ARAB KNOWLEDGE REPORT 2010/2011

EVALUATING THE READINESS OF FUTURE GENERATIONS FOR INTEGRATING INTO THE KNOWLEDGE SOCIETY

UAE
CASE STUDY

CONTENTS

UAE
CASE STUDY

CHAPTER 2-6:
SYSTEM OF ACTION TOWARDS THE KNOWLEDGE SOCIETY 355

The Arab Knowledge Report 2010/2011 deals with the issue of preparing the future generation of the Arab youth, which is considered one of the most important issues in the process of establishing the aspired knowledge society. The United Arab Emirates (UAE) was chosen as one of the four case studies in the report which investigates in depth the knowledge status in the Arab region in general and the UAE in particular. In addition, efforts made to enable the future generation to become involved in the knowledge society will also be examined.

The UAE case study in Chapter 1 begins with an analytical review on the status of human development, as this represents the overall aim of establishing the knowledge society, based on the relationship between human development and the efforts made to prepare the future generation. Chapter 2 of the case study focuses on education in the UAE as an important source of preparing the future generation for the knowledge society. To widen the research base, Chapter 3 sheds light on other preparation institutions that contribute to forming the essence, contents and purposes of the future generation's knowledge. Chapter 4 investigates the enabling environments and to what extent they enhance the efforts of society in preparing the future generation for involvement in the knowledge society. Based on comprehensive empirical field research Chapter 5 provides a scientific evaluation of the youth capabilities and the values that constitute the framework for their behaviour. In addition, Chapter 5 examines the opinions of the youth on their environments by using a survey. It also explores the results obtained from another survey completed by the teachers of these young people, along with the opinions of a selected group of experts on the efforts made for preparing the Emirati future generation to access the knowledge society. Finally, the report in the last chapter proposes a system for action that would contribute to achieving the main goal, i.e. successful preparation of the future generation for meaningful integration in the knowledge society.

U A E
CASE STUDY

INTRODUCTION

There are several definitions of the term 'knowledge society', as it is still relatively new. However, knowledge may be seen as the mental outcome or the total output of realisation, learning and thinking processes. 'Knowledge' is a main component of all human activities, whether economic, social or cultural, as it forms, during all stages of human development, a main input and output mechanism for all human processes. However, over the years, the importance of 'knowledge' has increased greatly and has now become an integral part of a society's capital, creating a new concept known as the 'knowledge society', whose success has become a standard for the development of a nation or society.

Huge and rapid developments in technology, particularly in information and communications technology have helped to accelerate the development of knowledge societies. This has changed many concepts, such as 'land borders', as technology has broken down these borders to open up the whole world, without restricting people to the same places to exchange knowledge and benefit from its outcomes. The current available technology allows more capability to share, keep and improve knowledge. Knowledge becomes one of the most important components of capital in this era, therefore, the development of any society is linked mainly to the ability to use and generate knowledge.

The United Arab Emirates has worked to provide the elements of the knowledge society model in terms of social, economic and cultural building and structure. Great achievements have been made in this direction, the most prominent of which is the considerable progress in information and communications technology. More efforts are being made to achieve the desired goals, especially those related to preparing the Emirati future generation for effective and positive involvement in the process of establishing the knowledge society in the UAE. This would contribute to establishing a prosperous Emirati society with a strong social and economic system that provides social wellbeing and ensures prosperity for the current and new generations.

STATUS OF KNOWLEDGE IN THE UAE

HUMAN DEVELOPMENT: THE BROADER FRAMEWORK OF THE KNOWLEDGE SOCIETY

Human development represents a broad framework for establishing the desired knowledge society. The United Nations Development Programme adopts the concept of 'human development' as the way to increase the opportunities of the individual to choose the decent life he or she desires. Human development leads to an increase in the options and opportunities available for individuals to obtain education, jobs and health care and to live in a safe and clean environment, fully participate in decisions and enjoy human, economic and political freedoms.

The UNDP also adopts the Human Development Index to measure the development level, which includes indicators such as the ability to enjoy a long and healthy life, to live at an acceptable

The United Arab Emirates has worked to provide the elements of the knowledge society model in terms of social, economic and cultural building and structure. Great achievements have been made in this direction, the most prominent of which is the considerable progress in information and communications technology

U A E
CASE STUDY

TABLE 2-1-1	
The most important indicators of human development in the UAE 2010	
Indicator	**value**
Human Development Index	0.815
life expectancy at birth (year)	77.7
GDP per capita (purchasing power equivalent to USD 2008)	56,485
Gross enrolment rate for both genders (%)	71.4
Adult reading rate (above 15 years) (%)	90
Combined poverty index	0.002
Infant mortality rate, under five years (for each one thousand new-borns)	8
Youth unemployment (15-24 years) (%) 2005*	8
Percentage of population using an approved water source *(%)	100
Source: UNDP database http://hdrstats.undp.org *Millennium Development Goals database http://mdgs.un.org on 17/5/2011	

The country's education strategy is based on encouraging the future generation to participate in the country's path of development, and its educational policy document works to achieve a knowledge society with its main intellectual approaches

economic level, the ability to access knowledge, and be able to read and write, which in turn represents one of the pillars of the knowledge society. According to the Human Development Index 2010, the UAE is classified among the countries with a very high level of human development; it ranked first among Arab countries and came 32nd internationally. The UAE has achieved great progress in human development. In the period 1980-2010, the value of the Human Development Index for the UAE increased from 0.627 to 0.815, i.e. approximately 20%.[1] Generally, the Human Development Index clearly indicates that UAE citizens enjoy basic rights such as health, education and a decent life. Table 2-1-1 illustrates some of the most important indicators of human development in the UAE.

Despite data indicating that Emirati citizens enjoy a high level of human development, more effort must be made for the society to exploit these outcomes and access the knowledge society. First, there must be awareness and conviction of the importance of transforming to the knowledge society, in addition to youth self-awareness of the challenges that hamper their gaining the required skills and abilities. It is necessary here to shed light on the status of knowledge within the UAE and the available potential that

would result, should it be correctly used, in effective integration in the knowledge society.

ACHIEVING EDUCATION FOR ALL

The UAE has succeeded in providing education for a high percentage of Emirati children; this percentage covered almost all children at schooling age. The net primary enrolment rate reached 91% in 2007, while there were only 5,000 children out of school. 100% of primary school students completed their study to the final year of primary education; compared to 90% in 1990. The gross secondary enrolment rate reached 92% in 2007 with a gender parity index of 1.03, indicating that the enrolment rate of females was higher than that of males. The UAE has considerably reduced the percentage of its illiteracy rate. The literacy rate during 1985-1994 was 71% with a gender parity rate of 0.95; this rate increased to 90% during 2000-2007 with a gender parity rate of 1.02 (UNESCO, in English, 2010). The country controls its education system; it is mandatory and free within public schools for UAE citizens. The country's education strategy is based on encouraging the future generation to participate in the country's path of development, and its

educational policy document works to achieve a knowledge society with its main intellectual approaches. These include considering education a main factor for achieving national stability and security, confirming its role in developing human energy with abilities that can cope with current changes within the regional and international society in order to achieve an integrated knowledge society, achieving a higher level of education appropriate to social and national needs, especially issues related to linking education to economic, social and cultural development needs and finally enhancing cultural affiliation and confirming learners' civilisation identity.

TECHNOLOGY AND HUMAN RESOURCES

There is a close relationship between human resources and the prevailing technology status in the society. It is known that technology transfer requires basic conditions, including the availability of human and material resources, as well as the availability of raw materials required for manufacturing new technology and opening the markets required for distributing the products. These main components shall be studied, not only for transferring technology, but also for localising and producing it.

Human development resources are one of the fundamental issues in social and economic development. In fact, the country's realisation of human wealth is the main incentive for caring about education and training, in addition to thinking about the effective means that provide the best education and training opportunities for society's individuals according to their abilities and capabilities. It provides each individual within the society with his or her share of various types of education, training and professional preparation in order to develop human wealth and this is a main pillar for the knowledge society (UNDP in Abu Dhabi and the Ministry of Economy, 2007).

The UAE has made progress in using modern technologies in management and production, including the application of the e-government concept which saves time and effort for the country and its citizens and leads to an increase in production efficiency, as well as the wide use of the internet in the country. The number of phone lines reached 2,090 per one thousand people during 2007, and the number of computers reached 330 per one thousand people, while the number of internet users reached 520 per one thousand people. The UAE spends 5% of GDP on information and communications technology and 1% on education as well as buildings, books, stationary and electronic devices, according to the 2007 data.[2] Broadening the knowledge scope and expanding electronic linking led to a considerable increase in the use of modern technology. The main issue in the preparation of the future generation for the knowledge society will be based upon the extent of the contribution of this technology and modern means of developing skills and knowledge required for individuals in society.

INNOVATION

The United Arab Emirates pays great attention to innovation, especially for the youth. This was clearly proven in many achievements, such as patents certified by the US Patent and Trademark Office, which remarkably increased in number during the last two decades; 67 patents were registered during the period 1997-2010, while the maximum number before 1997 did not exceed 18.[3] The volume of high technology exports reached 1% of the total manufactured exports in 2007.[4] Many institutions, either governmental or local, have been established to sponsor innovation and inventors in education, literature and the arts, concentrating on young people with distinguished talents and abilities. Sheikh Mohammed bin Rashid Al Maktoum's Foundation, which made several initiatives to support innovation

Many institutions, either governmental or local, have been established to sponsor innovation and inventors in education, literature and the arts, concentrating on young people with distinguished talents and abilities

U A E
CASE STUDY

not only in the UAE but also all over the Arab world, was one of the most important institutions. Dubai Media Association also sponsors media talent in the press, radio, and television, and the same is done by the Media Training Centre which is associated with the Radio and Television association in Sharjah. Many institutions and centers, including the Emirate Foundation, Emirate Foundation for Innovation, Dubai Foundation for Quality, Centre for Creative Thinking, and Presidential Affairs, and the Sheikh Mohammed bin Khaled Al Nahyan Centre's Prize for Childhood and Innovation, the Centre of Childhood and Youth in Sharjah, and others which sponsor inventors and contribute to caring for talented and highly skilled individuals through several innovative programmes. A number of prizes have been introduced in the UAE aimed at supporting talented youth and inventors, such as the Sheikha Latifa Award for Childhood Innovation.

SCIENTIFIC RESEARCH

There are many governmental and national institutions that sponsor and encourage scientific research within the UAE. The country established the Ministry of Higher Education and Scientific Research which, in cooperation with other ministries and institutions, such as the Ministry of Education and the Ministry of Social Affairs, contribute to sponsoring and producing many scientific studies. Supporting scientific research is not limited to government efforts, as there are some civil society institutions which also encourage scientific research. Many initiatives and awards have appeared, such as the Rashid bin Humaid Award for Culture and Sciences, the first award dedicated to the youth, the Al Owais Award for Scientific Research. The Zayed Centre for Strategic Studies and Research represents an important point in supporting and encouraging scientific research, in addition to the specialised research centres within some governmental

and private universities such as the United Arab Emirate University, Zayed University, Higher Colleges of Technology and Ajman University for Sciences and Culture.

Despite the existence of various institutions and initiatives, the production of scientific research in the country does not match the range and number of initiatives and incentive awards. Participation in scientific magazines, applied research and inventions in the sciences, medicine, engineering and mathematics are still under the required level, referring to a lack of awareness of the importance of scientific research as a requirement for the knowledge society. According to the most recent data available, the number of published scientific articles reached 55.86 per one million people, of which 58.77% was published jointly with foreign authors.[5]

On the other hand, the country has focused on the establishment of public and private libraries, including the public library in Dubai, which is one of the first libraries established in Dubai, followed by the public library in Sharjah and the Zayed Public Library in Al Ain. The UAE encourages its people to study and gain educational qualifications from both the university and beyond through scholarships provided to those young people who desire education. These scholarships are internationally open to all subjects.

The country and the Emirati society have provided various financial requirements to support innovation and scientific research. There are many plans that indicate awareness of the importance of establishing a knowledge society. However, setting plans and dedicating resources, even establishing facilities and providing requirements, are not sufficient for establishing the knowledge society. All these efforts will never be successful unless the youth benefit from them. This would see their available potential being used to its full capacity and the Emirati youth gaining the skills and capabilities required to cope with the era of science and technological progress to become involved in the knowledge society

Knowledge Economy Index for the UAE based on the World Bank's methodology

Index	Index value among 146 countries internationally	Rank among 15 Arab countries	Rank among 146 countries internationally
Economic Incentives and Institutional Regime	6.75	3	47
Innovation Regime	6.69	1	46
Education and Human Resources	4.9	6	79
Information and Communications Technology	8.59	1	21
Knowledge Economy Index (KEI)	6.73	2	45

Source: The World Bank's database (KAM) http://www.worldbank.org

where acquiring skills and values in proper enabling environments is a must.

KNOWLEDGE ECONOMIES IN LIGHT OF INTERNATIONAL INDICES

The World Bank adopts a methodology to measure the extent of achieving a knowledge economy based on 4 pillars: economic incentives and institutional regime, education, human resources, innovation and ICT. A knowledge economy is measured by a digital index.[6] The value of each index is between 0 and 10, indicating the relative position of the country compared to all countries included in the index.[7]

The UAE is ranked second among Arab countries on the Knowledge Economy Index (6.73) and the 45th internationally. This may be attributed to the remarkable rise in the value of the ICT Index (8.59), where the UAE came first among Arab countries and the 21st internationally. It also achieved a percentage higher than the average in the economic incentives and institutional regime index (6.75) and innovation index (6.69). However, the value of the education and human resources index (4.9), is below the acceptable level; the UAE is ranked 79th out of 146 countries. At the same time, there is a huge difference with a value of 3.69 points in the country's progress in ICT education and human resources. This indicates that education in the UAE is not coping well with technological and information development in the country. These indicators cause problems for the Emirati plan, particularly with regard to the appropriateness of the educational system and whether it meets the requirements of establishing the knowledge society within the country. Based on the integration among the four cognitive pillars for achieving a knowledge economy and knowledge society, a balance should be achieved among these pillars, as the failure of any is an obstacle to the others.

Based on what has been mentioned, it is clear that the UAE has achieved great progress in the field of human development, especially regarding the technological and economic development indicators. This progress forms a proper environment for cognitive performance and provides fertile ground for the future generation in the UAE to become involved in the knowledge society. This progress is also consistent with the developmental goals, as well as the objectives of a proper world for children in terms of education. The major challenge in establishing the knowledge society within the UAE is the improvement of educational conditions and raising the quality within schools and universities, as well as changing the view of education as a means for getting a job which ends once employed.

Based on what has been mentioned, it is clear that the UAE has achieved great progress in the field of human development, especially regarding the technological and economic development indicators

UAE CASE STUDY

PREPARING FUTURE GENERATIONS: INTRODUCTION TO ESTABLISHING THE KNOWLEDGE SOCIETY

The Arab Knowledge Report 2010/2011 shows that preparing the future generation represents a primary step in the process of establishing the knowledge society. In this case study, in addition to studies based on available data and information, we rely largely on the outcomes of the research and field surveys that were conducted in Dubai and Abu Dhabi for assessing the skills, values and enabling environments of the Emirati youth, and which the reports suggest shall be approximated at the time of preparing the future generation for the knowledge society. Skills are the mental capabilities related mainly to the ability to learn, to think critically/analytically, innovate, making decisions, problem solving and technical skills. This is in addition to capabilities related to the characteristics of an individual's personality, such as skills of self-awareness, controlling performance, dealing with pressure, adaptation and future planning, as well as social skills related to dealing with others, i.e. communicating, negotiating, being compassionate and spreading ideas. Values are what we wish to be instilled in the minds of the future generation in order to prepare them for dealing effectively with the knowledge society. This contributes to achieving the ultimate goal, which is adapting knowledge for achieving sustainable human development. This includes values related to attitude control, such as affiliation, self-esteem and adherence to freedom, as well as values related to learning, such as striving, perseverance, desire for knowledge and values related to dealing with others, such as respect, accepting differences, respecting moral promises and the willingness to participate in public life. We treat values according to the idea that they are a precise system inseparable from skills and capabilities, as they are specified for the actions, decisions and attitudes of individuals.

Studying enabling environments helps us to measure readiness of the political, economic and social environments and the prevailing social norms within the UAE in preparing the future generation to effectively contribute in the aspired knowledge society. The report will depend upon a number of administrative studies on the readiness of these environments in the UAE. Field research, it will examine in depth the direct enabling environment of the concerned students. Through direct observation and by surveying students and teachers opinions. It will explore the capabilities of schools and the conditions in which students live.

Values are what we wish to be instilled in the minds of the future generation in order to prepare them for dealing effectively with the knowledge society

THE EDUCATIONAL SYSTEM AND PREPARING THE FUTURE GENERATION FOR THE KNOWLEDGE SOCIETY IN THE UAE

INTRODUCTION

Education is the first pillar on which political, cultural, social and economic development depends. At the same time, education is the gateway to development and for preparing the future generation for the knowledge society. It also greatly contributes to human development, as it represents, along with a package of other factors, such as training, scientific research activities, development and innovation, a power that influences development (Hamed Ammar 1999). This chapter sheds light on the reality of education within the UAE in terms of quantity and quality, educational policies, the country's efforts towards educational reform and the challengesit faces. Changing society for the better - and towards the knowledge society - begins with school and education development, since education is considered the environment responsible, to a great extent, for developing scientific and critical thinking, innovation and the ability to adapt to development (Mohammad Bin Fatima, background paper for the report). All these matters are related to the ability of the educational system within the UAE to prepare the future generation with the skills, capabilities and freedoms that would enable them to access the knowledge society.

Some suggest that education began in the UAE before 1900, as there was an irregular type of education provided by the teachers of 'Katateeb' or 'Al Mutawaah', which is a traditional learning method in which a sheikh helps children to memorise the Holy Quran and provides some initial skills in reading and writing. This method lasted even after the establishment of schools by charities and traders who immigrated from nearby places, such as Hijaz, and settled along the Gulf coast due to the thriving diamond trade there. The first school, Al Tamimiah Al Mahmoodiah School, was founded in 1907. This was followed by the foundation of schools throughout the Emirates. However, these schools were affected by the degradation of the pearl trade in the 1930s, after which many were closed. In the 1950s and after freedom movements in the Arab countries, especially Egypt, the first school, Al Qasimiyah was founded in the UAE in Sharjah and was sponsored and supported by Kuwait. This was followed by several missions from Kuwait, Qatar and Egypt, and many primary and secondary schools were founded for males and females. With independence and the establishment of the Emirates Federation in 1971, there was an expansion in the number of schools and university educational institutions.[8]

PRE-UNIVERSITY EDUCATION

GOVERNMENTAL EDUCATION

The pre-university scheme in the UAE consists of four levels lasting fourteen years, starting from the pre-school stage. It is not considered to be a formal educational stage, but a high percentage of children are enrolled in kindergarten at the age of 4-6 years. 90% of Emirati children are enrolled in kindergarten (First Report on Care and Early Childhood Education, Knowledge and Human Development Authority, Dubai, February 2011). After kindergarten, students move to primary school (the first stage in primary/basic education), which lasts for five years with students ending this stage at 11 years old.

Changing society for the better - and towards the knowledge society - begins with school and education development, since education is considered the environment responsible, to a great extent, for developing scientific and critical thinking, innovation and the ability to adapt to development

Then, students move to the second stage, which lasts four years. Later, students study for three years in secondary school. In the 10th year of school, students are divided into two sections: scientific and literary, where they study the 11th and 12th years. Students finish the secondary stage in the UAE when they are 17 or 18 years old according to the age when enrolled in school. At the end of the secondary stage, they receive a certificate of secondary stage completion that is necessary to enter the university stage. From the very beginning, the Emirati educational system focused on female education, which it continues to do, and considerable progress has been made towards gender parity, as female education reached 100% in 2007 (UN and Arab League 2010).

Since its establishment in 1972, the Emirati Ministry of Education has focused on technical education, as it is very important to prepare the workforce to be qualified to deal with modern technology to achieve social and economic development in the UAE. Technical education started in 1958 under the supervision of the Trucial States Development Office. Since 1972, the perspective on technical education has changed and has come under the supervision of the Ministry of Education. Later, the Ministry established technical schools (commercial, industrial, agricultural) with special curricula to enable graduates to work in the public and private sectors in the country to fulfil the renewed needs of the national economy and positively participate in economic prosperity based on sound principles. The technical schools accept students who successfully complete the 9th grade (third preparatory year). After three years in school, they receive certificates for different levels: secondary school diploma (commercial, industrial, agricultural) and the secondary certificate for applied technology.

In 2003, the Ministries Council issued its resolution for phasing out commercial and agricultural education and transferring industrial education to Higher Colleges of Technology supervised by the Ministry of Higher Education and Scientific Research. A law was issued for the establishment of the Sharjah Institute of Technology. In 2005/2006, the industrial schools were transformed to the Institute of Applied Technology established to provide students with academic, technological, social and professional skills that enable them to face the challenges of market requirements in the 21st century.

PRIVATE EDUCATION

With approximately 88% of the UAE's residents either non-native Emiratis or expatriates,[9] private education has become as important as public education. According to the statistics provided by the Ministry of Education for 2009, there are 723 public schools and 467 private schools in the UAE (Ministry of Education 2009 A). Although all private schools are under the direct supervision of the Ministry of Education, their curricula differ from the Ministry's curricula in all subjects, except for Islamic Education, Arabic language and National Education, as the schools with more than 50% of Arab students are committed to teaching these subjects in Arabic or English according to the Ministry's books. There may be private schools that adopt the curricula of the Ministry in all subjects, but these schools often follow the curricula of their native countries. For example, Indian schools adopt the Indian curriculum, while English ones adopt the British curriculum, etc. Seventeen curricula have been adopted in private schools within the UAE until 2009.

This diversity of schools, curricula and communities may encourage the youth to take advantage of this cultural and educational environment, thereby contributing to gaining skills and knowledge, which could later enable them to establish the knowledge society. However, this diversity requires greater efforts for achieving harmony among these individuals for reaching the aspired goals through drafting a clear plan, in which

From the very beginning, the Emirati educational system focused on female education, which it continues to do, and considerable progress has been made towards gender parity

roles are integrated between different types of educational institutions and other society institutions.

The Ministry of Education has established a department dedicated to monitoring private schools to ensure they are committed to standards of performance and instruction, as well as to the policies of the Ministry. Private education is attracting an increasing number of Emirati, Arab and foreign students, and goes in parallel with public education. Private education has achieved remarkable development and attained a position that steadily increases in terms of the number of schools, technical and management institutions and students.

Most of the schools in the UAE are public, i.e. 61%, compared to 39% private schools. Abu Dhabi City contains approximately 25% of all schools in the UAE followed by Sharjah, which contains 10%. 42% percent of the total number of students in UAE receive education in public schools; Emirati children represent the vast majority of the total number of public schools students (81%), compared to children of expatriate Arabs who represent 19%. On the other hand, private schools provide education for 58% of the total number of students in the UAE; 22% Emirati students, compared to 48% of students from the Indian sub-continent, 20% from Arab countries and less than 10% from Western countries.

RELIGIOUS EDUCATION

This type of education accepts students who wish to move into it from the preparatory stage. This was established to provide religious guidance elements and open the way for university specialisations in Islamic studies. There were 29 religious classes in Ajman, Dubai and Al Ain, which included 600 students in 2010/2011.[10]

UNIVERSITY EDUCATION

The first public university in UAE was established in 1977 in Al Ain City. This university provides educational, scientific and literary programmes in different specialities: humanities, social sciences, education, sciences, law, economy, commerce, nutrition, agriculture, engineering, medical and health sciences and information technology. 90% of university students are Emirati students, and 10% are expatriates. Universities provide free education for all students, along with university housing for males and females from outside Al Ain City. In 2010, the number of university students reached 12,457, of which 24% were males and 76% females.[11]

In 1988, the Higher Colleges of Technology (HCT) were established to provide educational services for approximately 16,000 students. The HCT opened branches in all areas of the UAE and assigned buildings for male and female students. The HCT provide 80 educational programmes in technical specialities at the diploma and Bachelor's degree levels. Females represent 62% of HCT students while males represent 38%.[12]

The third governmental university is Zayed University, which was founded in 1998 with branches in Abu Dhabi and Dubai. It provides programmes through five colleges: Sciences and Literature, Sciences of Commerce, Communication and Media, IT and Education. In contrary to those UAE universities that accept resident students meeting certain standards and conditions, Zayed University and HCT only accept Emirati students.[13]

It is worth mentioning that establishing a free pre-university educational system in the UAE, in addition to three governmental institutions for university education that provide free services for citizens, gives the country an integrated educational system that is considered to be a cornerstone for progress and a strong base for the establishment of the Knowledge Society in the UAE.

Whereas the rate of residents in the UAE is 88% of its population, private university education has become very important for this category. Up to 2011, 72 private

The Ministry of Education has established a department dedicated to monitoring private schools to ensure they are committed to standards of performance and instruction, as well as to the policies of the Ministry.

U A E
CASE STUDY

educational institutions at university level have been founded within the UAE, which are licensed by the Ministry of Higher Education and Scientific Research.[14] These institutions provide educational services for residents and citizens. In 1988, Ajman College for Sciences and Technologies was the first university college founded in Ajman, followed by the establishment of the American University in Dubai in 1995, the American University of Sharjah in 1997, Abu Dhabi University in 2003, Dubai British University in 2004 and Al Hosn and Al Ain University for Sciences and Technologies in 2005. Later, branches for foreign universities, colleges and institutes were opened.

The Knowledge Village, which houses branches of prominent international universities, training centres and research institutions, was founded in Dubai. In 2007, the Knowledge Village hosted sixteen partners from international universities, such as Saint Petersburg University for Economics and Engineering, Wollongong University, Mahatma Gandhi University and Manchester College of Commerce (Ali Ibrahim, in English, 2010). Most specialities provided at these universities, colleges and institutes are scientific and technical, which the future generation need for the knowledge society.

ELIMINATION OF ILLITERACY AND ADULT EDUCATION

By establishing centres for eliminating illiteracy and providing adult education, the UAE strives to decrease the illiteracy of both genders, as there was a discrepancy between male and female illiteracy rates at the beginning of the 1970s. Currently, we see that the number of literate females is higher than males, as the percentage of illiterate females fell to 8.5% in 2005 while among males, it was 10.5%.[15] This indicates that the country cared about providing educational opportunities for all without discrimination between both genders.

