CHAPTER FOUR:

RESULTS OF THE FIELD STUDY

Introduction

In order to draw a more accurate understanding of the cognitive skills of the Emirati youth, extensive field studies were carried out by the Arab Knowledge Report team in 2013. The studies sought to examine the status of enabling environments, both at university and in general. It also examined the values held by the youth as well as other key elements of the active participation required in the processes of transfer and localisation of knowledge (see Chapter 2). In this context, this chapter will present first the results of the field surveys conducted on a selected sample of young Emiratis at the final stage of undergraduate study. It will then present the results of focus group sessions conducted on a selected sample of young Emiratis who have entered the labour market. Finally, the results of a brainstorming session that was held with experts and representatives of relevant stakeholders, including the government, academic and civic sectors will be presented. These combined results draw a more complete picture of the status of young Emiratis and their skills, as well as their ways of thinking and orientations. The results of the field study also offer an overview of the opinions of Emiratis on the topic, which shall help Emirati decision-makers and planners in finding the most appropriate approaches and the positive interactions to achieve a successful youth integration in the transfer and localisation of knowledge.

Study and Field Surveys

Previous Arab knowledge reports had defined the concept of the knowledge society, the current stage of human society, as one characterised by knowledge-intensive production, diffusion, and employment. It is a society where individuals are distinguished by their special cognitive, behavioural and value characteristics that interact in social, political and cultural environments to nurture and promote them and support creativity and innovation among individuals.[1]

In this context and in line with the adopted conceptual models, the field study aimed at exploring the most important aspects directly related to the stimulation and increased integration of the Emirati youth in the transfer and localisation of knowledge and in benefitting from the outcomes. These benefits can be attained by making use of knowledge for development purposes in the interests of the Emirati youth and the social and economic development in the UAE in general.

Getting to know the views, perceptions and expectations of the youth on this topic is essential to shed light on their beliefs the transfer and localisation of knowledge. Making the target group realise the importance of this subject is essentially the beginning and a foundation for active integration in these processes. Young people cannot be expected to interact with any process without believing in its importance, whether on a personal, or at a national, public level.

The field study attempted to explore the familiarity of students with the concepts of knowledge, its transfer and localisation. The survey also captured the opinions and perceptions of the Emirati youth regarding the most important incentives in the transfer and localisation of knowledge and associated challenges in the United Arab Emirates. Based on the conceptual model of this report that highlights the importance of providing the youth with the necessary skills to actively participate in the transfer and localisation of knowledge, the field survey also included specialised exercises and questions to assess the

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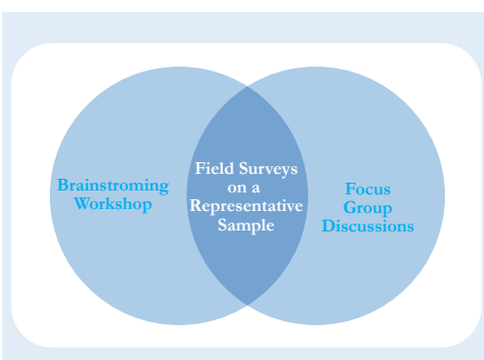
Figure 4.1

Field Studies



cognitive skills of the Emirati youth. These included problem-solving skills, information processing skills, skills of using technology, and written communication skills in both Arabic and a foreign language (English). Yet, possessing the necessary skills will not fulfill its role unless coupled with, and used in the context of, suitable societal values that are embodied clearly in societal practices. Thus, the field survey also aimed at exploring relevant values and beliefs among the Emirati youth, including views and practices related to citizenship, belonging and openness to the world, communication and social justice, as well as cultural, social and economic effectiveness. Together with skills, these constitute the required catalysts for the effective integration of the youth in the processes of the transfer and localisation of knowledge.

