برنامج الأمم المتحدة الإنمائي
United Nations Development Programme

UNDP

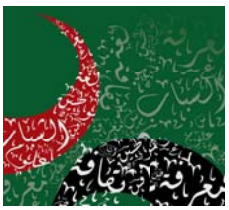
Empowered lives.
Resilient nations.

مؤسسة محمد بن راشد آل مكتوم
MOHAMMED BIN RASHID
AL MAKTOUM FOUNDATION

Arab Knowledge Report 2014

Youth and Localisation of Knowledge

United Arab Emirates



Arab Knowledge Report 2014
Youth and Localisation of Knowledge
United Arab Emirates

برنامج الأمم المتحدة الإنمائي
United Nations Development Programme

Empowered lives.
Resilient nations.

مؤسسة محمد بن راشد آل مكتوم
MOHAMMED BIN RASHID
AL MAKTOUM FOUNDATION

برنامج الأمم المتحدة الإنمائي
United Nations Development Programme
Empowered lives.
Resilient nations.

مؤسسة محمد بن راشد آل مكتوم
MOHAMMED BIN RASHID
AL MAKTOUM FOUNDATION

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)

Printed at Al Ghurair Printing and Publishing, Dubai – United Arab Emirates

on Chlorine – Free paper and using plant-based ink manufactured according to environmentally-friendly technologies.

Cover Design: Ahmad Mohammed Al Khalifi

Layout and Production: Al Ghurair Printing and Publishing – Dubai

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 at 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

Chairman of the Board
Mohammed bin Rashid Al Maktoum Foundation

Arab World's Transition to Knowledge Society

Knowledge is considered as one of the key pillars of a nation's development and advancement, and critical to the society's progress and prosperity. It is an incentive for intellectual and social mobilisation as well. The current era is called the "knowledge era". If every era had its own wealth, this era's wealth would be knowledge. The knowledge society is the society of the digital revolution, which has contributed to the change of relationships in the developed societies and perceptions about of the outside world. Information and knowledge have contributed to enhanced standards of living, defined artistic tastes and values, and helped speed up development and industrial progress. Knowledge accumulation also plays a major role in sustaining economic growth.

By projecting the mobilisation of global knowledge on Arab realities, we find a big gap in the level of education and curricula and the volume of investments in education and research. Distinctions are evident in terms of the number of patents, and the volume of community participation, as well as in youth enrolment in the transfer of knowledge and the shift from consumer societies to productive societies. Together, these issues form an integrated system for building knowledge-based societies.

From this perspective, we find it necessary to empower youth by reviewing the school and university curricula, promoting research through well-equipped schools and universities, and supporting researchers in specialised centres. We need a comprehensive vision based on a series of factors such as: freedom of thought, promotion of creativity in arts and sciences, equal opportunities for all citizens, transfer of knowledge through translations into Arabic, experiments, methodical research, exchange of expertise, continuing education, review of records and documentations, seminars, workshops and trainings, as well as other channels.

The Arab Knowledge Report comes as an indicator of the status of knowledge in the Arab countries. It presents a diagnosis of the situation to help those in charge to evaluate performance and implement development policies for building knowledge societies capable of facing challenges, and contributing to comprehensive and sustainable development. The third Report focuses on the importance of integrating youth in the transfer and localisation of knowledge processes in terms of its definition as well as economic and social benefits and priorities. The elements of localisation of knowledge are limited to two major integrated elements; the first being the production of knowledge and the second the employment of knowledge in human development in its cultural, scientific, social, political and environmental dimensions.

There is no doubt that the United Arab Emirates has made great progress in the development of dissemination and localization of knowledge through a number of initiatives, programs and projects. These together have helped the country overcome challenges and build knowledge based community and an environment that will ensure the sustainability of development and prosperity.

In an attempt to study the opportunities, threats and strategies in the successful integration of the Emirati youth in the transfer and localisation of knowledge on the national level, this UAE version of the Knowledge Report considers the main elements that would enhance the effectiveness of the youth and their participation in employing knowledge in sustainable human development.

We present before you the "Third Arab Knowledge Report: Youth and the Localisation of Knowledge" that includes a special report of the status of knowledge in UAE. We hope that both the reports will present a clear and comprehensive picture of our local and regional knowledge status, highlight the strengths and the ways to exploit them, and identify the areas that need further development. We believe that the reports will act as a road map for decision makers, providing them an overview of the means and methods in the transfer and localisation of knowledge in our Arab world.