From 1992/1993 to 2001/2002, more than 28,000 society members became literate, of which 6,367 had completed illiteracy elimination programmes, approximately 11,000 had completed primary education and 10,000 had completed secondary education by 2008/2009 (the Ministry of Education, 2009 B).[16]

The UAE was able to decrease its illiteracy rate, as adult illiteracy (above 15 years of age) decreased from 27.7% in 1985, to 10% in 2010, and the literacy rate doubled over the last three decades approximately three times.[17]

QUANTITATIVE DEVELOPMENT OF PRE-UNIVERSITY EDUCATION

The number of schools, students and teachers for public education throughout the UAE in 1972/1973 reached 157 schools, 40,627 students and 1,160 teachers. The number kept on increasing, reaching 723 schools, 265,431 students and 23,946 teachers in 2009/2010. The case was the same for private education, as it increased from 18 schools, 2,977 students and 138 teachers in 1972/1973, to 467 schools, 487,861 students and 30,205 teachers in 2008/2009. Based on these statistics, it is obvious that there has been great increase in the number of private and public schools. Quantitative expansion in education continues as the country strives to provide education for all groups in all regions (The Ministry of Education, 2009B).

Regarding the quantitative development of study days and hours in government and public schools, the number of school days increased from 176 to 180 days each year. The number of learning hours during the last five years increased from 840 hours to 927 hours, with an increase of 87 hours. But, this increase does not correspond to the number of study days and hours in private schools within the country, where students in public schools end their daily school hours early, compared to private schools. This certainly affects the time

By establishing centres for eliminating illiteracy and providing adult education, the UAE strives to decrease the illiteracy of both genders

available for students in public schools regarding their interaction with their teachers. In the second and third stages (grades 6 to 12), focus has been made on increasing the teaching hours dedicated to teaching science.

With all these reforms, the UAE is still below the international average in terms of the number of teaching days and teaching hours, as the number of daily school classes is limited to seven with 45 minutes for each class; the educational strategy for 2010-2020 calls for increasing the number of hours to 90 per week to come in line with the international hours rate (The Ministry of Education, 2009A).

The general budget of the UAE in 2010 was approximately Dh43.6 billion, i.e. $11.880 billion, of which Dh9.8 billion was dedicated to the social development sector, specifically to education (approximately $2.24 billion), equal to 22.5% of the annual budget.[18] This means that the educational budget for 2000, which was approximately Dh3.6 billion greatly increased in ten years.

There was also an increase in the expenditure rate with the increase in the number of students and schools, as the rate of expenditure from the educational budget doubled from 16.35% in 2000 to more than 33% in 2008. The financial cost of each student also increased more than a third during 2000-2008, which resulted in the advancement of school grades, in a way that suits the requirements and inputs of each educational stage (The Ministry of Education 2010B).

In addition to the central educational budget, which is the responsibility of the Ministry in six emirates, Abu Dhabi is in charge of the central educational budget in the emirate after the establishment of the Abu Dhabi Education Council (ADEC) in 2006. The emirate also provides Dh100,000 ($27,248) annually to each school in the country to be used for different school activities. Similarly, the Ministry of Education dedicates a special budget to each school in Dubai and the Northern Emirates based on the stage. A budget of Dh40,000

is paid to primary schools each term, and Dh45,000 is paid each term to preparatory schools (grades 10 to 12). In the event that the school has two stages, it allocated the budget for the higher stage. Secondary schools get Dh50,000 for each term, while the typical schools get Dh5,000 for each student registered in return for additional services and activities. This budget does not include employee salaries or maintenance expenses, which are the responsibility of the Ministry of Public Works (The Ministry of Education, 2008/2009).

YOUTH SKILLS BUILDING SYSTEM AND PREPARING THEM FOR THE KNOWLEDGE SOCIETY

In the next section, we will discuss the skills building system for the future generation and preparing them for the knowledge society. We will explore the issue of curricula and teaching methods development, from the traditional approach to the current learner-participation approach; stimulating learner's motivation and thinking. We will also look at developing teachers' abilities and training them, developing assessment systems from traditional exams that measure students' ability to memorise to structural exams, which are based on students' activity and problem solving, and connecting all these issues with the skills required for the knowledge society.

CURRICULA

Curricula play an important role in building abilities and skills in terms of understanding, analysing, structuring, building and developing the innovative thinking of the future generation. Revisions of the curricula in the UAE have been consistent with the requirements of skills and capabilities development, aimed at achieving the goals of the strategic plan set by the Ministry of Education by 2020.

The Ministry of Education has worked continuously on the revision of its

The UAE is still below the international average in terms of the number of teaching days and teaching hours

U A E
CASE STUDY

Curricula play an important role in building abilities and skills in terms of understanding, analysing, structuring, building and developing the innovative thinking of the future generation

educational curricula, in order to develop the content and teaching methods to be consistent with the requirements of the knowledge era. It has also worked to make the curricula, in essence, a national industry that takes into account the main dimensions on which the Ministry concentrates, and creates an educational subject that cares for students and their needs, keeping in mind their characteristics and seeing them as the main goal of education. The strategy of the Ministry of Education for 2010-2020 considered the curricula as one of the strategic axes to be constantly developed. Therefore, the Ministry continuously revises educational subjects and curricula and sets the skills and values that should be gained by students at each educational stage. The Ministry also takes care of the preparation of curricula according to international standards and benefits from the international curricula series in English, sciences and maths after they are translated and adapted to fit the Emirati environment. Arabic language and Islamic Education curricula have also been updated.

The Ministry's decision regarding the formation of a temporary committee for developing a national curriculum for the Arabic language, Islamic Education and National Education, issued in 2008, was one of the important resolutions made to cope with the knowledge era, with skills related directly to this age. The resolution provided for adding modern concepts to the national curriculum, such as the concepts of human rights, citizen rights and environmental protection, working on modifying the national curriculum in the way that meets the needs of the country and community and instilling tolerant and modest values and openness with other cultures, based on feeling pride for the national identity, Arabic and Islamic values, as well as Emirati traditions and habits (The Ministry of Education, 2009A).

The teachers' sample participating in the field study conducted in the context of this case study, which consisted of 138

teachers working in Abu Dhabi and Dubai, said the curriculum provided for youth was consistent with the requirements of the knowledge society. In the survey, 28% 'totally agreed' that curricula help in gaining the required skills, while 55.3% 'somewhat agree' with that statement. Their answers about the consistency of education with educational and technological development were consistent with this result (28% 'totally agreed', and 53.8% 'somewhat agree'); the same results were found with preparing new emerging curricula to face future challenges (25.8% 'totally agreed', and 51.5% 'somewhat agree'). Setting curricular, social, conative and cognitive dimensions will also be taken into consideration (See Table m2-1 in the Appendix). These results indicate a relative but not complete satisfaction of teachers about the curriculum in the UAE and their role in preparing the future generation for the knowledge society. Comparing these results with student levels in knowledge, skills and values (see chapter 5), it was found that any issues may not lie fully with the curricula, but may be attributed to other factors that are related to education and learning culture, practices and environments inside and outside the school.

TEACHING METHODS

The Ministry of Education in the UAE has made efforts to develop the teaching process using methods that concentrate on self-education to increase innovative thinking and avoid memorising and repetition.

The results of the teacher's survey on the teaching methods used indicated that a move towards modern methods had not begun in all schools yet. Results revealed that teachers do not use a certain approach in their teaching methods and that their educational practices interfere with modern methods and techniques. This resulted from a lack of understanding in connecting the educational subject, achieving the targeted goals. Based on teachers' responses in the context of the

field survey, 50% of teachers use these modern techniques in "all classes", and 39% in most classes. Also, 65.2% of teachers use discussions of the lesson concepts in "all classes" and 23.9% in most classes. Traditional techniques, such as maintaining silence in the class and punishing disobedience, are used by 79% of teachers in "all classes" and 15.2% in most classes, while writing the lesson on the blackboard is used by 53.3% of teachers in "all classes" and 20.4% in most classes. This may also refer to the many sources from which the teaching techniques are derived, or depending only on the cleverness and skills of the teacher (See Table m2-2 in the Appendix).

Teachers' educational trends tend to the traditional ways more than the modern ones. 88.9% of teachers agreed totally or partially (40.4% 'totally agreed' and 48.5% 'somewhat agree') that, "we must focus on the memorising characteristic of students to achieve success in their studies." Many participating teachers showed a conservative attitude towards the idea of development, most of them agreed totally or partially (35.3% 'totally agreed' and 40.6% 'somewhat agree') that, "the educational reform processes put teachers under stress and decrease their ability to teach". On the bright side, a large percentage of them (67.2% 'totally agreed' and 28.4% 'somewhat') that, "the task of the teachers is to instil a love of education and knowledge in the future generation", and that all students have the tendency to learn and succeed if they were taught by highly qualified teachers (44.8% 'totally agreed' and 35.1% 'somewhat agree'), (See Table m2-3 in the Appendix).

We can say here that teachers need awareness and to nurture the attitudes that support creating the knowledge society. These include changing the belief that they have the ability to teach without benefiting from modern educational approaches, and the need to adopt new forms of teaching and assessments, and viewing educational development as a requirement to activate and not burden the teacher, especially if this development is linked to the knowledge society and leads to the development of social, conative and cognitive skills in the future generation.

ASSESSMENT AND EXAMS

The concept of measuring student achievement in the UAE has developed over the past few years. The end of year exam had been the primary determinant of student achievement but the Ministry introduced methods for constructive assessment throughout the year, making them, along with students' school activities, an integral part of the assessment until the 12th grade. This development has begun to yield benefits. In 2010, ADEC created a national test, External Measurement of Student Achievement (EMSA), to determine the achievement level in school subjects, register the strengths and weaknesses of the development of student performance, define the effectiveness of the applied programmes, and to provide decision-makers within the Ministry with information about the quality of education. Results indicated the strengths and weaknesses of the students' performance.[19]

In 2007, Dubai participated in the fourth round of the international TIMSS tests which compares countries on student achievement in science and maths for the fourth and eighth grades within the category 'measuring achievement' throughout the cities. Dubai achieved 460 and 444 respectively in sciences and maths for the 4th grade. It also achieved 489 and 461 respectively in sciences and maths for the 8th grade, registering a level higher than the Arab average, but lower than the international one (UNDP 2007).

The Knowledge and Human Resources Development Authority, being the direct supervisor for public and private education in Dubai, in coordination with the Federal Ministry of Education, assessed school curricula throughout the Emirates by the school monitoring system. Results

Teachers need awareness and to nurture the attitudes that support creating the knowledge society

indicated that public school curricula are more comprehensive and more efficient to achieve the development of skills and capabilities, especially, since they are directly related to the Emirati community, in particular to matters related to the social and conative skills and all types of values. Of course, there is a difference between the content of the curricula and the way of transferring them to learners. If taught correctly, the study subjects may partly obtain the development of skills and capabilities. Figure 2-2-1 illustrates the development in school performance within Dubai schools through the previous two years.

Despite efforts, the majority of assessment practices are traditional, while referring sometimes to using modern assessment methods that are linked to measuring skills and capabilities. Results of the teachers survey in the field research sample indicated that they still mix between modern assessment methods in their understanding, practices and attitudes, such as assessment based on exerted efforts in doing homework, steady improvement in results, effective participation in classes,

There is a difference between the content of the curricula and the way of transferring them to learners. If taught correctly, the study subjects may partly obtain the development of skills and capabilities

ability to innovate and invent, as well as the ability to think and ask. This is compared to the traditional approach, such as attendance, good behaviour inside and outside the class and the right answer on the exam paper (See Table m2-4 in the Appendix). This refers to the necessity of addressing the issues of preparing and training teachers as they are on the front lines in preparing the future generation.

VALUES BUILDING SYSTEM FOR THE YOUTH AND PREPARING THEM FOR THE KNOWLEDGE SOCIETY

Some studies have focused on the values building system for Emirati students in secondary schools within the UAE by measuring their attitudes towards some general values, along with values related to the adolescent stage. They also tried to define the vision of that group of youths regarding the issue of work and the values related to it which affects the process of future development.

The study found that moral values were at the highest level for the study

FIGURE 2-2-1

Development of education quality according to curricula in Dubai schools
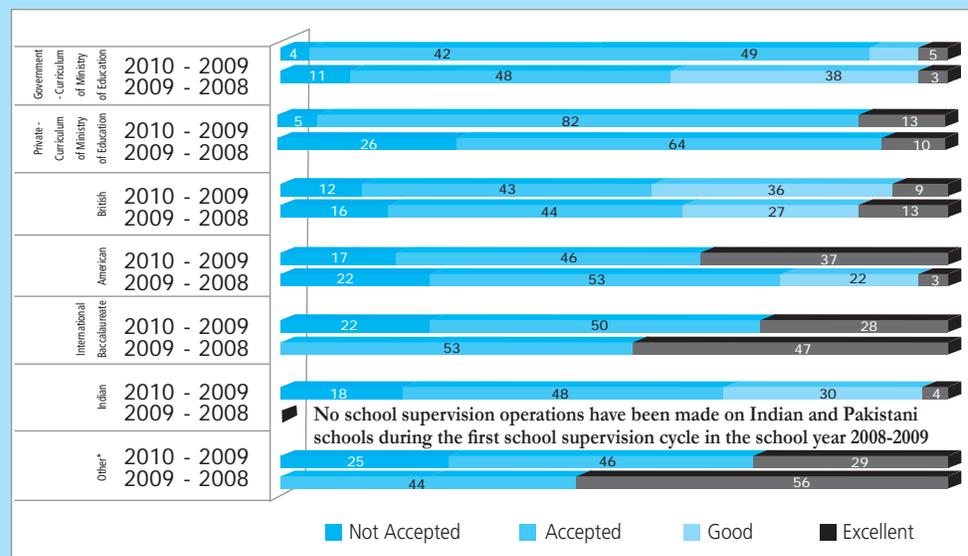
Source: (Knowledge and Human Resources Development Authority, 2009/2010)

sample, especially for issues related to the adolescent stage, such as truth and tolerance. Religious values were also found to be a main source of morals. Social values were important after moral and religious values. The study also indicated their attitudes towards independence values (achievement, independence and individuality). It was clear that individuals with high innovative performance received high degrees in values such as achievement, independence, truth and social esteem, compared to the group that achieved lower degrees of innovative performance.

Entertainment and materialistic values came last on the values scale, supporting the idea that secondary students in the UAE are not interested in these values. It is certain that the change in the methods and techniques of entertainment in the communication and information technology era is the reason for the entertainment value degradation in its traditional meaning on the values scale within a community where all modern technological equipment is available.

Regarding values related to work for secondary students in the UAE, the results of the same study suggest that the dominant values in this field are those related to the status of work itself, such as mastering work and the security it will provide in the future, followed by the social values of work, the values of self-fulfilment of work, such as social position or leadership and the innovation opportunities it provides, while work commitment value and earnings received the lowest degree in the values system in all samples. The study confirmed the importance of including, within the content of school curricula, especially in the first stages of life, subjects that focus on moderate positive religious and moral values, achievement and independence and providing the opportunity for the future generation to express itself through activities and programmes parallel to educational programmes, confirming grouping activities that aim at developing a spirit of collaboration and choosing

teachers to be the good example or the model that should be imitated by the new future generation, with the necessity of educating the Emirati family with its role towards the new future generation of youth (Yousef Al Hassan 2004).

Another study tried to define the values instilled by the school curricula, teachers and the school climate of students through a survey on a random sample of secondary stage teachers and students from all over the Emirates. The study indicated the presence of many values that may help the educational system access the knowledge society. 64.92% of students agreed that the educational system motivates their desire to know and learn, develops their feeling of responsibility (60.15% agreed), and enables knowledge-networking by students with other societies (54.92% agreed) and other values related to educational methodology, such as determination, perseverance (63.69% agreed) and self-esteem (60.15% agreed), in addition to other general human values. Regarding how the educational system enhances freedom values, the average was low as 48.46% agreed that the educational system gives students freedom of expression. Teachers participating in the study did not see that the educational system in the Emirates satisfactorily appreciates them morally and materially, as only 40.45% agreed on this point. 31.46% of teachers agreed that the educational system deals with the teacher as a partner in setting plans and educational programmes. While 42.7% saw that the educational system provides a climate that is professionally satisfactory, another 78.5% believe in the importance of the role played by teachers in creating the generation (Maryem Lotah, background paper for the report).

Another study on the availability of the student's moral contents in Arabic books provided for the first three grades in the primary stage found that despite the fact that these curricula contain some values related to the knowledge society, such as the love of education, there are

The study found that moral values were at the highest level for the study sample, especially for issues related to the adolescent stage, such as truth and tolerance

U A E
CASE STUDY

many values required by the knowledge society which did not appear clearly in the curricula taught within the UAE. This may have resulted from focusing on values of human relationships, love, affinity and compassion, which express the culture of the community and tend towards enhancing these values. Curricula must include the main and important values that children must learn to be able to use in the framework of efforts to enter the knowledge society with all its contents (Hassan Jaafar Al-Khalifah, in Arabic, 2008).

AVAILABLE ENABLING SYSTEMS FOR THE YOUTH THROUGH EDUCATION

The UAE worked on providing the enabling environments that allow the future generation to continuously learn through all educational stages. It focused on building and equipping schools in the best way possible. This was clearly obvious in the spread of many schools in different areas and communities within the UAE in order to provide education for all Emirati future generations. Enabling environments appeared in many forms from the material, such as school buildings and equipment to the spiritual; awards and incentives in various forms.

SCHOOL BUILDINGS

The Ministry of Education has focused greatly on school buildings and developed them as an integral part of the Ministry's development processes. The UAE is working to make school buildings reach the highest level and which are consistent with international standards. It is taking into consideration all components of good school buildings with proper services, utilities, clear drinking water and electricity. It has also decreased the number of students in classes to acceptable rates in 2008 with an average of 23 students per class.[20] However, there are some school

The UAE is working to make school buildings reach the highest level and which are consistent with international standards

buildings that still need maintenance and refurbishment. The Ministry of Education seeks to achieve qualitative movement in some schools, especially in the Northern Emirates, including Sharjah, Ras Al Khaimah, Ajman and Al Fujairah, where education started in the 1960s. In addition, the lack of schools in some villages has led to a relative increase in the number of students in each class within Dubai and Abu Dhabi.

AVAILABLE EQUIPMENTS IN SCHOOLS

The UAE seeks to furnish schools properly, focusing on standards of design and construction as well as security, health and aesthetic specifications, in addition to providing equipment, instruments, and technologies that are consistent with advanced curricular requirements that focus on the student as the main part of the educational process. The Ministry also established computer and science laboratories in approximately 70% of schools, as well as libraries and clubs for student activities. However, the availability of such environments is not sufficient for preparing the future generation unless these environments are activated and correctly used in order to help students achieve knowledge and develop a love for education and reading.

INFORMATION AND COMMUNICATIONS TECHNOLOGY

The UAE has provided schools with computers and a package of assistant technological programmes for educational development, including an enrolment and acceptance system, as well as an assessment and exam system. The Ministry also approved the e-education project, which will be pilot tested in 11 secondary schools and will ask the Ministry to provide 3,200 e-education content versions of the Ministry's curricula. All UAE schools are connected through the

internet. The Ministry's electronic portal was developed, and many educational services have become available, such as communication with students and teachers, disseminating exam examples and inquiry about the marks/grades of students. According to the strategic plan, work is underway to implement a Help Desk project for providing equipment and networks maintenance services for all UAE schools. Ministry programmes oblige teachers to learn ICDL, which is mandatory and a standard requirement for appointment and promotion. With the provision of these technologies in schools, an important role must be played by teachers in helping learners using such technologies in teaching and teacher training on integrating the technology into the teaching process.

According to the field surveys conducted in the preparation of this report, 82.4% of the teachers asked said they have good or advanced ability to use technology.

The results showed that 88.9% of teachers surveyed use technological methods to search for educational subjects. 80.4% of the sample believes that it helps in preparing lessons or in communicating with students (72.9%). This is a positive thing because searching for knowledge from several sources, especially by using technology, opens horizons for teachers to broaden their understanding and students' understanding, cultures and awareness and develop their cognitive skills. This is what the knowledge society aspires to. The agreement by a large percentage of teachers on the purpose of using technology does not necessarily mean they use it, although 68% of teachers said that they benefitted from using the computer for educational purposes (See Tables m2-5 and m2-6 in the Appendix).

MOTIVATION BY AWARDS

The availability of motivating and supporting environments, through providing motivation awards, supports the Knowledge Society.

Educational awards are considered to be a factor that may contribute effectively in raising the efficiency of the educational system and in bringing about a distinguished change in the educational process, for its goals and mechanisms aim at supporting educational work, on the condition of benefiting from them and directing youth to participate in it. A survey of the number of awards throughout the UAE indicated that there are more than 126 awards dedicated to youth, children, women, family and researchers. The most prominent of them are the Khalifa bin Zayed Award for Teachers, Hamadan bin Rashid Al Maktoum Award for Distinguished Educational Performance, Sheikh Khalid bin Saqr Al Qasimi Award for Collaboration and Student Excellence, Awards of the Sons of Sheikh Hazaa bin Zayed Al Nahyan for Arab Child Culture, Sheikh Rashid bin Humaid Award for Culture and Sciences, Sheikha Latifa Bint Mohammed bin Rashid Al Maktoum Award for Childhood Innovation, Sheikh Khalid bin Mohammed Al Nahyan Award for Future Generations, Sultan bin Ali Al Owais Award, Al Fahim Award for the top students in the secondary stage and the Sharjah Award for Educational Performance. This is in addition to a set of competitions for students, such as the Emirati Red Crescent competition and student councils competition at the Humaid bin Rashid Foundation for Development and Human Growth.

Some people may ask about the real impact of awards and their benefits for the future generation in motivating and supporting them, as well as in developing their skills and capabilities to be able to become involved in the knowledge society with its requirements, including the availability of enabling environments, sharing the future generation in defining their trends, desires and capabilities and working to achieve them. Most answers focused on the necessity of conducting a survey study about the impact of educational awards on the future generation. It is certain that this case needs an enhancing and supporting educational

The availability of motivating and supporting environments, through providing motivation awards, supports the Knowledge Society

U A E
CASE STUDY

partnership that combines the roles of all participants in the educational process, including the government, private sector, parents, students, teachers, family, society, media and civil society institutions, so that education becomes a social responsibility shared by all (Amna Khalifa, in Arabic, 2007).

TEACHER PREPARATION

Preparing and training teachers is an urgent need in the era of the knowledge society, as the perspective has changed about education which relies on school books. The UAE seeks to provide professional development opportunities for teachers and workers on different levels, with a variety of courses from the general ones that suit the needs of workers in the educational field and specialised courses according to school grades. These courses were organised before the teacher entered the educational field and during their service (central level, educational departments level, school level), with the investment in available training opportunities in different foreign bodies through training inside and outside the country. Training includes programmes for developing the leadership performance of school principals and providing them with the leadership skills that enable them to lead their schools within the knowledge society. Despite these efforts and the trend of putting the student at the centre of the educational process in the UAE and developing curricula to cope with the development of knowledge, there was no intensive qualitative and quantitative training to change teachers' trends, their teaching methods or the performance of school principals. Conditions still do not allow teachers to move towards the knowledge society. To see the impact of these efforts, a teacher survey was conducted during the preparation of this case study to explore teaching approaches and the available conditions of teachers

Preparing and training teachers is an urgent need in the era of the knowledge society, as the perspective has changed about education which relies on school books

to cope with the requirements of the knowledge society. The results indicated that more of the teacher's time is dedicated to activities related to their daily work than to activities that can improve their educational performance. Results indicated that 41.9% of teachers do not dedicate any time to participating in any activities with students (such as clubs and support lessons), while 50.4% of them do not dedicate any time to participate in any educational production, such as developing educational programmes or participating in assessments (See Table m2-7 in the Appendix). This means that teachers do not have enough time for activities and programmes that develop students' skills and abilities; they only focus on administrative issues and lesson preparation. Concerning the available equipment of teachers in their homes, 95.6% said that they have computers, and only 67.4% of them have an internet subscription. This means that a third of teachers participating in the study are not connected to the internet, at a time when this has become one of the main pillars of the knowledge society. 74.8% of teachers indicated that they have a library inside their homes while a small percentage of them (12.2%) acknowledged that they subscribe to educational magazines. This may mean that teachers are aware of the value and importance of these magazines for reviewing the most current studies and research in the field of education and teaching methods, or that teachers may do without that by subscribing to the internet, or teachers may tend to use common traditional methods in dealing with students and teaching methods (See Table m2-8 in the Appendix).

Through this questionnaire, teachers arranged their potential in providing various skills to students. The highest potential was in lesson memorisation (49.3% of teachers believe they have a 'high potential' to provide that to students), 46.2% believe they can train students to memorise educational rules

and laws and 38.9% was in favour of teamwork. On the other hand, the rate of teachers who believe they have the ability to enable students to acquire the required skills for the knowledge society was low: for life-long education (26.6%), research completion (27.5%), planning for the future (29.5%), critical thinking (22.7%), and information analysis (25.8%) (See Table m2-9 in the Appendix). The data suggest that teachers, for many reasons that may be attributed to them, or to the educational system, students, or reasons outside school, are unable to instil skills that cope with the knowledge society but can build memorisation capabilities.

We conclude that the way to the knowledge society for the future generation still needs more effort, be it on the level of curricula or teaching methods or in teacher performance. However, the issue has some optimistic aspects: the results of the survey also indicated that teachers are aware of the importance of educational practices supporting the knowledge society, such as encouraging students to interact with teachers and training them on problem solving. 83.3% of teachers think that this educational practice is 'very important'. 20.6% of teachers consider that making students memorise lessons is an essential teaching method and monitoring students step by step in all their activities are less important practices (See Table m2-10 in the Appendix). By analysing the data, we see that what is proposed by teachers has a great importance in developing cognitive, social and conative skills. It also refers to the fact that the teachers are aware of the necessary practices they must perform to help the future generation enter into the knowledge society, especially if the teacher is able to interpret these proposals into programmes and activities applied in the real world.

Regarding teachers' satisfaction with the professional preparation they receive, they said the school helps them to develop their capabilities, even if not on a regular basis (42.5% of teachers said that the school does this always, while 35.8% said that school does this sometimes), (See Table m2-11 in the Appendix). 15.7% of teachers completely agreed that there are many opportunities for training during service for improving educational level, while 54.4% 'somewhat agree'. Teachers may face some difficulties in obtaining training, such as the training centre's remoteness, while 68.5% of teachers stated that there are no training centres near the schools where they work. For the enabling environments that are available to teachers, 82.1% of teachers agreed that there are no systems or bodies that protect their rights, while about 79% of teachers sampled, either native citizens or foreign residents, said their salaries do not guarantee them a decent life. They are the basic and important factors enabling teachers to perform their role in the educational process that helps to prepare the future generation for the knowledge society (See Table m2-12 in the Appendix).