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To obtain this data, the study used a tool that was designed by a specialised team and consisted of two parts: the first was a set of various cognitive exercises which respondents had to complete in the suggested order, and in such a manner as to enable respondents to answer them all on a particular time. The second part presented participants with a set of questions on their views on a number of topics, notably in relation to enabling environments as well as matters relating to the higher education system and to the availability of the needed components for the transfer and localisation of knowledge in their community. Next to each exercise/question, there was an explanation on how to complete/answer it, since there were various types of exercises and questions in English and Arabic. They included multiple-choice, open-ended questions, classification and ranking, problem-solving, deductive questions and assessment of students' perspectives and visions. To ensure neutrality and complete freedom in order to obtain the most accurate and sincere answers, the ethical principles of the study were established. The team confirmed to the participants both verbally and in writing that their participation was voluntary and that it would not affect their scores or results in official exams, that their identity would remain anonymous, and that their data would be treated with confidentiality and would only be used for the purposes of scientific research.

Description of the Representative Sample

The representative sample consisted of young Emiratis in their senior year from all public universities in the UAE. Given that knowledge is not limited to applied sciences but also comprises humanities – social, economic and administrative – the sample included male and female students from four specialisations: engineering sciences (all engineering branches, IT), medical sciences (medicine, nursing and biology), administrative sciences (management and economics), and humanitarian sciences (education and social studies).

Table 4.1

Composition of the Representative Sample by Gender

	Frequency	Percentage (%)
Male Students	653	30.5
Female Students	1,489	69.5
Total	2,142	100

The sample included 2,142 students distributed in a way to best reflect enrolment patterns at these universities (Table 4.1). As demonstrated in the composition of the sample, the percentage of female students outweighs that of males at almost 70%, a pattern that is not surprising in the Emirati society where there is a relative reluctance among young males to enrol in university education. Based on several general observations, many male high-school graduates prefer early employment in the public sector, especially in military schools, the army and civil police, given the salaries and job security they offer, which are attractive to young Emiratis at this age. On the other hand, there is a remarkable inclination among females to enrol in higher education, reflected in the high female enrolment rates in the UAE as shown in Chapter 3.

Table 4.2

Composition of the Representative Sample According to University, Branch and Gender

University	Branch	Male Students	Female Students	Total
United Arab Emirates University	Al Ain	170	491	661
Zayed University	Abu Dhabi	28	166	194
	Dubai	9	190	199
Higher Colleges of Technology	Sharjah (2 branches)	38	152	190
	Dubai (2 branches)	164	177	341
	Abu Dhabi (2 branches)	163	87	250
	Ras Al Khaimah (2 branches)	28	45	73
	Fujairah (2 branches)	22	50	72
	Al Ain (2 branches)	29	71	100
	Al Ruwais (2 branches)	5	5	10
	Zayed City	-	8	8
	Khalifa City	-	44	44
	Total	656	1,486	2,142

The increase in the proportion of female enrolment in higher education is a notable trend that requires special attention. Whilst some interpret it as a form of self-fulfilment sought by young women in a conservative patriarchal society, others argue that it is more simply related to the fact that male Emirati youth are offered ample safe employment opportunities, which weakens their motivation to enrol at institutions of higher education. All of the above deserve a more thorough examination and consideration, especially when working towards active integration of young Emiratis, both males and females, in the transfer and localisation of knowledge.

The representative sample of male and female students was selected from the students studying at the three universities supported by the federal government, i.e. public universities. These are the United Arab Emirates University, the first university in the country, established in 1976 in Al Ain, which currently has 13,000 male and female students; Zayed University, established in 1998 with two branches, one in Abu Dhabi and another in Dubai; and the Higher Colleges of Technology, first established in 1988, which currently has 16 campuses across the country with almost 19,000 male and female students. Table 4.2 depicts the breakdown of the representative sample by university and branch.

The increase in the proportion of female enrolment in higher education is a notable trend that requires special attention

Results: The Knowledge Capital

Overall Result on Cognitive Skills

These skills include problem-solving, writing and communication in Arabic, information sourcing and processing, the use of technology and English language. The student's scores ranged between 39.51 and 87.80; meaning that the highest score was almost 12 points below the

Table 4.3

Overall Result on the Cognitive Skills Combined

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
66.08	7.62	39.51	87.80

Scores are on a scale of 0-100.

maximum possible score. The arithmetic average (mean), which indicates the average performance of all students participating in the questionnaire, was 66.08 points. Assuming that the minimum score indicating the possession of skills is 50 out of 100, we conclude that the performance of the participating students in the sample was generally good. The results in the upper and lower quartiles reinforced our conclusion as the percentage of individuals who scored at least 50/100 was 2.3%, while 12.4% of the students obtained scores of 75 points or higher. However, we notice that the proportion of students with "very high" cognitive skills was relatively small. This is a cause for concern, as these cognitive skills are necessary for a higher potential for innovation and creativity among the students. Meanwhile, the standard deviation shows a certain degree of homogeneity in the results, as the variation of the sample was not large.