Sheikh Ahmed bin Mohammed bin Rashid Al Maktoum
Chairman of the Board
Mohammed bin Rashid Al Maktoum Foundation

Preamble

Regional Director
Regional Bureau for Arab States,
United Nations Development Programme

The publication of this special report on youth and the localisation of knowledge in the UAE comes within the strategic partnership and the shared vision that brings together the Mohammed bin Rashid Al Maktoum Foundation and the Regional Bureau for Arab States at the UNDP in support of establishing knowledge societies for development purposes, and within the framework of the Third Arab Knowledge Report 2014.

This report presents a comprehensive view of the status of the Emirati youth, its capabilities and cognitive effectiveness, along with the available enabling environments. Similar to the previous knowledge reports, the current one is characterised by studies and surveys conducted with representative samples of Emirati youth in the final academic year in all public universities in the country. The report also highlights the opinions of young people and various stakeholders on the status of the youth today and the localisation of knowledge. These opinions were given during a series of field studies and workshops carried out while drafting the report. As such, the report has become, whether through its dialectics, outputs or recommendations, a unique platform for the UAE youth and stakeholders, where opinions are expressed and solutions proposed, and it explores several aspects that require attention, whether in the course of avoiding obstacles or capitalising on achievements.

The UAE has had remarkable achievement in development, and in record time. Since the beginning, building and enabling the UAE citizen have been among the adopted objectives, which have been accompanied by a political will, supported by an honest societal will and the awareness of the importance of catching up with developed countries. The persistent quest to establish the knowledge society and economy in the UAE represents one of the most important manifestations of these trends and policies. As confirmed in the report, the strategies and mechanisms proposed are not only applicable, but also enjoy the availability of most, if not all, conditions for their success. The UAE enjoys a developed information infrastructure and a strong economy, as well as a clear recognition of the importance of building the knowledge society and actively engaging the youth in this central development process.

I present my most sincere thanks and appreciation to everyone who participated in this great endeavour, including experts, researchers, as well as writers and editors, the UNDP and Mohammed bin Rashid Al Maktoum Foundation teams. My thanks also go to the UAE youth and everyone who contributed to the field research and workshops whose outputs formed the main material for this report.

At the end, I can only express my deepest respect, appreciation and thanks to H.H. Sheikh Mohammed bin Rashid Al Maktoum for his sponsorship and continuous support for the initiatives to establish the knowledge society, not only in the UAE, but also in the Arab region and the entire world. I reiterate the honour

to have this partnership at UNDP with the Mohammed bin Rashid Al Maktoum Foundation and our dedication to develop it further, to achieve our common vision of establishing knowledge societies and sustainable development for the people in the Arab region and beyond.

Sima Bahous
Assistant Secretary General
Regional Director - The Regional Bureau for Arab States
United Nations Development Programme

Report Team

Readers Group
Soliman Al-Jassim, Ali Said Al-Kaabi, Kaltham Al-Majid, Mona Juma Al-Bahr.

Core Team
Amna Khalifa Al-Ali (Main author), Ali Ibrahim (Researcher).
Members: Driss Bensaid, Hassan ElBilawi, Khaled Al-Wazani, Abdelwaheb Ben Hafaiedh, Najoua Fezzaa Ghriss.

Report Director/Coordinator
Ghaith Hamdi Fariz (UNDP)

Authors of Background Papers
Andelhamid Radwan, Abderrahim El Atri, Abderrahim Al-Maslouhi, Kamal Abdellatif, Kamal Najib, Hany Ibrahim Atta.

Questionnaire Design/Tools and Statistical Analysis
- Najoua Fezzaa Ghriss (Questionnaire Design and Analysis Review)
- Hany Torky (Statistical Analysis)
- Faculty of Commerce - Alexandria University (Data Entry)

Implementation of Field Surveys
Report team and the Mohammed bin Rashid Al Maktoum Foundation (MBRF) in collaboration with:
- United Arab Emirates University
- Higher Colleges of Technology
- Zayed University

Mohammed bin Rashid Al Maktoum Foundation (MBRF)

Jamal Bin Huwaireb (Managing Director), Faisal Bujesaim (Executive Director), Saif Al-Mansoori (Corporate Affairs Advisor – MD Office), Hussain Al Shamsi, Lina Al Anani, Wes Harry.