On the other hand, teachers' answers were positive regarding their ability to express themselves, as 63.7% stated so (See Table m2-13 in the Appendix). This feeling is of great importance, as opinion sharing among teachers plays an important role in developing education, and is a feature of the education society. It is hoped that teachers can transfer this feeling to their students to practise it.

For their view of the education profession and professional satisfaction level of teachers, taking into account that most of the participating teachers were non-Emirati (as is the case in most Emirati schools), 44.4% of the participating teachers said that they would completely leave the education profession if they found other work that provided them with the same income and conditions. 18% of teachers said that they may think about this. While 50.8% of teachers confirmed they would leave the teaching field if they entered another profession with a higher income, 21.2% of them said that this

Teachers may face some difficulties in obtaining training, such as the training centre's remoteness, while 68.5% of teachers stated that there are no training centres near the schools where they work

applies to them 'to some extent'. This trend may be attributed to the low respect for the teaching profession and to teachers' low income level; this was confirmed by the teachers' answers, as 60% completely agreed that 'the teaching income is not enough for self-sufficiency'. It is also a good sign that most teachers (more than 70%), (See Table m2-14 in the Appendix) agreed that they 'have a mission', as no teacher answered otherwise. Teachers' answers expressed their reality, as there is no high social esteem for the teaching profession, and it is not viewed as a profession one aspires to. Also, those who work in the field of teaching do not enjoy high social status, compared to other professions. In addition, they have low salaries. A large percentage of teachers (69.2%) supported this trend, as they felt low respect and esteem by society and students (73.7%), (See Table m2-15 in the Appendix). This is a large percentage that deserves to be given more consideration: Is this attributed to the view of the society to teachers, the non-appreciation by the educational institution in which they are working? Or is it because students do not appreciate the educational role performed by teachers in society, or because teachers, as a result of the low income compared to other professions, do not receive the proper respect? Or are there other reasons? This may be explained by the fact that many Emirati citizens, particularly males, are not inclined to the teaching profession, but seek other professions that bring better income and higher social status.

In brief, the government should do more to prepare teachers and provide the proper infrastructure in schools to enable them to practice their jobs to achieve the goal of preparing the future generation for the knowledge society. Many efforts still need to be made to raise teachers' self-esteem and to promote job satisfaction, in addition to supporting the efforts made for preparing the teacher academically for their assigned job.

Teachers' answers expressed their reality, as there is no high social esteem for the teaching profession, and it is not viewed as a profession one aspires to

POLICIES AND STRATEGIES OF REFORM AND EDUCATIONAL DEVELOPMENT

The educational development and reform policies were drafted in the mid-1990s in the light of a vision that motivates modernity and is consistent with the developmental requirements of the UAE. The educational policy for 1995 included six main principles: strong Islamic upbringing, education for enhancing national affiliation, education for instilling social responsibility, education for beneficial work and comprehensive development, education for preparing for the advanced changeable future and education for continuous learning (The Ministry of Education, 1995).

The educational vision for 2020 represents the main reference and the thought framework for the development of education for the preparation of students equipped with knowledge, skills and attitudes necessary for national development. It also includes advanced curricula that enhance thinking skills and behavioural values, teachers that are educationally and scientifically qualified, school management with the leadership characteristics and a multi-channelled educational system providing an educational environment that develops an ability to innovate. The vision's goals were drafted to include the development of secondary education, converting it to mandatory education, making a radical change to the concepts, techniques and practices of education and providing integrated student welfare programmes, along with achieving the principle of 'education is a right for all' and translating this right into equal educational opportunities for males and females (The Ministry of Education, 2004).

The strategic educational plan for 2008-2010 embodies the country's interest in developing and reforming education and providing the financial and human resources required for the achievement of

a comprehensive educational renaissance consistent with this era. It also seeks to interact with the lastest developments of the 21st century to transfer educational output of the Emirati students to an international level in terms of preparation, qualification, competition and gaining technical skills, which are all strongly required in the marketplace. In this regard, the project confirms that the targeted development will meet the UAE's aspirations in achieving a diverse economy and fully contributing to the technological revolution witnessed by the 21st century. This is to be accomplished through developing educational standards based on educational foundations, moving to an advanced educational environment that concentrates on the students and puts them in the centre of the educational process, adopting a modern system for educational buildings, preparing the educational environment and providing it with the proper infrastructure; internet and IT, adopting a special cadre of teachers and employees in the field of education, raising the social status of teachers and comprehensively developing the private education sector according to legal frameworks. Application of the strategic plan resulted in developing a set of programmes and projects that were clearly obvious in the development of schools and in establishing schools with specifications that suit the nature of the educational process and equipping them with laboratories.

The strategic educational plan for 2010-2020 was introduced as a document that describes the educational initiatives and projects for the state's future education. This strategy aims at achieving an educational model focusing on the student. It is based on four pillars: student educational achievement, student school environment, equal education opportunities for students and instilling values of citizenship in the student (The Ministry of Education, 2009 A).

EDUCATIONAL BOARDS IN THE UAE

Various boards in the UAE are granted more power in each emirate to oversee some educational affairs. Some boards and bodies have developed special strategies based on studying the reality of education in each emirate in accordance with the available budget for each council. The education boards help the Ministry of Education to advance educational development and achieve schools upgrading at the highest levels. These boards were established from around 2005/2006 in most of the emirates, as is the case in Abu Dhabi, Dubai, Sharjah and Al Fujairah. With the establishment of various boards of education, the overall vision must be clear and should be able to bear the developmental responsibility towards teachers. There shall be a unified strategic plan throughout the UAE with a clear methodology that focuses on developing skills for critical thinking, analysis, composition, deduction, application and employing information and students' knowledge.

Below, we will illustrate the most important achievements made by these boards in Abu Dhabi and Dubai, in which the case study was conducted in the Arab Knowledge Report 2010/2011.

ABU DHABI EDUCATION COUNCIL

The ADEC was established in 2005 to develop education and educational institutions, and to provide technical consultation for the development of educational policies and services applied within the emirate. It concerns education in schools in different stages within Abu Dhabi, in line with a vision that aims at promoting education at an international level. Within the general plan of education it aims to develop educational, training and professional programmes that secure the marketplace needs from excellent human efficiencies in the emirate (ADEC, 2008).

There shall be a unified strategic plan throughout the UAE with a clear methodology that focuses on developing skills for critical thinking, analysis, composition, deduction, application and employing information and students' knowledge

U A E
CASE STUDY

The ADEC's ten-year strategic plan (2009-2018) aims at developing the educational system and achieving educational output in Abu Dhabi at the highest level, achieving the economic vision of Abu Dhabi by 2030, and achieving qualitative change throughout education and promoting it to the highest international levels, in order to provide students with the skills required for the knowledge economy. The ten-year strategic plan includes six main components: raising student performance to international levels, providing educational opportunities for all, providing excellent private education choices, enhancing cultural inheritance affiliation, success in the marketplace and building institutional capabilities, in addition to the participation of all parties in the educational process (Abu Dhabi Education Council, 2009).

THE KNOWLEDGE AND HUMAN DEVELOPMENT AUTHORITY IN DUBAI

The Knowledge and Human Development Authority was established as a successor to the Dubai Education Council in 2006, to work on developing the knowledge and human resource sectors, as well as the quality of education and learning. It is responsible for managing public schools in Dubai through the School Educational Institution founded in 2007 for developing a school education sector at all stages (Knowledge and Human Development Authority, 2010).

The school monitoring body within the authority is responsible for improving the quality of the output of the educational process. It has developed a framework for monitoring, appropriate for Dubai schools, and is based on international experience that depends mainly on evaluating the educational outcomes of schools, which are: level of student achievement, compared to international standards in the five main subjects: Islamic Education, Arabic language, English language, sciences and maths, and the level of student progress in these subjects, in addition to evaluating student attitudes, behaviours and social development. Monitoring processes also evaluate the quality of school performance in four main aspects: education, learning, educational curriculum quality and the quality of support and protection which the school provides for its students, as well

FIGURE 2-2-2

Schools monitoring results in Dubai schools 2009-2010

Source: (Knowledge and Human Resources Development Authority, 2010)
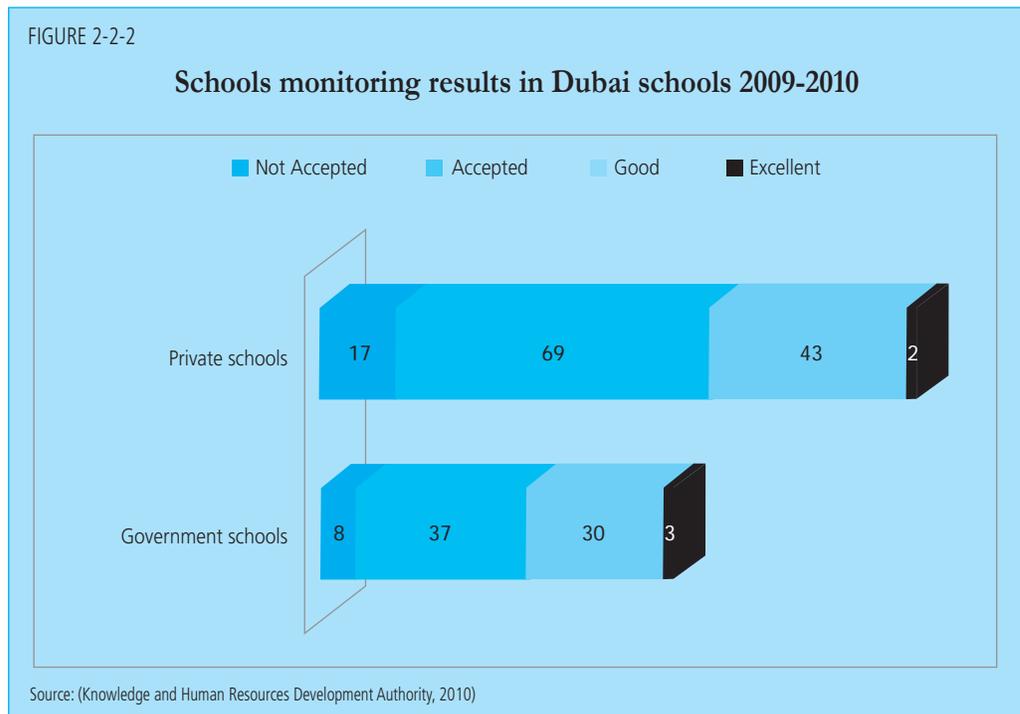
**Number of Schools in Dubai that achieved development
since the last school year (2009)**

Government - Curriculum of Ministry of Education	8	61	9
British Curriculum	12	25	12
American Curriculum	2	24	4
Private - Curriculum of Ministry of Education	14	1	
Other	3	5	
International Baccalaureate	4	2	

- The general performance did not change
- The general performance declined
- The general performance progressed

Source: Knowledge and Human Resources Development Authority, 2010

The model schools appeared as an ambitious and well researched experiment based on a number of educational experiments which proved its excellence in many developed countries

as the quality level of school leadership and management.

The first annual report on school monitoring, which was issued in 2009, showed a sharp decrease in the level of school achievement in the Arabic language in many private schools, as well as a decrease in the level of Islamic education. In addition, public school students in Dubai need to improve their skills in conversation, reading and writing in English. The report also showed a decrease in the level of school achievement of male students in the second education phase (6th to 9th grade). The report also stated that schools must help their students with developing self-education skills through providing major opportunities for the execution of a wide range of the projects and tasks that depend upon research, and teaching them how to use research technology in constructive and innovative ways. The school must also make more investments in the process of professional development to improve teachers' experience and performance, which positively affects student performance and meets all students' needs.

NEW SCHOOLS INITIATIVES

The UAE has issued a set of initiatives to improve the quality of education, including establishing new schools, each with certain features trying to achieve the best vision that must be provided for the society's future generation.

The model schools appeared as an ambitious and well researched experiment based on a number of educational experiments which proved its excellence in many developed countries. These schools aim at qualitative change in the status of education. It is based on comprehensive development of the learner's personality, flexibility, educational uniqueness, and emphasises partnership between the family and the school and teaching students in a manner that suits their development.

Work started, according to the Al Ghad Schools Initiative, during the 2007/2008 academic year. The idea of these schools is based on approving the educational standards as a basis for choosing the content of curricula from various resources, without depending on ready-made curricula, in addition to enabling

**U A E
CASE STUDY**

students to learn in English (The Ministry of Education, 2008 B).

Public-private schools are one of the most important initiatives implemented by the ADEC with 176 schools until 2009/2010. The private educational sector manages and operates public schools under the supervision of the council according to the main performance indicators that are consistent with the required educational outcomes. These schools teach the English language, maths, sciences and IT for the advanced curricula of the ADEC, and teach the remaining subjects according to the curricula of the Ministry of Education (The Ministry of Education, 2008 C).

INITIATIVES

Abu Dhabi commenced with the initiative of maintaining the percentage of students to teachers in secondary schools, which reached 10.7 students for each teacher generally. The percentage was higher for public schools, i.e. 10.4, than private schools (11.4). An improvement was made in 2005, compared to 2001 with 11.2 students for each teacher (ADEC, 2009).

The student council experiment was an important exercise for training students in electing, expressing opinion, dialogue participation, discussion, and being socially responsible, which is the focal point for achieving the targeted development in the future generation to live in the Knowledge Society. Student councils have been formed in many schools since 1997, from the fourth grade throughout schools and regions. Systems allow these councils to consider issues the student is interested in, as well as educational issues and management, and file their requests to the Ministry. Despite student councils being considered important beacons that enable sharpening students' thoughts and improvement of their skills in dialogue and discussion, which are required skills for the youth in the Knowledge era, it is obvious that the work is done traditionally

The student council experiment was an important exercise for training students in electing, expressing opinion, dialogue participation, discussion, and being socially responsible

and ineffectively most of the time. There is also lack of awareness in the goals and roles of these councils by students or employees in the education field.

Parents boards began to be formed within all schools and educational regions in the country in 1996, as these boards were founded in 454 schools, i.e. 92% of the country's schools (The Ministry of Education, 2010A). These boards allow parents to participate in extra-curricular activities. They also helped in relatively increasing the number of parents attending schools, compared to previous years, with a clear interest in following their children's progress inside and outside school. Parents attended schools without being requested to do so, their interest in discussing student issues increased and they held sessions in schools to find solutions.

CHALLENGES FACING THE EDUCATIONAL SYSTEM AND THE PREPARATION OF THE FUTURE GENERATION

The weak educational output and graduating students who are not qualified for higher educational institutions without passing a preparation year, are among the challenges that face the educational system in the UAE. This lack of educational output may be attributed to many factors, including teachers and schools' weak ability to motivate students, a lack of interest in instilling the skill of thinking for the future, and a weakness in instilling self-fulfilment, either in school, in the family or in other social and media institutions. The continuous use of traditional methods in teaching may be one of the reasons for the lack of educational output. This calls for developing the current study curricula to one based on competencies not on content, and on application not memorising. This also requires changing the educational process according to the methodology of competencies and providing teachers with training and required materials to implement and successfully use the new

methodologies. Among the necessities are avoiding repetition, memorising and recitation, along with adopting modern teaching techniques, developing skills connected to critical thinking, the ability to innovate, solve problems, make proper decisions, have self-realisation and self-control, accept others, and be able to communicate, negotiate and convince others, in addition to other skills.

The educational system in the UAE is still suffering from high rates of pupils leaving school early; the percentage in the country reached 2.2% for males and 1.1% for females. More than 10,000 students (most of which are Emirati students) out of 120,000 registered students at this stage in public schools, with the majority in the secondary stage, leave school to pursue other routes due to professional interests or due to social conditions. Male and female secondary school leavers reached 8.4%, while males reached 9.7%. This represents an increase compared to female students, whose drop-out percentage is 7.2%, which is a source of concern. Hence, the Ministry conducted two studies on this phenomenon to define its dimensions and how to overcome it in collaboration with the Centre for Research & Strategic Studies in Abu Dhabi and the Department of Research and Statistics in the Ministry (Ali Mihad, 2010). The Emirati Foundation for Social Development financed research projects that examined educational development and limiting early school leavers (Emirati Foundation for Social Development, Abu Dhabi, 2010), especially in the context of the advanced educational strategies approved recently by the country. The strategic plan of the Ministry includes appointing academic guides in all schools to define the types of students, communicate with students and follow up with their educational performance, understand the student-teacher relationship and recognise the most prominent obstacles that the student faces at school. The effects of leaving school are clearly apparent in unemployment, the

social effects on marriage, living standards and social behaviour, such as crime and civil misdemeanours.

Continuous change in educational policies represents one of the challenges that face the educational system in the UAE. In investigating the educational system, one realises that educational policy changes when the Minister of Education changes, i.e. there is no continuity of educational policies. So, education has become an experimental field, depending on importing educational policies from outside that sometimes succeed but sometimes fail. Over the decades, the Ministry has depended upon employing foreign experts to draft and supervise the implementation of educational policies. After years of applying such policies, the results of school and student performance assessment are often below par. Hence, it is important for an educational policy plan to have clear goals and depend upon a set of constant objectives in the mid-term, so policies do not change when Ministry of Education officers do.

Methods of measuring educational quality and its adequacy for a society are among the challenges that face the educational system. This necessitates the existence of better methods for measuring educational quality in a manner that does not eliminate its privacy, including the reasons for changing policies, changing educational goals and objectives, setting real standards for assessing the educational process and assisting the direction of developmental efforts.

The concept of educational reform may be among the challenges that face education, as reform concentrates on form and not content. Making reforms on buildings and equipment is not considered as development in the educational system, although this is very important. Reform process is an integrated process, regardless of the educational subjects, curricula, training teachers and teaching methods. Despite challenges that face the educational system, the social, economic, health and

The effects of leaving school are clearly apparent in unemployment, the social effects on marriage, living standards and social behaviour, such as crime and civil misdemeanours

cultural status in the UAE has resulted in a positive climate through which policies and strategies related to the educational system can be activated, revised and developed to cope with the science and technology age. It can also allow opportunities for defining points of strength and weakness in the educational system, as well as challenges that needs to be addressed. This will sesecure an educational system for the youth that allows for the acquisition of various skills and the exploration of capabilities towards employing them in realising comprehensive and sustainable development and that allows them to access the knowledge society.

PREPARATION INSTITUTIONS AND THEIR ROLE IN PREPARING THE FUTURE GENERATION

INTRODUCTION

This chapter discusses the status of the Emirati family, media, social culture, and the social and cultural roles that guide the future generation and empower them according to scientific and technological developments. It also discusses the influence brought by this reality, either positive or negative, on the future generation in terms of preparing and enabling them to gain access to the knowledge society.

THE FAMILY AND THE ROLE OF WOMEN

The UAE society, like other Gulf societies, has witnessed amazing structural changes not only as a result of modernisation and its culture, but also as a result of other internal factors such as urbanisation, oil exploration and the resulting economic changes. These changes have resulted in unprecedented family phenomena, some of which may be positive and others may be negative. These include relations between individuals, or the change in parent-child relations and the impact it has had on family consolidation or disintegration, as well as on the interaction and understanding among generations. All these things have impacted on the family's performance and its role in transferring the culture of the society to its members through social upbringing. Therefore, the family plays an important role in developing skills and values of young generations through the roles it plays in the process of social upbringing. The family takes into consideration changes that occur in the nature of the family and

its members from extended families to nuclear ones. The communication means, as an external effect, play a vital role in gaining some material values, producing behaviours that are inconsistent with the original values of the society (Abdullah Lo'lo' and Amna Khalifa, in Arabic, 1996).

The extended family in the Emirati society, from the early 20th century to the early 1970s, represented the basic social structure of society, around which other social structures emerged. Regarding the structure of the extended family in the Emirati society, we notice that it was not seen as an isolated formation unit, but as an integrated social, economic and cultural unit. The political, economic, and social conditions witnessed by the Emirati society played an important part in enhancing the role of the family in maintaining identity and the consistency of the social relations among its different structures and forms in the absence of a central political system at that time.

The Emirati family has been known as an extended and parental family, in which the pattern of internal marriage prevails. It is known that the extended family has positive effects on children's upbringing and provides them with many values and traditions that are practised by elders, such as bearing responsibility, cordiality, affinity and sacrifice, especially from unemployed elder relatives from whom children may gain behaviours that they could not gain from their mothers and fathers. Typically, the young individuals who live in extended families with solid social and economic relations enjoy psychological and spiritual balance and stability that enable them to

Typically, the young individuals who live in extended families with solid social and economic relations enjoy psychological and spiritual balance and stability that enable them to benefit from their achievement and to develop a set of scientific, technological, and social values

U A E
CASE STUDY

benefit from their achievement and to develop a set of scientific, technological, and social values.

After oil exploration in the 1960s, UAE society witnessed many changes and converted from the pattern of Bedouin and rural production, simple fishing, poor distribution of works or specialisation and self-sufficiency, to an urban and capitalist pattern with accelerated global changes, especially in the fields of technology and urbanisation. These changes have had positive effects represented in the establishment of infrastructure and the emergence of modern governmental and private institutions. This is in addition to the appearance of public and higher educational institutions, such as universities and technological institutes, and a decrease in illiteracy, an increase in individual income and family income, as well as the availability of medical care and social welfare in general. This also resulted in the appearance of the nuclear family in the early 1980s and the degradation of the pattern of the extended family, in accordance with the nature of life in the society, and the job opportunities available for young people which sometimes forced them to work away from the extended family and build new, smaller families.

As a result of change in the economic conditions of citizens and the increase in their income, the culture of marriage started to change and the material and consumer approaches started to prevail in society (Hend Al Kassemy, in Arabic, 1998). This resulted in polygamy, expensive dowries, and the rise in the rate of divorce; UAE has the highest percentage of divorce among Gulf Arab countries; it has reached 40% (General Women's Union, Abu Dhabi, 2009/2010). All these changes have had a negative effect on the social structure of Emirati society, such as family disintegration and juvenile delinquency. These negative changes do not provide a stable environment dominated by a stable family atmosphere, or a proper environment in which young people

It is clear that women's rights in contributing to different economic activities are the basis for sustainable development, as well as a necessity for social development and economic growth

grow up and develop their abilities and creations. The child is negatively affected by several family problems, which results in a negative effect on their personality, thinking, attitudes and values.

The political leadership in the UAE confirms that the comprehensive development process, in which both men and women participate, is the only way to raise society status and reach an advanced position. It is clear that women's rights in contributing to different economic activities are the basis for sustainable development, as well as a necessity for social development and economic growth.

It was noticed that Emirati families tend to define the roles played by males and females as being in line with the society's culture and traditions. They encourage females to take up traditional roles, for instance, being a housewife, while going to work is the role of the male (Haifaa Jawad, in Arabic, 1998). Therefore, it is commonly allowed for males to be educated in any field they choose for his career, while girls are brought up to marry, which affects their educational path. However, this situation is not as severe as before, especially with economic advancement and in the urban cities, such as Dubai, where a higher number of women are working. But traditional male and female roles still prevail in society in general. The evidence of this was a study (Sara Sayed, in Arabic, 2004) which surveyed many male and female students at Zayed University, and showed that male students, despite their educational level, tend to think about females after graduation as only wives and not as equal to men in the workplace. They believe that education could be useful for women after marriage in bringing up and educating their children, but they never think that the education of women will lead to them working outside the home.

Another study (Ashencaen Crabtree, in English 2007) concluded that female students in the UAE community do not complete their education at university because they yearn for more knowledge, but a large number of them believe getting

a university degree is the final touch on preparing for marriage. So, it is normal that the percentage of females enrolled at the university in the UAE is many times more than the percentage of males, although a large percentage of them do not seek to work after graduation. The parity index between males and females reached 2.32 in higher education, i.e. the percentage of females enrolled in higher education was twice that of males (UNESCO, in English, 2010). This may be a result of the fact that some males after secondary school join security institutions and the army and then higher education, while others prefer working in general companies and especially petroleum companies. Also, a number of males travel to study abroad at the expense of the government. It is obvious that some males do not have the same reasons to be educated as females.

The UAE community, since independence, has witnessed social and economic advancements brought about by applying developmental plans that have resulted in a change in the demographic, social, economic and political characteristics of citizens. These developmental efforts contributed to the increase in the participation of women in human development in general. Providing equal opportunities for learning and increasing opportunities for work and economic activities were among the most important factors for enabling women and increasing their participation rate. Supporting the process of enabling women was also in the statements made by the highest leadership levels in the UAE. The UAE government took steps that decreased the gap between men and women within the labour market. It issued laws in the middle of the 1990s and adopted international treaties calling for women's rights for equal treatment to men (CEDAW Data). The UAE constitution also ensures equality among all citizens, and labour laws reject gender discrimination. In accordance with the constitution, women have the right to education, health, and social care as well

as the right to work just as men do and the right of inheritance and ownership according to Islamic Law. These efforts have had a major influence as the rate of women participating in paid work in the non-agricultural sector reached 20.1% in 2008. Despite opportunities available for women to work, the desire to work is still low, and the unemployment rates among females are higher than males as it reached 28.1% for females, compared to 7.8% for males in 2009.[21]

Despite quantitative efforts in developing the ability of Emirati women, especially in the field of education, they have not contributed largely to changing social situations and values. The greatest constraint on female participation in the field of work and development in general has been the cultural and social dimension. Despite calling for equality on several levels, culture and social customs stand in the way of achieving that. The UAE is still obvious as a male-dominated community, which overshadows women's achievements. Also, the participation of men in family life in terms of social upbringing is commonly low, and hence, women have to bear more responsibilities than men towards the family. Changing the stereotypical roles imposed on women by society social structure requires changing more attitudes in the responsibilities of public and private life and deepening the idea of equality between men and women inside and outside the home (Abdullah Lo'lo' and Amna Khalifa, in Arabic, 1996).

The gender parity index reached 1.03 in secondary education, i.e. the number of females enrolled in secondary education approximately equals the number of males and even exceeds it slightly (UNESCO, English, 2010). The number of females at the university was also more than the number of males (The gender parity index was between 2.32). Although women proved they are equal to men, society still sees some jobs and professions, especially political work and executive posts, are fields only for men in which women rarely have

Despite quantitative efforts in developing the ability of Emirati women, especially in the field of education, they have not contributed largely to changing social situations and values

**U A E
CASE STUDY**

a role. The increase in female participation in economic and political fields means more preparations for the knowledge society that is based on the participation of all members of society, especially male and female youths.

The discussion over women's affairs in the UAE is a difficult matter due to the imposed restrictions on women that are rooted in Islamic traditional explanations and the tribal culture of society (Hend Al Kassemy, previous reference). There are no independent associations for human rights of women in the UAE that work on the issues of gender equality. There is the General Women's Union and associations in all emirates except Fujairah. This union contributes to caring for women and the family socially, culturally, and medically; it also plays a great role in issuing civil law.