The performance of the participating students in the sample was generally good

The good average scores obtained by the student sample on their cognitive skills reflect the quality and effectiveness of the enabling environments provided at these public universities. These enabling environments equip the students with such skills through plans, programmes and teaching methods that enhance cognitive skills.

These results acquire important dimensions once compared to those of the previous Arab Knowledge Report (2010/2011),[2] which included a field study of a sample of students at the end of secondary education/pre-university. This comparison shows significant progress in cognitive skills among the students at the end of their university studies. The performance of students in secondary education, as demonstrated by the results of the previous Arab Knowledge Report 2010/2011, pointed to a lack of readiness to engage in the knowledge society - at least in terms of the cognitive skills they possessed. The results pointed to a deficiency in the pre-university education system that was unable to create an environment promoting the acquisition of cognitive skills required to promote a knowledge-based culture among the students and heighten the value of knowledge. However, the student results at the end of university, as presented in this report, showed a significant positive difference in the acquisition of cognitive skills (the scores for knowledge skills in the secondary educational stage ranged between 3.61 and 72.45, with the highest score about 27 points below the maximum and with an average of 32.91. This is compared to a score of 12 below the maximum possible score for students at the end of university studies, with an average of 66.08).[3] It is to be noted that the tools used in both surveys varied to suit the academic level and age group of the participants for each of the two questionnaires (secondary vs. university). This marked disparity in cognitive skills for university students can be attributed to a number of factors, such as the fact that students who reach the final stage of undergraduate studies usually have better personal capabilities and greater motivation. The results may also show that UAE's public universities have educational environments that promote the acquisition of cognitive skills. Other reasons explaining the youth's acquisition of cognitive skills at this level could also include the nature of the university curriculum and courses, which are mainly built along the lines of the latest global courses. Meanwhile, in all three state universities, the scientific departments must seek guidance from foreign curricula that offer the latest topics and latest practices in each specialisation.

Detailed Results

Problem-Solving Skills

Table 4.4

Problem-Solving Skills

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
15.10	4.55	0.00	20.00

Scores are between 0 and 20.

The results showed that 65 students received a score of zero (3% of the total sample), while 591 students obtained a score of 20

(27.6% of the total sample). The arithmetic average (mean) of the students stood at 15.109, which is 5 points higher than the minimum required level (10 points over 20) for having problem-solving skills. Therefore, we concluded that the overall performance of the sample students in problem-solving skills was good. As indicated by the standard deviation, the relative variation in scores shows a difference in the performance of students in this skill.

The satisfying levels achieved by young Emiratis in one of the basic cognitive skills, i.e in problem-solving, constitute a positive and notable result. These levels may be traced back to the continuous and various courses offered during their university years and the accumulation of a set of cognitive skills. The students' ability to solve daily problems encountered can be traced back to several reasons. One of them is the fact that as university students, they are required to rely on themselves in various situations. University life offers students a variety of skills including that of problem-solving, be it through learning from teachers or from one another, while academic courses also play a role in developing their ability to use scientific methods and reasoning when solving problems.

Written Communication Skill in Arabic

Table 4.5

Written Communication Skill in Arabic

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
11.09	3.35	2.19	20.00

Scores are between 0 and 20.

The results of the analysis showed that the scores of the sampled students ranged from 2.19 to 20. Two students obtained the maximum score, representing 0.1% of the total sample. Meanwhile, the arithmetic average of 11.09/20 indicates that the general performance of students in this skill remained within the average.

