Arab Knowledge Report 2010/2011
Preparing Future Generations for the Knowledge Society
This Report has been produced through joint sponsorship and support of the Mohammed bin Rashid Al Maktoum Foundation (MBRF) and The United Nations Development Programme / Regional Bureau for Arab States (UNDP/RBAS)

Cover is printed on 350 GSM paper that is Chlorine – Free and meets the Sustainable Forest Initiative guidelines.
Text pages are printed on 80 GSM uncoated white opaque, wood free Paper. Both cover and text papers are printed with vegetable-based inks and produced by means of environmentally–compatible technology.

Cover Design: Pro Creative Concepts Advertising Agency-Cairo, Egypt
Printed at: Al Ghurair Printing & Publishing, L.L.C., Dubai, UAE

Printed in Dubai - United Arab Emirates

The analysis and policy recommendations of this Report do not necessarily reflect the views of the Mohammed bin Rashid Al Maktoum Foundation or the United Nations Development Programme, its Executive Board Members or UN Member States. The Report is the work of an independent team of authors jointly sponsored by the Regional Bureau for Arab States, UNDP, and the Mohammed bin Rashid Al Maktoum Foundation.

This work was originally published in Arabic. In case of discrepancy, the original language shall take precedence.
Foreword by the Chairman of the Board, Mohammed bin Rashid Al Maktoum Foundation

“Undoubtedly, the Arab reality is thorny and problematic; this is our reality, and we know it well in detail. We have no way out but to work through this reality, with awareness and determination to overcome obstacles, and with recognition that human’s worthiness is not measured by the success to adapt with reality, whatever it may be, neither by the skills in managing the statuesque, but rather by the ability to develop this reality and change it for the better through serious, persistent, and well thought hard work that is driven by a spirit of optimism, selflessness, and devotion. By this, change will happen and development will be achieved”.

This is one of the fundamental basis in the vision of His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, for achieving sustainable and fruitful Arab development through diagnosis of the status of knowledge in the Arab world, developing its infrastructure and improving its quality, in order to produce a reliable high-quality cognitive outputs that correspond with the requirements of the labour market.

The annual Arab Knowledge Report project; a joint initiative of the Mohammed bin Rashid Al Maktoum Foundation and the UNDP, provides an international Arab index for measuring the state of knowledge in the Arab countries. It is also considered a qualitative and accurate analysis and description, from several perspectives, that can assist officials in evaluating the performance and improving developmental plans for building knowledge societies that are capable of confronting challenges and of contributing to comprehensive and sustainable development.

The first Arab Knowledge Report for 2009 expressed the structural relationship between the triad of community, knowledge, and development for establishing and supporting knowledge economy bases, and for achieving the welfare and pride of the Arab citizen. This involved a detailed analysis and description of the knowledge scene in the Arab world, and the formulation of a road map for achieving a “knowledge renaissance” along with identification of the relevant priorities.

The second Arab Knowledge Report sheds light on one of the most important recommendations of the previous Report by addressing the issue of preparing future generations for the knowledge society which is considered the cornerstone for building a sustainable human development. Relying on updated field surveys undertaken in various Arab countries, the Report provides practical solutions that can guide Arab countries in bridging the “cognitive gap” that was highlighted in the first report.

Using a detailed methodology, the report also reviews many pedagogic and educational theories that are related to preparing future generations for the knowledge society, as well as the associated problematic issues including those related to the political, economic, and social conditions and the impact of these challenges on building the desired knowledge society. Going beyond
theories and studies concerned with building knowledge societies, the scope of this Report extends to the investigation and collection of data and information from their original resources by going to the Arab streets to gather facts and conduct comprehensive field surveys using real and representative samples of the young Arabs, from north to south and from east to west. This Report, which is optimistic in nature, provides practical solutions derived from the Arab reality, that are based on theories and methodologies of sustainable human development, providing a guiding reference for the Arab decision-maker that can assist in building the knowledge society.

In this context, I would like to extend thanks and appreciation to the UNDP/Regional Office for the Arab States, especially the report team in Dubai, and to every person who contributed to the completion of the report, be they thinkers, authors, editors or technicians.

I am looking forward to continuing further fruitful cooperation between us in solidifying the pillars of the cognitive and intellectual structures in the region, and in consolidating the foundations of the aspired human development in the Arab world.

