at something (bringing new ideas into existence).
- Change the way someone else looks at something.

All people are creative every day because they are constantly changing the ideas which they hold about the world around them and their relationship with it. Creativity does not have to be about developing something new to the world, it is more to do with developing something new. When people change themselves, the world changes with them, both in the way that the world is affected by their changed actions and in the changed way that they experience the world (Qatamy, 1990:365; <u>www.sasked.gov.sk.ca</u>).

Creativity is the process of being creative and contains three components (Harris, 1998:1-2):

- An ability. A simple definition is that creativity is the ability to imagine or invent something new. It is the ability to generate new ideas by combining, changing, or reapplying existing ideas. Some creative ideas are astonishing and brilliant, while others are just simple, good, practical ideas that no one seems to have thought of yet.
- An attitude. Creativity is also an attitude: the ability to accept change and newness, a willingness to play with ideas and possibilities, a flexibility of outlook, the habit of enjoying the good, while looking for ways to improve it.
- A process. Creative people work hard and continually to improve ideas and solutions, by making gradual alterations and refinements to their works. Contrary to the mythology surrounding creativity, very few works of creative excellence are produced with a single stroke of brilliance or in a frenzy of rapid activity.

Attention will be given to what the literature reveals regarding creative thinking activities in the following discussion.
4.4 CREATIVE THINKING ACTIVITIES

Creative thinking activities are designed to develop senses of observation, encourage minds to wander and create. All the activities may be done individually or in groups. The activities are divided into seven categories with several sample questions (Korgan, 1996:2-5; Alhorany, 2002:20-24; Torrance, 1990):

4.4.1 COMPARE AND CONTRAST

The ability to see similarities and differences between two or more concepts. Examples of these are:

- How are these two objects different from one another?
- Compare and contrast the techniques used in two art works.
- In what ways do these two objects relate to one another?

4.4.2 ANALYSIS

The ability to take apart and understand the interrelationships and structures of the whole. Here are some examples:

- Name one thing you could delete from this painting that would not alter the artist's intent.
- Why do you think this artwork is valued?
- What does this object tell us about the artist's attitude toward war, life...?

4.4.3 ELABORATION

The ability to expand and embellish ideas with intensive detail. They can be classified by things such:



- Select one or more musical pieces to accompany this object.
- Expand the title or name of this object into a detailed sentence or paragraph.
- Describe the setting in which you might find this object.

4.4.4 FLUENCY

The ability to produce a quantity of possibilities, ideas, consequences, or products. This can be exemplified by:

- What different kinds of textures can you find in this object?
- List the occupations of people who might use or study this object.
- List all the objects you can find in this artwork.

4.4.5 ORIGINALITY

The ability to produce unusual, unique, or highly personal responses, ideas, or solutions.

- If this object could fly, where would it go?
- If this object could talk, what would you ask it? Invent a game to accompany this object.
- Make up a short story about this object.

4.4.6 EVALUATION

The ability to draw conclusions by interpreting data and appraising alternatives.

- Which object do you like the least and what are the strengths of your least favourite?
- List the objects in order of their importance or usefulness.
- Which object took the most time and effort to produce?

4.4.7 FLEXIBILITY

The ability to view something in many different ways with a variety of ideas or products.

- If you could change one thing in this painting, what would it be?
- List the sounds you hear in this painting.
- If this painting were a dance, book, play, what would it be?

The different creative activities are dependent on different creative methods to be implemented and discussed in the following paragraph.

4.5 CREATIVE METHODS

Several methods have been identified for producing creative results. The most important are the following five classic ones (Harris, 1998:2-4):

4.5.1 EVOLUTION

This is the method of incremental improvement. New ideas stem from other ideas, new solutions from previous ones, the new ones slightly improved over the old ones. Many of the very sophisticated things we enjoy today developed through a long period of constant incrementation. Making something a little better here, a little better there gradually makes it something a lot better--even entirely different from the original.

For example, look at the history of the automobile or any product of technological progress. With each new model, improvements are made. Each new model builds upon the collective creativity of previous models, so that over time, improvements in economy, comfort, and durability take place. Here the creativity lies in the refinement, the step-by-step improvement, rather than in something completely new (Harris, 1998:2-4).

The evolutionary method of creativity is related to a well known critical principle: Every problem that has been solved can be solved again in a better way. Creative thinkers do not subscribe to the idea that once a problem has been solved, it can be forgotten, or to the notion that "If it isn't broken, don't fix it." A creative thinker's philosophy is that "there is no such thing as an insignificant improvement".

4.5.2 SYNTHESIS

With this method, two or more existing ideas are combined into a third, new idea. Combining the ideas of a magazine and an audio tape gives the idea of a magazine you can listen to, one useful for blind people or freeway commuters.

4.5.3 REVOLUTION

Sometimes the best new idea is a completely different one, a marked change from the previous ones. While an evolutionary improvement philosophy might cause a professor to ask, "How can I make my lectures better and better?" a revolutionary idea might be, "Why not stop lecturing and have the students teach each other, working as teams or presenting reports?"

For example, the evolutionary technology in fighting termites eating away at houses has been to develop safer and faster pesticides and gasses to kill them. A somewhat revolutionary change has been to abandon gasses altogether in favour of liquid nitrogen, which freezes them to death or microwaves, which bake them. A truly revolutionary creative idea would be to ask, "How can we prevent them from eating houses in the first place?" A new termite bait that is placed in the ground in a perimeter around a house provides one answer to this question (Harris, 1998:2-4).

4.5.4 REAPPLICATION

It is looking at something old in a new way, going beyond labels. Those who do reapplication go through the processes of unfixating, removing prejudices, expectations and assumptions and discovering how something can be reapplied. For example, one creative person might go to the junkyard and see art in an old model T transmission. He paints it up and puts it in his living room. Another creative person might see in the same transmission the necessary gears for a multi-speed hot walker for his horse. He hooks it to some poles and a motor and puts it in his corral. The key is to see beyond the previous or stated applications for some idea, solution, or thing and to see what other application is possible.

4.5.5 CHANGING DIRECTION

Many creative breakthroughs occur when attention is shifted from one angle of a problem to another. This is sometimes called creative insight.

A classic example is that of the highway department trying to keep kids from skateboarding in a concrete-lined drainage ditch, tried many solutions such as putting a fence then a threatening sign on the fence. All were useless. Finally, someone decided to change direction, and asked, "What really is the problem here? It's not that the kids keep getting through the barrier, but that they want to skateboard in the ditch. So how can we keep them from skateboarding in the ditch?" The solution was to remove their desire by pouring some concrete in the bottom of the ditch to remove the smooth curve. The sharp angle created by the concrete made skateboarding impossible and the activity stopped. No more skateboarding problems, no more fence problems (Harris, 1998:2-4).

This example reveals a critical truth in problem solving: the goal is to solve the problem, not to implement a particular solution. When one solution path is not working, shifting to another is required. There is no commitment to a particular path, only to a particular goal. Path fixation can sometimes be a problem for those who do not understand this; they become overcommitted to a path that does not work and only frustration results. So creativity can be expressed in different methods.

Another important aspect of creative thinking lies in the implementation of problem solving and the different strategies that can be implemented. These strategies will be explored in the following paragraph.

4.6 CREATIVE THINKING STRATEGIES

Every creative act is an application of problem solving. That does not mean that it cannot be fun as well; it can and should be enjoyable. Some of the best creative thinking strategies (www. kycreative.mis.net; Amabile, 1983; Altity, 2001:59-62; www.brainstorming.co.uk: Treffinger & Nassab, 1996:3-4) are discussed in the ensuing section:

4.6.1 WALLIS' FOUR STAGE SEQUENCE

Wallis (1913) formulated his theory. It may be old, but it is still one of the best there is:

- **Preparation:** the research phase during which information is gathered on the subject; the hard grind part of the process, requiring one to become very knowledgeable about the area of concern.
- Incubation: the period following the gruelling process of preparation in which one engages in other activities, not consciously working on the problem, but permitting consideration of the problem in the subconscious mind (often overlooked, but essential in the formation of many creative ideas).
- Illumination (sometimes called the 'aha' or 'Eureka!' moment): that moment when a possible viable solution to the problem occurs to one.
- **Verification:** the testing of the solution; involves the organization of data and conducting of experiments (Altity, 2001: 59-62).

4.6.2 CREATIVE PROBLEM SOLVING (CPS)

This is a five-step process and includes the following:

- Fact-finding
- Problem-finding
- Idea-finding
- Solution-finding
- Acceptance-finding

Each step has two phases respectively.

- Divergent thinking processes (curiosity, inventiveness, and activity)
- Convergent thinking processes (knowledge, decision, and valuation)

The first represents the Idea Generation Phase, which starts by listing the first, common or known ideas then applying a creative technique and listing the new ideas resulting from this technique. **The second represents** Idea Evaluation Phase: in which one selects and evaluates the ideas from the idea generation phase to obtain clear idea concepts (Treffinger & Nassab, 1996: 3-4).

4.6.3 KOBERG AND BAGNALL'S DESIGN PROCESS

This process expands on the CPS model by adding a visual orientation. Some methods of visually considering the stages include:

- Circular: One step leads to the next and then returns to the beginning if necessary.
- Feedback: Reconsideration of previous stages occurs
- Branching: The order of the stages may be revised as being considered.
 (www. kycreative.mis.net ; Treffinger & Nassab, 1996: 3-4).

4.6.4 SYNECTICS

The Synectics theory is built on the premise that success in problem solving is increased by using non-rational thought to lead to rational solutions. The process, therefore, involves making the strange familiar and the familiar strange. Synectics relies heavily on analogical and metaphorical thinking. There are nine phases:

- Problem as given
- Analysis (making the strange familiar)
- Problem as understood
- Operational mechanisms (analogies, metaphors developed)
- Making the familiar strange
- Psychological states (involvement, detachment, deferment, speculation, commonplaceness)
- States integrated with problem
- Viewpoint
- Solution or research target (www.kycreative.mis.net)

4.6.5 MORPHOLOGICAL APPROACH

This approach involves making forced connections by the combination of items on different attribute lists. All possible connections are placed in a multidimensional matrix called a morphological box.

There are five steps:

- A concisely formulated problem
- Localization and analysis of all possible important parameters of the problem
- Construction of the morphological box
- Securitization and evaluation of all possible combinations
- Practical application of the most suitable solutions (www. kycreative.mis.net, Altity, 2001: 59-62)

4.6.6 TRANSFORMATION

This is the use of simple questions to trigger creative thinking and offer alternative solutions. In this strategy, one begins with an already existing object or idea, and searches for ways it can be altered to provide possible solutions to a problem. Some of the transformational or manipulative verbs that can be used to activate creative thinking are: transform, translate, transmute, transpose, magnify, mini minify, multiply, divide, concretize, abstract, distort, disguise, animate, fragment, dissect, rearrange, adapt, modify, combine, unify, integrate, manipulate, restate, repeat, reverse, substitute, and eliminate.(www. kycreative.mis.net, Altity, 2001: 59-62).

4.6.7 SOCIODRAMA

This strategy involves a seven-step model:

- Defining the problem
- Establishing a conflict or situation
- Casting characters
- Warming up actors and observers
- Acting out the solution

- Cutting the action
- Evaluating situations
 - (www. kycreative.mis.net, Altity, 2001: 59-62)

4.6.8 BRAINSTORMING

Brainstorming is a technique for finding alternatives, which can be used at all stages in the creative problem solving process (cf. 4.2.2). As it is entirely a divergent thinking strategy, convergent thinking must be provided at later point within each stage.

There are four rules of brainstorming (www.brainstorming.co.uk:):

- All criticism is forbidden to allow for free exploration of any and all ideas.
- 'Freewheeling' is encouraged with zany ideas welcomed, as it is easier to later refine ideas than to make them more unique.
- Quantity of ideas is sought, as the more ideas are expounded, the better the likelihood becomes that useful ideas will be generated.
- Combining, improving on, and expanding on previous ideas is encouraged to allow for the best possibilities.

4.6.9 REVERSE BRAINSTORMING

This process involves listing ways of achieving a goal opposite of the one actually desired. What is most interesting about this process is that the ideas proposed using this technique are very often the ones currently in practice (www.brainstorming.co.uk).

In the next paragraph, attention will be given to different techniques regarding creative thinking.

4.7 CREATIVE THINKING TECHNIQUES

Without using special techniques, creative thinking still occurs but usually in an accidental way. Using this accidental or logical progression process often takes a long time for products to develop and improve (www.brainstorming.co.uk; Gordon,1994 ; Altity, 2001:61).



Using special techniques, deliberate creative thinking can be used to develop new ideas. The techniques force a wide range of merging ideas to happen to spark off new thoughts and processes. Developments of products occur much more rapidly using these techniques than by accident. Many people who are known as being creative use these techniques but may not be aware that they are using them because they have not been formally trained in them. (www.brainstorming.co.uk; Mansour, 1989:176; Altity, 2001:61-62).

Ongoing creative thinking is the continuous investigation, questioning and analysis that develop through education, training and self-awareness. Ongoing creativity maximizes both accidental and deliberate creative thinking. It is a quest for improvement which never ends. It is an acceptance of and a looking for continuous change that differentiates between ongoing creativity and mental inflexibility. Ongoing creativity takes time and practice to become skillful. Ongoing creative thinking soon becomes an attitude not a technique (<u>www.brainstorming.co.uk</u>; Altity, 2001:62).