Written communication is an important skill required for the transfer and localisation of knowledge. The results clearly indicated the medium level of this skill. This is due to several reasons. First, we must not overlook the level of these skills among students who have graduated high school. The results of the Arab Knowledge Report 2010/2011 indicated that written communication skills were very low among high school students, and its average was the lowest among the cognitive skills, standing at 5/25. This was attributed to a lack of attention in training students on different types of writing, a curriculum that leaves no space for emphasis on writing and an educational system based on memorising, which is adopted by the majority of teachers.

Secondly, despite a change in the academic environment at university and the importance given for student assessment through their own writings and projects, there is a general impression that writing is not given the required attention and follow-up it deserves for students who show a weakness. Students are often not given detailed feedback to help them improve. This may be due to the work-load carried by the teacher. The excessive attention to scores obtained by the students after correcting their work does not provide the required motivation to improve despite the existence of writing centres at the three universities to help students.

It is noted that although the performance of young people in the written communication skill was at a medium level and around the minimum required, only two students out of more than two thousand obtained the highest possible score in this skill. This is a cause for concern, since it reflects an unwillingness among the youth to write on topics outside the framework of their studies; it is established that free writing enhances written communication skills. Also to be noted is a general lack of interest in reading among university students. All of the above strongly calls for the need to work on developing the written and communication skills of young Emiratis, not only at the university level, but also more essentially during the earlier fundamental stages.

Written communication is an important skill required for the transfer and localisation of knowledge. The results clearly indicated the medium level of this skill

The skill of searching for information and processing it is among the core components that increase an individual's knowledge and is important for the transfer and localisation of knowledge and for the establishment of the knowledge society

At university, it is expected that all students are able to research and dig out information given the nature of university studies. So there is a need to strengthen this skill to ensure all university students acquire and practice it

Skill of Searching for and Processing Information

Table 4.6

Skill of Searching for and Processing Information

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
14.67	3.51	3.33	20.00

Scores are between 0 and 20.

The arithmetic average (mean) for this skill was 14.67 for the total number of senior year students participating in the questionnaire and majoring in science, medicine, engineering, management or humanities. If we consider that the minimum score required to indicate the possession of this skill is 10 out of 20, we can conclude that the overall performance of the student sample was good as it exceeded this threshold by 4.5 points, i.e. about 75% of the total score. Our conclusion is reinforced, as 72.7% of the participating students obtained scores higher than the minimum requirement (scoring higher than 50%), demonstrating their acquisition of this skill.

The skill of searching for information and processing it is among the core components that increase an individual's knowledge and is important for the transfer and localisation of knowledge and for the establishment of the knowledge society.

Modern technology has made it possible for all students to access information at any time. The results of the field study indicate that university Emiratis are able to search for a given piece of information and properly source it. This may be due to the nature of undergraduate study, which requires students to search for information and discuss it, contrary to pre-university education. In the three universities where the field survey was conducted, the assessment of the students is done through assignment and homework during the semester in addition to final exams. Student assignments often require students to search for information, reflect on them and submit reports.

One of the reasons for possessing this skill is the youth's ability to use the internet and its availability either at university or at home. There is no doubt that the three universities have a highly developed technological infrastructure and laboratories in all faculties, not to mention the opportunities for students to own their own computer or even iPads. Yet, despite young people's acceptable skill level for searching for information and given the highly technological environments available to access information, the question remains: why were the scores not higher? At university, it is expected that all students are able to research and dig out information given the nature of university studies. So there is a need to strengthen this skill to ensure all university students acquire and practice it. However, the successive field research of the Arab Knowledge Reports is reassuring. Improvements have been detected among undergraduate students compared to the results of Emirati students at the end of secondary school, which were less than average; as concluded by the Arab Knowledge Report 2010/2011.

Skill of Using Technology

Table 4.7

Skill of Using Technology

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
13.39	1.80	6.67	18.97

Scores are between 0 and 20.