The UAE occupies the second level among Arab countries according to the Gender Parity Index, developed by the UNDP, while it comes in 45th internationally in accordance with the Human Development Report 2010.[22] The value of this Index reached 0.464, close to the global average 0.56,[23] referring to the fact that the gap between men and women in the field of human development is generally low in the UAE, especially in the field of rights relating to education, health, and a decent life. Women contributions to the National Federal Council (the Legislative council) reached 22.5% of the total seats in 2010.[24] Although this number may be seen as acceptable, there are some factors that decrease the level of female political representation, such as the cultural attitudes and the stereotypical concepts about the role of women in the process of enabling them to participate. Some sectors still believe that the role of women is limited to caring for their families and raising children; they also believe that they may work in some jobs that are considered complementary to their roles in care, such as teaching and nursing (the United Nations and Arab League, 2010). There is a deeply rooted

There is a deeply rooted perspective that the Emirati woman lacks the experiences and skills required to work in leadership positions, or that she refuses to participate in these positions

perspective that the Emirati woman lacks the experiences and skills required to work in leadership positions, or that she refuses to participate in these positions. However, there are some women who work in leadership positions in the UAE. Therefore, it is important that policies related to the increase in the participation of women politically include activities for building the capacities of women. The General Women's Union implemented some of these activities in the UAE for a number of women over the past few years.

We can say that although four decades have passed since the application of developmental plans in the UAE after independence in 1971, the Emirati woman still has much to do to be able to participate comprehensively in developmental processes, social participation and becoming involved in the knowledge society. If females, whose number is approximately twice that of males in university education, would prefer to stay at home and not work, or the family or husband prefers that, this will exclude a large percentage of females from becoming involved in the knowledge society.

There is another dimension that should be taken into consideration when dealing with the issue of women and the family. Emirati families, as a result of economic changes, have undergone changes in values. The Emirati woman, either as an employee or a housewife, prefers to depend mostly on servants inside the home, and this negatively affects the members of the family and decreases the time for communicating with children. This is especially so if the mother depends on servants for caring for and raising their children who are not often aware of the culture, customs, traditions, and language of the society. They are even often not qualified or not well-trained to deal with children at this age. This matter influences the mental, psychological, and social development of the child and threatens growth, especially in the fields of language and culture.

MEDIA AND PREVAILING VALUES OF THE FUTURE GENERATION

It is certain that the future generation is the fastest developing social group, and youth between 15 and 20 years old are half the population of developing countries. They not only represent the future, but also the present. As a consequence of globalisation and technological advancement, it is presumed that communication with them must increase, because their votes affect and are affected by achieving development and change.

The school has always been the first source of knowledge in the 20th century, and teachers are still the main sources for spreading knowledge. People depended on schools as a main source for knowledge about the world. Today, modern media has been developed, and its technology was advanced to the extent of making its own educational environment, declaring the end of an era in which educational institutions monopolised the spread of culture and knowledge. Most communities now witness strong and public competition between both educational and media systems. Educational studies conducted by UNESCO on the rates of watching TV among Arab children indicated that children before 18 years of age spend 22,000 hours watching TV compared to 14,000 hours the child spends in school during the same stage (Amani Tufaha and Lara Hussain, in Arabic, 2010). This results in many cultural, health, knowledge and social consequences. We cannot deny the role played by the media and the effect it has on forming society structure in different groups, especially youth. Therefore, media institutions have a responsibility which is of the same importance that of educational institutions, and maybe even more.

Emirati youth in the world of satellite channels and the internet, like all Arab youth, are subject to changes in culture, factors and changes that reflect their thinking structure and approaches. A study (Ahmad Sulaiman Al Humadi and Abdulaziz Abdulfattah, in Arabic, 2008) concluded that Arab youth are living in a state of social and political expatriation, that is clearly apparent in their political attitudes, and in the frustrations they experience as a result of the political reality in Arab countries. The study found that the domination of the Western media is one of the main reasons for the state of expatriation experienced by youth. The Arab youth, including Emirati youth, obtain knowledge from a unilateral source, through depending on information broadcasted by the media, while at the same time ignoring reading as a source of knowledge. The study concluded that the technological aspect, like the internet and TV, is the dominant factor controlling the youth's daily life, as they dedicate the majority of their time to them, which emphasises the control of the media over the youth as a main source of knowledge. The most ominous conclusion of the study is the dominance of a foggy view towards the future of the nation and the Arab world, creating fear and psychological disturbance among the Arab youth. The major challenge faced by instructors is how to deal with the rapidly advancing production of media and how to benefit from these tremendous means in instilling moral values that create immunity in children, enabling them to differentiate between good and bad programmes. In this way, children can select the programmes that will develop their senses and capabilities and drive their energy. Using media for instilling values and searching for media substitutes directed at children, the future generation and youth within the framework of a strategic plan uniting the efforts of family, school, clubs and other institutions, is the strongest guarantee that will lead to protecting our generation from bad influences, taking into account the impact brought about by the surrounding sphere (Ali Al Rasheed, in Arabic, 2009).

Emirati youth in the world of satellite channels and the internet, like all Arab youth, are subject to changes in culture, factors and changes that reflect their thinking structure and approaches

U A E
CASE STUDY

SOCIETAL CULTURE AND PREPARING THE FUTURE GENERATION

The prevailing societal culture consists of several aspects, of which the most important in Arab and Islamic communities are religion, language, norms and values. Religion is a main source of values to community individuals with an interest in education and encouraging children and youth to join educational institutions. There was *"Al Kutab", "Al Mutawea"* or *"Al Mutaweah"* in the past; where children were taught to memorise the Holy Quran and learn the community's cultural habits and values by Al Mutaweah, as he is considered to be the best model for children and youth.

Language is the vessel through which the community's cultural habits and values are transferred, and which exhibits its identity, maintaining the mother tongue which is Arabic in the UAE and maintaining the community's identity and culture. Regarding the nature of the UAE community and its population structure, there has been an increase in the percentage of expatriates (approximately 88% of UAE residents) whose numbers exceed the number of native citizens. With the different nationalities and languages, the effect of these languages and cultures on the community's own language and culture must be taken into account. Maintaining the Arabic language has become a political and social requirement to avoid total dependence on other languages which would weaken the original language and consequently the community's culture. This is especially so when children start to learn different cultures that are reflected in their behaviours, taking into consideration that the UAE is open to the world economically and culturally and has attracted many foreign companies and corporations, particularly in Abu Dhabi and Dubai. This can also be emphasised by the necessity of learning other languages for individuals, especially the

young, to enable them to communicate with others and learn the cultures of the world particularly at a time when English is considered the language of the knowledge society. Some studies indicate that the concept of national identity has witnessed a crisis among the Emirati youth as a result of changes and challenges in the social, cultural and economic world. It can be summarised in the existence of a plurality of cultures, media openness and accelerated technological development in the real society within the UAE. The political government and political decision-makers became aware of the crisis of the national cultural identity in the country; hence they have worked on developing future programmes and plans aimed at maintaining the national identity among Emirati youth. Therefore, the Emirati Youth Forum, Arab Youth Forum, TV Programme for Youth, Youth Culture Forum, Shura Council of Youth were organised as examples of some activities and programmes implemented by youth and playing a great role in instilling local culture and national identity in the UAE. (Ahmad Sulaiman Al Humadi and Abdulaziz Abdulfattah, in Arabic, 2008).

CONCLUSION

From the previous analysis, it is obvious that the Emirati future generation is subject to many cultural and social factors that accompanied the oil breakthroughs and its consequences on the abundance of funds and changes in social and developmental structures. The atmosphere of openness and diversification prevailing in the UAE is a real opportunity for the Emirati future generation to be widely involved in the knowledge society if they are equipped with the proper skills and inherited values.

Language is the vessel through which the community's cultural habits and values are transferred, and which exhibits its identity, maintaining the mother tongue which is Arabic in the UAE and maintaining the community's identity and culture

EFFECTIVE ENABLING ENVIRONMENTS FOR PREPARING THE FUTURE GENERATION FOR THE KNOWLEDGE SOCIETY

INSTITUTIONAL STRUCTURE AND GOVERNANCE

The institutional system in the UAE enables UAE citizens to practice their political and social roles within a social framework that is based on transparency and objectivity. This is apparent in the rights enjoyed by citizens in the different social, economic, cultural and health fields, which strengthens their sense of affiliation and the way they care about, protect and defend their country. The UAE's constitution protects the rights of citizens and allows them the freedom of self-expression, political participation, freedom of establishing social and professional organisations and practicing different activities according to customs and traditions and rules recognised by the society.

CITIZENSHIP

The main element of the concept of citizenship is national affiliation, which can only be achieved when one feels that they are part of the society and entitled to guaranteed rights. To build this feeling of citizenship, the means of a decent life must be available to individuals within their society, their privacy must be respected and their rights and freedoms shall not be violated. The concepts of citizenship and the citizen seem to exist in the UAE as citizens enjoy all the rights that guarantee a decent life for them. Despite rights that are guaranteed for all, there is a slight difference among institutions regarding salaries paid

to employees, making some persons think that they do not have equal rights. For example, salaries paid to employees in the field of education, especially teachers, are not equal to salaries paid to employees in other sectors. The UAE constitution provided for equality, social justice, security and relief, equal opportunities for all citizens, consolidation, and compassion and trust (UAE constitution, 1971). Hence, their affiliation to their country rates highly, and this clearly indicates their love for home and desire for protecting it and maintaining its gains. This feeling of loyalty and affiliation is of great importance for the youth, because they will be members who participate and affect their society with love and a true desire for giving.

FREEDOM AND POLITICAL PARTICIPATION

Freedom and political participation in the UAE shall be considered in terms of two dimensions. The first is liberal democracy, i.e. the extent to which political freedoms are allowed by the political system, such as freedom of expressing political opinions in different ways and the freedom of forming political groups and participating in them. The second dimension is democratic rule, which includes the extent to which people can elect leaders and the extent of accountability of a government. Although the UAE does not have political parties or trade unions, the system permits the establishment of social, cultural and health organisations and associations. The Ministry of Social

Feeling of loyalty and affiliation is of great importance for the youth, because they will be members who participate and affect their society with love and a true desire for giving

UAE CASE STUDY

Affairs also supervises NGOs, human rights associations and child protection agencies as well as various educational institutions. The UAE constitution guarantees a set of rights and freedoms, such as personal freedoms and the right of the individual to be protected from unlawful arrest, inspection or detention (Naji Sadik Sharab, in Arabic, 1983). The constitution also guarantees citizens freedom of expression and opinion, which are both important requirements for young people to be able to communicate, have self-esteem and the ability to be responsible, which are characteristics of the knowledge society.

SOCIAL AND PROFESSIONAL ORGANISATIONS

National social work is of great importance within the UAE. As a community living in solidarity and cooperation, it continuously seeks to provide services and help communities and individuals. It also encourages the state to establish such organisations and associations, with the conviction of the role they play in providing support and social, health and cognitive care, which, in turn, supports the roles played by formal institutions. Civil society organisations are diverse in the UAE with up to 133 associations (The Ministry of Social Affairs, 2010). The nature of activities and programmes created by these associations varies. Some are interested in human, cultural, educational, professional, folklore, theatre, women or community affairs. On the other hand, there are many professional associations in the UAE that play different roles according to the nature of their field, such as socialists, lawyers, teachers and doctors, protection of the Arabic language association, friends of the environment and others.

However, the majority of these societies, in addition to dealing with charitable services, also deal with the issues of human development and the empowerment of youth and women in particular, which are important matters in preparing youth for the knowledge society. Such organisations also

National social work is of great importance within the UAE. As a community living in solidarity and cooperation, it continuously seeks to provide services and help communities and individuals

give youth the opportunity to participate and express their minds freely and develop and strengthen their skills and capabilities in understanding the co-existence within society.

DEMOGRAPHIC ENVIRONMENT

According to population statistics (National Centre for Statistics, 2009), the UAE's population reached about 8.26 million in 2010. The Emirati society is considered a young society, as young people constitute a large percentage. In 2010, those under 25 made up 34.6% of the total population (nationals and expatriates). The percentage of young people to the total population of Emirati citizens only was 63.7%. Expatriates in the UAE make up approximately 88%[25] of the population.

Despite the developmental roles played by expatriates in the society, the state began to think of balancing the population structure and relating it to the labour market. The state started 'Emiratisation' projects for jobs provided by private sectors for achieving social and economic developments. At the same time, this development was limited to a political framework that maintains the identity of the society while not harming the population structure.

LABOUR MARKET

Since the 1980s, UAE has witnessed a remarkable increase in foreign labour rates that form a large percentage of workers within the state (72.6% in 2004). However, over the last two decades, there has been an increase in the participation of Emirati citizens in the workforce, as the percentage increased from 20.7% in 1995, to 26% in 2005 (Gonzales and others, English, 2008). The factors that lead to such an increase of women's participation in the labour market. This increase is attributed to many factors; a change in social attitude

FIGURE 2-4-2

Population hierarchy in the UAE
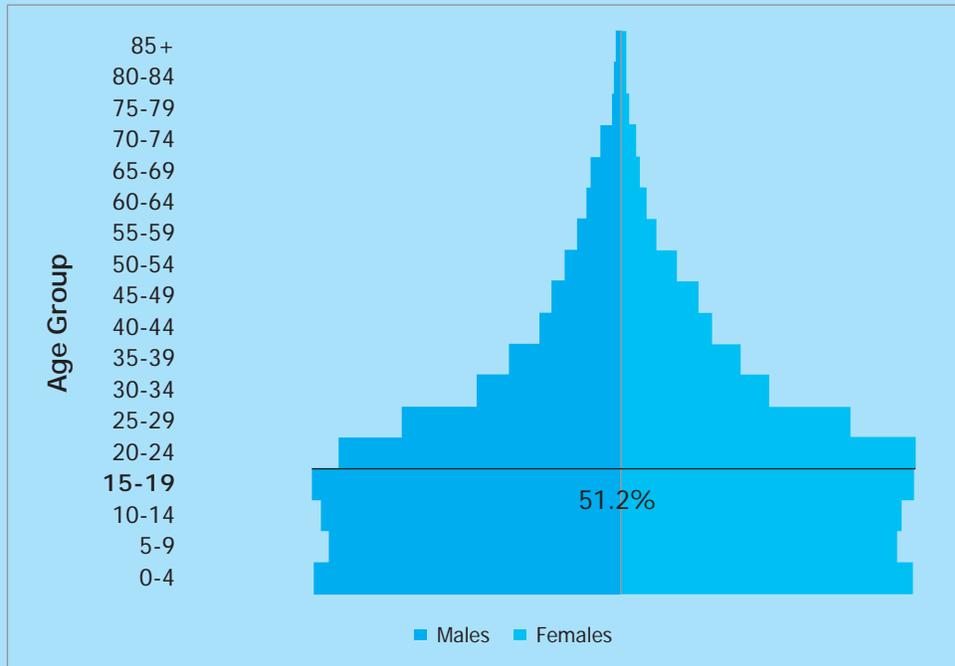
Source: U.S. Census Bureau database (U.S. Census Bureau) http://www.census.gov/ipc/www/idb/groups.php dated May 30, 2011
Source: The National Centre for Statistics, UAE, www.uaestatistics.gov.ae on May 30, 2011.

to work, economic needs and the increase of women's participation in education. The government has made serious endeavours to organise the workforce and set legal controls that protect the labour market from great numbers that can affect the quality of the foreign workforce. This must be consistent with the stage of development the state undergoes.

An increase in the foreign workforce in the UAE may be due to the absence of educational and technical qualifications among Emirati citizens and from their reluctance to work in some fields, such as building and craft. Many Emirati citizens believe that they must work in certain fields, mostly in governmental institutions, where the majority of them (61%) work in management, defence, and social security, compared to 5.3% who work in productive sectors, such as mining, processing industries and agriculture (National Centre for Statistics, 2009B). This is a negative indicator towards accelerating community conversion to the knowledge society. The work of Emirati citizens in government institutions only, limits the ability of future generations to get involved in certain economic areas they think do not have any value. Most ominous is the low number of Emirati citizens who are working in medicine, engineering, sciences, agriculture and industry. The percentage of those enrolling in engineering and scientific subjects was 20.93% in 2007.[26] Work related to science and maths is not motivating (Assunta Martin, 2003). All these matters have negative effects on all aspects of development and convert the society to a productive knowledge society instead of being a consumable one. This affects the ability of the future generation to move towards participation in the knowledge society.

RAISING THE STANDARD OF LIVING AND ERADICATING POVERTY

With the diversity in income resources, searching for alternatives, developing human

The government has made serious endeavours to organise the workforce and set legal controls that protect the labour market from great numbers that can affect the quality of the foreign workforce

One of the most important pillars of the knowledge society is the presence of strong institutions and a solid network of communications that connects these institutions in order to concert efforts towards the proper environment for establishing the knowledge society

resources and transferring technology use, the UAE has accomplished much in maintaining the proper living standard for its native citizens and a large percent of expatriates. According to the Human Poverty Index, Emirati citizens enjoy better life opportunities than citizens in the rest of the Arab countries; the value of the multi dimentional poverty reached 0.002% in 2008.[27] This may in part result from focusing on implementing developmental projects by the government in social and educational care and health, and in part to the increase in the per capita income.

HEALTH SAFETY

The level of expenditures dedicated to health care are high, as it reached (8.7%) of total general governmental expenditures.[28] Everyone in the Emirates has access to an improved source of water. The state also established a wide network of hospitals and health centres that ensure comprehensive health care in all stages and specialisation throughout the country.

IMPROVEMENT IN MOTHERS' HEALTH

The state gives special attention to improving maternal health, as this issue has positive and effective return on the improvement of society as a whole, and in particular the health of children and adolescents from birth. Therefore, the country expanded the establishment of gynaecology and obstetrics departments within hospitals. According to the Millennium Development Goals of the UAE (2007), the maternal mortality rates have decreased since 2004 to 0%, while the delivery rate under physician supervision was 100%. Providing health security is one of the important and necessary indicators for maintaining the public health of the society and especially the future generation. This indicates the care of the country for its citizens and for providing them with a life free of disease and epidemics that can

put their lives at risk. It also confirms the country's desire to enable them to enter into the knowledge society.

INSTITUTIONS SUPPORTING THE PREPARATION OF THE FUTURE GENERATION FOR THE KNOWLEDGE SOCIETY

One of the most important pillars of the knowledge society is the presence of strong institutions and a solid network of communications that connects these institutions in order to concert efforts towards the proper environment for establishing the knowledge society and providing all possible means to the future generation to enable them to contribute effectively to that society. This appears in many institutions that are specialised in preparing the future generation.

The Ministry of Social Affairs is one of the ministries that have a direct relationship to providing services to the society and education, due to its close connection to providing specialised and multiple services for many categories within the society starting from childhood to old age. Also, the Ministry of Social Affairs is the formal body responsible for many categories, including centres for caring and rehabilitation of the physically challenged or people with disabilities. The Ministry provides specialised services in social security to achieve economic security to help the needy and provide proper living standards for them. The Ministry works to raise community awareness for social protection. It also prepares programmes to protect the youth from delinquency, treats delinquents, confronts juvenile social problems, as well as reforms individuals, helps released prisoners and provides care for orphans and neglected children. As an amalgamation of various women's societies, the Women's Federation aims to provide social services and activities and provide women the opportunity to play a role within the family and society. The Women's Federation and its societies hold

forums, lectures and competitions and organises exhibitions and celebrations, as well as exchange visits and trips. It also contributes to the educational and social activities concerned with motherhood and childhood within the state. Individual activities may be the prevailing characteristic of these societies that do not depend upon a strategic plan, throughout the country, and don't have a clear vision for roles and activities that must be conducted for achieving comprehensive and sustainable development for women and the family in the UAE that can lead them later to be participants in the international knowledge society.

Many public and private institutions and bodies have been constructed in the country for supporting, preparing and enabling the youth. The list also includes family development institutions that are concerned with all matters related to family development and care; it also includes a society development authority which works to transform the emirate of Dubai into a better place for living for the current and future generation through working on achieving sustainable social development. The Supreme Council for Family Affairs in Sharjah aims at promoting the sound and integrated building of the future generation's personality within the family and enabling the disabled and people with special needs to be involved in the knowledge society. Children and girls' centres work under the supervision of the Supreme Council for Family Affairs in Sharjah and are interested in developing children/girls and providing them with the proper climate for innovation and excellence in the cultural, educational, informative and technological fields. It also gives great attention to deepening and strengthening religious motives, supporting cultural identity and motivating elements of educational and critical thinking and developing skills and talents.

These centres care for the age category 12-18 years using an educational methodology based on attractive extra-curricular activities, through which they aim at helping these children gain a set of life skills that are necessary and complementary to leadership and personality building. Their activities focus on skill and kinetic aspects; they also aim at achieving their desires and needs through providing attractive and developed programmes that take into consideration age requirements with the proper attitude. This process of discovering the skills and capabilities of talented and distinguished people is an important part of the centres' activities.

In confirming the integration of the different categories of community in the processes of preparing and enabling, the Zayed Higher Organisation for Humanitarian Care and the Sharjah Organisation for Humanitarian Services provided training, education and employment services for hundreds of disabled individuals and orphans of different ages. They did so by providing these services within different educational institutes and departments, as well as through education, culture and social services. This was done by communicating with the different sectors of society, such as local departments, hospitals and national societies.

The General Authority of Youth & Sports Welfare is the formal body for implementing the country's sports policy socially and culturally in accordance with Islamic religious principles, moral values and national goals. The authority generally focuses on fitness and sports. However, there are no specialised sports establishments for the sports federations. In addition, the sports establishments are not equally distributed throughout the country; the sports culture of the individual is fragile in society, and customs and traditions impose constraints on women participating in sports.

We conclude that the existence of different institutions that provide various programmes and projects is of great importance, as these institutions are considered enabling environments for

Many public and private institutions and bodies have been constructed in the country for supporting, preparing and enabling the youth

U A E
CASE STUDY

the individuals of the society, especially for the future generation. Consequently, they contribute to drafting the knowledge society. However, it is clear that they lack the comprehensive vision for establishing the knowledge society. Also, there is no single comprehensive approach for connecting the work of institutions; otherwise, there is some discrepancy in the events held either in terms of dates or the issues discussed, in addition to the inequality in the distribution of work and the allocated budgets of the geography of the UAE.

LEGAL AND LEGISLATIVE ENVIRONMENT

Law and legislation are the main elements for securing the required freedom to access the knowledge society, as knowledge can only be achieved with the guarantee of laws for the freedom of knowledge

Law and legislation are the main elements for securing the required freedom to access the knowledge society, as knowledge can only be achieved with the guarantee of laws for the freedom of knowledge. The UAE's constitution includes articles that emphasise the value of education and the responsibility of the country in this regard. The constitution contains important provisions that guarantee the free education of children. Article 17 of the constitution emphasises education as a main factor for the development of society. It is mandatory in the primary stage and free in all stages within the federation. Federal laws give the Ministry of Education the mission of spreading and providing education for all citizens, making it mandatory in the primary stage and free in all stages within the federation. It obliged the Ministry to develop educational plans, prepare school curricula, create exams and develop illiteracy elimination programmes, as well as establish and supervise schools and vocational, industrial, agricultural and university institutes. Ministerial decrees were also issued regarding the educational system and mandatory education within the country's schools. It is certain that the constitutions and countries laws, including articles, consider supporting and enabling environments to be important for all society's individuals to participate and interact with the issues of the society, as well as integration into society's different aspects of life.

In the field of child care rights, the state generally focuses on protecting all children's rights, either for UAE nationals or for expatriates, based on Islamic legislation guidelines, Emirati society traditions and international laws. Laws and legislation were enacted to guarantee protection of child rights, fulfil all the main requirements of life and protect children against exploitation and violence in all forms, including trafficking, maltreatment and psychological and physical abuse. Severe penalties were imposed on anyone who committed such acts. The UAE takes pride in the success it has achieved in the elimination of all forms of discrimination against children, and females enjoy the same rights and legal and social protection as males (UAE constitution, 1971).

The UAE has made great advancements in establishing enabling environments. Prevailing laws and systems supports the process of preparing youth and confirms the necessity of achieving it, while current institutions, either governmental or national, provide the supporting institutional framework. Financial resources also allow action without material constraints. However, the question is to what extent these environments, whether on the institutional or organisational level, are effective in achieving the aspired goal of preparing the future generation for the knowledge society. This is especially important with the existence of various bodies, visions and activities without a plan to effectively organise or coordinate their activities. Reference must be made here to the biggest challenge, i.e. how to motivate the future generation to obtain the benefits provided by these environments.

FUTURE GENERATION READINESS FOR ACCESSING THE KNOWLEDGE SOCIETY: FIELD STUDY RESULTS

INTRODUCTION

This chapter provides an overview of the results of the field survey conducted in preparing the UAE case study. A sample of the future generation, under 17-18 years of age, who completed the eleventh grade in Abu Dhabi and Dubai was surveyed. These students represent the product of the educational process before university. They also represent the higher category of the 'future generation' group adapted in the Arab Knowledge Report 2010/2011, under the age of 18, which represents about half of the population in the UAE.

The field studies aimed to find to what extent the youth participating in the study possessed the talents and values related to the cognitive, conative and social dimensions of the personality, which are required for accessing to the knowledge society. The study also sought to collect the opinions of those students about their surrounding environments. This chapter also discusses the results of the survey of participating students' teachers and analyses their attitudes and opinions on enabling environments for students within the school. This chapter also examines educational practices and methods, as well as teachers' attitudes on the issues that may contribute to preparing youths to be involved in the knowledge society. The research was expanded to include a larger group of relevant stakeholders; hence this chapter offers the opinions of a group of specialists and decision-makers in the UAE on the same issues that were expressed in a workshop in which they participated.

FIELD STUDY SAMPLES

RANDOMLY SAMPLED STUDENTS

Random sampling of twelfth grade students in Abu Dhabi and Dubai schools was used as the general methodology of the report (See Chapter Five of the general report). According to the nature of the leading case studies and taking on board what was implemented in other case study countries, a random sample of 1,375 male and female students meeting the following criteria was drawn:[29]

- They had to be students in a secondary school in Abu Dhabi or Dubai.
- They had to have completed the eleventh grade and are now in the twelfth grade.
- The sample must cover the available study specialisations (scientific and literary streams).
- The selected sample shall consist of males and females.
- The members of the sample must be UAE citizens who study in private and public education.[30]

DESCRIPTION OF SAMPLED STUDENTS

A sample of students was drawn according to the data approved by the Ministry of Education, with explanations about the number of students and their educational specialties.

The sample included 23 schools in Abu Dhabi and Dubai. The number of students sampled was 1,375, with 629 male students and 746 female students from the scientific and literary streams. 64% per cent of the female students and 73% of male students studied scientific subjects. This is consistent with the study community which tends to the scientific specialisation

The field studies aimed to find to what extent the youth participating in the study possessed the talents and values related to the knowledge, moral and social dimensions of the personality, which are required for accessing to the knowledge society.