Sheikh Ahmed bin Mohammed bin Rashid Al Maktoum
Chairman of the Board
Mohammed bin Rashid Al Maktoum Foundation
The partnership between the Mohammed bin Rashid Al Maktoum Foundation and the Regional Bureau for Arab States in UNDP to support the Arab and international efforts in building the knowledge society and economy, brings to fruition the Arab Knowledge Report for 2010/2011 which deals with one of the most important issues in the preparation of the future generations for the knowledge society.

The second Arab Knowledge Report for 2010/2011: “Preparing Future Generations for the Knowledge Society” builds on the main findings of the first Arab Knowledge Report launched in 2009, which showcased the deficits and gaps in the Arab knowledge scene and proposed ways to address these gaps, including political will and mobilization of required capabilities and resources. It relied on one of the most important recommendations calling for building “the necessary capacity” of qualified human capital to lead the processes of moving forward the knowledge society and economy.

Following these diagnoses, and based on the triad of “knowledge, development, and freedom” which was adopted in the previous Report, “the Arab Knowledge Report 2010/2011: Preparing Future Generations for the Knowledge Society” moves to the stage of “action”. This puts us at the core of building the knowledge society through preparing of the Arab society to actively participate in building the aspired knowledge society and to benefit from its fruits; and then utilize the gains in serving the objectives of sustainable human development.

According to the Report’s authors, the preparation of the future generations for the knowledge society requires providing them with a comprehensive set of skills that are consistent with the requirements of the future era including cognitive, compassionate and social skills. The Report stresses that skills alone are not enough unless they are accompanied by a set of values that guide the youth in their work for the good of humanity and society. The vision of the Report emphasizes the importance of providing supportive and motivating enabling environments, including the provision and protection of freedoms in their broader sense, in order to nurture and maintain the value system, and embrace and develop the skills of the youth in order to optimize their investment in the processes of building the knowledge society.

The Report is characterized by its inclusion of field studies on the status of preparing future generations in four selected Arab countries; the United Arab Emirates, Jordan, Morocco, and Yemen, as well as addressing issues of preparing the future generations for the knowledge society in the Arab region as a whole. The first part of the Report highlights the most important concepts and practices in the preparation of the future generations for the knowledge society in the Arab region, including an in-depth investigation on the status of education systems as being among the most significant approaches to the preparation processes along with the overall family and societal conditions.

The Report also provides an objective analysis of the status of enabling environments for the future generation, stressing the urgent need for effective intervention for the establishment of proper enabling environments stimulating the youth and their preparation for the knowledge society.

After a consolidated presentation of
the outcomes of the empirical studies that were conducted as case studies in the four selected Arab countries, the first part of the Report concludes by presenting a proposed model for the future practices towards the preparation of the future generations. The second part of the Report contains a comprehensive in-depth assessment of the status of the preparation of the future generations in each case study country. The case studies are based on: the available research and information; outcomes of the surveys and field activities that were conducted by the Report team including the students’ and teachers’ questionnaires; workshops held with the participation of experts and stakeholders in each of these countries; and results of tests and innovative tools specifically designed to measure the skills and orientations of students which were applied for the first time on pioneering bases in the Arab region.

The field results on the conditions of the future generations and their readiness to access the knowledge society showed many gaps that must be dealt with if we really want to move forward towards building the knowledge society. The challenge is big and we have to face it. We hope that the empirical results of this Report will help the decision makers and stakeholders in the four case study countries, and in the Arab region in general, in identifying and adopting the required policies and solutions. We hope that this Report, like its predecessor, will stimulate constructive discussions on these issues. Again, we do not claim ownership or monopoly of the truth, but we aspire to stimulate an Arab dialogue about the most efficient and effective way to build the knowledge society as a first step towards achieving the aspired Arab renaissance.

A selection of Arab intellectuals and experts in related fields participated in the preparation of this Report to be a platform for views and aspirations and to provide theoretical and practical bases for the establishment of the desired knowledge society. For this outstanding effort, I would like to extend sincere thanks to all those who participated in the completion of this work, including the teams of authors, writers, coordinators, editors, and the work teams in both the UNDP and Mohammed bin Rashid Al Maktoum Foundation. I would like also to thank all those who contributed and participated in building the tools of this Report, including the participants in the workshops held in the context of preparing the Report with a commendable participation by specialists and interested parties in the countries of the four case studies, as well as students and teachers who participated in the field study.