The first step to take is to learn the creative thinking techniques so that people can use them deliberately to come up with new ideas. They will then be at an immediate advantage to those who do not know how to use them. They should then practice them to increase their skills at ongoing creative thinking. With practice they may even find it unnecessary to use specific techniques because they may soon have too many ideas without using them at all (www.brainstorming.co.uk; Altity, 2001:63-64).

4.7.1 BRAINSTORMING

Brainstorming has also been referred to paragraph 4.2.2 and 4.6.8 where aspects were discussed. Alex Osborn (1991), advertising writer of the fifties and sixties, has contributed many very powerful creative thinking techniques. Brainstorming is probably the best known and certainly one of the most powerful. He compiled these techniques in his well known book," *Applied Imagination*" as mentioned by Harris (2002:1).

Brainstorming is an idea generating technique. Its main goals are (Harris, 2002:1):

• To break out of our habit-bound thinking.

• To produce a set of ideas from which to choose.

4.7.1.1 Basic guidelines for brainstorming

Brainstorming is useful for attacking specific (rather than general) problems and where a collection of good, fresh, new ideas (rather than judgment or decision analysis) are needed (Harris, 2002:1).

For example, a specific problem like how to mark the content of pipes (water, steam, etc.) would lend itself to brainstorming much better than a general problem like how the educational system can be improved. Note, though, that even general problems can be submitted to brainstorming with success (Harris, 2002:1).

Brainstorming can take place either individually or in a group of two to ten, with four to seven being ideal. (Osborn recommends an ideal group size of twelve, though this has proven to be a bit unwieldy). The best results are obtained when the following guidelines are observed (Harris, 2002:1-2).

- **Suspend judgment.** This is the most important rule. When ideas are brought forth, no critical comments are allowed. All ideas are written down. Evaluation is to be reserved for later. People have been trained to be so instantly analytic, practical, and convergent in their thinking that this step is very difficult to observe, but it is crucial. To create and criticize at the same time is like watering and pouring weed killer onto seedlings at the same time.
- Think freely. Freewheeling, wild thoughts are fine. Impossible and unthinkable ideas are fine. In fact, in every session, there should be several ideas so bizarre that they make the group laugh. It is to be remembered that practical ideas very often come from silly, impractical, impossible ones. By permitting oneself to think outside the boundaries of ordinary, normal thought, brilliant new solutions can arise. Some 'wild' ideas turn out to be practical, too.

For example, when the subway was being dug under Victoria station in London, water began seeping in. What are the ways to remedy this? Pumps, steel or concrete liners? The solution:

freeze it. Horizontal holes were drilled into the wet soil and liquid nitrogen was pumped in, freezing the water until the tunnel could be dug and cemented (Harris, 2002:1-2).

Tag on. Improve, modify, build on the ideas of others. What's good about the idea just suggested? How can it be made to work? What changes would make it better or even wilder? This is sometimes called piggybacking, hitchhiking, or ping ponging. Somebody's idea is to be used as stimulation for one's own improvement or variation. As was noted earlier, changing just one aspect of an unworkable solution can sometimes make it a great solution.

Example problem: How can we get more students at our school? Brainstorm idea: Pay them to come here. That sounds unworkable, but what about modifying it? Pay them with something other than money--like an emotional, spiritual, or intellectual reward or even a practical value-added reward like better networking or job contacts? (Harris, 2002:1-2).

• Quantity of ideas is important. Concentration should be on generating a large number of ideas so that later on they can be sifted through. There are two reasons for desiring a large quantity. First, the obvious, usual, stale, unworkable ideas seem to come to mind first, so that the first, say, 20 or 25 ideas are probably not going to be fresh and creative. Second, the larger one's list of possibilities, the more one will have to choose from, adapt, or combine. Some brainstormers aim for a fixed number, like 50 or 100 ideas before quitting the session.

Through brainstorming a number of creative new ideas may be generated, however, these must be accompanied by questions.

4.7.2 IDEA GENERATING QUESTIONS

Asking questions to stimulate curiosity and creativity has proven helpful for all kinds of endeavours, whether problem solving, product development, inventing, or communication. A written list of mind-stimulating questions is useful because it reminds people of approaches and

possibilities that we otherwise would not have in mind. It is sometimes possible to be creative in a thorough and even orderly way (Harris, 2002:4).

A useful tool to apply is the six questions journalists have to answer when writing an article.

4.7.3 THE JOURNALISTIC SIX

There are six key questions that journalism students are taught to answer somewhere in their news articles to make sure that they have covered the whole story. For creative thinkers, these questions stimulate thinking about the idea in question and allow approaches to it from various angles (Nashawati, 1985:286; Harris, 2002:4-5):

- Who? (Actor or agent) Who is involved? What are the people aspects of the problem? Who did it, will do it? Who uses it, wants it? Who will benefit, will be injured, will be included, and will be excluded?
- What? (Act) What should happen? What is it? What was done, ought to be done, was not done? What will be done if X happens? What went or could go wrong? What resulted in success?
- When? (Time or timing) When will, did, should this occur or be performed? Can it be hurried or delayed? Is a sooner or later time preferable? When should the time be if X happens?
- Where? (Scene or source) Where did, will, should this occur or be performed? Where else is a possibility? Where else did the same thing happen, should the same thing happen? Are other places affected, endangered, protected, aided by this location? Effect of this location on actors, actions?
- Why? (Purpose) Why was or is this done, avoided, permitted? Why should it be done, avoided, permitted? Why did or should actor do it? Different for another actor, act, time, places? Why that particular action, rule, idea, solution, problem, disaster, and not another? Why that actor, time, location, and not another?

 How? (Agency or method) How was it, could it be, should it be done, prevented, destroyed, made, improved, altered? How can it be described, understood? How did beginning lead to conclusion?

4.7.4 HISTORICAL EXAMINATION

These questions are especially useful for generating ideas for improving something (the evolutionary approach), but they also help to break thinking out of the evolutionary mode and put it into the revolutionary mode by returning the thinker to the origin and purpose of the idea or solution. By returning to the roots of the problem, a new vision can be created (Harris, 2002:5):

- **Essence.** What is it? Object, concept? What is it made of? What is its real, elementary nature? What are its parts? What is it like, unlike? (Similes and metaphors help in understanding abstractions). What is it related to? What are its various kinds, facets, shades? What is it a part of? Which part of it is unusual or outstanding? In what forms does it appear? Is it typical or atypical of its kind? What is it not? What is it opposed to? How is it different? What makes it different?
- Origin. Where did it come from? How was it made or conceived or developed? What caused it? If an idea, how did it arise? Are its origins meaningful now? What makes it spread or multiply or gain adherents? What was the reason behind it? Is the reason still valid or useful? Why? Why not? Is it still needed? What influences it? Does it change? Can it, should it be changed, strengthened, eliminated? What could have prevented, delayed, encouraged it?
- **Purpose.** What does it do? How does it work? What is its purpose? Is the purpose fulfilled? Better than by its predecessor? Can it, should it be improved? Is it helpful or harmful in intent? What are its implications; what does it lead to? Does it have obvious or hidden consequences? Does it have more than one purpose? What are its immediate effects and its long-term effects? Is its actual function the same as the original purpose intended by its originator? Can it be put to other uses?
- **Import.** What is its overall significance? What is its significance to man, environment, civilization, happiness, virtue, safety, comfort, etc.? How is it important? Is it a key element in life, civilization, local area, one man's existence? Is it necessary? Is it desirable?

• **Reputation.** What do you think about it? What are your underlying assumptions? What do others think about it? Do you find consensus, division? Is it good, bad, helpful, and harmful in fact or in the opinion of others? Can you resolve any differences between truth and opinion, intent, and actuality, pro and con members? What weaknesses are commonly identified? Are there obvious areas of desired change or improvement or elimination?

After exploring different techniques and strategies for creative thinking it is also important to explain aspects that may hinder creative thinking.

4.8 MYTHS ABOUT CREATIVE THINKING AND PROBLEM SOLVING

Several myths exist with regard to creative thinking. These are:

- Every problem has only one solution (or one right answer). The goal of problem solving is to solve the problem, and most problems can be solved in any number of ways. If a solution that works is discovered, it is a good solution. There may be other solutions thought of by other people, but that does not make that solution wrong. What is THE solution to putting words on paper? Fountain pen, ball point, pencil, marker, typewriter, printer, Xerox machine, printing press? (Qatamy, 1998:284 ; Harris, 1998:6).
- The best answer/solution/method has already been found. Look at the history of any solution set and that improvements can be seen, new solutions, new right answers, are always being found. What is the solution to human transportation? The ox or horse, the cart, the wagon, the train, the car, the airplane, the jet, the SST? Is that the best and last? What about pneumatic tubes, hovercraft, even Star Trek type beams? (Adams, 1979:52; Harris, 1998:6).

What is the best way to put words on paper? The word processor? Is that the last invention? How about voice recognition, or thought wave input?

On a more everyday level, many solutions now seen as best or at least entrenched were put in place hastily and without much thought--such as the use of drivers' licenses

for ID cards or social security numbers for taxpayer ID numbers. Other solutions are entrenched simply for historical reasons: they've always been done that way. Why do shoe laces still exist, when technology has produced several other, better ways to attach shoes to feet (like velcro, elastic, snap buttons, and so on) (Qatamy, 1998:285; Harris, 1998:6-7).

• **Creative answers are complex technologically.** Only a few problems require complex technological solutions. Most problems you'll meet with require only a thoughtful solution requiring personal action and perhaps a few simple tools. Even many problems that seem to require a technological solution can be addressed in other ways (Qatamy, 1998:286; Harris, 1998:6-7).

For example, what is the solution to the large percentage of packages ruined by the Post Office? Look at the Post Office package handling method. Packages are tossed in bins when you send them. For the solution, look at United Parcel. When you send a package, it is put on a shelf. The change from bin to shelf is not a complex or technological solution; it's just a good idea, using commonly available materials (Harris, 1998:7).

Ideas either come or they don't. Nothing will help. There are many successful techniques for stimulating idea generation. These are discussed and applied (Qatamy, 1998:286; Harris, 1998:6-7). Please refer to 4.7.2.

If such myths are considered carefully and thought of as such, many people would become creative thinkers. It may be a good idea if teachers help their students dispel such myths.

4.9 MENTAL BLOCKS TO CREATIVE THINKING AND PROBLEM SOLVING

The following are mental blocks or obstacles which impede creative thinking:

Prejudice. The older people get, the more preconceived ideas they have about things. These preconceptions often prevent them from seeing beyond what they already know or believe to be possible. They inhibit them from accepting change and progress (Gordon, 1995:28; Harris, 1998:7).

Example problem: How to divide a piece of cake equally between two children so they won't complain that one child is preferred over the other: "You gave him the bigger piece; you like him better! Waaaah!" Solution: Put the children in charge of dividing the cake. Our prejudice is that immature, selfish children cannot do the job. But the solution, one cuts the cake, the other has first choice of pieces, works very well (Harris, 1998:7).

• **Functional fixation.** Sometimes people begin to see an object only in terms of its name rather in terms of what it can do. Thus, people see a mop only as a device for cleaning a floor, and do not think that it might be useful for clearing cobwebs from the ceiling, washing the car, doing aerobic exercise, propping a door open or closed, and so on (Harris, 1998:8).

There is also a functional fixation of businesses. In the late nineteenth and early twentieth centuries the railroads saw themselves as railroads. When automobiles and later aeroplanes began to come in, the railroads did not adapt. "That's not our business," they said. But if they had seen themselves as in the people transportation business rather than in the railroad business, they could have capitalized on a great opportunity (Harris, 1998:8).

And there's a functional fixation of people, too. If people think for a minute how they reacts when they see their pastor mowing their lawn, or their auto mechanic on a television show promoting a book. Stereotyping can even be a form of functional fixation--how many people would laugh at a blonde quoting Aristotle? Too often people permit only a narrow range of attitudes and behaviours in other people, based on bias, prejudice, hasty generalization, or limited past experience. Statements like, "I can't believe he said that," or "Imagine her doing that," and so on. But recall the proverb, "The goal of my life is not to live down to your expectations" should be thought of carefully (Harris, 1998:8).

• **Learned helplessness.** This is the feeling that one doesn't have the tools, knowledge, materials, ability, to do anything, so they might as well not try. People are trained to rely

on others for almost everything. We think small and limit ourselves. But the world can be interacted with.

If you are in need of information, there are different sources such as libraries, bookstores, friends, professors, and the Internet (Harris, 1998:8-9).

• **Psychological blocks.** Psychological blocks prevent you from doing something just because it does not sound good or right, which is inhibiting. Overcoming such stumbling blocks can be really beneficial. Navy commandos in Vietnam overcame their blocks and put on women's panty hose when they marched through the swamps and jungle. The pantyhose cut down on the friction and rubbing from the plants and aided in removing the dozens of leeches after a mission. Overcoming the block to using one's own blood to write a help note could save one's life someday if one was kidnapped (Harris, 1998:9).

The discussion above has showed that, because of some factors, people become inhibited from being creative. The following question might be asked: Can education help people remove such jeopardy, and move forward to being creative? Strategies and techniques mentioned in an earlier section as well as the attitudes discussed in the next section in this chapter could be the answer to such a question. Teachers may concentrate on training their students to render their student to think more creatively using the tools discussed above.

4.10 ATTITUDES TOWARDS CREATIVITY

One's attitude is important with regard to the development of creative thinking. In this section attention will be given to different attitudes and its contribution to creative thinking.