UAE
CASE STUDY

more than the literature one.

TEACHERS SAMPLE

A random sample of Emirati and foreign teachers was taken. It consisted of 138 teachers working at the schools from which the sample of students was surveyed. They were asked about their opinions regarding the teaching profession, as well as to define their view on their surrounding environments and to what extent they support or hinder their efforts to prepare the future generation.

EXPERTS AND DECISION-MAKERS SAMPLE

A brainstorming workshop was organised that included approximately 41 experts selected from different scientific and cognitive specialisations from both the public and private sectors. The workshop was organised to discover their opinions and attitudes regarding the most important issues for preparing the future generation to effectively participate in the knowledge society, as well as to define the shortfalls they think hinder this goal and suggest ways for overcoming them (a list of the names of participants in the workshop is included in the appendix).

FIELD STUDY RESULTS

SKILLS

Students' skills were tested through measuring their cognitive, conative and social skills. Each skill was measured according to a set of sub-skills with a score ranging between 0 and 25. Students were required to score 12.5 to indicate their possession of the sub-skills.

COGNITIVE SKILLS

Cognitive skills consist of four sub-skills: searching for and processing information, written communication skills, problem solving skills and use of technology skills. The maximum score for possessing the skill was 100, and the minimum score is 50. Below are the results for aggregate cognitive skills.

Table 2-5-1 shows that the total arithmetic mean of the cognitive skills is 32.91, which didn't exceed one third of the minimum score. The low value of standard deviation along with the low averages of males and females are indicators of the low levels of cognitive skills among males and females. The table also indicates that no student received a score higher than 72.5. Despite the fact that females outperformed males and the difference was statistically significant, they did not receive the required minimum score of 50 to possess aggregate cognitive skills. The weakness in these skills may be attributed to a shortfall in the educational system that is unable to prepare the environment that strengthens the ability to obtain the required cognitive skills to spread a knowledge culture among students and to deal with knowledge as a necessity of life. In other words, the reasons for this weakness may be attributed to the nature of the curricula and educational culture or the

Despite the fact that females outperformed males and the difference was statistically significant, they did not receive the required minimum score of 50 to possess aggregate cognitive skills

TABLE 2-5-1								
Results of aggregate cognitive skills *(Total scores range from 0 to 100)*								
Average (Arithmetic mean)[31]			**Standard deviation [32]**		**Standard deviation [33]**	**Lowest score**	**Highest score**	**Statistical differences between males and females ***
Males	**Females**	**Total**	**Males**	**Females**				
28.24	36.87	32.91	10.71	10.72	11.54	3.61	72.45	In favour of females

* At significant level 0.05

TABLE 2-5-2

Results of detailed cognitive skills
(Total scores range from 0 to 25)

	Arithmetic mean			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Information searching	8.62	10.52	9.65	3.69	3.5	3.71	0	20.24	In favour of females
Written communication	2.91	6.77	5	4.05	5.74	5.39	0	25	In favour of females
Problem solving	5.15	6.9	6.09	3.75	3.67	3.814	0	22.22	In favour of females
Use of technology	11.55	12.16	12.15	4.3	3.47	3.92	0	22.13	In favour of females

methods and techniques used in education.

Figure 2-5-1 and Table 2-5-2 indicate that there are weaknesses in all cognitive skills, as the average of any cognitive skill did not exceed the required minimum score of 12.5. Results showed a genuine discrepancy in the levels of possession of these skills. The written communication skill was the weakest with an average score of 5, and about 20.7% of the students sampled did not receive any score in this skill. However, ironically, this skill is the only one for which students received a final score, even though the percentage was low, i.e. 0.4%. This indicated variation in students' scores. The same was confirmed by the standard deviation value that exceeds the arithmetic mean value of this skill. Student performance was slightly higher in the problem solving skill (6.09), than in written communication. However, performance was still very low with homogeneity among students being weak in this skill. Performance in the problem solving skill increased by 3.5 marks to 9.65. As for the use of technology skill, it is the best skill among UAE students, as the average of this skill was approximately 12.15 of the required minimum score. Females outperformed males in all cognitive sub-skills with statistically indicative differences; the greatest differences were in written communication skills, as the average of males was (2.91) and females (6.77).

The written communication skill was the weakest with an average score of 5, and about 20.7% of the students sampled did not receive any score in this skill

FIGURE 2-5-1

Comparison of average (arithmetic means) of cognitive skills for total sample
(males and females)

The required minimum score

9.655

5

6.09

12.15

Students' scores out of 25

Information searching | Written communication | Problem solving | Use of Technology

The weakness in students' cognitive skills is certainly related to the failure of the educational system that helps them acquire such skills. This has resulted from the fact that school curricula and activities are not prepared in such a way that allows students to gain such skills. Despite taking into consideration educational activities and research in assessing students' scores, particularly in the secondary educational stage, what is really happening is copying and pasting information or even asking for help from centres specialised in preparing research for students. It is worth mentioning that the development of curricula to activate such skills is confronted by the student's learning culture and teaching methods which are mostly traditional. It is still thought that the test score is the only measurement of learning. Therefore, the culture of repetition and memorisation prevails. Also, weakness in the written communication skill is a result of not paying enough attention to training students on various writing types, giving them the chance to select subjects related to the subject materials and instructing them to write about themselves and discuss their work with their classmates. This weakness may be also attributed to the volume of curricula that does not allow this, and it may also be attributed to the instructional educational system which is adopted by a large number of teachers. It is certain that the nature of teaching the Arabic language is another constraint, as Arabic language curricula use a classical language and vocabularies that students do not use in their daily lives, which makes using it in written communication very difficult. Thus, the mission of the teacher is often for students to memorise vocabularies and grammars for passing exams. Regarding problem-solving skills, they already exist in the curricula. However, their application is often not related to the problems the student encounters in life. So, students may be asked about a situation they have not faced before, and hence cannot give an answer except by asking a family member who solves the problem on their behalf.

Students' preference to use technology skills other than cognitive skills confirms that the educational system provides the infrastructure required for obtaining knowledge by providing high quality learning tools consistent with the prevailing use of this technology in society by most individuals, either at the level of the family or society through computers or mobile phones. However, possession of this skill does not mean that students will be qualified enough for accessing the knowledge society because they may be consumers of knowledge products. There also should be integration between other cognitive skills in addition to the technology use skill.

What happens outside school may greatly affect the level of the student's knowledge. Therefore, we should not limit ourselves to the skills of searching for information, written communication and problem–solving as those only gained in school. The various enabling environments in the society such as institutions and bodies must collaborate to support the development of the young generation in these skills. The same was referred to previously when discussing the programmes and activities of institutions and bodies and their role as enabling environments.

Considering the scores of the female students participating in this study, the difference between their results and those of the male students gives an accurate description of the actual differences between females and males in UAE society. Females were more successful in all cognitive skills than males, especially in the skills of information processing and written communication, i.e. females are interested in and benefit from education more than males. The same was also emphasised by examining the results in the Ministry of Education, which indicated that females are more successful in education than males. This may also be clear through the increasing numbers of females joining university.

Students' readiness in terms of cognitive skills

We notice that most students fall into the second half of the readiness scale, i.e. their abilities are not sufficient to respond to the requirements of the knowledge society. Considering aggregate cognitive skills, we found that 26.8% of the surveyed students do not have the minimum score required to become involved in the knowledge society. 65.1% of students are in the early stages for gaining readiness, i.e. approximately 92% of students are below the required level. 8% of students are the only ones who fall in the top half of the readiness scale, they are in the process of gaining readiness potentials, which was not reached by any of the other examined students.

By comparing the levels of readiness among the four skills, we note that the position of the use of technology skill, followed by the skill of information processing, is relatively better than the problem-solving and written communication skills. For the last two skills, we note that about 90% of students are still in the first half of the scale.

A closer investigation demonstrated that only 41 students, i.e. approximately 3%, fall in the category of 'not ready' in all skills, while no student reached the level of readiness in all skills at the same time.

CONATIVE SKILLS

Conative skills consist of three sub-skills, i.e. the skills of self-esteem, learning motivation and future planning. The maximum score was 75, and the supposed minimum score for skill possession was 37.5. Below is an illustration of the aggregate results of the conative skills.

Table 2-5-3 indicate that the situation of the conative skills is better than that of the cognitive skills, as students exceeded the minimum score for possessing the aggregate conative skill with 3.5 marks. The standard deviation value indicates that there is no variation in students' answers. Results also indicate that no student

The situation of the conative skills is better than that of the cognitive skills, as students exceeded the minimum score for possessing the aggregate conative skill with 3.5 marks

FIGURE 2-5-2

Students' readiness in terms of cognitive skills

	Information searching	Written communication	Problem solving	Use of technology	Aggregate cognitive skills
Not ready (less than 25% of total score)	20.8	69.4	60.5	7.6	26.8
In early stages of being ready (25% to 50% of the score)	56	19.5	34.5	44.1	65.2
In the process of being ready (50% to 75% of the score)	22.8	8.3	4.7	44.3	8
Ready (75% or more of the score)	0.4	2.8	0.3	4	0
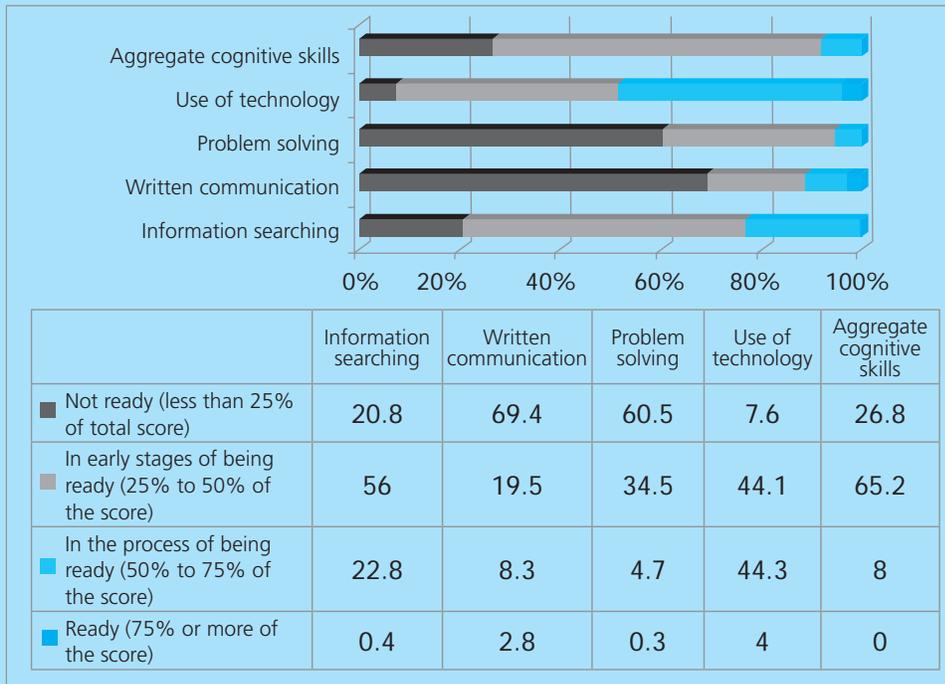
Results of aggregate conative skills
(Total scores range from 0 to 75)

Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
Males	Females	Total	Males	Females				
38.91	42.96	41.1	15.10	11.89	13.6	0	66.77	In favour of females

The reasons for positive self-esteem and educational motivation are attributed to social upbringing and the public culture within the UAE, which instils in the citizen a sense of pride in their identity and self-esteem

received the full score, where the highest score was 66.77. As with the cognitive skills, we notice that females also were more successful than males in aggregate conative skills, and this difference was statistically significant.

Students' possession of conative skills may be attributed to three reasons: first is the culture of UAE society, which instils in the future generation a sense of pride in their national identity and the family, which raises students to have self-esteem. The second reason may be the fact that students feel that their future and rights as citizens will be secured by the government in terms of the availability of employment opportunities and a decent life. The third reason may be the efforts for developing such skills in students through various educational institutions.

By checking the results of the conative sub-skills, (Table 2-5-4 and Figure 2-5-3) we note that there is a statistically significant difference between the skills of self-esteem and learning motivation on one hand, and the skill of future planning on the other hand. The skills of self-esteem and learning motivation feature high scores for students, as the average score for both was 20.73 and 18.82

respectively. These skills are the highest sub-skills of all the cognitive, conative and social skills. The difference in both skills is also not statistically significant for males and females. On the contrary, we note that the skill of future planning is one of the weakest sub-skills not only at the level of conative skills, but also at the level of cognitive and social skills. 24.7% of the sampled students received a score of 0, which is a high percentage compared to the other sub-skills. Despite a similarity at the low levels, females achieved a statistically indicative difference over males in this skill. The reasons for positive self-esteem and educational motivation are attributed to social upbringing and the public culture factors within the UAE, which instils in the citizen a sense of pride in their identity and self-esteem. One of the major reasons for possessing these skills is that the Emirati student has no fear of the future. The country has made great efforts in securing the future of citizens and enhancing their self-esteem through national initiatives for youth employment in the various state sectors through 'Emiratisation', as well as through adopting some laws, procedures and initiatives for youth employment in the private sector. This is in addition to

Results of detailed conative skills
(Total scores range from 0 to 25)

	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Self-esteem	20.63	20.81	20.73	3.2	2.67	2.91	3.57	25	No difference
Learning motivation	18.96	18.72	18.82	3.11	2.99	3.04	2.08	25	No difference
Future planning	3.91	5.40	4.72	3.78	4.73	4.38	0	25	In favour of females

FIGURE 2-5-3

Comparison of average (arithmetic means) of conative skills for total sample (males and females)

It seems that students' assurance of their future has positively influenced the skill of self-esteem and negatively influenced the skill of future planning
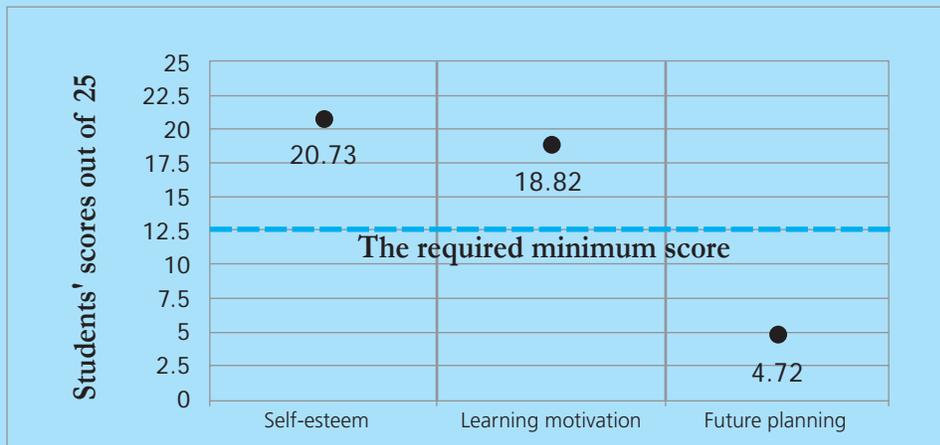
giving youth the opportunity to enlist in the police and army, which the youth consider a top priority as a future career. The possession of both skills may also be attributed to the educational system, which instils self-confidence, self-esteem and learning motivation in the future generation. However, this seems weak with their refusal, particularly by males, to complete their university education and higher education. The results of the learning motivation skill were opposite to those of the teachers' questionnaire. The results were shocking, as a great percentage of teachers believed that "the care of students for their study is decreasing day after day" (56.8% of them totally agree, while 34.1% of them somewhat agree), while no teacher refuted this statement. A great percentage of teachers (52.6% totally agree) also believe that "material values prevail over cognitive values for most students" (See Table m2-15 in the Appendix).

It seems that students' assurance of their future has positively influenced the skill of self-esteem and negatively influenced the skill of future planning. This has resulted in the future generation possessing a low level of this skill. We cannot exclude the failure of the educational system to instil such skills in students, as those graduating

from secondary schools have no idea about the faculty they will join. Therefore, transferring from one faculty to another in the first and second years is frequent. The educational system does not direct youth during the secondary stage to specific fields of study needed by the UAE, such as medicine, engineering and science. In some categories, a special culture prevails, which supports future women's work in teaching and other fields, where there is no direct dealing or interaction between the two genders. This results in a lack of interest in the family for planning the future of their daughters outside the framework of traditional women's jobs. The future of the girl is mostly already known in UAE society; she does not need to exert effort in planning her future as it is often associated with marriage. Work also comes later, but is not necessarily the main incentive for the girl's future. In addition, the decision for the girl to join the university is not often taken by the family as a result of several factors, such as believing that marriage is more important than study and the remoteness of the location of the university in the future.

Students' readiness in terms of conative skills

Considering the conative skill aggregate

results, we notice that 4.7% of students have the required conative skills, and that only 8.4% of the students surveyed do not have the minimum score for the conative skills that prepares them for involvement in the knowledge society. We also note that, except for the skill of future planning, the majority of students fall within the third and fourth levels of the readiness scale.

Referring specifically to 'readiness', we find that three quarters of the sample are 'ready' on the level of the self-esteem skill (75.9%), and approximately half of the sample are 'ready' on the level of the learning motivation skill (50.8%). Further investigation demonstrated that the number of students falling within the 'Not Ready' category in all conative skills and found only two students, while three of them reached the fourth level (full readiness level) in all the conative skills at the same time.

SOCIAL SKILLS

Social skills consist of three sub-skills: the skill of communication with others, the skill of team-work and the skill of participation in public life. The maximum score was 75, and the supposed minimum

score of skill possession was 37.5 scores.

The results for aggregate social skills were similar to that of the total conative skills, while they differed from the total cognitive skills. We found that the level of students in the social skills exceeded the supposed minimum score for the possession of these skills, in which the total average was 39.17. No student received the full score. Table 2-5-5 shows that there are no statistically significant differences between males and females.

Table 2-5-6 and Figure 2-5-5 show statistical differences between students' levels in these social sub-skills. The participation in public life skill is the weakest social sub-skill, as the arithmetic mean average was 11.57, which is 1 mark less than the supposed minimum limit. This is the only skill in all aggregate and sub-skills, in which males outperformed females to a statistically significant degree. As for the skill of communicating with others, it is similar to the skills of self-esteem and educational incentive with an average of 16.8. Females outperformed males in this skill. The teamwork skill is in the middle level between the two skills mentioned above with an average of 14.17. Females also outperformed males in this skill.

Referring specifically to 'readiness', we find that three quarters of the sample are 'ready' on the level of the self-esteem skill (75.9%)

FIGURE 2-5-4

Students' readiness in terms of conative skills

	Self-esteem	Learning motivation	Future planning	Aggregate conative skills
■ Not ready (less than 25% of total score)	20.8	69.4	7.6	26.8
■ In early stages of being ready (25% to 50% of the score)	56	19.5	44.1	65.2
■ In the process of being ready (50% to 75% of the score)	22.8	8.3	44.3	8
■ Ready (75% or more of total score)	0.4	2.8	4	0
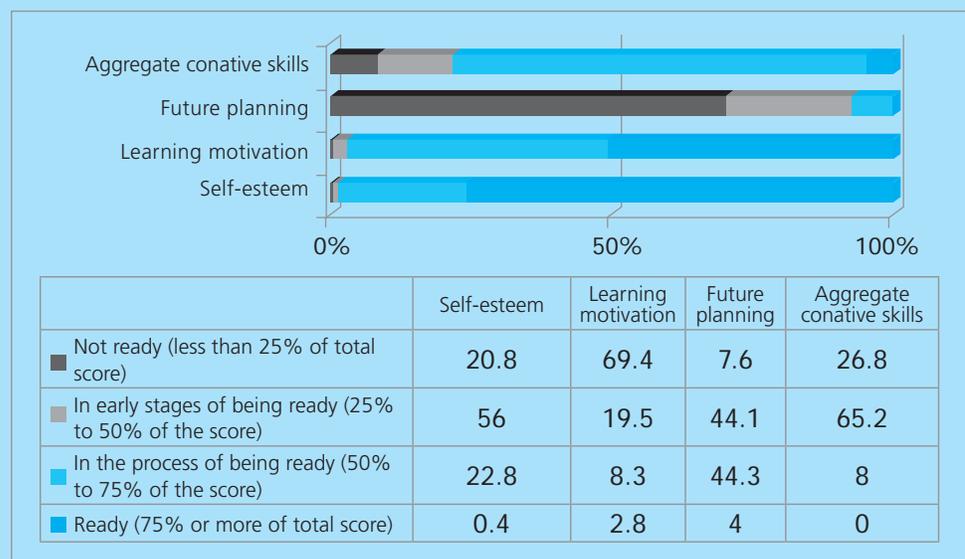
Table 2-5-5

Results of aggregate social skills
(Total scores range from 0 to 75)

Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
Males	Females	Total	Males	Females				
38.36	40.06	39.17	17.16	17.47	17.43	0	69.84	No difference

Table 2-5-6

Results of detailed social skills
(Total scores range from 0 to 25)

	Average (Arithmetic mean			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Communication with others	16.34	17.34	16.8	6.30	5.73	6.03	0	25	In favour of females
Teamwork	13.55	14.73	14.17	6.59	6.73	6.7	0	24.12	In favour of females
Participation in public life	12.06	11.10	11.57	7	6.50	6.74	0	25	In favour of males

FIGURE 2-5-5

Comparison of average (arithmetic means) of social skills for total sample
(males and females)

Whoever has both skills of communicating with others and social work is expected to have a good skill in participating in public life

Whoever has both skills of communicating with others and social work is expected to have a good skill in participating in public life. However, results showed that the participation of the future generation in public life was low. This may be attributed to the fact that public participation away from the family and relatives is not significant for the future generation, in addition to the fact that they have a low awareness of the value and importance of participating in public life in society, such as participating in voluntary social work. This weakness in the skill of participating in public life and training to practice it within the UAE is consistent with the results of a study on the efficiency of indicators of civil society institutions in some Arab countries, including the UAE. It also showed a weakness in the participation of individuals in voluntary social work (Amna Khalifa, in Arabic, 2010).

Generally, the results of the future generation's possession of social skills

UAE CASE STUDY

were positive. The overall performance of the individuals sampled exceeded the required minimum level. The MOE implements educational and cultural visits for successful students, students with highly qualified skills and talented students to some Arab and foreign countries to gain an awareness of the most modern inventions in the field of the students' interest, knowledge and gaining skills and benefitting from the countries' experiments in these fields. We can say that instilling the skill of communication with others is not limited to the educational system, as the student develops this skill in the family and the surrounding environment. With the nature of Emirati society and the convergence of its families and tribes, the future generation can develop this skill. Possessing such skills may be attributed to the nature of UAE society outside the family, especially in Dubai and Abu Dhabi, as well as the existence of a multi-national workforce, allowing more communication.

This explanation also applies to the culture of teamwork. The UAE is a society where social relationships prevail among its individuals, which encourage communication and helping others, especially families and relatives. Students gain such skills through their families and the general culture. Also, a large group of foreign nationals, either Arabs or foreigners, work in UAE public schools, and this supports such skills. The most prominent thing is that some subjects, such as maths and science, aim at instilling such skills, especially since such subjects allow students to work together in teams inside and outside the classroom.

As for the gender variable, males are more successful in the skill of participating in public life than females, as a result of the conservative culture of the society.

Students' readiness in terms of social skills

We notice that 36.3% of students are still either 'not ready' or in the beginning phase of gaining social skills required for accessing the knowledge society. On the other side of the scale, we notice that only 14.3% are in the 'ready' category. 50% of students possess skills that qualify them to be in the process of the readiness phase. This result is higher than that recorded for cognitive skills, but it is still lower than that recorded for conative skills. This means that students are more prepared at the level of conative skills than at the level of other skills.

At the level of social skills in detail, we notice that the majority of students fall in the third and fourth levels of the readiness scale for the skills of communication with others and teamwork, contrary to the skill of participating in public life. Focusing on the high category, it was clear that there is a discrepancy between the rates of ready students through various skills. The highest skill is communicating with others, and the lowest is the skill of participation in public life. With more research, we notice that 60 students (4.4%) fall within the 'readiness' category in all social skills compared to 5 not ready students (0.4%).

With high rates in social skills of the youth and their relation to youth readiness for the knowledge society, students scored relatively high in two skills, i.e. communication with others and teamwork, while they scored low in the skill of participation in public life. This may result from weak participation in educational institutions and the society as a whole. The high rates achieved in the readiness phase in social skills are 14.3%, compared to conative skills (4.7%) and cognitive skills (0%). This may be attributed to the social upbringing that concentrates on developing and enhancing the skills related to strengthening social relations within families, relatives and neighbours and to the nature of UAE society with its openness to many cultures represented by non-nationals. If we add the students who are about to be prepared to the category of 'ready' students, then the category of conative skills (77.9%) is above that of

We can say that instilling the skill of communication with others is not limited to the educational system, as the student develops this skill in the family and the surrounding environment

FIGURE 2-5-6

Students' readiness in terms of social skills
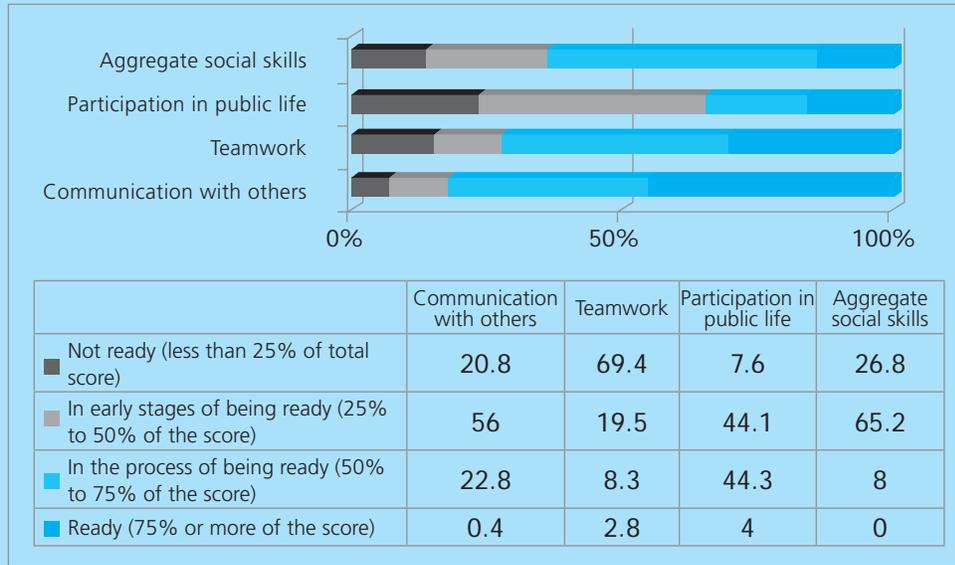
	Communication with others	Teamwork	Participation in public life	Aggregate social skills
■ Not ready (less than 25% of total score)	20.8	69.4	7.6	26.8
■ In early stages of being ready (25% to 50% of the score)	56	19.5	44.1	65.2
■ In the process of being ready (50% to 75% of the score)	22.8	8.3	44.3	8
■ Ready (75% or more of the score)	0.4	2.8	4	0

social skills (63.7%) and cognitive skills (8%). In both cases, the cognitive skill is very weak.