In conclusion, I have the honor to extend my deepest gratitude and appreciation to His Highness Sheikh Mohammed bin Rashid Al Maktoum for his support to the knowledge initiatives in the Arab world, which would not have continued without His Highness’s ongoing sponsorship and patronage. We, at UNDP, are proud of the partnership with Mohammed bin Rashid Al Maktoum Foundation, and we are keen to maintain it in the best benefit of the knowledge society in the region and in enhancing the prospects for sustainable human development in Arab countries and in the world at large.

Amat Al Alim Alsoswa
Assistant Secretary-General, Assistant Administrator and Director of the Regional Bureau for Arab States
United Nations Development Programme (UNDP)
Report Team

Readers Group

Core Team
Amna Khalifa Al Ali (UAE case study), Ahmad Ouzzi (Morocco case study), Tayseer Al No’ami (Jordan case study)*, Hassan el Bilawiy (General report), Sabria Al-Thawr (Yemen case study), Fawaz Jaradat (Jordan case study), Najoua Fezza Ghriss (General report).

Report Director/ Coordinator
Ghaith Fariz (UNDP).

Authors of Background Papers

United Nations Development Programme (UNDP)
Amat Al Alim Alsoswa (Assistant Secretary-General, Assistant Administrator and Director of the Regional Bureau for Arab States, RBAS), Adel Abdellatif (Chief, Regional Programmes Division, RBAS), Ghaith Fariz (Report Director/Coordinator), Tamara Maaita, Dima Al–Khatib, Deena Abul Fottouh, Siff Pedersen, Manal Habash, Mary Jreidini, Melissa Esteva, Hany Torky.

Mohammed bin Rashid Al Maktoum Foundation (MBRF)
Adel Rashed Al Shared (Vice Chairman and Managing Director), Sultan Ali Lootah (Acting Chief Executive Officer), Salim Ali Al-Owais, Ibrahim Mohammad Ibrahim, Ali Saif Al Shaaali, Ahmed Al Shamsi, Rasha Al Dam, Fatima Shuwaihi, Khaled Kalaji.

Questionnaire design/ Tools and Statistical Analysis
Najoua Fezza Ghriss (questionnaire/tools design and analysis review). Hany Torky (statistical analysis). Ajman University of Science and Technology (data entry).

Implementation of field survey:
- Jordan: (Jordanian development institution initiatives).
- UAE: (Higher Technical Colleges).
- Morocco: Serec Institution.
- Yemen: (The Centre for the development of young leaderships).

Translation
Euro Script, Nada Abdelkhalek

Editors
Arabic: Fayiz Suyyagh
English: Euro Script, Christina Curran

Cover Design
Pro Creative Concepts, Cairo, Egypt

Research Assistants for the Core Team
Ali Ibrahim, Wesam Abdo

*Dr. Tayseer Al No’ami was the author of Jordan’s case study until 9/2/2011 when he was appointed as the Minister of Education in Jordan. Dr. Fawaz Jaradat completed Jordan case study after that date.
ARAB KNOWLEDGE REPORT 2010/2011
Part I: The General Report

FUTURE GENERATIONS AND
THE ARAB KNOWLEDGE SOCIETY:
ANALYTICAL VIEW AND CASE STUDIES SUMMARY
CONTENTS

PREAMBLE

Introduction
Methodology, concepts and structure of the report
Generations preparation and the knowledge - freedom - development triad
Vision: Building generations and the triad of skills, values and enabling
Triad of skills, values and enabling
   Skills and competencies
   Values system
   Enabling environments
Cognitive, conative and social values
General methodology of the report
Structure of the report

CHAPTER 1:
THE KNOWLEDGE SOCIETY: CONCEPTS AND PROBLEMATIC

Introduction
The knowledge society: The concept and its relation to
the preparation of the future generations
Knowledge and technology and communication revolution
Problematic of accessing to the knowledge society
   The problematic of cultural development in the Arab world
   The problematic of the inherent contradiction in the knowledge society and knowledge economy
   Burning stages problematic
   The change in education systems problematic