4.10.1 CREATIVE ATTITUDE

In order to be a successful creative thinker it is crucial to have that creative attitude that makes people face the world and their problems in an exciting and flexible way. The following three



principles are considered as fundamental for a creative life (Alsorour, 2002:265-266; Alremawy, 1997:65-69):

• Postpone your judgment

Postponing judgment means that for a certain period of time, every idea is allowed to be heard without judging it. More and better ideas are gotten in less time. Afterwards judgment and evaluation become more effectively undertaken than one would have been otherwise; criticizing is stopped for a moment. Every idea should be given a chance. What is valuable in it should be looked at no matter whether it is not a good idea, it might inspire other ideas. If criticism is done immediately, the generation of great ideas is inhibited.

Look for alternatives

If a person has a problem and he or she is looking for ideas, look for many alternatives. The more ideas one has, the more likely there will be a winner amongst them. A good tip: set a target before searching new ideas, e.g. create more than 30 new ideas.

Opportunity Finding

If a person is surrounded by a mass of great ideas, so one will start looking for opportunities now. One does not wait for problems to get creative. One will look around one and see there is still a lot to improve. If people encounter problems, they would see them as opportunities to find new ideas.

4.10.2 POSITIVE ATTITUDES FOR CREATIVITY

These attitudes are intended to facilitate creativity:

 Curiosity: Creative people want to know things--all kinds of things-- just to know them. Knowledge does not require a reason. The question, "Why do you want to know that?" seems strange to the creative person, who is likely to respond, "Because I don't know the answer." Knowledge is enjoyable and often useful in strange and unexpected ways (Alsaqqar, 1984:44-45; Harris, 1998:9). Knowledge and especially a wide range of knowledge, is necessary for creativity to flourish to its fullest. Much creativity arises from variations of a known or combinations of two known. The best ideas flow from a well equipped mind. Nothing can come from nothing (Harris, 1998:9).

In addition to knowing, creative people want to know why. What are the reasons behind decisions, problems, solutions, events, facts, and so forth? Why this way and not another? And why not try this or that?

The curious person's questioning attitude toward life is a positive one, not a destructive one reflecting skepticism or negativism. It often seems threatening because too often there is no good reason behind many of the things that are taken for granted--there is no 'why' behind the status quo.

Everyone may be asked questions. The same question can be asked of different people just to enable one to compare the answers. People can look into areas of knowledge they have never explored before, for example cloth dying, weather forecasting, food additives, ship building, or the toxicity of laundry detergents.

- **Challenge**. Curious people like to identify and challenge the assumptions behind ideas, proposals, problems, beliefs, and statements. Many assumptions, of course, turn out to be quite necessary and solid, but many others have been assumed unnecessary, and in breaking out of those assumptions often comes a new idea, a new path, a new solution (Alsaqqar, 1984:46; Harris, 1998:10).
- **Constructive discontent**. This is not a whining, griping kind of discontent, but the ability to see a need for improvement and to propose a method of making that improvement. Constructive discontent is a positive, enthusiastic discontent, reflecting the thought, "Hey, I know a way to make that better" (Alsaqqar, 1984:47- 48; Harris, 1998:10).

Constructive discontent is necessary for a creative problem solver, for if people are happy with everything the way it is, they do not want to change anything. Only when they become discontent with something, when they see a problem, will they want to solve the problem and improve the situation (Harris, 1998:10).

One of the hallmarks of the constructively discontented person is that of a problem seeking outlook. The more problems a person finds, the more solutions and therefore improvements can be made. Even previously solved problems can often be solved again, in a better way. A constructively discontented person might think, "This is an excellent solution, but I wonder if there isn't another solution that works even better (or costs less, etc)" (Harris, 1998:10-11).

Another characteristic of constructive discontent is the enjoyment of challenge. Creative people are eager to test their own limits and the limits of problems, willing to work hard, to persevere and not give up easily. Sometimes the discontent is almost artificial--they are not unhappy with the status quo of some area, but they want to find something better just for the challenge of it and the opportunity to improve their own lives and those of others (Harris, 1998:11).

• A belief that most problems can be solved. By faith at first and by experience later on, the creative thinker believes that something can always be done to eliminate or help alleviate almost every problem. Problems are solved by a commitment of time and energy, and where this commitment is present, few things are impossible (Alsaqqar, 1984:48-49; Harris, 1998:11).

The belief in the possibility that problems can be solved is especially useful early on in attacking any problem, because many problems at first seem utterly impossible and scare off the faint-hearted. Those who take on the problem with confidence will be the ones most likely to think through or around the impossibility of the problem (Harris, 1998:11).

• The ability to suspend judgment and criticism. Many new ideas, because they are new and unfamiliar, seem strange, odd, bizarre, even repulsive. Only later do they become 'obviously' great. Other ideas, in their original incarnations, are indeed weird, but they lead to practical, beautiful, elegant things. Thus, it is important for the creative thinker to be able to suspend judgment when new ideas are arriving, to have an optimistic attitude toward ideas in general, and to avoid condemning them with the typical kinds of negative responses like, "That will never work; that's no good; what an idiotic idea; that's impossible," and so forth. Hospital sterilization and antiseptic procedures, television, radio, the Xerox machine, and stainless steel all met with hohums and even hostile rejection before their persevering inventors finally sold someone on the ideas (Alsaqqar, 1984:49-51; Harris, 1998:11).

It is to be remembered then that (1) an idea may begin to look good only after it becomes a bit more familiar or is seen in a slightly different context or clothing or circumstance and (2) even a very wild idea can serve as a stepping stone to a practical, efficient idea. Quick judgment of these fragile early ideas and their source can destroy the ideas. The first rule of brainstorming (see part 4.6.8) is to suspend judgment so that people's idea-generating powers will be free to create new ideas without the restraint of fear or criticism. They can always go back and examine critically what was thought out (Harris, 1998:11; Nashawati, 1996:317).

• Seeing the good in the bad. Creative thinkers, when faced with poor solutions, don't cast them away. Instead, they ask, "What's good about it?" because there may be something useful even in the worst ideas. However little that good may be, it might be turned to good effect or made greater (Harris, 1998:12).

People easily fall into either/or thinking and believe that a bad solution is bad through and through, in every aspect, when in fact, it may have some good parts they can borrow and use on a good solution, or it may do inappropriately something that's worth doing appropriately. The bad solution has just one really glaring bad part, which when remedied, leaves quite a good solution (Harris, 1998:12).

• **Problems lead to improvements**. The attitude of constructive discontent searches for problems and possible areas of improvement, but many times problems arrive on their own. But such unexpected and perhaps unwanted problems are not necessarily bad, because they often permit solutions that leave the world better than before the problem arose (Alsaqqar, 1984:52; Harris, 1998:12).

Consider examinations or papers. When a student does not do as well as expected, he or she thinks, "Oh no!" but actually, he or she has a good insight into what he or she does not know and still need to learn. They are aware of the geography of their knowledge in a much more detailed form than before the errors showed up (Harris, 1998:12).

- A problem can also be a solution. A fact that one person describes as a problem can sometimes be a solution for someone else. It was noted that above creative thinkers can find good ideas in bad solutions. Creative thinkers also look at problems and ask, "Is there something good about this problem?" (Alsaqqar, 1984:52-53; Harris, 1998:12-13).
- **Problems are interesting and emotionally acceptable**. Many people confront every problem with a shudder and a turn of the head. They do not even want to admit that a problem exists--with their car, their spouse, their child, their job or their house. As a result, often the problem persists or even become a crisis (Harris, 1998:13).

Creative people see problems as interesting challenges worth tackling. Problems are not fearful beasts to be feared or loathed; they are worthy opponents to be jousted with and unhorsed. Problem solving is fun, educational, rewarding, ego building, helpful to society (Freeman, 1995:190; Harris, 1998:13-14).

In general or in summary, the creative person: (Harris, 1998:14):

- Is curious
- Seeks problems
- Enjoys challenge
- Is optimistic
- Is able to suspend judgment
- Is comfortable with imagination
- Sees problems as opportunities
- Sees problems as interesting
- Finds problems emotionally acceptable

- Challenges assumptions
- Does not give up easily: perseveres, works hard.

4.10.3 MISCELLANEOUS GOOD ATTITUDES

The previous section delineated positive attitudes that facilitate creativity. The following are some other related attitudes that could fulfill the same function.

- **Perseverance**. According to Alsorour 1996:12, most people fail because they spend only nine minutes on a problem that requires ten minutes to solve. Creativity and problem solving are hard work and require fierce application of time and energy. There is no quick and easy secret. People gain knowledge by study and research. They must put their knowledge to work by hard thinking and protracted experimentation. They have surely read of the difficulties and setbacks faced by most of the famous inventors, for example: how many filaments Edison tried before he found a working one, how many aircraft designs failed in the attempt to break the sound barrier. Planning to persevere is planning to succeed. (Alsorour, 1996:12; Harris, 1998:13).
- A flexible imagination. Creative people are comfortable with imagination and with thinking so-called weird, wild, or unthinkable thoughts, just for the sake of stimulation. During brainstorming or just mental playfulness, all kinds of strange thoughts and ideas can be entertained. And the mind, pragmatist that it is, will probably find something useful in it all. We will look at several examples of this later on (Alsorour, 1996:12; Harris, 1998:13).
- A belief that mistakes are welcome. Modern society has for some reason conceived the idea that the only unforgivable thing is to fail or make a mistake. Actually failure is an opportunity; mistakes show that something is being done. So creative people have come to realize and accept emotionally that making mistakes is not a serious problem. One chief executive of a big American corporation warns all his newly hired managers, "Make sure you make a reasonable number of mistakes." Mistakes are educational and can lead to success because they mean you are doing something (Alsorour, 1996:13; Harris, 1998:13).

Sir Francis Pettit Smith, one of the early developers of the screw propeller, tried one design in 1836. During the test, half of it broke off--what a failure--but then the boat increased in speed substantially, revealing the efficiency of a new design, formed from a mistake (Harris, 1998:13).

In sum, as Vergil once said, "They can who think they can." Having the proper positive attitude about generating new and useful ideas and solving problems is really a large part of the whole process (Alsorour, 1996:14; Harris, 1998:13).

A positive and innovative attitude is necessary for creative thinking. Perseverance, flexibility and the willingness to learn through mistakes encourage creativity. The role of creative thinking in education needs to be explored.

4.11 CREATIVE THINKING AND EDUCATION

The teacher's role could be described as one of structuring activities, assignments and lessons which incorporate all of the above discussed aspects of critical and creative thinking into the subjects which they teach. Teachers would attempt to do this in ways which build upon their students' innate abilities, interests, experiences and background knowledge (Carter, 1992:38; Alhorany, 2002:47-52; Alzogoul, 2002:155-159).

Getting students to work on thinking skills and creative thinking can be fun. Here are some ideas that a teacher may wish to copy and then modify for use with his or her class as suggested by Carter, 1992:38; Alhorany, 2002:47-52; Alalosy, 1985:76-77:

- Brainstorming is to be practised with class activities. One should remember to set standards for behaviour so that each child feels free to participate.
- Role playing is required with "stories that end but aren't finished." Students are to be given chance to come up with multiple solutions to problems in the stories.

Students are to be told that their book report, science report, or social studies project must be presented in a way that differs from the way they usually present reports. Have

them think about acceptable ways to present the content that will be unique in some way. Make sure they discuss ideas with you before going ahead with their ideas.

- Students are to be encouraged to do historical essays from the viewpoints of, for instance, a child living during that time, a space traveller, an extinct animal or an ancient tree.
- Students should be given the chance to use computers to develop presentations for ideas such as the following: crime solving in the year 2010; what if Abraham Lincoln (Gandhi, King, or Kennedy) had not been assassinated; lasting peace in (and with) the Middle East; health and fitness for everyone (adults and students) in the school; an inventive (invention) idea; cities of the future; the one thing the world needs; a new game (or rule) for the NFL (or major league baseball, basketball, hockey, soccer).
- Students may be given an assignment to develop ideas about how to teach drug, smoking, alcohol abuse education effectively. What would they do differently than what is being done in their school?
- A talent show can be presented during which each student shares a special talent or goals related to a talent (These might be poems, essays, songs, art work, athletic achievements, academic achievements or helping others).
- Students may be given the name of another student in the class. They may be encouraged to write a very positive piece about what they believe are the talents of this person and why these talents are important not only to the person, but to the community and beyond. Specific guidelines and standards are expected to be set for this activity. The work is to be checked before letting the students read them in class just in case something may have been written that may (sometimes inadvertently) offend the other student.
- A round-robin story can be a start. Writing the first chapter (depending upon grade and ability level, this may be only a paragraph or two or much more). Then individual volunteers are taken to write each succeeding chapter. The story should end when the last student is finished writing. The teacher has to remember to review with students what is appropriate for the story.

- Student groups or individual students should be given a number of ingredients or parts. Go over standards for the activity. Then, they are asked to make something (art, invention, food--whatever) out of what you have given them.
- Students are induced to think about the problems related to so-called 'cool' groups in a school or class. What ideas do your students have that would make everyone feel appreciated in a school or class?
- Students are to be asked to compile their own list of people they admire. How did (are) these people make / (making) a difference? Do the students view these people as role models? Why or why not?
- Students are asked to consider the problems of thinking differently. If they, for example, were to 'think differently' than the other students at school, would there be problems? What types of problems did (do) famous people who thought (think) differently face? Does someone have to be brave to think differently?
- Students are given an assignment to create their own 'masterpiece' of some type. Ask them to create something they'll be proud to show to their parents and the class.
- Students are induced to think about creative people such as Jim Henson. Why did he become so famous? What set him apart from others who were puppeteers or puppet-makers?
- Students can be asked: How easy is it to think differently? Are habits a problem? Are they "set in their ways" already? What do they think of their abilities? Remind them that people such as Albert Einstein and Thomas Edison believed that success came from a curious mind and hard work, not simply intelligence.
- A goal-setting assignment can be given to students. The progress of the goal setting should be reviewed every few months.