The use of technology is one of the basic skills required for the effective integration of young Emiratis in the transfer and localisation of knowledge. The results of the field research for the use of technology ranged between 6.67 and 18.97, with an arithmetic average (mean) of 13.39/20. Assuming that a score of 10/20 is the the minimum level required for the acquisition of this skill, then the overall performance of the sampled students is within average. It is important to note that 3.3% of the students did not obtain the minimum required level (50%), while 16.9% obtained a score of 15 points or above. The value of the standard deviation reveals that

the sample is homogeneous, i.e. there is no significant variation among the tested students. This result might look lower than expected, due to the high prevalence of technology and its daily use in the UAE, but this average performance can be explained by the quality of the questions in the survey. These questions do not measure the normal daily use of technology, but rather focus on its advanced use in searching for and developing knowledge.

These results, when combined, reflect an acceptable skill level for using technology. However, a better result was expected, since the three universities involved in the survey have an advanced technological infrastructure and motivate students to use new technology and applications, disseminating knowledge among them so they are better able to use the technology in searching for information. This requires greater attention and focus for strengthening this skill to deeper levels.

Skill of Using Foreign Language (English Language)

Table 4.8

Skill of Using Foreign Language (English language)

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
11.81	3.74	1.25	20.00

Scores are between 0 and 20.

The use of foreign language is considered one of the necessary skills for young people, especially for achieving the most important element of this distinct knowledge era, where it is crucial to maintain openness and intercommunication with other civilisations and international scientific achievements. The overall performance of young Emiratis in this skill was average (11.81 points), as it stood near the minimum acceptable score of 10/20.

It should be noted that the percentage of those who did not achieve this minimum level stood at 32.2% compared to about 18% who obtained a score of 15 points or above. This indicates that the sample group clearly lacks fluency in understanding and writing in English. The value of the standard deviation also reveals a relative variation between the sampled students.

The use of foreign language, primarily English, as it is considered the most widespread worldwide, is a very important issue in building the knowledge society and in the transfer and localisation of knowledge. English is widely regarded as the language of science and knowledge in the current era. Therefore, university students must possess relevant language skills, in terms of speaking, writing and understanding, if they wish to achieve effective openness to other cultures and to the international spheres of science and knowledge. However, this issue is not simple since it is related to the preparation of the students at the pre-university stage. The first annual report on school supervision in Dubai, released in 2009, also confirm our conclusion as the report revealed a need to improve English language skills in speaking, reading and writing among students at public schools.[4] Graduates of public secondary education are often unable to join university directly as many require a constituent year during which they study basic English, computer use and analytical thinking skills.

It seems that the lack of English language skills is normal in the sample as education at various stages, especially in public schools, is largely provided in Arabic. Despite the fact that English is taught from primary school, many students do not master it. This leads to the conclusion that the problem of poor skills in the use of English accompanies the students from secondary school to university, where all courses are provided in English. Consequently, undergraduates face difficulties and are obliged to retake many courses. In some cases, this leads students to abandon their studies completely.

Analysis of the Differences between the Cognitive Skills

Analysing the results of the various skills under study shows significant statistical differences between the skills.

The use of foreign language is considered one of the necessary skills for young people, especially for achieving the most important element of this distinct knowledge era, where it is crucial to maintain openness and intercommunication with other civilisations and international scientific achievements

The following ranking classifies the skills in descending order according to the level of acquisition by the students:

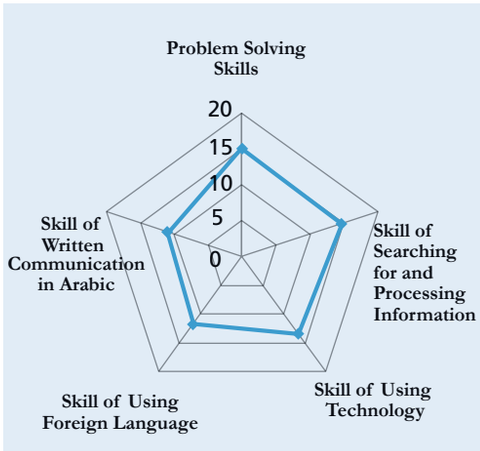
- Problem solving skills
- Information sourcing and processing skills
- Technology use skills
- Foreign language skills
- Arabic written communication skills