The results of the workshop, in which an elite group of academics, experts and decision-makers participated to discuss to what extent the future generation is ready to participate in the knowledge society, confirmed the results of the students' testing in such skills. Workshop participants confirmed that cognitive skills, including the skills of decision-making, problem solving and critical analytical thinking, are among the weakest skills for youth. The results also confirm that the skill of future planning is one of the weakest skills for youth, and this is consistent with the test results. The reasons for weakness, according to participants in the workshop, are attributed to the educational system followed, the consumption culture, luxury, dependence on others and on foreigners,

Workshop participants confirmed that cognitive skills, including the skills of decision-making, problem solving and critical analytical thinking, are among the weakest skills for youth

FIGURE 2-5-7

Views of participants in the workshop about the importance of skills and their availability

the desire to gain money without effort and the style of social and family upbringing.

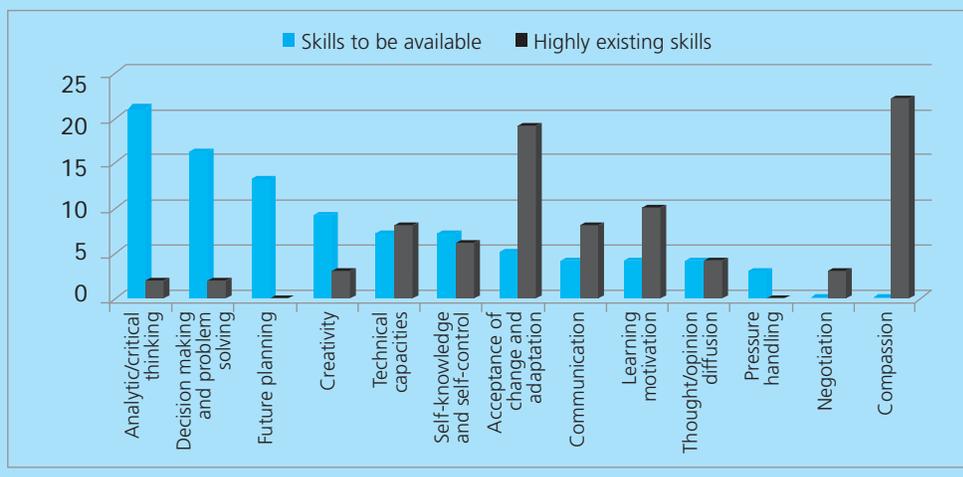Most experts and decision-makers agree that these weak skills are also the most important 3 skills necessary for the youth to possess. We finally concluded that the size of the gap within the UAE is still large until the youth are ready for the knowledge society according to the views of experts and decision-makers.

The experts agree that the strongest skills of the future generation are related to compassion, acceptance of others, the ability to adapt and caring about educational incentives. This is also consistent with the results of student tests. Specialists participating in the workshop believe that these skills are strong as a result of the approach followed by the educational system, various cultures within UAE society, openness to others, technological development and family upbringing.

VALUES

The scale of values adapted by the study contained four groups. The first includes conative values (such as love of knowledge, having an open mind for accepting new things, striving and persistence and interest in scientific inventions); the second includes conative values (such as self-confidence, social recognition, personal freedom, self-honesty); the third social values (such as respecting codes of ethics, customs and traditions, national affiliation, respecting others' opinions and thoughts, willingness to participate in public life). The fourth universal values (such as human rights, international peace, democracy, justice, and freedom of expression). Both aggregate and sub-values were measured on a scale from 1 to 5, so the supposed minimum limit of values possession is 3 marks.

Table 2-5-7 shows that the marks of students ranged between 2.41 and 4.66, i.e. no student received the full mark. Results also showed that students are strong in the aggregate values as the average of their marks was 3.77. This exceeded the supposed minimum limit by 0.77. The standard deviation also indicates that there was not any discrepancy in students' scores, and that their levels were close in general. By analysing the differences between males and females, it was found that females were more successful than

The experts agree that the strongest skills of the future generation are related to compassion, acceptance of others, the ability to adapt and caring about educational incentives

TABLE 2-5-7

Results of aggregate values
(Total score of values ranges from 1 to 5)

Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
Males	Females	Total	Males	Females				
3.66	3.87	3.77	0.33	0.32	0.34	2.41	4.66	In favour of females

TABLE 2-5-8

Results of detailed value
(Total scores range from 1 to 5)

	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Cognitive values	3.78	3.92	3.86	0.46	0.43	0.45	1.84	4.89	In favour of females
Conative values	3.72	3.98	3.86	0.41	0.36	0.44	2.26	5	In favour of females
Social values	3.63	3.76	3.70	0.43	0.41	0.39	2.38	4.75	In favour of females
Universal values	3.55	3.86	3.72	0.40	0.41	0.43	1	4.85	In favour of females

FIGURE 2-5-8

Comparison of average (arithmetic means) of values for total sample (males and females)
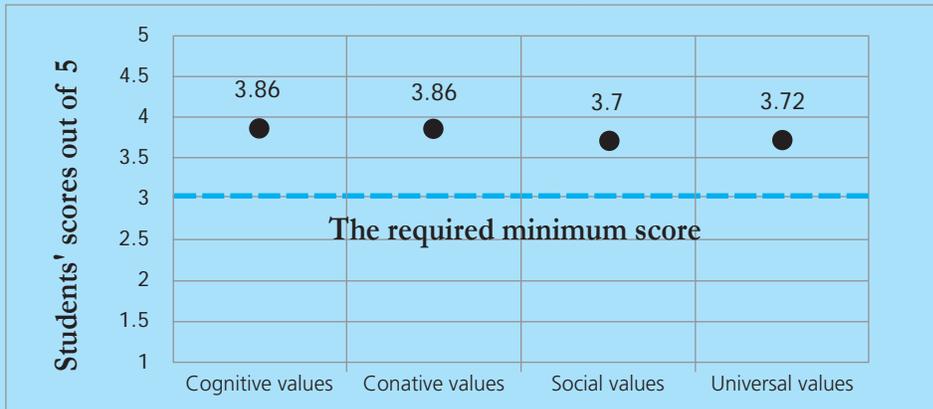
The required minimum score

Students' scores out of 5

Cognitive values: 3.86
Conative values: 3.86
Social values: 3.7
Universal values: 3.72

males. The same was also true in the total cognitive and conative skills.

It is worth noting that when we talk about values, we quote students' statements which are indicators for their trends, but not necessarily for what they actually possess or practice.

Direct comparison between the studied value categories indicated the presence of two different groups (with statistically significant differences). The first category includes cognitive and conative values, while the second includes universal and social values. The first values are equal in the arithmetic mean (3.86), which exceeds the minimum limit supposed for possessing the values by 0.86. This indicates that they prevail in students. On the other hand, the degree of possessing universal and social values decreases, as their averages were 3.72 and 3.7 respectively. However, it is still higher than the supposed minimum limit for possessing values. Regarding the gender variable, females achieved statistically significant differences over males in all cognitive, conative, social and universal values.

We here indicate again that what students stated is the degree of possessing the four groups of values. Here, we find a contradiction, especially due to the fact that skills in general, and cognitive skills in particular, were weak while it was expected

that the values – at least the cognitive ones – would be weak. However, the results in Table 2-5-8 did not indicate so. Therefore, it could be said that students have a positive desire towards the different values, but they could not translate this approach to behaviours and practices in the real world. This also applies to social values; the results of the skills and workshop confirmed that values related to dealing with others, such as understanding, compassion and tolerance, were the dominating values. The same is also true for conative values. This is consistent with the results of the conative skills, which suggested that the educational system enhances values of self-esteem, trust, inspiration, dignity and respect.

STUDENTS' READINESS IN TERMS OF VALUES

The scores obtained by students allowed us to classify most of them into the two high levels in the readiness scale: 70.8% of them are in the process of being ready and 27.7% of them already ready. This situation differs from what we have recorded for the cognitive skills level, but still close to what has been recorded for the conative level.

Considering the category of 'ready' students, we find that students are more ready at the level of conative and cognitive values, followed by universal values and

It could be said that students have a positive desire towards the different values, but they could not translate this approach to behaviours and practices in the real world.

finally the social one. However, the situation is generally less bad than the status of skills because students, except for a small minority, possess the minimum limit of values that put them either near readiness/in the process of being ready or already ready.

By researching the number of students who reached the fourth level in all values (readiness), we found 79 students (5.7% of participating students in the study), while no student was still in the first level (not ready) in all values.

The possession of different values by students – even if they were not translated into the real world – is an important and necessary indicator that should be taken into account by teachers, curriculum developers and educational departments. The possession of these values helps greatly in enhancing and training in such values for transforming them later to a behaviour that produces skills gained and practiced by students.

For a more comprehensive view about students' readiness in terms of values, we conducted a survey on the opinions of teachers on values that students were asked about and to what extent it is important

that they have them. The teachers said they cared for all values equally, as the analysis found no statistically significant differences. In addition, all types of values, whether cognitive, conative, social or universal, showed no difference in importance according to the teachers' views, as teachers believe that these values are important and play a role in the preparation for the knowledge society (See table m2-16 in the Appendix).

Regarding teachers' opinions about the extent of students' possession of values, the analysis revealed that teachers believe that students have medium degrees of values, which were generally lower than the degrees believed by the students themselves, i.e. teachers provided lower estimates for the students' possession of values or students provided higher estimate for their possession of values. From the teachers' point of view, statistically significant differences appeared between their strength in students, except for conative and universal ones. Cognitive values were the weakest for students (See Table m2-17 in the Appendix).

Considering the results of the workshop that was held in the UAE with an elite

The possession of different values by students – even if they were not translated into the real world – is an important and necessary indicator that should be taken into account by teachers, curriculum developers and educational departments

FIGURE 2-5-9

Students' readiness in terms of values

	Cognitive values	Conative values	Social values	Universal values	Aggregate values
■ Not ready (less than 25% of total score)	0.1	0	0	0.1	0
■ In early stages of being ready (25% to 50% of the score)	4.3	4.5	5.9	4.9	1.5
■ In the process of being ready (50% to 75% of the score)	56.8	56.3	73.9	69.3	70.8
■ Ready (75% or more of the score)	38.8	39.2	20.2	25.7	27.7
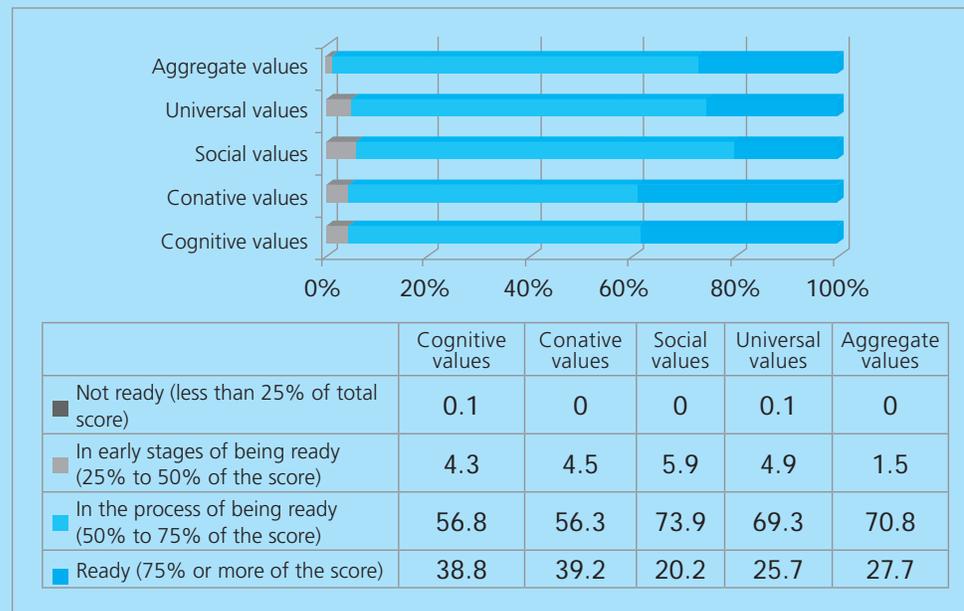
FIGURE 2-5-10

**Views of participants in the workshop about the importance of
values and their availability among the youth**
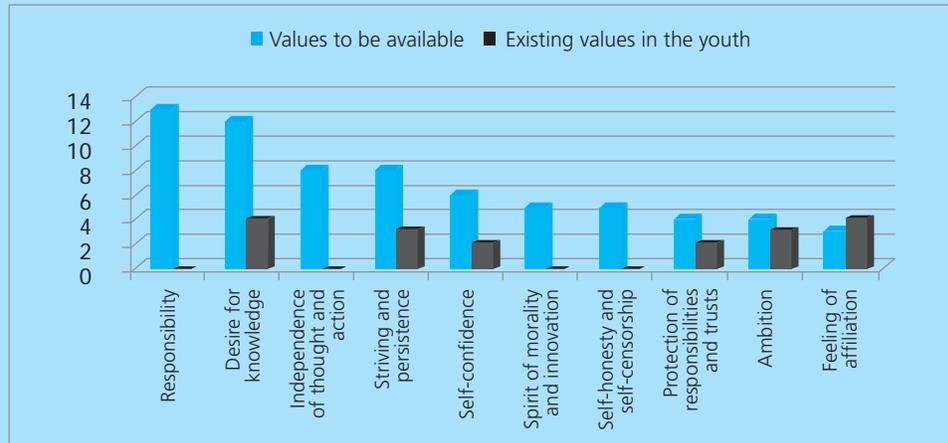
group of academics, experts and decision-makers in the field of preparing the youth generation for the knowledge society, we found the values that participants believe the youth strongly possess are the desire for knowledge, understanding, compassion, tolerance, solidarity with others and openness to others. Considering these values, we see that they represent the values that are deeply rooted in students, and therefore, they translated them into behaviours and skills that clearly appear in positive results obtained by students in conative and social skills.

The experts attributed the reasons for the strength of these values in the future generation to the nature of society, religious upbringing, cultural diversity and the population structure, which are all factors that often enhance the values of compassion and tolerance to others. It is also attributed to the youth's enthusiasm, the desire to achieve their goals and coping with the real world.

By examining values, which the experts participating in the workshop believed were weak for the future generation but necessary for accessing the knowledge society, we note that most of these values are cognitive values that affect cognitive skills, which clearly appeared weak in the students' testing. The experts found that the weakest future generation values are those related to responsibility, striving, persistence, independence of thought and spirit of morality and innovation, which are all related to knowledge and greatly affect cognitive skills. Experts attributed the reasons for weakness in these values to welfare, luxury, increased dependency on others, the traditional educational system, which failed to instil the spirit of striving, persistence and desiring education, in addition to the weak role of the family and media, the absence of the spirit of competition, initiative, as well as weakness in public activities.

ENABLING ENVIRONMENTS

THE IMPACT OF ENABLING ENVIRONMENTS ON SKILLS AND VALUES

Based on the student survey, the enabling environments were summarised by the following variables:
- Family structure: an integrated family (father, mother and children) or single-parent family (absence of father or mother due to divorce, death or migration)
- Father's educational level
- Mother's educational level
- Family's interest in student's study

The experts found that the weakest future generation values are those related to responsibility, striving, persistence, independence of thought and spirit of morality and innovation, which are all related to knowledge and greatly affect cognitive skills

**U A E
CASE STUDY**

- Family's financial welfare level
- Educational welfare at home
- Educational welfare in the local environment
- Educational welfare at school
- The family's method of upbringing

Skills

Regression analysis showed that among the above factors in the enabling environments, there are five that affect the youth's possession of cognitive skills by 8.7%. Three changes were found to significantly affect the possession of conative skills by 4.1%, while two changes indicatively affect the possession of social skills by 2.6% (See table m2-25 in the Appendix).

Considering the enabling environments that affect the future generation's possession of different skills, we found that the family's method of upbringing and the educational welfare at home positively affected the possession of the three skills. The family's care for the student and their education, the method of upbringing and the methods followed by parents for dealing with the student, in addition to providing what is required and some stories, books and tools, would certainly help the student to possess various skills. It was also clear that the financial welfare of the family negatively affected the student's possession of cognitive skills. This may mean that wealthy students are less interested in obtaining knowledge compared to their peers. Educational welfare at school also affected the conative skills of students, i.e. the more school is prepared as an attractive educational environment, the more students feel pride, self-esteem and, consequently, it increases the motivation to learn.

Values

Regression analysis showed that among the above enabling environments, there are three factors that affected possession of cognitive skills by 9.5% and one factor

that affected possession of social skills by 3.9%. In addition, there was one factor that affected possession of conative skills by 6.0%, while there are three factors that affected possession of universal skills by 8.3%.

The results indicate the great impact of the family's method of upbringing on the future generation's possession of various values. It is certain that possession of cognitive values is also affected by the school environment. Social values and conative values were not influenced by the school context or what is happening in the surrounding environment, as the influence of the family dominated the future generation's possession of two skills. It is also noted that the financial welfare level within the family again plays a negative role in the possession of universal values. This may result from the fact that wealthy individuals do not care for what is happening in the world or have the desire to possess universal values.

We note that most changes appearing in the models are closely related to the family and then to the school, which means that the family, with its educational and financial facilities, as well as the ability to monitor children, may play an important role in enabling them to gain the main skills and values. It is worth mentioning here that these changes do not explain all differences among students, i.e. they are not the only changes that define the degree of gaining skills and values, as their influence ranged between 2.6% and 9.5%, indicating that there are other factors that affect the process of enabling students (See table m2-26 in the Appendix).

It is worth mentioning here that the influence of educational welfare in local environments on the skills and values of the future generation disappeared, despite expenditures and efforts made by the state for supporting that side, which appeared in the availability of public and electronic libraries, book fairs, cultural festivals and other events. This refers to the benefit from these events by categories other

Considering the enabling environments that affect the future generation's possession of different skills, we found that the family's method of upbringing and the educational welfare at home positively affected the possession of the three skills

than youth, or to the fact that the future generation did not realise the importance of these events and did not want to attend them.

OPINIONS OF STUDENTS, TEACHERS AND EXPERTS ON ENABLING ENVIRONMENTS

A questionnaire was used to seek students' opinions on their surrounding school and social environments, and to the extent they are satisfied with them, as well as ascertaining whether the required proper environment that can participate effectively in accessing the knowledge society is available or not.

Students' opinions on the school environment

The questionnaire results indicated that the students' relationships within the school are good in general, as the majority of them 'totally agree' or 'somewhat agree' with the positive features mentioned above, either regarding the good environment for education in the school or the atmosphere of good relationships within the school.

The sample responses emphasised that students have a proper educational atmosphere and a good social life and good relationships with their teachers, as 71.4% of students completely agreed, and 75% completely agreed that they have good relationships with their colleagues, and this allows them to understand school subjects easily and feel safe and secure within the school. Approximately 75% of teachers participating in the questionnaire completely agreed that there are good relationships and mutual respect between them and the students. This percentage increased to 82.8% who completely agreed that there is mutual respect between teachers and parents. The highest percentage, i.e. 91.9%, expressed complete agreement on mutual respect with other. This may seem reasonable in the work culture within the UAE, which is characterised by stability and respect for others. The most remarkable response was a lack of communication between teachers and parents, which is necessary for exchanging views about student issues, as 29.8% of teachers denied any periodical meetings (See Table m2-18 in the Appendix). This indicated that a large percentage of parents do not communicate with teachers as to the level of their children or try to participate in solving their problems.

We notice that students' opinions were positive towards the school as a healthy enabling environment; the majority of responses were 'completely agree' followed by 'somewhat agree'. The sample said that there are healthy environments inside the school for students, such as the availability of an equipped school clinic (61.1% completely

The sample responses emphasised that students have a proper educational atmosphere and a good social life and good relationships with their teachers

TABLE 2-5-9

Students' opinions on the school and their relation to its components (%)

	Completely agree	Somewhat agree	Disagree	Completely disagree
A. I can easily understand school subjects.	27.4	63.3	7.2	2.1
B. My school strengthens my desire for learning and excellence.	39.8	45.1	9.6	5.5
C. I feel safe and comfortable at school.	52.3	34.5	8.9	4.3
D. I have good relations with my teachers (mutual respect).	71.4	23.2	3.7	1.7
E. I have good relations with my school friends.	75	20.2	3.4	1.4
F. My school prepares me well for the future.	51.9	37	6.6	4.5

Students' opinions on the healthy enabling environments (%)

	Completely disagree	Disagree	Somewhat agree	Completely agree
A. The school offers periodical medical check-ups for students.	3.2	6.2	34.8	55.8
B. The school offers all students medications free of charge.	3	7.5	30.2	59.3
C. The school clinic is fully equipped (bed, examination equipment, primary medications).	4	7.8	27.1	61.1
D. The school organises health campaigns combating unexpected epidemics.	5	11	32	52
H. The school conducts awareness programmes against dangerous diseases.	4.2	8.5	29.9	57.4
I. The school has a social worker who helps students solve their social problems.	7.7	12.3	27.7	52.3
J. The school has an educational guide/ psychologist to help students deal with their psychological problems.	11.6	13.4	27.5	47.5
K. We study issues related to health education.	9.7	15.6	34.3	40.4

Students' perspectives differ with those of the experts from the workshop who confirmed the weak presence of psychologists and social workers

agree) and (27.1% somewhat agree). Students' responses also ranged between (55.8% completely agree) and (34.8% somewhat agree) regarding the availability of medical check-ups. The sample showed an interest in the psychological and social care for students, as 52.3% of students completely agree on the availability of a social worker and 47.5% agree on the availability of a psychologist.

Students' perspectives differ with those of the experts from the workshop who confirmed the weak presence of psychologists and social workers. This is attributed to the lack of training centres and qualified human cadres to provide psychological and social advice for students. The opinion may be correct for psychologists, but there is a social worker in each school, and they play an important role. However, they have a large burden as usually, only one social worker is appointed for each school. The fact is that students in the secondary stage or in the state of physical and psychological change need a person who can understand their feelings, discuss their problems, help tackle their problems, answer their questions and instil in them the sense of dialogue, discussion and exchange of views in a practical and

organised way, thus qualifying them to be able to live within a society in which they have thinking skills, abilities and proper human values that suit the knowledge society.

Generally, the workshop participants indicated that there are infrastructure environments, such as the required proper health care, protection and treatment services provided by the Ministry of Health, the Health Authority Abu Dhabi, and Dubai Health Authority, and infrastructure for obtaining knowledge with the existence of a large number of public and private authorities and institutions that are interested in the technological aspects that can spread the culture of knowledge, and provide material and professional incentives for students who search for knowledge. This is done through giving the future generation the opportunity to receive free university education inside or outside the UAE through scholarships, as well as providing the technology required for searching for information. The availability of such enabling environments is due to the efforts made by the state and its material capabilities. The workshop participants indicated that the weakest environment are the psychological and social services

FIGURE 2-5-11

Views of participants in the workshop about the most important of environments and their availability among the youth
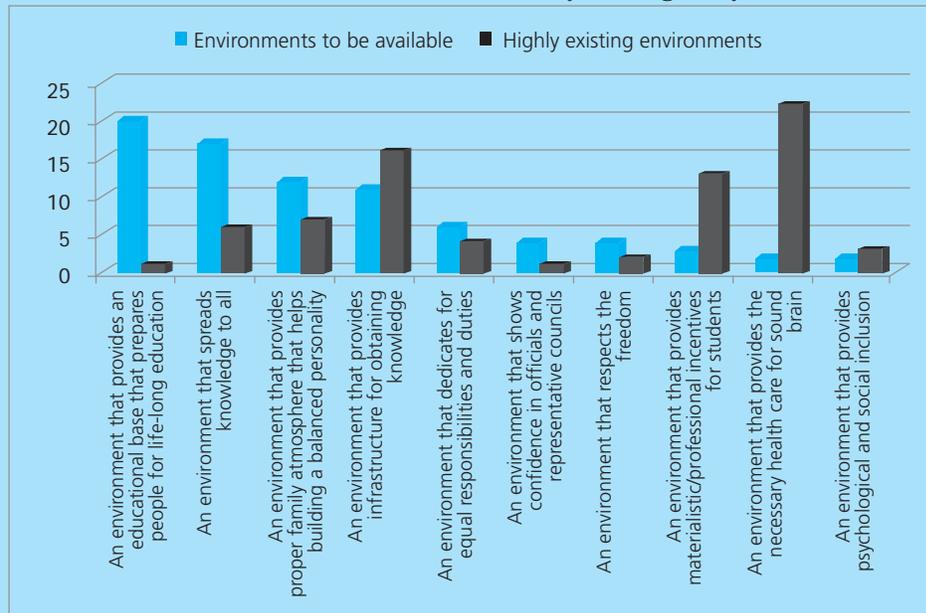
■ Environments to be available   ■ Highly existing environments

The workshop participants indicated that the weakest environment are the psychological and social services provided to students. They attributed this to family disintegration, an increase in wealth and divorce rates, economic factors and the fast social changes in UAE society

provided to students. They attributed this to family disintegration, an increase in wealth and divorce rates, economic factors and the fast social changes in UAE society.

Considering the opinions of decision-makers and experts who participated in the workshop and the opinions of students in the enabling environments, we can conclude that the infrastructure is friendly, but other enabling environments must be provided, such as advanced curricula, tools and teaching methods and educational and administrative authorities that can develop the future generation's skills. In other words, there should be harmony between the enabling environments and the infrastructure that provides an educational base that prepares people for life-long education and spreads knowledge to all who would help the youth access the knowledge society.

Teachers were asked their opinions on the enabling environments available for students within schools in terms of available educational tools and equipment in schools. 82.4% agreed that schools have scientific labs in good condition. The case is not the

same with language labs, as 65.3% pointed out that there are no labs for languages in their schools. This may be attributed to the attention to scientific subjects and neglect of languages, especially foreign languages. This is an issue that must be reconsidered when preparing the future generation for the knowledge society, as one of its main components is mastering languages, especially English. 72.9% of teachers emphasised the necessity of connecting schools to the internet; however, only 20% said that schools provide each teacher with a computer in good condition. It is known that such equipment and services are of great importance for developing different types of skills, and that the provision of instruments and equipment is one of the main requirements needed for accessing the knowledge society (See Table m2-19 in the Appendix).