The above mentioned points stimulate diverse and creative thinking which can be used effectively in all subjects and classrooms but teachers need to plan such activities thoroughly.



4.12 SUMMARY

This chapter concentrated on creative thinking, its definition, its relationship with problem solving and other related processes. The activities, strategies and techniques were enumerated.

Seven thinking activities were delineated: comparison, analysis, elaboration, fluency, originality, evaluation and flexibility. If teachers concentrate on those activities, students' creativity will be enhanced.

Six creative methods were discussed. They are namely, Wallis' (1913) four stage model, the fivestep CPS, Kolberg and Bagnall's design process, Gorden's Synectics, Zwicky's Morphological approach, Sociodrama, and Osborn's Brainstorming. They show that creativity can be fostered in different ways.

Some techniques were identified to show to teachers practical ways to initiate and encourage creativity. These were: brainstorming, idea generating questions, the journalistic six, and historical examination.

Some wrong ideas and myths about creativity can hinder the appearance or enhancement of creativity. They can take forms such as mental blocks and myths people hold about creativity.

As creativity can be fostered by attitudes, some practical topics for teachers were discussed in the last section of the chapter. These should be taken into account if teachers want to encourage their students to be creative.

The chapter finally gave guidelines to be used for fostering creativity education.

The following figure summarises the literature review of the chapter.



Figure 4.1: Summary of chapter 4

CHAPTER 5

RESEARCH DESIGN

5.1 INTRODUCTION

In the previous chapters, a detailed literature review on the factors related to the study and its variables were presented. An extensive overview was given about the UAE society, its education system and its vision for the future. The independent variables are the upbringing styles at home and locus of control. The dependent variable is creative thinking.

This chapter will describe the research design used to assess the relationship between these variables.

Ethical aspects

To conduct the research, the following ethical principles were applied:

- Informed consent was obtained from the principals of the schools and the parents for participation in the research. The aims of the research project was also explained to the students so that they could decide if they wanted to participate. Participation was thus voluntary and no deception occurred.
- The students remained anonymous.
- The researcher studied various books on research methodology and consulted experts when necessary, for example with regard to the statistical analysis.
- All results were honestly reported.

5.2 PROBLEM STATEMENT

5.2.1 GENERAL PROBLEM STATEMENT

As stated in chapter one (1.3.2), the general research problem is defined as follows:

Is there a significant relationship between family upbringing style and locus of control with creative thinking?

5.2.2 SPECIFIC PROBLEM STATEMENTS

The following are specific research problem statements, which were identified during the literature review and which direct the statement of the hypotheses and the statistical techniques used for analysis:

- Is there a significant relationship between gender and locus of control in the study sample?
- Is there a significant relationship between gender and upbringing style in the study sample?
- Is there a significant relationship between locus of control and upbringing style in the study sample?
- Is there a significant relationship between gender and the creative thinking in the study sample?
- Is there a significant relationship between locus of control and creative thinking in the study sample?
- Is there a significant relationship between upbringing style and creative thinking in the study sample?

• Is there any significant effect between the combination of the independent variables (gender, upbringing style and locus of control) on the creative thinking of the study sample?

5.3 HYPOTHESES

Research problem 1

Null-hypothesis

H01: There is no significant relationship between gender and locus of control.

Experimental hypothesis

H1: There is a significant relationship between gender and locus of control.

• Research problem 2

Null-hypothesis

H02: There is no significant relationship between gender and upbringing style.

Experimental hypothesis

H2: There is a significant relationship between gender and upbringing style.

• Research problem 3

Null-hypothesis

H03: There is no significant relationship between locus of control and upbringing style.

Experimental hypothesis

H3: There is a significant relationship between locus of control and upbringing style.
• Research problem 4

Null-hypothesis

H04: There is no significant relationship between gender and creative thinking.

Experimental hypothesis

H4: There is a significant relationship between gender and creative thinking.

• Research problem 5

Null-hypothesis

H05: There is no significant relationship between locus of control and creative thinking.

Experimental hypothesis

H5: There is a significant relationship between locus of control and creative thinking.

• Research problem 6

Null-hypothesis

H06: There is no significant relationship between upbringing style and creative thinking.

Experimental hypothesis

H6: There is a significant relationship between upbringing style and creative thinking.

• Research problem 7

Null-hypothesis

H07: There is no significant effect of the combination of the independent variables on students' creative thinking.

Experimental hypothesis

H7: There is significant effect of the combination of the independent variables on students' creative thinking.

5.4 THE RESEARCH DESIGN

The research approach was quantitative. A survey design was used. The research was conducted as follows:

5.4.1 POPULATION

The population of the study included all the (male and female) learners registered for grade nine (9) in the preparatory schools in UAE for the academic year 2003/2004. Their number was 22 198 distributed in 142 schools.

5.4.2 SAMPLING

The sample of the study included 309 female and 228 male students (537 students in total) selected as follows:

- A directorate was randomly selected from a total of eight directorates by putting all the names in a container, shuffling the container and selecting one. The directorate that was thus selected consists of 19 preparatory schools.
- The names of the 19 schools were put in two different boxes so that schools for the two genders were kept separate. From the two boxes, four female and three male schools were randomly selected in the same way as the above.

Although the schools of only *one* directorate was included, the sample is seen as a probability sample of the population of possible schools in Ajman educational directorate for the following reasons:

• The student populations in all directorates are comparable as the structure of the society in all emirates is the same.

• More important, the education system is centralized. Hence, all aspects of the education system, teachers, programmes, curricula et cetera are uniform.

Table 5.1 shows the distribution of the study sample according to their gender, school and number of students in each school.

Gender	The preparatory school names	No. of	No. of	Total No. of
		sections	students	students
F	Al- Zawra'	4	86	
F	Um- Ammar	4	82	
F	Khadeejah	4	76	309
F	That Alnetaqain	3	65	
М	The Islamic scientific institute	4	70	
М	Alhasan bin Alhaytham	4	81	228
М	Alnuaman bin Basheer	4	77	
	Total	27	537	537

Table 5.1 Schools and number of students

5.4.3 INSTRUMENTS

Three scales were used to collect the data of the study. These scales were:

5.4.3.1 The Rotter Internal-External Locus of Control Scale

(a) Description of the scale

This scale has been translated into the Arabic language and adapted to the Arabic environment by many researchers, such as Barhoum (1979); Alhersh (1992); Jebriel (1996) and Abu Hilal (2002). It contains 29 pair of items, 23 of them expressed the internal-external attitudes towards reinforcement sources. The other six pairs of items were used as distracters. See Appendix A.

The respondent had to choose from each pair the item that corresponded with his / her attitude. Students were thus classified into two categories:

- Students with an internal locus of control: are those who get scores between 0 and 11.
- Students with an external locus of control: are those who get scores between 12 and 23.

See Appendix A.

(b) Validity of the scale

Validity refers to the ability of the instrument, or test, to measure what it is supposed to measure and to reflect the true differences in the variables that are being measured (De Vos, 1998: 83). This study used a validated instrument. Barhoum (1979:28) used the following measures of validity: face validity and predictive validity. (Barhoum used the concept *construct* validity and not *face* validity. However, the method of judgement that was used corresponds to what De Vos et al (1998:84) calls *face* validity and is therefore discussed as face validity.)

(i) Face validity

Face validity concerns the superficial appearance or face value of a measurement procedure. The question that is asked is: Does the items appear to measure what they are supposed to measure?

To ascertain the construct validity of Rotter's scale, Barhoum (1979:28) distributed the Arabic version to five psychologists in the Department of Psychology in Jordan University. They were asked to judge each item listed. They were to decide whether the item indicated internal or external locus of control. All judges (100%) agreed on the 35 items as they considered them to

be valid to a very high level. They criticized the rest of the 11 items. These were reformulated. The process was done again to reach agreement.



(ii) Predictive validity

Barhoum found that Rotter's scale had predictive validity for predicting that children of different ages differ significantly with regard to their creativity. He introduced the scale to two groups of different ages. The t-test showed a significant difference between their scores on the scale.

(c) Reliability of the scale

Reliability refers to the degree of consistency and/or accuracy with which the scale measures (Abu Zeena, 1998:69; Alzioud, 2002:135). Thus the more reliable the scale, the less likely other variables, unrelated to the objective of the test, will influence the measurements of the scale (McMillan & Schumacher, 1993:227).

Barhoum calculated the reliability of the Arabic translated form of Rotter's scale. He found that the reliability of the scaled items is 0.87 on the Chronbach Alpha correlation coefficient. Barhoum considered this coefficient to be acceptable for his Jordanian sample of students which are similar to the students used in this study.

5.4.3.2 Upbringing style scale

(a) Description of the scale:

To elucidate upbringing styles in this study, an Arabic scale was used and applied. Abu Jabal (1983) prepared and developed this scale. It assumed that upbringing in family takes one of two types: the authoritative and the authoritarian style. Abu Jabal's scale (1983:24) was a result of direct contact with adolescents, following up their family problems and was based on his meetings with their parents and an extensive review of related literature. Two styles of family upbringing (authoritative/authoritarian) were identified.

He assumed that children's responses of authoritative (democratic) families are reflected in the following four attitudes:

• Parents take their opinions and feelings into consideration.

- Perception and awareness of adolescents of their parents' sacrifices and striving towards their happiness as well their satisfaction about the family's affective relationships that bind them together.
- Feeling of the adolescents that they have reached self-actualization.
- Adolescents perceive their parents as friends.

Children's responses of authoritarian families are reflected in the following four attitudes:

- Adolescents feel that their parents exert their authority on the adolescents and tend to refuse them privileges.
- They feel that their parents are biased in their dealing with brothers and sisters (they distinguish between them).
- They feel that their parents use punishment and hurt them psychologically.
- This means that authoritarian parents' behaviours towards their children are characterized by refusal, neglect, non-acceptance and resistance to fulfil the adolescents' needs and wishes.

The scale contains 56 items. These are divided into two equal numbers: 28 items reflect the democratic style. The other 28 reflect the authoritative style. Each set of seven (7) items describes one of eight attitudes. Each item is rated on a four-point scale which represents the frequency of the behaviour. The respondent has to choose one of four alternatives (always, often, sometimes, never). Scores (4, 3, 2, 1) are assigned to positive stated items. The reverse is applied on the negative statements (1, 2, 3, 4). The total score ranges from 56 to 224. Students were divided according to their scores on the basis of the median. Those above the median were considered to perceive their parents as authoritative (democratic) and those who scored less than the median were considered to have perceived their parents as authoritarian. See Appendix B.

(b) Validity of the scale

Abu Jabal (1983) adopted the raters' validity to calculate the upbringing scale validity. The eight categories of scale were introduced to specialized raters to judge each item on the linguistic formulation as well as whether the item measures the category to which it belongs. They responded to each item on a three-point scale (good= 3; average= 2; and weak= 1). The mean was calculated for each item. The item that reached two was accepted. All items were considered acceptable except three. These were reformulated as the raters suggested.

(c) Reliability of the scale

Abu Jabal (1983) introduced the scale to a randomly selected sample of students from the target population. The split half-correlation method was used. The calculated reliability was 0.71. The Spearman-Brown prediction equation rendered the reliability coefficient 0.83. This high coefficient shows the reliability and stability of the measured characteristic.

5.4.3.3 Torrance Tests of Creative Thinking (Form A)

(a) Description of the scale

The test was used to measure fluency, flexibility, originality and elaboration. These factors were measured through making respondents face some situation to which they were required to respond. The Torrance test contains two sub-tests: verbal and figural. Both have two forms each (A & B). One is verbal, the other is figural. The two forms are equivalent.

The verbal test contains seven separate sub-tests. The respondent is required to:

- Ask inquiry questions about an event.
- Give possible reasons for the occurrence of the event.
- Mention the expected consequences following the event.
- Formulate hypotheses to improve something.
- State alternative and unusual uses of something.
- Pose unfamiliar questions about something.

• Give expectations on a hypothetical situation.

The figural test contains the following sub-tests:

- Construct a picture in a certain way.
- Completion of a picture by adding open lines to incomplete shapes.
- Formulation of topics by using open, straight lines.

These tests measure four (4) abilities (fluency, flexibility, originality and elaboration).

The scores of the test depend on the respondents' responses. Thus there is no expected range of marks. The collected data has shown a range of (84-387).

See Appendix C.

(b) Validity of Torrance's tests

• The American version

The validity of Torrance's test is questioned as there are different interpretations of creative behaviour.

(i) Content validity

Torrance addressed the test content validity by studying and analysing the creative personality as well as the nature of the performance that is considered to be creative. He ensured that he included all relevant aspects.

(ii) Concurrent validity

This was achieved by including peers and teachers of respondents. Peers were asked to identify colleagues who could be characterised as being creative. Teachers are asked to categorise their students into two groups: those who think creatively and those who do not.

(iii) Predictive validity

Torrance introduced his test to students who were considered to be creative. They proved to be those who could think creatively. The students wrote stories, or poetry, or conducted research. When their work was evaluated, significant correlations were found between the test scores and the marks obtained for creativity.