The above results indicate that the Emirati youth possess a reasonable capacity in the areas of problem solving and information processing which is a positive indication that should be emphasised as these skills are essential for enabling the youth to proceed towards the knowledge society. The performance level in the use of technology skills is also good, although it could be highly attributed to the wide availability of information and communication technology. Yet, what should be seriously addressed is the large gap with regards to language skills, including the mother tongue (Arabic) and foreign language skills (English). Other skills, such as problem solving or information sourcing and processing remain short of empowering the youth to positively engage in processes of establishing the knowledge society if the youth are unable to communicate clearly and effectively through language. Language, as emphasised earlier, is the medium that essentially embodies culture and knowledge.

results indicate that the Emirati youth possess a reasonable capacity in the areas of problem solving and information processing which is a positive indication that should be emphasised as these skills are essential for enabling the youth to proceed towards the knowledge society

Figure 4.2

Results for Students' Cognitive Skills



Upon interacting with university students, it was evident that many prefer to use the English language more than Arabic because it is easier to find online supporting references in English for their homework. Interestingly, the written communication skill in Arabic is at the bottom of the list of cognitive skills, and comes lower than English communication, even with the low performance in English written communication.

It seems that, writing skills among the participants in general, need greater attention. Efforts should not solely focus on acquiring the skill itself but should also focus on achieving a valid linguistic medium as the transfer, localisation, spread, production and use of knowledge can only be achieved within this framework. We should highlight here that scientific journals do not accept research articles unless elaborately written; so how can this be achieved with the obvious gaps in youth writing skills?

Values

The field research targeted a set of values that could be presented broadly in four groups: (1) Values with a cognitive dimension (such as the love of knowledge, the preference of education over money, intellectual openness to accept new ideas and the diligence, perseverance and commitment at work); (2) values with an emotional dimension (such as self-confidence, social recognition, adherence to personal freedom and honesty with oneself); (3) values with a social dimension (such as the respect of the code of ethics, customs and traditions, the respect for others in terms of their opinions and beliefs and the will to participate in the public life); and (4) values with a cosmic dimension (such as human rights and justice).

Student scores in the questionnaire on sections related to values ranged between 44.62 and 89.23, with an arithmetic average (mean) of 71.23/100. Assuming that the minimum acceptable score is 50, research showed that 0.6% of the participants obtained less than the minimum, while

Table 4.9

Values

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
71.23	7.21	44.62	89.23

Scores are between 0 and 100.

99.4% of the participants obtained 50 or above. These results indicate that most of the students possess almost all the values featured in the study.

The results of the values skill – with a student average of 71/100 – indicate that students have a clear tendency to adopt the values that are featured in the study. However, we should note here that when talking about values, we are referring to what the students have declared, which may be indicative of their attitudes but not necessarily a true reflection of the values they possess or practice. Accordingly, these results should be dealt with cautiously.

Although these results could indicate a reasonable ability of the university education system to promote these values, the students' possession of the values cannot be explained to be the product of this system only. The Arab Knowledge Report 2010/2011 indicated that high school students generally possess high level of the various categories of values. What should be emphasised here is that these values had been instilled years before university education. Also, we should not ignore the important role of the family in consolidating values among the youth, given the conservative nature and culture of UAE society. The high level of values among students and the homogeneity between males and females in their possession of these values is not surprising. Family plays a major role in the foundation of many values among students that become instilled in their daily practice, in addition to the values the students acquire from the curriculum through various stages of education. The values that undergraduates enjoy are a true reflection of the values they have accumulated throughout their lives within the family, school and society, where the importance and respect of values, customs, traditions, and religious values is emphasised.

Youth Effectiveness

Before presenting the results, it should be noted that "effectiveness" in this report refers to the active and unrestrained participation of respondents in one of the below-mentioned fields. This effectiveness is the outcome of interaction between opinion and behaviour, in the sense that effectiveness is an attitude that is based on planned voluntary behaviour rather than spontaneous or implied behaviour. Keeping this in mind, cultural effectiveness was measured with questions that aimed at gauging student knowledge in terms of their country and region's historical events, geography, names of books read, whether in Arabic or in other languages, as well as practiced cultural activities and their quality. Social effectiveness was measured by the same token through questions on participation in voluntary and community activities and their types. Economic effectiveness was measured in terms of paid work and participation in projects.