42.1% of teachers believe that the school sometimes helps students with learning difficulties and provides encouraging incentives for 35.1% of distinguished students. There is a similarity between the opinions of workshop participants and

U A E
CASE STUDY

teachers regarding the lack of specialists, especially psychologists in schools, where 39% of teachers pointed out the rareness or absence of specialists, while 29.1% indicated that those specialists sometimes exist (See Table m2-20 in the Appendix).

50.4% said that they 'somewhat agree' that the role of the school has become a secondary one in providing students with science and knowledge, and it is no longer the place that provides them with what they need. This may be attributed to the decrease in the role of the school and availability of other competing resources for knowledge in society. We also cannot exclude the fact that the social culture and the future view of work play a major role in confirming such views. This may be boosted by the feeling of teachers to believe that the methods used in schools do not motivate students to obtain knowledge (21.4% of teachers completely agreed, while 46.6% somewhat agreed) (See Table m2-15 in the Appendix). This negative attitude may be due to the fact that teachers in most schools – except for model schools or public-private schools sometimes – are executers and not partners in preparing curricula and activities they receive from educational departments. When schools cannot motivate students to learn, there will be a problem with their role as an enabling environment for the knowledge society.

Students' opinions on surrounding enabling environments

Students' answers indicated that they enjoy a reasonable degree of freedom, as they have the freedom to choose and personally decide within their families; a high percentage that exceeded 60%, as well as to think (58.2%), while the freedom of scientific choice was slightly lower (45.7%). This was mostly attributed to the fact that parents greatly interfere in the process of choosing the field of study or specialty for their children, believing that they will better choose the correct choice for them, especially for females.

Teachers declared that they have the freedom of choice, either absolute or major, in many fields, especially in personal choices (33.8%, absolute freedom, and 36.1% major freedom). The absolute freedom rate for scientific choices fell to 28.8%, while professional choices were 50.8% (15.2% absolute freedom, and 35.6% major freedom), (See Table m2-21 in the Appendix). This suggests that half of the participating teachers agreed that the range of professional freedom is low, which is certainly an expected result in the light of previous results that confirmed compliance of teachers with curricula, teaching methods and assessment techniques.

Considering public political life, students' answers indicated that they do not tend to participate, as more than half (57%) of the students sampled declared that they did not participate politically. Only 25% of students answered that they did.

This answer reflects a conviction of the youth that policy matters are limited to politicians and rulers who sponsor the interests of the country. We also cannot deny the family's efforts made in instilling this concepts in their children. It was noticed that the students' opinions regarding the social and legal enabling environments were positive, but with reservations, as 49.8%

TABLE 2-5-11

Students' opinions on the freedom available for choosing (%)

	Much freedom	Moderate freedom	Little freedom	No freedom
A. Personal options	62.2	33.3	3.9	0.7
B. Scientific options	45.7	46.8	6.3	1.3
C. Intellectual options	58.2	33.7	6.5	1.6

FIGURE 2-5-12

Views of students about political participation
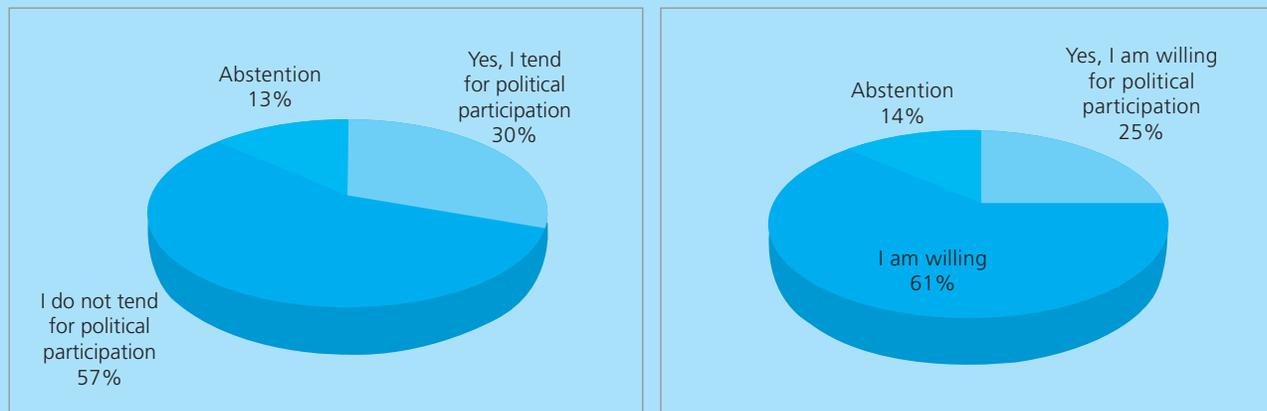
agreed that laws are applied within the school at a slightly lower degree, i.e. 45.4%, than within the community in general. More than a third of the sample 'somewhat agreed' that there are strict laws, either in school or the society, indicating that such laws are not ideally applied. Some students did not deny some problems in the society such as 'favouritism', albiet a small percentage (See Table m2-22 in the Appendix). It was also noted that the students have more trust in government-run media than non-government run media (See Tables m2-23 and m2-24 in the Appendix). This may be true, as the UAE has good media that is quietly open, featuring the professional spirit and transmitting various opinions clearly with an approach to rooting the identity of the community and acquisitions.

CONCLUSION

In light of previous results, we found that 'aggregate values' came first in terms of possession that enable students to be 'ready', as results showed that approximately 27.7% of students were ready to access the knowledge society, followed by 'aggregate social skills' with 14.3%, then 'aggregate conative skills' with 4.7%, and finally 'aggregate cognitive skills' for which no student was prepared. As for sub-skills, we found that the weakest

one is the skill for future planning, and the highest one is the skill for self-esteem and educational motivation; all are conative skills. Results also indicated that there is a clear weakness in the cognitive skills, despite the availability of educational and healthy environments inside and outside the school, as confirmed by students and teachers. This takes us again to the previous question regarding the effectiveness of such environments in preparing the future generation, in addition to another question: Will these environments remain a factor that does not affect the skills of students, or can they convert the students' convictions – appearing clearly in the values of their answers – to the cognitive skills required for accessing the knowledge society?

As for sub-skills, we found that the weakest one is the skill for future planning, and the highest one is the skill for self-esteem and educational motivation; all are conative skills

SYSTEM OF ACTION TOWARDS THE KNOWLEDGE SOCIETY

INTRODUCTION

The first four chapters of the UAE case study included a discussion of the development level in the UAE and a discussion of the system of upbringing, including educational institutions and other social upbringing institutions, such as the family, media and prevailing norms. In addition, the conditions of the enabling environments and their relationship to the future generation's readiness for accessing the knowledge society were surveyed. The field study in Chapter Five discussed the different dimensions of the levels of readiness of the future generation in terms of the knowledge, skills, values and enabling environments for such access.

In completing the research, this chapter provides a vision for the system of movement towards the preparation of the Emirati future generation to effectively participate in establishing the knowledge society. Chapter Six focuses on four main topics: the will of the Emirati community to move towards the knowledge society, readiness and ability of the society, especially the youth to progress, mechanisms of moving towards the positive involvement in the knowledge society and securing the requirements of this progression.

THE WILLINGNESS TO ACT

UAE society has realised the value of human resources. This was the main incentive for the special interest in building the capabilities of the Emirati future generation. This was clear in the great support provided to education and the dedication to enable development and establish the knowledge society. This was evident in the interest of the state in establishing schools throughout the UAE and providing education to all school-aged children of Emirati citizens. The state also established public universities and a chain of colleges that provide education free of charge for UAE students. The UAE encourages its citizens to study abroad to acquire academic qualifications at university, as well as post-graduate studies through scholarships it provides for those young people willing to learn. The state has utilised information from international experiments, such as supporting decentralisation in the educational affairs department. It permits the establishment of different educational boards in each emirate, allowing good education management and local development. The state was not only interested in providing public education to its citizens, but also in establishing a private educational system parallel to the public one and in harmony with the demographic privacy of the state, in which many expatriates live and work in a large ratio that exceeded the number of Emirati citizens. The country implemented the private educational system by establishing the Knowledge Village, which is a destination for foreign and international universities, training centres, and human development centres in the Middle East region. It established a free zone in Dubai for universities and post-graduate education, assisting investors who are interested in the knowledge and science sectors in establishing university branches and centres. In other emirates, there are many international universities, development centres and human development centres in different fields (See Chapter Two of the UAE case study).

The UAE encourages its citizens to study abroad to acquire academic qualifications at university, as well as post-graduate studies through scholarships it provides for those young people willing to learn

U A E
CASE STUDY

The UAE took major steps in modern technology and internet use in all state and community facilities and made it the means of communication for various facilities, which contributed to expanding the scope of knowledge and science to a wide range of individuals. This expansion, in addition to advanced communication services, led to the development of individual skills and knowledge.

The UAE was interested in innovation as a knowledge advancement indicator; therefore, many institutions that sponsored science, literature and artificial innovation were established. Many awards appeared throughout the state and in different emirates that sponsor innovation and innovators. The state is also interested in establishing public libraries in most emirates to spread the culture of reading and knowledge, including Dubai Public Library, Sharjah Public Library and Zayed Library in Al Ain.

The state also focuses on the media and openness to the world. There is no doubt that the current developments in the media system and the spread of many Emirati satellite channels are an outlet for providing knowledge and participation in formulating the features of the future society.

Different efforts made by state and society institutions reflect good intentions and confirm the willingness to cope with the developed states.

The UAE, with the efforts made over the last years, has provided youth with the proper environments that help them with effectively accessing the knowledge society and which ensures the general formal political and social desire for moving towards achieving that goal. However, the will of decision-makers and society institutions should be in line with a real desire from the future generation itself to move towards the knowledge society. This leads to an important issue within Emirati society that relates to motivating the future generation towards that goal. In that study characterised by material abundance, we find that most youth (more than 70% of males for example) tend to become involved in governmental and administrative works of financial benefit, while they clearly avoid engaging in works directly related to the processes of establishing society and the knowledge economy, especially those related to production, technology, scientific research and innovation. The absence of the real incentive for youth and a concentration on consuming the outcomes of knowledge that are different goods without real involvement in knowledge production or the processes of dedicating such outcomes for development is a real challenge for society within the UAE.

READINESS AND THE ABILITY TO ACT

The results of the field study, conducted for preparing the UAE case study, emphasised that 26.8% of the examined students lacked the minimum cognitive skills (which include the skills of problem solving, information processing, written communication and technology use), which are among the main skills that prepare them to access the knowledge society. 65.1% of them are at the beginning of acquiring these skills, i.e. approximately 92% of students are below the level required for accessing the knowledge society. Only 8% of students were in the phase of acquiring these skills which no one in the examined group had achieved. This suggests that the system for upbringing in the UAE, whether educational or social, could not enable students to obtain the cognitive skills needed and required in this age. This confirms that a lot of attention should be paid to this system and to applying significant changes in curricula, teaching methods, evaluation methods, professional development for teachers and other issues related to the system of upbringing in the UAE community as a whole, in order to enable the UAE youth to acquire skills and values required for accessing the

There is no doubt that the current developments in the media system and the spread of many Emirati satellite channels are an outlet for providing knowledge and participation in formulating the features of the future society

knowledge society.

The results were slightly better in terms of the conative skills (such as self-esteem and maintaining learning motivation), and social skills (such as communicating with others and team work). Results of the field study confirmed that most students participating in the test were either in the process of being ready or ready (77.9% for conative skills and 63.7% for social skills). Results remarkably improved on the level of values, as the percentage of those who are ready or in the process of being ready was 98.5% of the total sample. However, stating these values and approaches by students does not necessarily mean they are reflected in their daily practices.

Considering these aggregate results, the gap appears very wide between the level of current cognitive skills in participating students and the knowledge requirements needed for accessing the knowledge society, contrary to the conative and social skills or even values. This necessitates reconsidering the quality of the educational system and trying to repair its directions, goals and practices towards building the knowledge society. This analysis seems correct as other studies emphasise that the educational level is lower than all other development indicators in the country. The Knowledge Economy Index of the World Bank suggested that the Education and Human Resources Index Value is 4.9 out of 10 which is considered to be below the accepted level, while the UAE achieved advanced levels according to the value of the Economic Incentives and Institutional System Index (6.75); the value of the ICT Index was 8.59, and the value of the Innovation System Index was 6.69. In addition to the fact that graduates of public higher educational institutions are unable to often enrol in the university directly, they often need a preparatory year in which they study the English language and computer. Hence, education in the UAE does not cope with the economic, technological and informational development in the country, which confirms that the system in the country is not suitable for establishing an effective knowledge society.

Admitting that the educational system is still weak and that its output is unsuited to the knowledge age is the first step towards reform. Is this attributed to the prevailing traditional education and evaluation patterns? Or to some patterns that prevail in families, making the learner negligent regarding learning? Or to low motivation as a result of the economic welfare and future assurance? Or to all these factors together? The results of the workshop and the teachers' surveys conducted for preparing the UAE case study indicated that the system of education is often dominated by the pattern of traditional assessment based mostly on written exams that concentrate on memorising and memory. This relates to the traditional pattern of teaching, in which the learner is a passive receiver of information which he memorises for the day of the exam. The good teacher has become the one who can assist students to memorise the subject to remember it during the exam. The challenge of this pattern of education is that it became the prevailing pattern dedicated to the culture of negativity towards knowledge, silence and dependence on the teacher. Hence, the student remains the same throughout their schooling until graduation given information, memorising and restoring it until they loses the spirit of thinking and innovation.

The matter is not limited to the educational system. The results of the field study of the enabling environments showed that the financial welfare of the family negatively affects the students' possession of cognitive skills. This may mean that students living in luxury are less interested in obtaining knowledge compared to their peers. The family also plays an important role - maybe the most important role - in the possession of the future generation's various values, especially knowledge values. Therefore, what we need is to change the attitude of the family and the society towards the concept of acquiring education and

Admitting that the educational system is still weak and that its output is unsuited to the knowledge age is the first step towards reform

knowledge as the real standard for social and economic development.

This situation sheds light on the gap between educational plans and strategies developed by the Ministry and education councils and on practices and results in the real world. General attitudes toward reform and written policies emphasise in the different forms that education focuses on the student, the development of their cognitive and social abilities which prepares them for the knowledge society. Regarding practical performance, the field study of the report suggested that the future generation is weak in these skills, particularly the cognitive skill, required for living in the knowledge society. Family and society institutions could not compensate for this deficiency. Therefore, attention should be given to resuming and implementing national strategies and plans for the successful execution of such plans in reality.

The results of the field study and the results of other studies should not be a source of pessimism but rather should be an incentive to be aware of the reality, and make more serious decisions and set sufficient work strategies to achieve more positive results.

METHOD AND MECHANISMS OF ACTION

Knowledge, freedom and development; none of them can prosper in the absence of the others. The freedom of thinking and expression represents the main component of the enabling environments that contribute to developing knowledge performance and development. Therefore, the effective action for establishing the knowledge society in the UAE - or in any other Arab country - should be based on three main pillars: broadening the freedom of thought and expression, openness and effective communication with the revolution of knowledge and technology and a better response to the developmental needs of the society

(UNDP and Mohammed bin Rashid Al Maktoum Foundation, 2009).

As for the method which can enable youth to effectively become involved in the knowledge society in the UAE, it consists of three main axes. The first axis is cognitive enablement; it is achieved through creating an educational environment which spreads the culture of establishing knowledge and a culture of education and life-long education for all, an environment that provides the necessary infrastructure for obtaining knowledge. The second axis is conative enablement, through creating an environment that provides a sound family atmosphere that helps to form a balanced personality, an environment that provides medical and psychological care necessary for a balanced and sound mind. The third axis is societal enablement, through creating an environment that respects the freedom of thought, opinion and belief, an environment that emphasises the principle of equality in rights and duties. In fact, it is very difficult to imagine working on one of these axes without the others, because the matter requires working on them all at the same time. As for cognitive enablement, the first point of action is the real knowledge of the awareness of the nature and style of education in the knowledge society. Education in the knowledge society creates learning communities in classes and schools between students and teachers (DuFour and Eker, English, 2008). It also allows students to learn individually or collectively in a way that helps them acquire the ability to generate and employ new knowledge. It is an education that cares for learning and obtains benefits more than concentrating on school achievement and getting grades on exams. This can only be achieved through research, surveying, and problem solving. This education can only be achieved through an educational environment that cares for fulfilling learners' needs for knowledge and considers the learner as a person who has the ability to learn, in addition to providing highly qualified teachers, modern curricula

The results of the field study and the results of other studies should not be a source of pessimism but rather should be an incentive to be aware of the reality, and make more serious decisions and set sufficient work strategies to achieve more positive results

developed in terms of content and teaching strategies that concentrate on the learner, effective evaluation methods that focus on improving learning and not for monitoring educational achievements, as well as modern facilities and equipment that fit the current age. This kind of education and learning can only be achieved through the availability of societal experiences for learners in all environments in which they live. The core of these experiences should be the culture of freedom, democracy, transparency, accountability on one hand, and modernisation, use of rational and scientific styles and cooperation on the other hand.

No doubt that the provision of highly qualified teachers who have the knowledge, skills and values that help students to possess them, is one of the mechanisms that help students to access the knowledge society. Should teachers in the country be unable to access the knowledge society and participate in it, they will never be able to teach their students to do so. Teachers of the knowledge society can practice thinking and self-criticism for defining their needs and then work to promote their level. They are teachers, they should consider their practices, and they should care about promoting their knowledge and skills continuously, and tend to work in teams and refuse isolation in teaching and work (Watkins, 2005). We are in need a new culture in which the teacher is seen as someone passing through various developmental phases, starting from preparation at the university until working in a school, to master their work when they can cope with all modernisation and when they can qualify their students to absorb the developments of this age and cope with them.

Conative enablement concentrates on providing a sound family and school atmosphere that helps build a balanced personality. Therefore, there should be education about the role of the family and its importance in building the personality of its members. By the family we do not mean only the father, mother and brothers, but instead the extended family, including grandparents and relatives. There are important topics that should be discussed in UAE society that may negatively affect sons, such as early marriage, young fathers not having a lot of experience in educating their children, the rising rate of divorce, polygamy and its influence on children and dependence on servants who may play the roles of mothers while dealing with a lot of the children's needs. Attention should also be given to the emotional aspect at school. It is true that there is a social worker who contributes to discussing and solving the students' family problems, but the matter also requires a psychologist to be at school – following the pattern used by several countries – especially in the secondary school stage, as young men and women undergo the stage of adolescence and changes in behaviour and temper. The role of social workers is not limited to solving problems, but also helping teachers increase students' self-confidence, motivating them to learn and discussing their future.

Societal enablement can be achieved through creating an environment that respects freedom of thought, opinion and belief, an environment that emphasises the principle of equality in rights and duties. Societal enablement is achieved through the country's policies, institutions and different mass media. The country enacted laws that guarantee gender equality and decrease the gap between them at work. The Emirati constitution also guarantees gender equality, but the constraints against women's empowerment in society were brought about by socially inherited traditions, which still consider the role of the woman as a traditional one as a wife and mother. Therefore, there is a need for caring for the role of the woman in society, not only as she represents half the society and a main partner in preparing the future generation, but also as she has knowledge, skills and certificates (Gonzales, 2008), allowing her to perform new social,

Societal enablement can be achieved through creating an environment that respects freedom of thought, opinion and belief, an environment that emphasises the principle of equality in rights and duties

U A E
CASE STUDY

economic and political roles that fit her position.

The other side of societal enablement lies in the freedom of thought, expression, belief, acceptance of other opinions and thinking in a way that is different from the prevailing one. This point is related to the pillar of freedom. Feeling free in the ability to express opinions should prevail within the society. The media should play its role in establishing the knowledge society through specialised channels and programmes to spread the general culture, reading, discovery of talents, provision of technology, and concern for scientific research. The media should continue its role of enhancing the culture of tolerance, coexistence and prevent discrimination in all forms. A free media can tackle issues objectively and discuss important matters.

Emirati society contains great youth potential. The UAE must exploit and develop this youth power without underestimating its role in the establishment of the society. Listening to the youth, fulfilling their needs and making them a part of the development process must be taken into consideration. However, a large percentage suffers from low educational incentives. This is considered a major problem that must be discussed and solved. If the state provides public job opportunities and preserves jobs for its youth, it is unacceptable that the youth should depend on this and subsequently lose their desire for education, knowledge and learning.

SECURING ACTION REQUIREMENTS

After being aware of the method of involvement in the knowledge society and the mechanisms required for such a step, care must be taken to secure the requirements of action and accelerate and enhance the process of involving Emirati youth in the knowledge society. In light of the availability of financial resources and political will, compliance with the

UAE vision 2021 is a must. In its third element, it necessitates building a, "varied and flexible knowledge economy led by the skilled Emirati talents and enhanced by experience which ensures long-term prosperity for the UAE."

It is necessary for the UAE to quickly implement and activate the 2010-2020 educational strategic plan that aims at "improving students' educational achievement, preparing a proper school environment, developing citizenship spirit, developing curricula, improving performance of teachers, providing school needs, standardising assessment systems, including for the disabled, achieving high quality public education, activating participation of parents and building citizenship oriented capabilities in the field of education." Expansion in teaching languages and ICT in schools and universities for helping youth with communication and openness is of great importance. It is also necessary for the UAE to expand participation in international assessments as references used for measuring the extent of developing students' capabilities, compared to students of other countries. We cannot fail in this context to emphasise the need to link the educational system with the overall objectives for sustainable human development in order to improve people and society.

There are certain issues to be addressed regarding securing action requirements and maintaining sustainability of the knowledge society, such as education and obtaining knowledge as a lifestyle that lasts from birth to death and rooting such a concept in the expansion of pre-school programmes, adult education, public libraries and training and education centres. In this context, caring for youth is a top priority. This can be done through establishing and supporting governmental and private entities that address youth issues and strengthen the opportunities available for them to express themselves, their problems, their future and their aspirations.

Emirati society contains great youth potential. The UAE must exploit and develop this youth power without underestimating its role in the establishment of the society

Among the incentives of establishing the knowledge society is adopting national projects that encourage young and old to read and enhance their knowledge and broaden their intellectual horizons, not limiting them to reading school books. Another incentive is to spread the culture of scientific research in schools through adopting student projects as a component of evaluation. This also includes focusing on teacher training in terms of 'active research' that helps them solve the problems and shortcomings in their students' education, in addition to a wider net to encourage innovators and talented and distinguished persons and researchers who are considered the catalysts for development and advancement in the various thinking, cultural and economic fields of society. Last but not least, creating honorary and excellence awards should also be an incentive. As for the economy, it is not only important to concentrate on transferring knowledge and science, but also to employ such knowledge and science in the life of the youth, adopting them in society and continuously improving them.

It is also important to attend to other preparation institutions, such as the family, by developing and implementing a plan for the culture of UAE families to raise awareness of the importance of education and their roles in helping schools in preparing students to access the knowledge society. This is in addition to enhancing the role played by the media in society, developing a useful media policy that works to expand peoples' horizons, educate them and develop their understanding of the issues of development, human rights, democracy and knowledge. These efforts can succeed through the support of self-expression, freedom and deepening political, social, economic and cultural democracy in the society.

The positive action towards building and preparing the future generation for effective living in the knowledge society requires reconsidering, revising, and directing current practices in effective and positive directions. Late involvement in the knowledge society can be achieved because there is a political will, along with various enabling environments. The political will has shown determination to continue building a developed country. This will is also supported by large governmental and non-governmental institutions. Therefore, the UAE only lacks emphasising the goal, and directing all institutions towards building the knowledge society.

End Notes

1. Arab Statistics Website, UNDP 2011 http://www.arabstats.org/countryindicators.asp?cid=7on 14/2/2011
2. The World Bank (KAM)s database http://www.worldbank.org May 2011
3. US Patent and Trademark Office dated 23/5/2011 http://www.uspto.gov/web/offices/ac/ido/oeip/tof/cst_all.html
4. The World Bank (KAM)s database http://www.worldbank.org 18/5/2011
5. The World Bank (KAM)s database http://www.worldbank.org 18/5/2011
6. The Knowledge Economic Index (KAM) was developed by the World Bank. The index is calculated based on the data of twelve indicators of which each three indicators represent one of the four pillars which are: Economic incentives and institutional regime, innovation, education and human resources and ICT. The index value falls on 0-10 scale and it reflects the relative position in comparison with all other countries for which the index is calculated. However the low index value for a country does not necessarily mean the low value of the indicators, it may result from the increase of such indicators by percentages lower than those of the country's competitors among countries all over the world
7. The World Bank (KAM)s database http://www.worldbank.org May 2011
8. Investigating this issue:
   - Hussain Al Mutawaa, 1978 (Education Economies). Dar Al Kalam, Dubai.
   - Salah Abdulhamid and others,1996 (Education in the UAE). Al Falah Library, Second Edition, Al Ain.
   - Mahmoud Ahmad Ajawi, 1991 (Education in the UAE). Emirates Library, Al-Ain 1991.
   - Fakhri Rasheed and others, 1988 (Education in UAE society).
9. Estimates of mid October 2010, Data of National Bureau for Statistics on 31/3/2011 http://www.uaestatistics.gov.ae
10. Website of the Ministry of Education www.moe.gov.ae dated 12/6/2011
11. UAE University 2010, facts and figures. http://www.uaeu.ac.ae/about/history/facts_and_figures.shtml
12. Higher Colleges of Technology 2010. About Higher Colleges of Technology 2010 http://www.hct.ac.ae/misc/aspx/hct_at_a_glance.aspx
13. Zayed University 2010, Zayed University Programs 2009-2010. http://www.zu.ac.ae/catalog/documents/pdf/zuCatalog2009.pdf
14. The Ministry of Higher Education, 2011. Academic Approval Committee, licensed private educational institutions. https://www.caa.ae/caaweb/DesktopModules/Institutions.aspx
15. Database of UNESCO Institute for Statistics http://stats.uis.unesco.org/unesco/TableViewer/document.aspx?ReportId=143&IF_Language=eng Dated 15/2/2011
16. Statistics of the Ministry of Education 2008, Statistics and Documentation, UAE, www.moe.gov.ae
17. UNDP Database http://hdr.undp.org/en/statistics/data Dated 13/2/2011
18. Al Khaleej Newspaper Website 2009:
    http://www.alkhaleej.ae/portal/80d83bae-f6b0-4134-a264-dfddc3d10e55.aspx
    (USD = AED 3.67)
19. ADEC 2010. ADEC Conducts Standardised EMSA Testing,http://gsec.abudhabi.ae/Sites/GSEC/Navigation/EN/MediaCentre/government-news,did=149476.html
20. Website of the National Center for Statistics. United Arab Emirates Dated 19/5/2011 http://www.uaestatistics.gov.ae
21. Millennium Development Goals Website, Dated 23/5/2011 http://mdgs.un.org/unsd/mdg/Data.aspx
22. UNDP database http://hdrstats.undp.org dated May 19, 2011
23. The Gender Disparity Index is a compound index that measures inequality in achievements between males and females on 3 axes: Reproductive health, empowerment, and labor market. The value of the index ranges from zero, representing full equality, to one, representing inequality
24. Millennium Development Goals Website, Dated 23/5/2011 http://mdgs.un.org/unsd/mdg/Data.aspx
25. http://www.census.gov and the National Center for Statistics
26. The World Bank's database (KAM) dated 19 May 2011 www.worldbank.org
27. UNDP Human Development Report 2010
28. UNDP website, statistics of the Arab countries on 19/5/2011 www.arabstats.org
29. A Field surveys were conducted on a sample of individuals on October 6-7, 2010 in Dubai and on October 17-18, 2010 in Abu Dhabi
30. Students studying educational curricula different from the curricula of the Ministry of Education were excluded.
31. A measurement for the value around which the data of the sample is concentrated (one of the central tendency measurements)
32. Used when conducting statistical tests
33. It refers to the degree of data dispersion.