United Nations Development Programme (UNDP)
Sima Bahous (Assistant Secretary General, Regional Director - The Regional Bureau for Arab States), Adel Abdellatif (Chief, Regional Programmes Division, RBAS), Ghaith Hamdi Fariz (Report Director and Coordinator), Tala Khanji, Dima Al-Khatib, Sara Bittar, Stephanie Boustany, Saif Pederson, Tarek Khairallah, Mary Jraidini, Mariam Itani, Hany Torky, Yakup Beris.
Administrative operations: Regional Programme Support Unit

Editors
Arabic: Fayiz Suyyagh
English: Christina Curran

Translation
GMTranslations.me

Cover Design
Ahmad Mohammed Al Khalifi

CONTENTS

CHAPTER 1: Preamble

Introduction 3
Completing the Journey toward Establishing the Knowledge Society in the UAE 4
The Concepts of Localisation of Knowledge and Active Integration of the Youth 5
The Conceptual Model for the Youth and the Localisation of Knowledge 6
Knowledge Localisation as a Gateway for Sustainable Development 8
    The Organic Relationship between Development and Knowledge 8
The Active Participation of the Youth as a Prerequisite for the Localisation of Knowledge 9
Youth between Two Aspects: Biological and Social 10
General Methodology 11
    Analytical Studies 11
    Field Study 11
    Focus Groups with the Youth 11
Structure of the Report 12

CHAPTER 2: The Knowledge Status and Challenges of Localisation in the UAE

Introduction 17
The Situation of Knowledge in the UAE According to the Knowledge and the Knowledge Economy Indices 18
The Knowledge Status of the UAE According to the Human Development Index 19
Ranking on the Global Innovation Index (GII) 23
    First: The Innovation Input Sub-Index 25
    Second: The Innovation Output Sub-Index 25
The UAE Ranking on the Global Competitiveness Indices 25
The UAE Ranking on the Arab Competitiveness Indices 26
Ranking on the Happiness Index 29
Challenges of the Transfer and Localisation of Knowledge in the UAE 29
    The Educational Challenge 30
        -The Status and Challenges of University Education 31
    The Youth Motivation Challenge 32
    The Human Resources Challenge 33
    The Economic Challenge 35

CHAPTER 3: The Enabling Environments and the Transfer and Localisation of Knowledge in the UAE

Introduction 41
The Educational Environment 41
    Higher Education in the UAE 41
        -Study-abroad Scholarship Programmes 44
        -Foreign Universities in the UAE 45
    Smart/E-Learning Initiatives 46
Research and Development Environment 48
The Economic Environment 50

E-Commerce 52
The Social Environment 53
The Social Dimensions of Progress 53
The Challenges of Language and Citizenship 54
The Political Environment 55
The Demographic Environment 56
Media Environment: Media and Mainstream Values among Youth 58
Cultural Environment 59
Technological Environment 60
Supporting the Legislative and Regulatory Structure in Technology 60
Developing the Human and Institutional Capacities in the Field of Information Technology 61
E-Government 63
Youth Empowerment Initiatives 64
Conclusion 66

CHAPTER 4: Results of the Field Study

Introduction 71
Study and Field Surveys 71
Description of the Representative Sample 72
Results: The Knowledge Capital 73
Overall Result on Cognitive Skills 73
Detailed Results 74
-Problem-Solving Skills 74
-Written Communication Skill in Arabic 75
-Skill of Searching for and Processing Information 76
-Skill of Using Technology 76
-Skill of Using Foreign Language (English Language) 77
-Analysis of the Differences between the Cognitive Skills 77
Values 78
Youth Effectiveness 79
Citizenship and Belonging 80
Openness and Global Communication 81
Analysis of the Results According to Gender 82
Youth Opinions on the Transfer and Localisation of Knowledge and the Necessary Enabling Environments 82
Enabling Environments in the UAE 84
Outcome of Focus Group Sessions with the Youth 89
Support for the Concept of Openness and the Transfer and Localisation of Knowledge 89
The Importance of Youth Participation and Formation for Building the Knowledge Society: Between Ambition and Limitations 91
The Development of Skills: An Important Necessity for Knowledge 92
Criticism of the Successive Educational Plans 93
The Important Role of the Media 93
Activating the Role of the Private Sector 93
Outcomes of the UAE Workshop 93
Clear Perceptions on the Subject of the Transfer, Localisation and Employment of Knowledge 94
The Most Important Skills and Required Elements 95
Fear of the Potential Negative Consequences of Openness and the Transfer and Localisation of Knowledge 96
Fear of Cultural Consequences 97

Disagreement over the Nature of the Required Knowledge 98
Arabic Language: The Incubator of Culture and Knowledge 98
Reproaching the Educational Institutions 99
A Call for Better Organisation of Relevant Institutions 99
Creativity, Transfer of Knowledge and Labour Markets 100
Scientific Research and Entrepreneurship: Issues of Vision, Supporting Political Will and Hesitation in Practice 100
Youth Support Institutions 101
Enabling and Motivating Environments 101
Research Enabling Environment 102
The Weak Role of Civil Society 102
Investment in the Current Enabling Environment in the UAE 103
Conclusion 103