CHAPTER 2:
EDUCATION AND PREPARATION OF THE FUTURE GENERATIONS FOR THE KNOWLEDGE SOCIETY

Quantitative analysis of the Arab education system
Illiteracy among the Arab youth
Care and education in early childhood
Status of education in the primary stages
Secondary education for the Arab youth
Secondary technical education
Quality of Arab education
Acquisition indicators in the Arab education systems
Teachers
Cognitive and social structures of education systems in Arab countries
Infrastructure and school equipment
The curriculum in the traditional context of the Arab education
   Spending on education
   The legal structure of education
Policies of educational reform in Arab countries
Towards a new education for the Arab region
Knowledge and skills necessary for the knowledge society
   The quaternary of education development
      Updating the knowledge structure
      Organisational structure
      Technological structure
      Global Context

CHAPTER 3:
SOCIAL UPBRINGING AND PREPARATION FOR THE KNOWLEDGE SOCIETY

Cognitive upbringing triangle
   Family and cognitive upbringing for the future Arab generations
   The elite segment
   The privileged segment
   Sub-middle segment and the pursuit of social ascension
   The marginalised or shadow youth

The media and cognitive upbringing in the Arab region

Societal culture and knowledge society
   Religion
   Arabic language and reaching the knowledge society
   Citizenship and identity, and the requirements of youth’s integration in the knowledge society

CHAPTER 4:
ENABLING ENVIRONMENTS FOR PREPARING FUTURE GENERATIONS IN THE KNOWLEDGE SOCIETY

Governance and youth preparation
Governance and civil society organisations
Fundamental freedoms and political conditions
Women’s enabling

Economic and social environments
   Economic reform policies and their impact
   Inequality in income distribution
   Poverty and hunger
   Unemployment
   The challenges of population pressures and youthfulness
   Health security challenges
   Prosperity Index

Arab countries in difficult circumstances

Knowledge enabling environments (Knowledge Economy Index)

CHAPTER 5:
FIELD RESEARCH ON THE READINESS OF THE YOUNG TO ACCESS THE KNOWLEDGE SOCIETY: PROCEDURES AND FINDINGS

Introduction
Section I: Methodologies
Research tools
Test of student skills
   The basic principles of the test design process
Methodology adopted in the formulation of test items

Student values scale

Questionnaire on student perceptions of enabling environments

Questionnaire on teachers’ perceptions on enabling environments

Basic principles for the selection of items

Aspects measured in the teacher’s questionnaire

Research samples

Student sample

Teacher sample

Limits of the study

Section II: Display of research results

Study of students’ skills

Cognitive skills

Collective cognitive skills

Detailed cognitive skills

Analysis of differences between the average performances in cognitive skills

Readiness of students in terms of cognitive skills

Conative skills

Collective conative skills

Detailed conative skills

Analysis of differences between average performance scores in conative skills

The readiness of students in terms of conative skills

Social skills

Collective social skills

Detailed social skills

Analysis of differences between average performance scores in social skills

The readiness of students in terms of social skills to access the knowledge society