• The Arabic version

Abu Hatab and Sulaiman (1979) consider that the units of the test and its language are not strange to the 20th century. They made it possible for the test to be applied in the Arab world without facing any serious problems in its adaptation or standardization. This is because the Torrance test language and items do not pose any cultural bias problems.

(i) Discrimination validity

Alshanty (1983) has applied the Torrance test in Jordan. The validity was used by comparing students' scores on the Torrance test and their scores on creative activities they performed. There was a significant difference between those who were classified as creative and those who were not classified as such. The significant differences were noticed on all forms of creativity, namely: fluency, flexibility, originality and elaboration.

(ii) Homogeneity

Alshanty has also calculated the functional congruence coefficient on the basis of the correlations between the scores of the partial test of fluency, flexibility, originality, and elaboration with the total score of the whole test. The same thing was done on the total scores of each of those partial tests.

The correlation of the total score obtained on the verbal form and teachers' rating were 0.703. The correlation of the figure form using the scores as above was 0.675.

(c) Reliability of Torrance's Creative thinking Test

• The American version

The reliability and validity coefficients of the tests of creativity are usually low. Torrance argues that this is due to many factors that account for creativity performance. This, however, does not mean that creativity measurement tools should not be relied on. Nor should it be assumed that they lack credibility as a result of low reliability and validity coefficients.

(i) Correction reliability

Torrance found that the correction reliability coefficient between the scorer and two other scorers was high as the correlation usually exceeded (0.90).

(ii) Test - retest reliability

Torrance calculated the reliability of the tests in the four forms by reintroducing the test after a two-week interval. The correlations between the test and retest in the verbal were 0.93, 0.84 and 0.88 successively for fluency, flexibility and originality. The correlations for the figure tests were 0.71, 0.73, 0.85, 0.83 consecutively for fluency, flexibility, originality and elaboration.

On a second study, the time interval between the test and re-test was eight (8) months. The correlations for the verbal were 0.87, 0.84, and 0.89 for fluency, flexibility and originality. As for the figure form, the correlations were as follows: fluency= 0.50, flexibility= 0.63, originality= 0.60 and elaboration= 0.71.

• The Arabic version

AlShanti (1983) used the test- retest form to calculate the reliability of the scale in its Arabic version. He found that the reliability coefficients for different sub-tests varied between 0.47 and

0.81. The overall reliability coefficient reached 0.70 on the verbal form and 0.66 on figure form. All of these coefficients were significant.

5.5 ANALYSIS OF DATA

The following statistical techniques were used to test the hypotheses and to determine the significance of the differences and dependencies:

- T-tests
- Chi-square tests
- Pearson's bivariate and multi-variate correlation.
- F-tests
- Stepwise regression analysis.

5.6 SUMMARY

This chapter focused on the statement of the research problems and hypotheses. The different test instruments to determine locus of control, upbringing style and creativity were explained. Validity and reliability were addressed. Finally, the various statistical techniques that are used to test the hypotheses in this research were also identified.

CHAPTER 6

FINDINGS AND DISCUSSION OF FINDINGS

6.1 INTRODUCTION

In the previous chapter the research design was explained. In this chapter the findings and results are reported and discussed. Each research problem and each hypothesis is discussed separately. The results are presented in tables.

6.2 RESULTS AND DISCUSSION

The general research problem is defined as follows:

Is there a significant relationship between family upbringing style and locus of control and creative thinking?

Results are reported in relation to the different research questions and hypotheses of the study. Hence frequencies, percentages and other numerical data are shown.

6.2.1 THE FREQUENCIES AND PERCENTAGES OF RESPONDENTS WITH REGARD TO THE STUDY VARIABLES

This section reports frequencies and percentages of the sample based on locus of control and upbringing style scores.

6.2.1.1 Frequencies and percentages of students with different locus of control styles

Frequencies and percentages were calculated. The results are presented in figure 6.1 and table 6.1



Figure 6.1 The distribution of the sample according to their locus of control

Table 6.1 Frequencies and percentages of students with different loci of control

Locus of control	Frequency	Percentage
External	299	56.7 %
Internal	228	43.3 %
Total	527	100 %

Table 6.1 shows that just more than half of the sample (56.7 %) has an external locus of control while the rest (43.3 %) of the students have an internal locus of control.

These results concur with previous research. There were more students with external loci of control than those with an internal locus of control. This may be related to the fact that Arab societies tend to be more authoritarian, hence their children adopt more external rather than internal locus of control styles. This has been supported by Jibriel (1996:366) and Alhersh (1992:35).



6.2.1.2 Frequencies and percentages of students with different upbringing styles

Frequencies and percentages of students with different upbringing styles were calculated. The results are presented in figure 6.2 and table 6.2



Figure 6.2 The distribution of the sample according to their upbringing style

Table 6.2 Frequencies and percentages of students with different upbringing styles

Upbringing style	Frequency	Percentage
Authoritarian	295	56%
Authoritative	232	44%
Total	527	100%

Table 6.2 illustrates that more than half (56%) of the students in the sample came from homes with an authoritarian upbringing style, while a lesser percentage (44%) of them felt that they had an authoritative upbringing. (See figure 6.2).

This seems to go with the general tendency of the Arabic culture. As mentioned in section 2.1.2.6, the Arab society is dominated by males. Children are taught to obey and respect their

parents as well as the other adult members of the clan (Alqumzy 2003:151-152). So it is to be expected that the majority of the families in the Arab society can be classified as having an authoritarian style of upbringing. UAE families are patriarchal and hierarchal (with respect to sex and age). The father possesses complete authority and responsibility. He expects respect and unquestioning compliance, and shows little tolerance of dissent. Fathers generally remain aloof from the task of raising children in their early years. The UAE Arab family is the society in miniature: the same patriarchal and hierarchical relations and values also prevail at work and in religious, political, and social associations (UAE University, 1997:230-233).

6.2.1.3 Frequencies and percentages of students with different gender, locus of control styles and upbringing styles

Frequencies and percentages of students of different gender, loci of control and upbringing styles were calculated. The results are presented in figure 6.3 and table 6.3



Figure 6.3 Histogram showing the distribution of the sample according to their gender, locus of control and upbringing style.

Gender	External locus	s of control Internal locus of control		of control	Total	
	Authoritarian	Authoritative	Authoritarian	Authoritative		
Girls Count	134	47	39	89	309	
% within	43.4 %	15 %	12.6 %	28.8 %	100 %	
% of total	25.4 %	8.9 %	7.4 %	16.9 %	58.6 %	
Boys Count	85	33	37	63	218	
% within	39 %	15.1 %	17 %	28.9 %	100 %	
% of total	16.1 %	6.3 %	7 %	12 %	41.4 %	
Total Count	219	80	76	152	527	
%	41.6 %	15.2 %	14.4 %	28.8 %	100 %	

Table 6.3Frequencies and percentages of students with different gender, loci of
control and upbringing styles

Table 6.3 shows that the students with an external locus of control mostly came from homes with an authoritarian upbringing style (43.4 % authoritarian versus 15 % authoritative in the girls' sample) and (39 % authoritarian versus 15.1 % authoritative in the boys' sample). The same can be observed for the students with an internal locus of control. They came mostly from homes with an authoritative upbringing style (28.8 % authoritative versus 12.6 % authoritarian in the girls sample) and 28.9 % authoritative versus 17 % authoritarian in the boys sample).

The table illustrates well the expected outcomes. That is to say that an authoritarian upbringing style led to an external locus of control. In contrast, an internal locus of control was due to an authoritative style. Children of authoritarian parents tend to lack social competence with peers: they tend to withdraw, not to take social initiative and to lack spontaneity. Although they do not behave differently from children of other types of parents on contrived measures of resistance to temptation, on projective tests and parent reports they do show lesser evidence of 'conscience'. Hence they are more likely to have an external, rather than an internal, moral orientation in discussing what is the 'right' behaviour in situations of moral conflict. In boys, there is evidence that motivation for intellectual performance is low. Several studies link authoritarian parenting with low self-esteem and an external locus of control (George, 2005:2-4).

In general, then, the research results support the idea that upbringing styles and locus of control influence each other (and may influence creative thinking).

6.2.2 HYPOTHESES

In the following section follows a discussion of the testing of the hypotheses. Where significant differences or relationships were found, the effect of sample size should be kept in mind. Significant relationships are influenced by the relatively big sample of 537 students.

6.2.2.1 Hypothesis 1

The following research question was stated:

Does gender influence locus of control?

Null-hypothesis: There is no significant relationship between gender and students' locus of control.

To test this null-hypothesis, frequencies and percentages were calculated. Thereafter correlation and a chi-square statistical analysis were performed. The results are presented in figure 6.4 and tables 6.4 and 6.5



Figure 6.4 Histogram showing the frequency distribution of the sample according to their gender and locus of control

Table 6.4Correlation and significance of relationship between student's gender and
locus of control

Variables	Correlation	Significance
Gender and Locus of control	0.04421	0.3111

Table 6.5 Cross tabs and significance of dependency between gender and locus of control

Variable:	G	Gender	
locus of control	Female	Male	Total
External: Count	181	118	299
% within control	60.5 %	39.5 %	100 %
% of total	34.3 %	22.4 %	56.7 %
Internal: Count	128	100	228
% within control	56.1 %	43.9 %	100 %
% of total	24.3 %	19 %	43.3 %
Total: Count	309	218	527
% within control	58.6 %	41.4 %	100 %
% of total	58.6 %	41.4 %	100 %

 $(\chi^2 = 1.030; df = 1; p > 0.05)$

Table 6.5 shows that the majority of both girls and boys experience an external locus of control rather than an internal locus of control. However, there was no significant difference between the two genders regarding this aspect, since p>0.05 (see table 6.4). The correlation between gender and locus of control is very low and not significant. (See table 6.4).

This is in accordance with some previous research outcomes. Some researchers found differences (Crandall et al, 1965: Ya'qoub 1988:47). Others, however, did not. This may not be surprising since previous research showed that there were no consistent outcomes as far as the

dependency between gender and locus of control is concerned (Dweck & Repucci 1973; Parsons 1978; Alhersh 1992:35; Jebriel 1992:366). As far as this research is concerned, it may explained by the fact that in the Arab culture girls tend to be better than boys in many aspects of academic achievements and mental processes (Qatamy 1990:245; Ya'qoub 1988:46).

6.2.2.2 Hypothesis 2

The following research question was stated:

Is there any relationship between gender and upbringing style?

Null-hypothesis: There is no significant relationship between gender and students'upbringing style

To test the null-hypothesis, frequencies and percentages were calculated. Thereafter, correlation and a chi-square analysis were done. The results are illustrated in figure 6.5 and tables 6.6 and 6.7



Figure 6.5 Histogram showing the frequency distribution of the sample according to their gender and upbringing style

Table 6.6Correlation and significance of relationship between students' gender and
upbringing style

Variables	Correlation	Significance
Gender and upbringing style	0.00024	0.9957

Table 6.7Cross tabs and significance of dependency between gender and
upbringing style.

Variable: gender	Upbring		
	Authoritarian Authoritative		Total
Female: Count	173	136	309
% within gender	56.0%	44%	100%
% of total	32.8%	25.8%	58.6%
Male: Count	122	96	218
% within gender	56.0%	44%	100%
% of total	23.1%	18.2%	41.4%
Total: Count	295	232	527
% within gender	56.0%	44%	100%
% of total	56.0%	44%	100%

 $(\chi^2 = 0; df = 1; p > 0.05)$

Table 6.7 shows that the majority of both girls and boys experience authoritarian rather than authoritative upbringing styles. However, there was no significant difference between the two genders regarding this aspect, since p>0.05 (see table 6.6).

This show that in the UAE, upbringing styles tend to go with the general tendency of the Arabic culture that is being more authoritarian. This applies to both boys and girls. Previous research findings showed the same results (Eihab 1993:55; Malhas & Abdouni 1997:360). (See also section 6.2.1.2).

6.2.2.3 Hypothesis 3

The following research question was formulated:

Is there any effect of upbringing style on locus of control?

Null-hypothesis: There is no significant effect of upbringing style on students' locus of control

To examine the null hypothesis, frequencies and percentages were calculated. Thereafter correlation and a chi-square statistical analysis were executed. The results are illustrated in figure 6.6 and tables 6.8 and 6.9



- Figure 6.6 Histogram showing the frequency distribution of the sample according to their locus of control and upbringing style
- Table 6.8Correlation and significance of relationship between students' upbringingstyle and locus of control

Variables	Correlation	Significance
Upbringing style and locus of	0.39833	<0.0001
control		

Table 6.9Cross tabs and significance of dependency between locus of control and
upbringing style

Variable:	Upbring		
locus of control	Authoritarian	Authoritarian Authoritative	
External: Count	219	80	299
% within control	73.2%	26.8%	100%
% of total	41.6%	15.2%	56.7%
Internal: Count	76	152	228
% within control	33.3%	66.7%	100%
% of total	14.14%	28.8%	43.3%
Total: Count	295	232	527
% within control	56%	44%	100%
% of total	56%	44%	100%

 $(\chi^2 = 83.616; df = 1; p < 0.01)$

Chi square was calculated to find out whether there were any significant dependency between locus of control (internal/external) and upbringing styles (authoritative/authoritarian).