CHAPTER 5: Strategies for Motivating the Emirati Youth To Effectively Participate in the Transfer and Localisation of Knowledge

Introduction 111
Important Results of Field Investigations 112
Facing Challenges 113
Facing the Educational Challenge 113
-Orienting the Educational System towards the Knowledge Economy 114
Facing the Challenge of Research and Development 116
Facing the Human Resources Challenge 117
Facing the Challenge of Economic Structure 118
Facing the Challenge of Motivating the Youth to Engage in the Processes of Knowledge Transfer and Localisation 118
Moving towards the Effective Engagement of the Youth in the Processes of the Transfer and Localisation of Knowledge 120
In Conclusion 124

References and Background Papers: 129

Statistical Annex

Table A1: Population Distribution in the UAE According to Age Group (Mid-2010 Estimates) 137
Table A2: Distribution of the National Population per Emirate (Mid 2010 Estimates) 138
Table A3: Labour Market and Unemployment Indicators in the UAE and GCC Countries (2012) 138
Table A4: Proportional Distribution of Workers (≥15 years) According to Nationality, Gender and Sector 139
Table A5: Knowledge Economy Index (UAE and Comparison Countries) 140
Table A6: Primary Education Indicators for the UAE and the Arab Region (2012) 141
Table A7: Vocational Education Enrolment in the UAE, the Arab Region and the World (2012) 141
Table A8: Number of Students in Higher and University Education (private and Public) by Specialisation, Nationality and Gender (Academic Year 2012/2013) 142
Table A9: Number of University and Higher Education Graduates (Public and Private) According to Specialisation, Nationality and Sex (Academic Years 2010/2011 – 2011/2 012) 143

Table A10:	Number of Scholarship Students in Higher Education and University According to Specialisation, Degree and Gender (Academic Year 2012/2013)	144
Table A11:	Technology Indicators in the UAE and Selected Arab Countries	145
Table A12:	Networked Readiness Index for the UAE and Selected Arab Countries	145
Table A13:	ICT Development Index (IDI) (2011-2012)	146
Table A14:	Innovative Capacity and Localisation of Technology in the UAE and Selected Arab Countries (2012)	146
Table A15:	Global Innovation Index (GII) (2014)	147
Table A16:	GII Ranking (2013-2014)	148
Table A17:	Global Competitiveness Indicators	149
Table A18:	Arab World Competitiveness Indices for the UAE and Selected Arab Countries (2012)	150
Table A19:	Corruption Perceptions Index (CPI) for the UAE	151
Table A20:	Happiness Index for the Arab States and Comparison Countries (2010-2012)	151

List of Boxes

Box 1.1:	Development and the Shift towards the Knowledge Economy	8
Box 1.2:	Youth: The Most Important Segment in the Dissemination and Production of Knowledge	10
Box 1.3:	Youth and the Ability to Work	11
Box 2.1:	Knowledge Trends among the Youth in the UAE	34
Box 3.1:	Roger's Theory on Knowledge Transfer and Innovation	47
Box 3.2:	The National Research Foundation	49
Box 3.3:	The Importance of Scientific Research	50
Box 3.4:	The UAE Vision 2021	51
Box 3.5:	UAE: The E-Commerce Hub	53
Box 3.6:	The Community Development Authority: An Example on Social Work Institutions	55
Box 3.7:	Models of Leading Media Organisations in the UAE	59
Box 3.8:	Dubai Museum of Contemporary Art (DMOCA): A Valuable Cultural Landmark	59
Box 3.9:	The Strategy of the Ministry of Culture	60
Box 3.10:	ICT Fund	61
Box 3.11:	E-Government in the UAE	63
Box 3.12:	Development Initiatives for the ICT Sector	63
Box 3.13:	Leading Institutions in Youth Empowerment: The Khalifa Fund and The Mohammed bin Rashid Al Maktoum Foundation	64
Box 3.14:	Sectors and Institutions of Knowledge Transfer and Localisation in the UAE	65
Box 4.1:	Internet Usage among the Emirati Youth	81
Box 4.2:	Ministerial Proposals to Raise a Generation of Good Citizens Who Are Confident of Their Abilities and Able to Work in the World of the Future	94
Box 5.1:	Mohammed Bin Rashid Al Maktoum Foundation	117