REFERENCES
AND
BACKGROUND PAPERS

References

REFERENCES IN ARABIC

Abdullah Lo'lo' and Amna Khalifa. 1996. (Gulf Family, Features of Change and Future Attitudes). UAE.

Abu Dhabi Education Council. 2008. (Report on ADEC). Abu Dhabi, UAE.

---. 2009. (Ten-Year Strategic Plan of ADEC). Abu Dhabi, UAE.

Ahmad Sulaiman Al-Hamadi and Abdulaziz Abdul-Fatah. 2008. (Impact of Political, Economic and Social Changes on Thinking and Cultural Ideology of Arab Youth). General Directorate of Youth Centres, Higher Council of Family Affairs, UAE.

Ali Al-Rashid, 2009. (Values and Substitutes and Their Role in Supporting Responsible Media). Al-Sharq Newspaper, Qatar.

Ali Mihud Al-Sewaidy. 2010. (Males tend to work at early stages, while females tend to marry). Emirates Today Journal, on May 5, 2010.

Amani Tufahah and Lara Hussain. 2010. (Impact of Satellite Channels on Children's Behaviours). Arab Child Conference in the Face of Cultural Impacts, Alexandria.

Amna Khalifa. 2007. (Cultural, Scientific and Social Awards in UAE). The Ministry of Culture, Youth & Community Development. UAE.

---. 2010. (Realities of Civil Society Associations in UAE.Arab Network of NGOs, Effectiveness Indicators of the Arab NGOs). Cairo, Arab Republic of Egypt.

General Women's Union. 2009/2010. (Analytical Study of the Status of Children in the UAE). Abu Dhabi.

Hamed Ammar. 1999. (In Human Development and Future Education, Standard Vision, Studies in Education and Culture). Al-Dar Al Arabia Book Library, First Edition.

Hassan Jaafar Al Khalifah. 2008 (Analytical Study of Moral Implications in Arabic Language Books in the UAE). UAE.

Hend Al-Kassemy. 1998. (Constants and Variables in the Culture of Emirati Women). Social Association, Sharjah.

Knowledge and Human Development Authority. 2010. (Annual Report of the School Monitoring Office in Dubai). Dubai.

---. 2011. (First Report on Care and Education during the Stages of Early Childhood). Dubai.

Mohammad Abd El-Wahab El-Alali. 2008. (Article in Al-Thawrah Newspaper). Edition of July 16, 2008.

MSA. 2010. (Realities of Associations of Social Benefit in UAE). MSA, UAE.

Naji Sadek Sharab. 1983. (Study on Policy and Governance). Al Ain, UAE.

National Centre for Statistics. 2009 A. (Analytical Report on Social and Economic Dimensions). Abu Dhabi, UAE.

---. 2009 B. (Work Force Survey). Abu Dhabi, UAE. http://www.rand.org/ pubs/monographs/2008/RAND_ MG786.pdf

Tarek Musa Kamel Sarsour. 2007. (The Role of School Curricula in the UAE for Developing the Innovative Thinking Skills of Students). Al Uwais Award for Studies and Scientific Innovations, Educational Studies, Round (14), Culture and Sciences Forum, Dubai, UAE.

The Ministry of Education. 1995. (Educational policy document, the Ministry of Education). Dubai.

---. 2004. (Education Vision in UAE). Dubai.

---. 2008 A. (Report on Model Schools). Dubai.

---. 2008 B. (Report on Al Ghad Schools). Dubai.

---. 2008 C. (Report on Public-Private Schools). Dubai.

The Ministry of Education. 2008/2009. (school statistics). UAE.

The Ministry of Education. 2009 A. (Strategic Plan for Education). UAE.

The Ministry of Education. 2009 B. (Educational Statistical Publishing). Department of Educational and Institutional Researches, UAE.

The Ministry of Education. 2010 A. (Board of Fathers and Mothers). Dubai, UAE.

The Ministry of Education. 2010 B. (Budget of the Ministry of Education). UAE.

UAE. 1971. (UAE Constitution). http://www.uaecabinet.ae/ Arabic/UAEGovernment/Pages/ ConstitutionOfUAE.aspx

UN and Arab League. 2010 (Third Arab Report on Millennium Development Goals in UAE 2010, Impacts of International Economic Crises on Achieving Them). Cairo/NY.

UNDP and Mohammed bin Rashid Al Maktoum. 2009. (The Arab Knowledge Report 2009: Towards Productive Knowledge Communication) Al Ghurair Publishing House, Dubai.

UNDP in Abu Dhabi and the Ministry of Economy. 2007. (Millennium Development Goals in UAE). Abu Dhabi.

UNDP. 2007. (Achievements of the Arab Countries that Participated in the Trends in International Mathematics and Science Study TIMSS 2007). Al Naul International for Propaganda and Advertising, Amman.

Yousef Al-Hassan. 2004. (System of Values in Secondary Students in the UAE, Culture and Sciences Forum). UAE.

REFERENCES IN ENGLISH

Ali S. Ebrahim. 2010. (Dubai's Knowledge Village and Creating a Knowledge Economy in the United Arab Emirates (UAE). Middle East Institute. Washington, DC.

Ashencaen Crabtree. 2007. (Culture, gender and the influence of social change amongst Emirati families in the United Arab Emirates). Journal of Comparative Family Studies 38(4): 575-87.

Assunta Martin. 2003. (An experience of teaching in the United Arab Emirates). English Today 19(2): 49-54.

DuFour, R. & Eaker, R. 2008. (Revisiting professional learning communities at work: New insights for improving schools). Bloomington, IN: Solution Tree.

Gonzalez et al. 2008. (Facing human capital challenges for the 21st century: Education and labour market initiatives in Lebanon, Oman, Qatar, and the United Arab Emirates). Santa Monica: California.

Haifaa Jawad. 1998. (The rights of women in Islam: An authentic approach). New York, St. Martin's Press.

Sara Sayed. 2004. (Women, politics and development in the United Arab Emirates). UNESCO and Zayed University.

UNESCO. 2010. (Education for All, Global Monitoring Report, Reaching the Marginalized). Oxford University Press.

Watkins, C. 2005. (Classrooms as learning

LIST OF BACKGROUND PAPERS (AUTHOR NAME; PAPER LIST):

- Ahmed Falah Alomosh. (Socio-economic indicators of the UAE).

- Husein M. Alothman. (Knowledge society in the UAE).

- Salama Al-Rahoumi. (Education in the UAE: Reality and Future).

communities: What's in it for schools?)
London: Routledge.

UAE APPENDIX

APPENDIX 1

LIST OF UAE WORKSHOP PARTICIPANTS

H.E. Sheikh Nahyan Mubarak Al Nahyan
Minister of High Education and Scientific Research
Head of Higher Colleges of Technology Complex

H.E. Humaid Moh'd Al Qutami
The Minister of Education

Mrs Halima Khalifah Al Fekaai	Dr. Amal Al Kubaisy
Prof MuzahSaif Matar Saied	Dr. Fwazyah Mohammad Badri
Mr Mohammad Ahmad Al Hamedi	Mrs Maryam Yousef Al Kubaisi
Mrs Aeshah Is-hak	Mrs Maha Al Shaer
Dr. Karimah Matar Rashed Al-Mazrouey	Mrs Aminah Khalil
Dr. Fatemah El-Elwan	Mrs Muzah Rashed Khalfan Al-Ghafli
Mrs Eman Khamis Humaid Al-Salfa Al-Suaidi	Mrs Asmaa Al Gemali
Mrs Marwa Shaye' Mohammed Salem Al-Mezah	Dr. Hanadi Al-Gaafari
Mr Fahed Ibrahim Al-Shuhi	Mr Ali Abbas Mahmoud
Mrs Aeshah Rashed Khalfan Al-Ghafli	Dr. Yousef Sharab
Dr. Mohammad Al-Saqa	Mr Khamis Mohammad
Mr Abdullah Yousef Al-Haydan	Dr. Aminah Al Marzouki
Mr Muna Abdullah Mohammed	Dr. Salama Al-Rahoumi
Mrs Aminah Khalil	Mrs Najibah Al-Refaai
Mrs Samaa Mahmoud Al-Khaledi	Dr. Ali Saied Al-Kaabi
Dr. Hanan Ameen Hairab	Dr. Abdul-Salam Al-Zeaabi
Mrs SamahWal	Dr. Abdullah Al-Shamsi
Mr Bankej Poul	Mrs Reem Ubaidat
Mr Sulaiman Deen	Mr Mohammad Ahmad Al Hamadi
Mrs Khawlah Mohammad Al-Abduli	Mr Essa Bin Haidar
Dr. Aeshah Saif Al-Shamsi	Dr. Awashah Ahmad Mohammad Al-Muhairi

LIST OF SCHOOLS PARTICIPATING IN UAE'S SURVEY

Dubai Schools	Abu Dhabi Schools
Al-Rashid Al-Saleh	Al-Wardiah Private School
El-Shorouq Private School	Al-Mashahael National school
New World School	Khalifah Bin Zayed School
Al Wahida School	Abdul-Qader Al-Jazaeri School
Al-Maaref School	Al Ittihad Model School
Al-Shaarawi School	Hamdan Bin Mohammed School
Al-Safa School	Al-Hesn School
Hamdan Bin Rashed School	Salamah Bint Buti School
Maria School	Um El Emirat School
Al-Sofouh School	Al-Samha School
Sakinah School	Al-Shahama School
Al-Rayah School	

UAE CASE STUDY
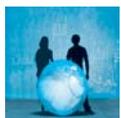
UAE'S QUESTIONNAIRE REPORT

Table m2-1: Teachers' opinions of educational curricula and programmes (%)

	Completely agree	Somewhat agree	Disagree	Completely disagree
A. The educational programmes and curricula prepare students to overcome future challenges.	25.8	51.5	15.9	6.8
B. The educational programmes and curricula help students acquire necessary skills.	28	55.3	14.4	2.3
C. The educational programmes and curricula help prepare efficient students who can compete externally.	25.4	46.9	26.2	1.5
D. The educational programmes and curricula contribute to promoting the value of citizenship and civilised behaviour.	34.6	48.5	13.1	3.8
E. The educational programmes and curricula prepare students to cope with problems in everyday life.	23.8	43.8	26.2	6.2
F. The educational programmes and curricula provide training that takes into account knowledge and emotional dimensions.	22.9	46.6	25.2	5.3
G. The educational programmes and curricula provide training which keeps up with scientific developments.	28	53.8	15.2	3

Table m2-2: The extent of practicing the following educational activities and methods (%)

	In all classes	In most classes	In some classes	No practice
A. Participating in educational/learning activities with students	22.6	40.1	34.3	2.9
B. Training students on problem solving	18.2	47.4	32.2	2.2
C. Explaining theoretical concepts	65.4	24.3	8.8	1.5
D. Writing lessons on the board	53.3	20.4	16.1	10.2
E. Discussing the concepts of the lessons with students	65.2	23.9	10.2	0.7
F. Discussing student achievement relating to the concept of the lessons	12.3	28.3	51.4	8
G. Assessing student achievement (tests, exams)	27.9	39	32.4	0.7
H. Helping students accomplish scientific/practical experiments	11.3	16.5	42.9	29.3
I. Organising student work in small groups	14.7	24.3	42.6	18.4
J. Linking educational material to the requirements of everyday life	50	39	9.5	1.5
K. Keeping silence in the classroom and deterring troublemakers	79	15.2	4.4	1.4

UAE CASE STUDY

Table m2-3: Educational trends of teachers (%)

	Completely agree	Somewhat agree	Disagree	Completely disagree
A. It is necessary to focus on strengthening the memorisation ability of students to succeed in their study.	40.4	48.5	10.4	0.7
B. All students can learn and succeed if they are taught by efficient teachers.	44.8	35.1	20.1	0
C.Successful teachers can accomplish their curriculum tasks in the specified manner and timeline.	59.8	28.8	6.9	4.5
D. Giving teachers the chance for initiative or innovation harms the educational system.	21.1	15	39.8	24.1
E. Teachers are not required to know all teaching methodologies, but it is enough to master one of them.	11.3	30.8	46.6	11.3
F. Tests and exams are the best way of encouraging students to concentrate and learn.	19.4	32.1	41	7.5
G. The best way to improve the ability of students to learn is to adopt a qualitative evaluation system (without grades) for the levels of pupils.	16.6	44.7	32.6	6.1
H. Consulting and coordinating with the parents of the students is part of the teachers' duties.	26.9	52.2	17.2	3.7
I. Educational reform processes pressure teachers and decrease their output.	35.3	40.6	20.3	3.8
J. It is sufficient for teachers to be experts in their specialties in order to succeed in their mission.	25.4	34.3	33.6	6.7
K. It is the mission of teachers to help the future generation have a passion for learning and knowledge.	67.2	28.4	3.7	0.7
L. The important feature of successful teachers is their ability to communicate information related to their specialty.	52.2	36.6	9.7	1.5
M. It is necessary for teachers to be familiar with other subjects' features to be able to teach their own subjects.	39.6	46.3	12.6	1.5

Table m2-4: To what extent are the following educational practices important? (%)

	No importance	Little importance	Moderate importance	Much importance
A. Regular school attendance (no absence)	2.2	2.9	12.3	82.6
B. Effort exerted in homework	2.9	1.5	29.2	66.4
C. Steady improvement of results	1.5	3.7	25.2	69.6
D. Good conduct inside and outside classroom	3	3	11.8	82.2
E. Effective classroom participation	2.2	1.5	21.8	74.5
F. The ability to innovate	2.2	6.6	41.6	49.6
G. The ability to think and question	0.7	5.1	33.2	61
H. Taking the initiative	1.5	10.9	38.7	48.9
I. Correct answers on the exam paper	1.5	2.9	24.1	71.5

Table m2-5: The ability of teachers to use technology (%)

Weak	Intermediate ability	Good	Advanced
2.2	15.4	55.9	26.5

Used for educational purposes? (%)

Yes	No
68.4	31.6

Table m2-6: Purposes for which teachers use technological tools (%)

	Yes	No
Searching for educational resources	88.9	11.1
Preparing lessons	80.4	19.6
Selecting exercises and activities	83	17
Consulting with other colleagues	58.7	41.3
Communicating with students	72.9	27.1

Table m2-7: Weekly time dedicated for the following activities (%)

	None	Less than one hour	From one to two hours	From 3 to 4 hours	More than 5 hours
A. Planning and preparing lessons	5.1	25.4	42.7	18.1	8.7
B. Correcting students' homework	5.1	18.8	34.8	22.5	18.8
C. Attending administrative meetings	9.4	39.9	38.4	8.7	3.6
D. Holding meetings with the students' parents	18.7	53	20.8	6	1.5
E. Meeting students (in clubs or private tuitions)	41.9	32.4	16.2	6.6	2.9
F. Undertaking activities for professional development (attending lectures, reading specialised journals, etc.)	17.9	33.6	32.8	8.2	7.5
G. Participating in an educational production (authoring books, setting up projects, taking part in an assessment, etc.)	50.4	24.4	12.6	5.2	7.4

Table m2-8: Educational facilities available for teachers at home (%)

	Yes	No
A. Computer	95.6	4.4
B. Internet subscription	67.4	32.6
C. Encyclopaedia	46.2	53.8
D. Educational magazine subscription	12.2	87.8
E. Dictionary	81.5	18.5
F. Library	74.8	25.2

Table m2-9: Teachers' evaluation of their abilities to enable students to acquire the following skills (%)

	Limited ability	Intermediate ability	Great ability	Do not know
A. Varied information analysis	14.3	57.6	25.8	2.3
B. Critical thinking	15.2	59.8	22.7	2.3
C. Taking initiatives	19.7	50.8	28	1.5
D. Accomplishing research	21.3	46.6	27.5	4.6
E. Solving problems	19.1	44.2	34.4	2.3
F. Using their knowledge in different situations	15.9	47	34.8	2.3
G. Memorising rules and laws of scientific material	6.8	44.7	46.2	2.3
H. Working independently	16.9	42.3	38.5	2.3
I. Memorising lessons	4.5	44.7	49.3	1.5
J. Life-long education	26.7	38.8	26.6	7.9
K. Team work	15.3	44.3	38.9	1.5
L. Future planning	22.7	41.7	29.5	6.1

Table m2-10: Opinions of teachers of the importance of the following educational practices (%)

	Not necessary	Somewhat necessary	Necessary	Do not know
A.Training students to analyse varied information	2	23.7	73.3%	1
B.Training students on critical thinking	5	18.8	75.2	1
C. Encouraging students to work independently and take initiatives	2.9	26.5	69.6	1
D. Helping students conduct research	3	33.6	63.4	0
E. Training students on problem solving	1	15.7	83.3	0
F. Helping students memorise rules and laws of scientific material	4.9	39.2	54.9	1
G. Motivating students to interact with the teacher	1	7.8	91.2	0
H. Following students step by step in all their assigned activities	17	53	30	0
J. Training students on self-evaluation practices	1	30.4	68.6	0
K. Training students on team work	1	21.8	77.2	0
L. Teaching students social principles and values	5.9	23.5	70.6	0
M. Requiring students to memorise lessons	29.4	49	20.6	1

Table m2-11: Teachers' opinions on the support available to them (%)

	Always	Sometimes	Rarely	Never
A. The school has a system for regular evaluation of teachers by students.	24.1	34.6	21.1	20.2
B. The school has a system for regular evaluation of teachers by management.	62.9	25.8	8.3	3
C. The school helps teachers develop their abilities and skills by providing them with regular training courses.	42.5	35.8	14.2	7.5
D. Teacher meetings are held at school for consultation and coordination of educational activities.	49.3	33.3	10.6	6.8

Table m2-12: Teachers' views on enabling environments (%)

	Completely agree	Somewhat agree	Disagree	Completely disagree
A. The educational system offers teachers facilities to resume their education during service.	20.7	33.1	37.7	8.5
B. Training centres for teachers exist near the school and I can join them when necessary.	13	18.5	39.8	28.7
C. The state offers incentives to highly efficient teachers.	13.6	31.2	28.8	26.4
D. The state provides several training opportunities during service to improve the level of education.	15.7	54.4	20.5	9.4
E. The state provides novice teachers with training courses.	40.9	48.8	6.4	3.9
F. The selection of candidates to the teaching profession is governed by strict criteria.	8.7	25.2	32.3	33.8
G. There is a gap between the training of teachers and the true requirements of the teaching profession.	31.2	46.9	16.4	5.5
H. The state offers teachers' salaries which guarantee them a good living standard.	5.5	15.6	22.6	56.3
I. There are laws and institutions that protect the rights of teachers.	6.5	11.4	20.3	61.8
J. The state provides teachers with in-service training upon request.	5.7	50	27.9	16.4

Table m2-13: Teachers' feeling of the ability to express opinions (%)

Yes	No
63.7	36.3

Table m2-14: Teachers' relationship to the teaching profession and its requirements, and to educational parties (%)

	Completely apply	Somewhat apply	Do not apply	Do not apply at all
A. I will leave teaching if I find a job with the same salary and conditions.	44.4	18	26.3	11.3
B. I will leave teaching if I find a job that generates a higher income.	50.8	21.2	18.9	9.1
C. The teaching profession salary does not make me feel self-sufficient.	60	27.4	11.1	1.5
D. The teaching profession makes me feel I have a mission to fulfil.	70.1	20.9	9	0
E. A job in education makes me feel psychologically comfortable.	28.4	34.3	20.9	16.4

Table m2-15: Teachers' views on students and school (%)

	Completely agree	Somewhat agree	Disagree	Completely disagree
A. The society no longer shows great respect to teachers.	69.2	26.2	2.3%	2.3%
B. Students generally show less respect to their teachers than in the past.	73.6	21.1	4.5	0.8
C .Student interest in study is decreasing day after day.	56.8	34.1	9.1	0
D.The current generation of students has a strong personality.	28.6	45.1	17.3	9
E. The preparation of the current generation of students is better than the preparation of previous generations.	9	27.1	38.3	25.6
F. The material values of most students surpass their knowledge values.	52.6	39.1	6.8	1.5
G. The school has a minor role in providing students with information and knowledge.	15.7	50.4	24.1	9.8
H. The teaching methods adopted by schools do not encourage students to seek knowledge.	21.4	46.6	26	6

Table m2-16: Teachers' views on the importance of values

Values	Cognitive values	Conative values	Social values	Universal values
Arithmetic mean	3.20	3.24	3.22	3.21
Standard deviation	0.74	0.70	0.77	0.78
Minimum	1	1	1	1
Maximum	4	4	4	4

Table m2-17: Teachers' views on students' possession of values

Values	Cognitive values	Conative values	Social values	Universal values
Arithmetic mean	2.11	2.42	2.30	2.43
Standard deviation	0.60	0.65	0.71	0.71
Minimum	1	1	1	1
Maximum	4	4	4	4

Table m2-18: Teachers' relationship to the teaching profession and its requirements, and to educational parties (%)

	Completely apply	Somewhat apply	Do not apply	Do not apply at all
A. The relationship between myself and students is based on mutual respect.	75.4	22.4	2.2	0
B. The relationship between myself and my colleagues is based on mutual respect.	91.9	7.4	0.7	0
C. The relationship between myself and students' parents is based on mutual respect.	82.8	14.9	1.4	0.7
D. The relationship between myself and the administrative department is based on mutual respect.	84.3	12.7	3	0
E. I meet parents periodically to exchange opinions regarding student issues.	19.4	50.8	23.1	6.7

Table m2-19: Educational facilities and equipment available to teachers in the school (%)

	In good condition	In bad condition	Not available
A. Science labs	82.4	14.5	3.1
B. Language labs	28.2	6.5	65.3
C. School library	84.8	9.1	6.1
D. Computer for every teacher	20	10	70
E. Educational software programmes	35.5	18.5	46
F. Internet connection	72.9	20.9	6.2
G. Subscription to useful websites	32.6	11.6	55.8
H. Printers and copiers	70.4	25.9	3.7
I. Tools for teaching respective specialty	55.3	21.2	23.5

Table m2-20: Teachers' opinions on the support available to them (%)

	Always	Sometimes	Rarely	Never
A. The school helps students with learning difficulties.	36.8	42.1	11.3	9.8
B.The school provides incentives to distinguished students.	38.8	35.1	20.9	5.2
C.The school has a system for substituting for absent teachers.	51.5	20.5	11.4	16.6
D. The school has specialists who help teachers deal with the material, psychological or social difficulties faced by students.	32.1	29.1	15.7	23.1

Table m2-21: Teachers' feeling of freedom of choice (%)

	Absolute freedom	Much freedom	Limited freedom	No freedom
A. Personal options	33.8	36.1	25.6	4.5
B. Scientific options	28.8	39.4	27.3	4.5
C. Intellectual options	29.5	33.3	31.8	5.4
D. Professional options	15.2	35.6	40.9	8.3

Table m2-22: Students' perceptions of legal and social enabling environments (%)

	Do not know	Completely disagree	Disagree	Somewhat agree	Completely agree
A. Strict laws exist in schools that restore rights to their owners.	2	2.5	9.2	36.5	49.8
B. Strict laws exist in society as a whole that restore rights to their owners.	2.4	2.1	8.7	41.4	45.4
C. The student thinks carefully before violating the code of ethics due to the school's laws.	4.1	3.8	14.1	39.4	38.6
D. The person thinks carefully before violating the code of ethics due to society's laws.	4.1	3.7	13.6	38.9	39.7
E. The law is applicable to all people at school, regardless of their capacity or position.	5	6.6	14.2	35.8	38.4
F. the Law is applicable to all people in society, regardless of their capacity or position.	5.4	7	14.5	34.2	38.9
G.Those who have money have better opportunities for education.	4.6	9.2	16.8	31.1	38.3
H. Jobs are occupied according to candidates' efficiency and no other considerations (intermediation for example).	6.5	9.2	13.2	36	35.1
I. Job promotion does not depend on objectivity but personal views.	10.4	3.3	13.2	37	36.1
J.Certification, employment, promotion and other privileges should be based on objective considerations and not intermediation and favouritism.	10.3	4	9.7	38.8	37.2

Table m2-23: Students' views on government-run media (%)

	Do not know	Completely disagree	Disagree	Somewhat agree	Completely agree
A. Audio-visual media convey news honestly.	3.2	2.7	6.9	36.5	50.7
B.Audio-visual media convey different views of society.	4.3	1.9	5.3	41.9	46.6

Table m2-24: Students' views on non-government-run media (%)

	Do not know	Completely disagree	Disagree	Somewhat agree	Completely agree
A. Audio-visual media convey news honestly.	6.8	4.4	11.2	38.8	38.8
B. Audio-visual media convey different views of society.	8	3.6	10.3	40.1	38

Table m2-25: Impact of Enabling environments on students' skills

	The family's method of upbringing	Educational welfare at home	Material welfare within family	Family's interest in student's study	Educational welfare at school	Explanation ability of the independent changes* (%)
Cognitive skills	0.177**	0.216	-0.178	0.080		8.7
Conative skills	0.144	0.064			0.090	4.1
Social skills	0.131	0.076				2.6

*Expresses the ability of the model to explain the change in the dependent variable

**The numbers in the table express the standardised regression coefficients.

Table m2-26: Impact of enabling environments on students' values

	The family's method of upbringing	Educational welfare at home	Family's material welfare	Educational welfare at school	Explanation ability of the independent changes (%)*
Cognitive values	**0.264	0.74		0.064	9.5
Social values	0.199				3.9
Conative values	0.246				6.0
Universal values	0.263	0.109	-0.160		8.3

*Expresses the ability of the model to explain the change in the dependent variable

**The numbers in the table express the standardised regression coefficients.

UAE
CASE STUDY