Table 6.9 shows that there is a significant dependency between the students' locus of control and the upbringing styles they experienced. Table 6.9 shows that when the percentages were compared, it was clear that locus of control was dependent on upbringing style. An authoritarian upbringing style seemed to lead to an external locus of control rather than an internal locus of control (73.2 % compared to 26.8 %). Those who were brought up under authoritative upbringing style were inclined to have internal loci of control (66.7 % compared to 33.3 %).

This is congruent with previous research. Authoritative upbringing styles nurture internal loci of control (Malhas & Abdouni 1997:361; Alhersh 1993:36; Saber 1999). In his study of the effect of family types on personality and locus of control, Abdellatief (1997) found that children whose

parents were authoritative were generally characterized as internals. Children whose parents were authoritarian were, however, found to be externals.

6.2.2.4 Hypothesis 4

The following research question was formulated:

What is the effect of gender on students' creative thinking?

Null-hypothesis: There is no significant relationship between gender and students'creative thinking.

To test this hypothesis, means and significance of difference were calculated. Thereafter a correlation and a t-test were performed. The results appear in figure 6.7 and tables 6.10 and 6.11.



Figure 6.7 Histogram showing the means of the sample' creative thinking according to their gender.

Table 6.10 Correlation and significance of relationship between students' gender and creative thinking List of research project topics and materials

Variables	Correlation	Significance
Gender and creative thinking	-0.08123	0.0624

Table 6.11Means and significance of difference in creative thinking for different
genders

Gender	N	Mean	Std.	d.f	Significance
			Deviation		
Female	309	222.98	76.911		
Male	218	210.13	72.473	525	0.054

Tables 6.10 and 6.11 illustrate that although the females in the group were more creative than the males, there is no significant difference between male and female students' creative thinking since p > 0.05.

This seems to be logical as no difference was found between locus of control and upbringing styles in both sexes. This is also in alignment with previous research on gender and creative thinking (Eihab 1993: 56; Alhersh 1992:38; Gurbal 1983:831).

6.2.2.5 Hypothesis 5

The following research question was stated:

What is the effect of locus of control on creative thinking?

Null-hypothesis: There is no significant relationship between locus of control and students' creative thinking.

To test this hypothesis, frequencies, means and standard deviations were calculated. Thereafter the correlation and significance of the relationship between the two variables and a t-test were executed. The results are presented in figure 6.8 and tables 6.12 and 6.13.



Figure 6.8 Histogram showing the means of the sample's creative thinking according to their locus of control

Table 6.12Correlation and significance of relationship between student's locusof control and creative thinking

Variables	Correlation	Significance
Locus of control and	0.734	p < 0.0001
creative thinking		

Table 6.13Means and significance of difference in creative thinking for differentloci of control

Locus of control	N	Mean	Std.	D.F	Significance
			Deviation		

External	299	169.47	46.464		
Internal	228	280.86	56.885	525	p<0,01

t = -24.728

Table 6.12 shows that there is a significant (at the 1%-level) high, positive correlation of 0.734 between the students' loci of control and creative thinking. This indicates that the higher the internal locus of control, the more creative the person is, and vice versa.

Table 6.13 illustrates that there is a significant difference in creative thinking of grade nine students with different loci of control. Those with an internal locus of control are significantly more creative (on the 1%-level) than those with an external locus of control (280.86 > 169.47 and p<0.01).

Both tables (6.12 & 6.13) show a significant difference between the two types of locus of control (external & internal) on creative thinking. The students with an internal locus of control are significantly more creative than those with an external locus of control. The characteristics of internals help them to be more creative. This is in agreement with previous research. Some researchers claim that 'internals' tend to be more intelligent and more success-oriented than 'externals'. In the elementary grades, children with an internal locus of control were also found to earn higher grades (Simons, Irwin and Drinnins 1987; Alhersh 1993; Allen 1982). (See sections 3.5 and 3.6.3).

6.2.2.6 Hypothesis 6

The following research question was stated:

What is the effect of family upbringing style on creative thinking?

Null-hypothesis: There is no significant relationship between students' upbringing style and creative thinking.

To test this hypothesis, means and significance of differences were calculated. Thereafter Pearson's bivariate correlation, significance of relationship and a t-test were executed. The results appear in figure 6.9 and tables 6.14 and 6.15



- Figure 6.9 Histogram showing the means of the sample's creative thinking according to their upbringing style
- Table 6.14Correlation and significance of relationship between students' upbringing
styles and creative thinking.

Variables	Correlation	Significance
Upbringing style and	0.61722	p < 0.0001
creative thinking		

Table 6.15Means and significance of difference in creative thinking for different
upbringing styles

Upbringing	N	Mean	Std.	d.f	Significance
style			deviation		
Authoritarian	295	176.92	57.303		
Authoritative	232	269.47	62.594	525	p<0,01

t = -17.669

Table 6.14 shows that there is a significant (at the 1%-level) high, positive correlation between students' upbringing style and creative thinking. The more the student had an authoritative (not

authoritarian) upbringing, the more creative he/she was.

Table 6.15 illustrates that there is a significant difference in creative thinking of grade nine students coming from families with different upbringing styles. Those who came from an authoritative upbringing home were significantly more creative (at the 1%-level) than those who came from authoritarian homes (269.47 > 176.92 and p<0.01).

Both tables (6.14 and 6.15) show that there were differences in creativity between those who were brought up under an authoritarian style and those succumbed to an authoritative style. The students who experienced an authoritative upbringing were found to be more creative. The correlation tended to support the idea that family upbringing style influenced creative thinking. This may be due to the fact that requirements for creativity are usually present in authoritative environments such as: freedom, independence, clear standards of behaviour and warm relationships. They are also encouraged to think independently, and they acquire a sense that their viewpoints carry some weight (Weiss & Schwarz 1996; Nancy 1999:2; Eihab 1993:57).

6.2.2.7 Hypothesis 7

The research question that was stated is:

What is the effect of the combination of the independent variables on students' creative thinking?

Null-hypothesis: There is no significant effect of the combination of the independent variables on students' creative thinking.

To test this hypothesis, means were calculated. Thereafter an F-test and significance of relationships were executed. The results appear in figures (6.10 - 6.13) and table 6.16



Figure 6.10 Histogram showing the means of the sample's creative thinking according to their gender and locus of control



Figure 6.11 Histogram showing the means of the sample's creative thinking according to their gender and upbringing style



Figure 6.12 Histogram showing the means of the sample's creative thinking according to their locus of control and upbringing style



Figure 6.13 Histogram showing the means of the sample's creative thinking according to their gender, locus of control and upbringing style

Boys and girls are similar with regard to their creative thinking when they have similar loci of control. This means that gender does not influence creative thinking. However, locus of control effects creative thinking.

Table 6.16F-value and significance of relationships between the independentvariables (gender and locus of control) and the dependent variable(creative thinking)

Independent variables	D.F	Type III SS	Mean	F-value	Pr>F
			square		
Gender and locus of control	1	2823.0932	2823.0932	1.5	.2211
Gender and upbringing style	1	2354.1415	2354.1415	1.25	.2638
Upbringing style and Locus	1	178.9071	178.9071	.10	.7579
of control					
Gender, locus of control and	1	1769.6839	1769.6839	0.94	0.3325
parental style					

No post hoc tests were carried out since the p-values were not significant. Table 6.16 indicates that:

- Boys and girls were similar with regard to creative thinking when considered according to the two types of locus of control.
- Boys and girls were similar with regard to creative thinking when considered according to the two types of upbringing style.
- Boys and girls were similar with regard to creative thinking when considered according to the two types of upbringing style as well as the two types of locus of control.

Internals think creatively whether they come from authoritative or authoritarian families. Those who are externals are less in their creative thinking whether they come from authoritative or authoritarian families.


The type of locus of control is not only due to the upbringing style. Some other factors might contribute in fostering locus of control. The students in the sample, it is to be reminded, are in grade 9. They have undergone different experiences and influences outside their homes. The school has certainly made its impact: teachers' styles, classroom management, school activities, to name but a few.

Internals whether boys or girls coming from either authoritative or authoritarian families are not different in their creative thinking. So are externals. Previous results (hypotheses 5 and 6) show that internals are higher than externals in their creative thinking. It is true that there were more internals in authoritative families. However, it is not the style of upbringing alone that seems to lead to creative thinking.

The above can discussed as follows:

First: it is noted that when the variables of the study are combined together, the effect of each seemed to decrease (Eihab 1993:63).

Second: when all the variables of the study are combined together, the effect of each one on creative thinking is obscured since all interactions were found not significant. That may be explained by the fact that creative thinking is not affected only by these variables. Many other variables have their influence such as: school upbringing styles, intelligence, learning styles, teachers' methods of teaching, the social groups' effects, the personality of the student, students' motivation, the curricula and many other possible variables.

6.2.2.8 Stepwise regression

The research question that was stated is:

What is the relative contribution of each independent variable to students' creative thinking?

To answer this question, a stepwise regression analysis was carried out to find the relative contribution of each of the main factors (gender, locus of control and upbringing style) to creative

thinking.

The results are illustrated in figure 6.14 and table 6.17.



CREATIVE ~ GENDER + LOC + STYLE

Figure 6.14 A graph showing the differences between the sub-variables in student' creative thinking

According to the graph, the group with the highest creativity was girls from authoritative homes with an internal locus of control. The group with the least creativity was boys from authoritarian homes with an external locus of control.

Table 6.17 Stepwise regression of independent variables related to creative thinking

Independent variable	Std. error	Beta	t	Significance
Locus of control	4.159	.589	21.489	.000
Upbringing style	4.146	.376	13.753	.000
Gender	3.837	110	-4.389	.000

The results show that the most contributing factor to creative thinking is locus of control followed by upbringing style, then gender. Both locus of control and upbringing style have been shown to influence creative thinking as shown in hypotheses (5 and 6).

The fact that locus of control is the most influential factor on creative thinking is not surprising, since locus of control is affected by factors related to different mental activities. Examples are: working for achievement, raising behavioural goals, evaluate and re-evaluate, tolerance of ambiguity, and looking for reasonable consequences (Alhersh 1992:41-42).

6.3 SUMMARY OF THE RESEARCH RESULTS

The results are summarized on the basis of the independent variables of the study (gender, locus of control and upbringing style) and the dependent variable (creative thinking).

6.3.1 RESULTS OF THE RELATIONSHIPS BETWEEN INDEPENDENT VARIABLES

- **H1:** There is no significant difference between the two genders regarding the locus of control of grade 9 students.
- **H2:** There is no significant difference between the two genders regarding the upbringing style of grade 9 students.
- H3: There is a significant relationship between upbringing style and locus of control of grade9 students.

6.3.2 RESULTS OF THE RELATIONSHIPS BETWEEN INDEPENDENT VARIABLES WITH THE DEPENDENT VARIABLES

- **H4:** There is no significant difference between the two genders regarding creative thinking of the grade 9 students.
- **H5:** There is a significant relationship between locus of control and creative thinking of the grade 9 students.
- **H6:** There is a significant relationship between upbringing style and creative thinking of the grade 9 students.
- **H7:** There is no significant influence of the interaction of the independent variables regarding the creative thinking of the grade 9 students.

6.3.3 RESULTS OF THE RELATIVE INFLUENCE OF THE INDEPENDENT VARIABLES ON CREATIVE THINKING

Locus of control, thereafter upbringing style and thereafter gender contributed to creative thinking.

6.4 CHAPTER SUMMARY

This chapter focused on the results of the study. The results were briefly explained in the light of the aims of the research and the literature review. In the next chapter conclusions and corresponding recommendations will be made. Finally, the limitations of the study will be highlighted.

CHAPTER 7

CONCLUSIONS, RECOMMENDATIONS AND LIMITATIONS OF THE STUDY

7.1 INTRODUCTION

In the previous chapter the results of the research were discussed. This chapter focuses on the conclusions of these results with regard to the main factors related to the study. These were gender, locus of control, upbringing style with their relationship to creative thinking. The literature review delineated the background to the study. The focus was on the importance of creative thinking. It identified the main factors that foster and enhance creative thinking.

The environment in which a person lives is an important factor influencing creative thinking. Research has showed that upbringing styles and the type of locus of control relate to creative thinking. Some of the types (authoritative upbringing style and internal locus of control) are those are responsible for creative thinking (Alhersh, 1992:25).

The literature (cf. chapter 2 and 3) and the results of this study made it clear that the type of locus of control is the result of the home upbringing style.

In this chapter recommendations are made and the limitations of the study are highlighted. It should be noted that the conclusions are applicable to the students of grade 9 in the schools involved in the research. However, they may also be applicable to the students in grade 9 of all preparatory schools of UAE and possibly elsewhere.

7.2 CONCLUSIONS

From the general research problem, eleven hypotheses were developed. The following conclusions have been drawn from previous research results and the actual investigation.

The present research has looked at the relationship of three main variables to creative thinking (gender, upbringing styles and locus of control). These results are discussed in their relationship with the three main variables related to creative thinking.

7.2.1 CONCLUSIONS REGARDING GENDER

7.2.1.1 The relationship between gender and upbringing style

The literature review revealed different outcomes as far as gender is concerned. Many studies found that gender was related to upbringing style. These indicated that upbringing styles might differ according to gender (Keshk, 1991). Conversely, other studies showed that upbringing style was not different with regard to gender (Eihab, 1993:55; Malhas & Abdouni 1997:360). The actual study reported no influence of gender on upbringing style (hypothesis 2). This was explained in the light of similar studies. The common way families deal with their children in UAE and the uniformity of the education system were seen to explain the similarity.