Examining students’ values

Collective values

Detailed values

Differential analysis of the average scores for values

The readiness of students in terms of values

Teachers’ opinions on values

Studying enabling environments

Enabling environments from students’ perspective

Teachers’ perspectives of enabling environments

Analysis of factors affecting students’ performance in skills and values

Analysis of results in light of the enabling factors

Some conclusions and general recommendations

CHAPTER 6:
THE SYSTEM OF ACTION FOR PREPARING THE YOUNG TO ACCESS THE KNOWLEDGE SOCIETY

Quaternary of action

The willingness to act

The ability to act

Historical stage factor

Country situational variations factor

Challenges facing the Arab region
Table 4-3: Prosperity index for Arab countries
Table 4-4: Access to information and communications technology
Table 5-1: Cognitive skills
Table 5-2: Conative skills
Table 5-3: Social skills
Table 5-4: Values distribution
Table 5-5: Examples of major focus for cognitive enabling
Table 5-6: Examples of major focus for conative enabling
Table 5-7: Examples for societal enabling
Table 5-8: Distribution of respondents by country and gender variables
Table 5-9: Descriptive measures for collective cognitive skills
Table 5-10: Descriptive measures for searching and processing information skill
Table 5-11: Descriptive measures for written communication skill
Table 5-12: Descriptive measures for problem solving skill
Table 5-13: Descriptive measures for the skill of using technology
Table 5-14: Levels of readiness for the information processing skill (%)
Table 5-15: Levels of readiness for the skill of using technology (%)
Table 5-16: Levels for readiness for the written communication skill (%)
Table 5-17: Levels for readiness for the problem solving skill (%)
Table 5-18: Descriptive measures for conative skill
Table 5-19: Descriptive measures for the skill of self-knowledge and self-esteem
Table 5-20: Descriptive measures for the skill of promoting learning motivation
Table 5-21: Descriptive measures for the skill of planning for the future (%)
Table 5-22: Levels of readiness for the skill of self-knowledge and self-esteem (%)
Table 5-23: Levels of readiness for the skill of promoting learning motivation (%)
Table 5-24: Levels of readiness for the skill of planning for the future (%)
Table 5-25: Descriptive measures for collective social skills
Table 5-26: Descriptive measures for the skill of direct communication with others (Total score ranging from 0 to 25)
Table 5-27: Descriptive measures for the teamwork skill
Table 5-28: Descriptive measures for the skill of participating in public life
Table 5-29: Levels for readiness for the skill of direct communication with others (%)
Table 5-30: Levels for readiness for the skill of teamwork (%)
Table 5-31: Levels for readiness for the skill of participating in public life (%)
Table 5-32: Descriptive measures for cognitive values
Table 5-33: Descriptive measures for collective values
Table 5-34: Descriptive measures for conative values
Table 5-35: Descriptive measures for collective values
Table 5-36: Descriptive measures for social values
Table 5-37: Levels of readiness in cognitive values
Table 5-38: Levels of readiness in cognitive values
Table 5-39: Levels of readiness in social values
Table 5-40: Levels of readiness in universal values
Table 5-41: Comparison between values in terms of their importance from the viewpoint of teachers
Table 5-42: Comparison between students’ possession of values from teachers’ perspective
Table 5-43: Students’ opinions on the school and their relationship with its components
Table 5-44: Students’ opinions on health enabling environment
Table 5-45: Teachers’ opinions on the teaching profession and their relation to it
Table 5-46: Teachers’ opinions on preparation for the teaching profession
Table 5-47: Teachers’ opinions on the equipment available at schools and its condition
Table 5-48: Teachers’ opinions on available support
Table 5-49: Teachers’ opinions on support provided to students
Table 5-50: Teachers’ opinion on the importance of education practices
Table 5-51: Types of activities practiced by teachers and the time specified for each
Table 5-52: Teachers’ assessment of their abilities to enable students to acquire various necessary skills
Table 5-53: Purposes of teachers’ use of technology
Table 5-54: Comparison of students’ performance averages in cognitive skills by gender
Table 5-55: Comparison of students’ performance averages in conative skills by gender
Table 5-56: Comparison of students’ performance averages in social skills by gender
Table 5-57: Comparison of students’ performance averages in values by gender

LIST OF FIGURES:
Figure 1-1: Triad of skills, values and enabling
Figure 2-1: Illiteracy rates among youth 2000-2007
Figure 2-2: Gross enrolment rates in pre-primary education
Figure 2-3: Mastery of scientific cultural in the 15-year-old category in some Arab countries according to the international comparison
Figure 2-4: Ability to scientifically explain the phenomena in relation to the 15-year-old category in selected Arab countries
Figure 2-5: The quaternary of education development
Figure 4-1: Governance indicators in the Arab states
Figure 4-2: Corruption perceptions index
Figure 4-3: Youth unemployment rate and percentage of labour force
Figure 4-4: World Bank KEI comparing most recent scores with the year 2000
Figure 5-1: General environment for students
Figure 5-2: Levels of collective cognitive skills
Figure 5-3: Views of participants in workshops on the status of skills in the countries participating in research
Figure 5-4: Comparison of cognitive skills in the participating countries
Figure 5-5: Levels of cognitive readiness in the participating countries (%)
Figure 5-6: Levels of collective conative skills
Figure 5-7: Results of conative skills in the participating countries
Figure 5-8: Levels of conative readiness in the participating countries (%)
Figure 5-9: Levels of collective social skills
Figure 5-10: Results of skills in the participating countries
Figure 5-11: Levels of social readiness in the countries participating in the research
Figure 5-12: Levels of collective values
Figure 5-13: Views of workshop participants on the status of values in the countries participating in the research
Figure 5-14: Results of values in the participating countries
Figure 5-15: Levels of values readiness in participating countries
Figure 5-16: Workshop participants’ opinions on environments status in the case study countries
Figure 6-1: Quaternary of action for the preparation of future generations for the knowledge society
Figure 6-2: Moving towards preparing the young for the knowledge
Figure 6-3: IT, development drive (Malaysia experience)