List of Figures

Figure 1.1:	The Conceptual Model for the Localisation of Knowledge and the Youth Enabling System	7
Figure 2.1:	Knowledge Economy Index (KEI) for the Arab States (2000-2012)	19
Figure 2.2:	Education Index for the Arab States (2000-2012)	19
Figure 2.3:	ICT Index for the Arab States (2000-2012)	20
Figure 2.4:	Innovation System Index for the Arab States (2000-2012)	20

Figure 2.5: Economic Incentive and the Institutional Regime Index for the Arab States (2000-2012) 21
Figure 2.6: Framework of the Global Innovation Index 23
Figure 2.7: Global Innovation Index for the Arab Countries (2012-2014) 24
Figure 2.8: The Innovation Input Sub-Index (2014) 24
Figure 2.9: The Innovation Output Sub-Index (2014) 25
Figure 2.10: The General Structure of the Arab Competitiveness Index 27
Figure 2.11: Competitiveness Indices for the Arab Countries (2012) 28
Figure 4.1: Field Studies 71
Figure 4.2: Results for Students' Cognitive Skills 78
Figure 4.3: Comparison of Student Scores on Effectiveness 80
Figure 4.4: Student Access of Translated Books Related to Their Disciplines (%) 82
Figure 4.5: Research and Presentations in University (%) 82
Figure 4.6: Student Awareness of the Existence of Partnerships and Agreements between Their University and Other Institutions (%) 83
Figure 4.7: Student Awareness of the Existence of Youth Institutions Involved in the Transfer and Localisation of Knowledge (%) 83
Figure 5.1: Global Education Trends 115
Figure 5.2: Moving towards the Active Youth Integration in the Process of Knowledge Transfer and Localisation: UAE Specific Mechanisms and Challenges 123

List of Tables

Table 2.1: Knowledge Economy Indices in the UAE and in GCC Countries (2012) 18
Table 2.2: Ranking of Arab Countries on the 2014 Human Development Index 22
Table 2.3: The UAE Development Indices Compared to Selected Arab Countries 22
Table 2.4: PISA 2012 Results for the UAE and Selected Comparison Countries 30
Table 3.1: The Number of Students in Higher Education and University in the UAE for the Academic Year 2012/2013 41
Table 3.2: Enrolment in Higher Education and University by Subject and Gender for the Academic Year 2012/2013 43
Table 3.3: Distribution of Emirati Students, Holders of the Secondary School Diploma, across Educational Divisions for the Academic Year 2010/2011 43
Table 3.4: Distribution of Emirati Students with Study-abroad Scholarships during the Academic Year 2012/2013, by Educational Level and Gender 44
Table 3.5: Scientific Specialisations for Students on Study-abroad Scholarships during the Academic Year 2012/2013 44
Table 3.6: The Contribution of Oil and Non-Oil Sectors to the UAE GDP in Fixed Prices for the Years 2012 and 2013 (Billion AED) 51
Table 3.7: Population Growth of Citizens and Non-Citizens in the Period 1975-2010 56
Table 3.8: Age Distribution of the Emirati Citizen Population (Estimates of Mid 2010) 57
Table 3.9: Distribution of the UAE Population (2010) 57
Table 3.10: UAE Citizen Residents According to Age and Gender (2010 Estimates) 58
Table 3.11: ICT Development Index (IDI) in the UAE and Selected GCC Countries (2012) 62
Table 4.1: Composition of the Representative Sample by Gender 72
Table 4.2: Composition of the Representative Sample According to University, Branch and Gender 73
Table 4.3: Overall Result on the Cognitive Skills Combined 73
Table 4.4: Problem-Solving Skills 74
Table 4.5: Written Communication Skill in Arabic 75

Table 4.6:	Skills of Searching for and Processing Information	76
Table 4.7:	Skill of Using Technology	76
Table 4.8:	Skill of Using Foreign Language (English Language)	77
Table 4.9:	Values	79
Table 4.10:	Student Scores in Effectiveness	79
Table 4.11:	Citizenship and Belonging	80
Table 4.12:	Openness and Global Communication	81
Table 4.13:	Students' Opinions on the Effectiveness of Their University's Enabling Environment and Their Contribution to the Preparation of Youth for the Transfer and Localisation of Knowledge	84
Table 4.14:	Students' Levels of Confidence in the Capacity of the Following Institutions to Contribute towards Engaging the Youth in the Processes of the Transfer and Localisation of Knowledge	85
Table 4.15:	Students' Opinions on the Contribution of the Following Components	85
Table 4.16:	Students' Opinions on the Processes of Transfer and Localisation of Knowledge	86
Table 4.17:	Students' Opinions on Motivating and Impeding Factors in the Integration of the Youth in the Transfer and Localisation Processes	88
Table 4.18:	Students' Opinions on the Status of Freedoms and Rights	88