7.2.1.2 The relationship between gender and locus of control

Various studies showed different outcomes related to this factor. Those differences could be attributed to the range of assortment of areas in which locus of control was studied.

The literature review found different outcomes about the relation between gender and the types of locus of control. Some studies showed an influence of gender on locus of control. As an example, as far as attribution of failure is concerned, males tended to relate this to external factors, while females tended to explain this as caused by internal factors (Parsons, 1978; Crandall et al, 1965 see section: 3.6.1). These indicated that locus of control might differ according to gender.

Those studies, on the contrary as stated in section (3.6.1), found no gender differences in either internality or lack of effort attributions (Beck, 1977; Diener & Dweck, 1978; Nicholls, 1975; Alhersh, 1992 and Jibriel, 1992). The same was observed in measures of attribution of failure to external causes.

Other studies showed that locus of control types were not different in both genders.

The actual study reported no influence of gender on locus of control (hypothesis 1). This was explained in the light of previous similar studies. The way families rear their children in UAE and the uniformity of the education system were seen to explain the similarity.

7.2.1.3 The relationship between gender and creative thinking

Much of the research literature has shown inconsistent outcomes. Some studies have shown that gender is not correlated to creative thinking (Eihab, 1993; Alhersh, 1992 and Gurbal, 1983). Some others did show its existence (Ghadha & Arunk 1983). For example, Eihab, 1993 and Alhersh 1992 stated that no significant differences in creative thinking were found regarding the gender of the students. Sometimes there is a difference between the two genders, but these differences were not significant. Gurbal (1983) found that the girls were more creative in elaboration, fluency and flexibility. It was also found that boys were more creative in originality.

The present study revealed no influence of gender on creative thinking (hypothesis 4). As stated above (section 7.2.1.2), the same thing can be said regarding this variable, the similarity of the way families rear their children in UAE and the uniformity of the education system were seen to explain the similarity for both genders, that is, authoritative or authoritarian parents rear both genders in the same way.

7.2.1.4 Stepwise regression about gender and creative thinking

Stepwise regression has, however, revealed that gender has shown to predict creative thinking. This result was some how surprising as the correlations were not significant in separate analyses (Hypothesis 4).

The possible interpretation can be related to social factors. Review of literature indicated that despite clear roles defined for each type of gender, things seem to change (cf. 2.2.1; Thabit, 1983). Boys and girls receive the same education, especially in schools (Rashid, 1985).

It might be argued that as women are honoured and respected in Arab societies (Ch. 2, sec. 2.2.2; also Alwan 2000:80-82), girls might be thought achieve more than boys (Eihab, 1993) and hence, may think more creatively. The UAE society has a well-established structure. Males have more outside responsibilities, while girls have responsibilities related to indoors. This possibly provides a chance for females to study more and hence achieve better. Consequently, they have the chance to develop creative thinking. It might also be suggested that, as some research outcomes indicated, females differ from males in some indicators of creative thinking (Gurbal, 1983). Hence, it may be suggested, girls (as results show) had higher scores on creative thinking.

7.2.2 CONCLUSIONS REGARDING UPBRINGING STYLE

Previous research, as literature indicated, has shown that upbringing style influences different aspects in individuals. The focus of the actual research is on creative thinking. Relationship of upbringing style with locus of control has also been looked at. These relationships are enumerated below.

7.2.2.1 The relationship between upbringing style and locus of control

The literature review found different results about the relationship between upbringing styles and the types of locus of control. Many studies showed an influence of upbringing styles on locus of control. These indicated that locus of control might differ according to upbringing styles (Saber 1999; Malhas & Abdouni 1997 and Abdellatief 1997). Other studies showed that locus of control types were not different in both styles of upbringing (Abdallat, 1992). The actual study reported a significant influence of upbringing styles of the students on their locus of control (hypothesis 3). The authoritative style produces internal locus of control, and the authoritarian style produces external locus of control.

Previous research has shown that family environment characterized by warmth, protection and nurturance is more likely to lead to an internal locus of control. However, those with limited social power resources are more likely to develop external locus of control styles (Alhersh, 1993).

The relationship of creative thinking to upbringing style can then be observed. The style of upbringing that produces the most positive results is the authoritative style (Darling, 1999). Parents adopting the authoritative style believe in giving their children choices. They balance their demands with freedom. They have simple rules and impose reasonable consequences for breaking the rules, they encourage independence, responsibility and self-competence. Hence these characteristics produce internal locus of control and more creativity.

7.2.2.2 The relationship between upbringing style and creative thinking

Previous studies found different outcomes about the relationship between upbringing styles and creative thinking. Although some studies showed that students' creative thinking was not different in both styles of upbringing, others indicated an influence of upbringing styles on creative thinking. These indicated that students' creative thinking might differ according to upbringing styles (Weiss and Schwarz, 1996; Nancy, 1999:2; Eihab, 1993:57).

The actual study reported a significant influence of upbringing styles on students' creative thinking (hypothesis 5). Students who were subjected to a authoritative upbringing style were more creative in their thinking than those who experienced an authoritarian upbringing style.

This relationship could be interpreted as follows: creative thinking requires freedom, thinking independently, warm relationships, an atmosphere of love and trust, open discussions between parents and children and flexibility. An authoritative upbringing style can provide these requirements. It has been shown in the literature that according to an authoritative style, parents define standards, solicit their children's opinions and encourage them to think independently. An authoritative style provides children with greatest sense of control over their lives (Baumrind, 1991; Lewis, 1991).



7.2.2.3 Stepwise regression about upbringing style and creative thinking

Stepwise regression has indicated that upbringing style predicts creative thinking. This result was in harmony with the outcomes of hypothesis 5 as the correlation between upbringing style and creative thinking was significant (Hypothesis 5). The possible interpretation can be related to social factors. The review of the literature indicated that despite the fact that there are clear roles for each gender, certain circumstances appear to be changing (see 2.2.1;Thabit, 1983). Both boys and girls receive the same education, especially in schools (Rashid, 1985).

This might be due to the fact that authoritatively raised children achieve more than authoritarian (Eihab, 1993). They, hence, may think creatively because authoritative parents are more encouraging towards their children, as they allow them more space to think independently (see 7.2.2.2).

This may explain the outcomes indicating that authoritatively brought up children differ from those brought up in an authoritarian manner in some indicators of creative thinking (Eihab, 1993).

7.2.3 CONCLUSIONS REGARDING LOCUS OF CONTROL

Literature review has shown that locus of control influences different aspects in individuals. The relationship of locus of control with the other independent variables (gender and upbringing style), as indicated in sections 7.2.1.2 and 7.2.2.1, was shown be similar in both genders and different in upbringing styles. In this section the relationship between locus of control and creative thinking has also been looked at. These relations are enumerated below.

7.2.3.1 The relationship between locus of control and creative thinking

The literature review found different outcomes about the relationship between locus of control and creative thinking. Much research indicated an influence of locus of control on creative thinking. These studies indicated that students' creative thinking might differ according to their locus of control type (Simons, Irwin and Drinnins, 1987; Alhersh, 1993; Allen, 1982). Other studies

showed that students' creative thinking was not different in both types of locus of control (Bolen, 1975; Esiesenstadt, 1980). The actual study reported a significant influence of locus of control on students' creative thinking (hypothesis 6). Mainly, students with internal locus of control were more creative than those with external locus of control.

The characteristics of internals help them to be more creative. This is in agreement with the previous research. Some researchers claimed that 'internals' tend to be more intelligent and more success-oriented than 'externals'. In the elementary grades, children with an internal locus of control were found to earn higher grades (Simons, Irwin and Drinnins, 1987; Alhersh, 1993; Allen, 1982; see sections 3.5 and 3.6.3).

7.2.3.2 Stepwise regression about locus of control and creative thinking

Stepwise regression (par 6.2.2.8) has indicated that locus of control has a correlation between creative thinking. This result was in harmony with the outcomes of hypothesis 6 as the correlation between locus of control and creative thinking was significant (Hypothesis 6).

Previous research claimed that internals tend to be more creative than externals. Students with internal locus of control believe that their grades are determined by their abilities and efforts. The internals are more likely to work for achievement, to plan for long-term goals, to raise their behavioural goals and are better at tolerating ambiguous situations.

7.2.4 CONCLUSIONS OF THE COMBINED FACTORS

Different combinations of the relationships between different independent variables with creative thinking did not show any significant effects. The gender with other variables was found in all cases not significant. It was explained in the light of previous research and within the UAE culture and education system.

The effect of upbringing style combined with locus of control was explained in light of the importance of locus of control. The latter as individual relationships and regression showed, was the most determining factor of creative thinking.

This was explained in the light of the possible confounding effects of other factors. Education and social influences could explain the decrease as they bear upon creative thinking alongside upbringing styles.

7.3 RECOMMENDATIONS

Creative thinking requires an enhancing and fostering environment. The research literature and the present study show that the way people have been brought up leads to different types of locus of control which in turn influences creative thinking. Recommendations are directed to families, schools and educational authorities in their role to nurture and hence foster and enhance creative thinking.

7.3.1 RECOMMENDATIONS FOR PARENTS AND FAMILY MEMBERS

The family through its upbringing styles can nurture creative thinking. As literature showed, the authoritative style of upbringing can through its processes create the atmosphere leading to internal locus of control hence creative thinking. The following practices in the family can achieve this goal by

- Providing a secure atmosphere that provides for (in Erikson's terms) trust, love independence, initiative and industry. These are thought to lead to internality and creative thinking.
- Ensuring opportunities for discussing and giving opinions which encourage individuals to think.
- Enriching the environment with different experiences which develop individuals' linguistic, cultural, social and scientific abilities.
- Encouraging the development of individuals' thinking abilities through the incitement of curiosity, exploration, inquiry and asking questions.

- Developing counseling programmes to help families foster their children's creativity.
- Developing and providing programs for training that facilitate the way for parents to adopt an authoritative upbringing style.
- Warning parents about the consequences of the uses of negative practices of the authoritarian styles such as over-protection, rigid discipline and the like.
- Warning parents from any practices that contribute to the disintegration of family relationships.

7.3.2 RECOMMENDATIONS FOR SCHOOLS

Schools are considered the second most important environment for developing students' different abilities. Schools can play an important role in rendering students' able to develop internal locus of control and thinking abilities. The following can be taken into account by:

- Considering individual differences by devising learning tasks which lead to fulfil the individuals' motives.
- Individualizing, if possible, teaching as it helps to realize the needs and desires of the individuals.
- Providing individuals with additional learning resources to enrich their experiences and enhance their creative thinking.
- Using the computerized instructional programs which require direct interaction between the learner and the instructional experiences.
- Encouraging competition between individuals especially the kind of competition, which motivates their ability to learn, discover and work with groups.
- Diversifying teaching and instructional methods that encourage discussion, flexibility,

analysis and divergent thinking.

- Encouraging and training teachers to adopt an authoritative style that provides an atmosphere of trust and freedom to foster inquisition, discovery, and discussion.
- Assuring to nurture creativity, teachers are to adopt warm considerate accepting attitudes towards those who venture unusual ideas.
- Inciting teachers to participate in extra curricular activities that help students' thinking abilities to flourish. Discovery expeditions, interesting projects, practice of different hobbies are but a few examples. These will create a relaxed atmosphere that would develop different students' mental abilities.

7.3.3 RECOMMENDATIONS FOR EDUCATIONAL AUTHORITIES

The educational authorities have a crucial responsibility in the endeavours to help schools foster creative thinking. The following points are derived from the 2020 Vision for the UAE' education system.

- The infrastructure and the layout of schools are to be prepared in way that provides for and facilitates an atmosphere which develops creative abilities.
- Enrich the existing curricula with different facts that facilitate and develop mental abilities. This can include stimulating academic activities and experiences. Teaching methods and classroom activities are to revolve around ways that make students think rather than memorize.
- Schools cannot provide an atmosphere for creativity if teachers are not trained in methods of instruction that nurture thinking. Pre and in service training should provide programmes in this direction.
- To render creative thinking a common practice, educational authorities should find ways to motivate students to think. A way to achieve this is to revise the evaluation processes. Standards of evaluation are to be set to a level which encourages thinking. Looking at different standards such as ANCATE can be beneficial.

7.3.4 RECOMMENDATIONS FOR FURTHER RESEARCH

This research has concentrated on finding the influence of three independent variables (gender, upbringing styles and locus of control) on grade 9 students' creative thinking in schools in the UAE. In the light of these variables, which are the subject of the study, the research results and the research process, recommendations are made for further research. It is recommended that future studies should:

- investigate other factors which affect creative thinking, such as cognitive functions, motivation, social and cultural environment.
- apply similar research to other levels of the education system, (primary, secondary and higher education) in order to allow for greater generalization of the results of the research.
- provide greater scope for generalization by comparing present results to other findings that apply different tests for the independent variables used.
- compare the results in the single application of the creative thinking tests with separately spaced applications of certain parts of the test.

7.4 LIMITATIONS

The following can be highlighted as limitations of the study.

- The results can only be generalized to grade 9 students. Its applications with students in different grades may reveal different results.
- Test variables of the study such as upbringing, locus of control and creative thinking were limited to certain types, other kinds could be applied and compared.

• The social environment in which the study was applied was embedded in Arab culture. It would be fruitful to conduct a cross-cultural study.

7.5 SUMMARY

This chapter has focused on presenting conclusions about the results of this study. Conclusions related to each variable were mentioned. Recommendations were suggested for families, schools and educational authorities. Limitations of the research were listed. Recommendations for further research were suggested.

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APPENDICES

Appendix A: Rotter's Locus of Control Scale

- 1. a. Children get into trouble because their patents punish them too much.
 - b. The trouble with most children nowadays is that their parents are too easy with them.
- 2. a. Many of the unhappy things in people's lives are partly due to bad luck.
 - b. People's misfortunes result from the mistakes they make.
- a. One of the major reasons why we have wars is because people don't take enough interest in politics.
 - b. There will always be wars, no matter how hard people try to prevent them.
- 4. a. In the long run people get the respect they deserve in this world
 - b. Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries
- 5. a. The idea that teachers are unfair to students is nonsense.
 - b. Most students don't realize the extent to which their grades are influenced by accidental happenings.
- 6. a. Without the right breaks one cannot be an effective leader.
 - b. Capable people who fail to become leaders hive not taken advantage of their opportunities.
- 7. a. No matter how hard you try some people just don't like you.
 - b. People who can't get others to like them don't understand how to get along with others.
- 8. a. Heredity plays the major role in determining one's personality
 - b. It is one's experiences in life which determine what they're like.
- 9. a. I have often found tlint what is going to happen will happen.
 - b. Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
- 10. a. In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
 - b. Many times exam questions tend to be so unrelated to course work that studying in really useless.
- 11. a. Becoming a success is a matter of hard work; hick has little or nothing to do with it.
 - b. Getting a good job depends mainly on being in the right place at the right time.
- 12. a. The average citizen can have an influence in government decisions.
 - b. This world is run by the few people in power, and there is not much the little guy can do about it.
- 13. a. When I make plans, I am almost certain that I can make them work.
 - b. It is not always wise to plan too far ahead because many things turn out to- be a matter of good or bad fortune anyhow.
- 14. a. There are certain people who are just no good.
 - b. There is some good in everybody.
- 15. a. In my case getting what I want has little or nothing to do with luck.
 - b. Many times we might just as well decide what to do by flipping a coin.
- 16. a. Who gets to be the boss often depends on who was lucky enough to be in the right place first.
 - b. Getting people to do the right thing depends upon ability. Luck has little or nothing to do with it.
- 17. a. As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
 - b. By taking an active part in political and social affairs the people can control world

events.

- 18. a. Most people don't realize the extent to which their lives are controlled by accidental happenings.
 - b. There really is no such thing as "luck."
- 19. a. One should always be willing to admit mistakes.
 - b. It is usually best to cover up one's mistakes.
- 20. a. It is hard to know whether or not a person really likes you.
 - b. How many friends you have depends upon how nice a person you are.
- 21. a. In the long run the bad things that happen to us are balanced by the good ones.
 - b. Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
- 22. a. With enough effort we can wipe out political corruption.
 - b. It is difficult for people to have much control over the things politicians do in office.
- 23. a. Sometimes I can't understand how teachers arrive at the grades they give.
 - b. There is a direct connection between how hard 1 study and the grades I get.
- 24. a. A good leader expects people to decide for themselves what they should do.
 - b. A good leader makes it clear to everybody what their jobs are.
- 25. a. Many times 1 feel that I have little influence over the things that happen to me.
 - b. It is impossible for me to believe that chance or luck plays an important role in my life.
- 26. a. People are lonely because they don't try to be friendly.
 - b. There's not much use in trying too hard to please people, if they like you, they like you.
- 27. a. There is too much emphasis on athletics in high school.
 - b. Team sports are an excellent way to build character.

- 28. a. What happens to me is my own doing.
 - b. Sometimes I feel that I don't have enough control over the direction my life is taking.
- 29. a. Most of the time I can't understand why politicians behave the way they do.
 - b. In the long run the people are responsible for bad government on a national as well as on a local level.

Score one point for each of the following:

2.a, 3.b, 4.b, 5.b, 6.a, 7.a, 9.a, 10.b, 11.b, 12.b, 13.b, 15.b, 16.a, 17.a, 18.a, 20.a, 21.a, 22.b, 23.a, 25.a, 26.b, 28.b, 29.a.

A high score = External Locus of Control A low score = Internal Locus of Control



Appendix B: Family Upbringing Style Scale

Instructions:

Most people describe their feelings or attitudes towards their parents by using some of the following expressions.

Please read every sentence and put an (X) in the space of the related expression that you think it reflects your opinion. Please answer all the sentences frankly.

It is necessary to know that there are no true or false answers to any of these sentences, and also there is no finite time for the answers. So; just answer the expression that reflects your general feeling.

All your answers will be treated confidentially and will be used only for the purpose of this study.

Thanks for your co-operation

#	The expressions	always	often	some-	never
4				times	
1	I try my best to satisfy my parents				
2	My parents treat me as a friend				
3	My parents treat me as a small child who				
	doesn't understand anything				
4	I always tell my parents about my exams'				
_	result what ever it seems				
5	My parents respect my friends				
6	I feel worried if any of my parents is absent or sick				
7	My parents spoil my brothers and sisters more than me				
8	My parents understand my problems as an				
	adolescent				
9	My parents give me all what I want to satisfy				
	my needs				
10	My parents do not give me my pocket money				
	if I make some trouble, but they don't do the				
	same with my brothers and sisters				
11	My parents trust me deeply				
12	My parents don't compliment me while I am				
	with my friends, brothers or sisters				
13	My parents don't ask me about my study or				
	my own personal affairs				
14	My friends envy me positively because of my				
	position in my family				
15	My parents expect me to be successful in my				
	study and work				
16	My parents don't punish or preach me if				
	anyone complains of me				
17	I look in a great pride and appreciation to my				
	parents				

#	The expressions	always	often	some- times	never
18	My parents' method of thinking encourages				
	me to talk about my problems				
19	my parents are hard on me without any				
	reason				
20	I need my parents' kindness and				
	encouragement				
21	I feel that all my family members despise me				
22	I wait that day in which I can help my family				
23	Love and kindness are common in our family				
24	I feel that my family are proud of me				
25	My parents beat me and treat me with				
	humiliation.				
26	I hope my God increase my parents' age and				
	make them happy				
27	My parents always respect my suggestions				
28	My parents think that I cant do any thing				
29	My parents consult me in family's affairs				
30	My parents don't criticize me without a good				
	reason				
31	My parents listen to me carefully when I tell				
	them my problems				
32	If I make a mistake, my parents blame me,				
	but they don't do the same with my				
	brothers/sisters				
33	My parents do not refuse my friends whom I				
	choose				
34	My parents don't care about me if I fail in an				
	exams				
35	My parents work day and night for our				
	happiness				
36	My parents don't take me with them in their				
	travel or visits				

#	The expressions	always	often	some-	never
				times	
37	I can't understand what my parents want				
	from me, some times they want some thing				
	and other times they want its opposite				
38	I feel that no one understands me				
39	I don't feel embarrassed if my parents ask				
	about my problems				
40	My parents try to impose some kinds of				
	friends on me				
41	I feel that my friends are more happy than my				
	self				
42	I wear what I want without any objection from				
	my parents				
43	My parents prefer my brothers more than my				
	sisters				
44	My parents remind me always about my				
	mistakes and failure				
45	My parents grant me insufficient pocket				
	money				
46	My parents force me to sleep on a fixed time				
	every night				
47	My parents differ in their rearing style				
48	I feel that my parents lose their hope about				
	me				
49	My parents ask me to obey my old brother's				
	commands				
50	My parents treat me as a mature person				
51	My parents understand my opinion about our				
	society problems				
52	I feel that I am bounden so much to my				
	family				
53	My parents try to impose the type of T.V				
	programs that I watch				

#	The expressions	always	often	some-	never
				times	
54	My parents interfere in choosing my books				
	and magazines				
55	My parents help me in doing some homework				
56	My parents don't care about me while I am				
	preparing my lessons or doing my homework				

Appendix C: Creative Thinking Scale A: Verbal Form

Student name:	School:
Grade:	Date of Birth:

Instructions Dear student

The following activities are considered as the Verbal form of Torrance Tests of Creative Thinking (TTCT). It will give you the chance to use your own imagination in thinking about thoughts and frame it in words. There are no true/false answers, but it incurs you to know how many ideas can be elicited from you. We think this work is very interesting. Try to think in many uncommon and unfamiliar thoughts that you believe no one before you thought about.

You must do seven activities; every one has its own time; try to use your time well; do as fast as you can but without hurry.

If you haven't more thoughts before time out, wait for the instructions before you move to the next activity.

If you have any questions after beginning, don't talk in loud voice, only raise your hand. You will find me in front of you to answer your questions.

The researcher

Activities from (1 – 3) Ask and Guess

The following three activities rely on the image on this page, and you are given a chance to show your skills in making questions, provided that the answers to these questions will lead to the comprehension of things that you do not know of; and you should hypothesize the causes and he possible results to what is happening in this image.

"Now look at the image", what is happening? What can you say (about it) firmly? What do you need to be able to understand what is happening? What causes the incident? And what would be the result?



The first activity: Posing the Questions

On this page write all the questions that you can think of about the image (which is placed on the previous page). Ask all the types of questions that you need to ask in order to be able to understand what is happening. Do not ask (simple) question that one can answer just by looking at the image.

You can look at the image whenever you need to:

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2
3
4
5
6
7
8
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10
11
12
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15
16
17
18
19
216

20				•	
----	--	--	--	---	--

The second activity: Guessing the causes

In the following (spaces) write what you can think of possible reasons for the incident (in the first image); you may also think of what had happened directly, shortly or even along time prior to the incident, and have had caused this incident.

Write what you can, and you do not need to worry about making guesses:

1	•
2	•
3	•
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19.	•	•	•	•			•	•			•	•	,	•	•	•		•	•	•	•		•	•	•	•	•	•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•		•	•	•	•	•	•	 •	•	•	•	•	•	•	•	•	 •	•	•	•
20.														•										•			•									•																										•							•	•
The	t	h	ir	d		а	C	t	i١	/i	t	y	:																																																									
<u>Gue</u>	es	ss	sir	างุ	g	t	ł	۱e)	F	R	e	s	ε	<u>1</u>	t	s																																																					

Write whatever you can think of what is possibly going to happen due to the incident in (in the first image). You may think of what may happen due to that incident either directly or after along period of time.

Write whatever you can of guesses - and do not be afraid of more guess:

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The fourth activity: Improving the production

In this picture there is an image of one of the children's toys that you may buy from any of the toy shops; and it is an elephant that is stuffed with cotton, its 6 inches long and weighs 0.5 kg. What is required of you is to write some of the methods that you can think of to make some changes in it; so, that this toy becomes –after this alteration- a source of bringing more fun and pleasure to the hearts of children who may play with it. Also, speak about the most unfamiliar and the most attractive means of alterations for this toy; do not worry about the cost of these modifications. Think only of may make this toy a source of bringing more joy and happiness.



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The fifth activity:

The common uses of (empty cans)

It observed that most people through away the empty cans despite of the possibility of making use of them in several delicate uses.

Write down your thoughts about the unusual uses.

Don't limit your thinking in any specific volume of these cans, you can think about many of them as you like.

Don't think about the usual uses that you have seen before or heard about, but down the new and strange thoughts as you can:

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The sixth activity:

The uncommon Questions

In this activity try to think about many questions that you can ask about the empty cans. These questions must lead to many different answers to make the others more excited and look more for the knowledge.

Try to concentrate your questions about the special sides of these cans that most of the people usually don't think about.

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The seventh activity: Suppose that

The following is an event that is impossible to happen. Just assume it happened. This assumption will give you a chance to use your imagination to think about the exciting results that may happen if this assumption will happen.

Write down the expected results, guesses and write about your thoughts.

The situation: suppose that the clouds have threads drooped down from them and connected to the ground. What may happen?

Write down all your guesses and thoughts in the next page:



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Creative Thinking <u>Scale</u> B: The Form of Shapes

Activity Instructions:

Dear student,

You will find interesting things in the following pages. They will give you a chance to use your imagination and think of other ideas that could be combined in different ways. We want you to think of the best ideas; ideas that no one has thought of before. When you think of an idea, please continue and add other ideas to it till it becomes an exciting story.

You will be given a limited time for each activity; therefore, try to go on thinking. If you finish before the assigned time, wait and do not turn the page until you are told to.

If you want to ask a question, only raise your hand. You will find me in front of you to answer your questions.

Best wishes!

The Researcher

First Activity Constructing a Picture

On this page, there is a sloping shaded shape. Think of a picture or a subject that you can draw. This shape should be part of your picture.

Try to think of pictures that no one has thought of before. Then go on adding new ideas to your first idea to make it tell an interesting story. Think of any title and write it below your picture. Write a smart, unusual title as possible as you can, and use it to tell your story.





Second Activity Completing a Picture

By adding lines to the incomplete shapes on this page and the next page, you can draw things or interesting pictures. Also, try to think of a new thing or a picture that has not been drawn by anyone before.

Try, as possible as you can, to make your drawing tell an interesting story by adding new ideas. Choose a title and write it below your drawing.



Third Activity

Parallel Lines

In ten minutes, try to find out how many things or pictures you can draw from the straight pairs of lines shown on this page. The straight pairs of lines should be part of what you draw. You can add other lines in pencil to these pairs of lines in the picture so as to form the picture you intend to draw. You can put signs between or on or outside the lines or at any place you like so as to get the picture you want to draw. Try to think of things that no one has thought of before, and draw as many different pictures or things as you can by adding more ideas to each picture. Make every picture tell an interesting story and write a title below it.



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