After measuring the scores of all the aspects of effectiveness, the latter were consolidated on a scale of 0-1, with 1 being the highest level of effectiveness.

The values that undergraduates enjoy are a true reflection of the values they have accumulated throughout their lives within the family, school and society

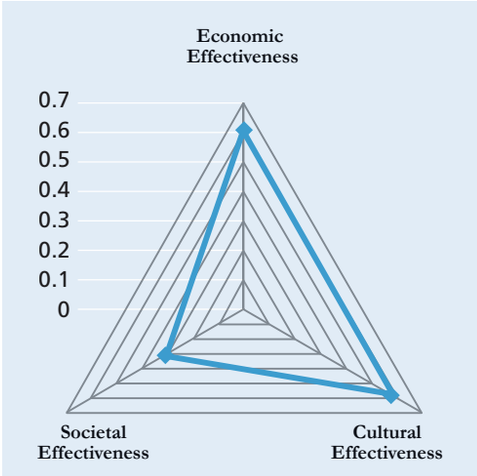
Table 4.10

Student Scores in Effectiveness

	Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
Cultural Effectiveness	0.58	0.11	0.20	1.00
Social Effectiveness	0.31	0.32	0.0	1.00
Economic Effectiveness	0.61	0.48	0.0	1.00

Figure 4.3

Student Scores on Effectiveness



low levels of cultural and social effectiveness are not a good indicator of the youth's ability to build the desired knowledge society

Table 4.10 shows that youth effectiveness levels vary from one area to another, with the lowest being community participation and the highest being economic effectiveness. As for cultural effectiveness, where the average score was 0.58/1, a greater need arises to further promote culture among the youth, especially in terms of knowledge of their country's historic and geographic characteristics as well as prominent literary and artistic milestones. The situation is worse in the students' social effectiveness and participation. On the other hand, the survey showed higher degrees of economic participation among students, with scores pointing to acceptable youth effectiveness levels in paid activities.

Student effectiveness depends on the level of awareness and understanding they possess in a given field. The low levels of cultural and social effectiveness, as reflected in the results, may be mostly due to inadequate information among students in these two fields. This calls for the need to pay more attention to this issue, whether at home or in schools, universities, civil society institutions and the media. The relatively high economic effectiveness compared to cultural and social effectiveness can be attributed to the fact that most of the students' parents engage in some kind of economic activity. Even with availability of many government jobs, many still start their own business projects, often engaging their children as well. Students thus learn from their parents certain economic concepts and values, experiencing economic effectiveness at a relatively early age.

It is noteworthy that low levels of cultural and social effectiveness are not a good indicator of the youth's ability to build the desired knowledge society. Knowledge in a society should be diffused among all citizens, but how is this to be done amid a reluctance to engage in the country's various community activities? State institutions of all kinds should strive to raise young people's cultural and social effectiveness, as well as integrate them into community life and engage them in all its activities.

Citizenship and Belonging

Table 4.11

Citizenship and Belonging

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
0.55	0.28	0.00	1.00

The report addressed this important aspect in the survey through a set of questions that examined opinions of the Emirati youth regarding the concept of citizenship and its main characteristics.

Analysing the answers reveals that knowledge of good citizenship principles is average among the Emirati youth, at 0.55; close to the lowest acceptable score. Upon observing the two scale ends, 8.9% obtained the lowest score (0), while 16.5% obtained the highest score (1). In other words, almost 200 respondents do not have any knowledge whatsoever on good citizenship principles, while almost 350 students of the 2,142 female and male respondents have a full understanding of such principle.

Analyses of the questions on country belonging show a high sense of belonging among young Emiratis. Most of them pointed to their clear desire either to complete their education and work in the UAE or to pursue their studies abroad and then return immediately to the country. This love and

pride felt by young Emiratis towards their country is manifested through the different activities in which they participate, such as National Day celebrations. Belonging is also apparent in the general sentiment among young people whenever the UAE competes in sports tournaments or wins the hosting of global events such as Expo 2020. This strong sense of belonging can be capitalised on by educational, social, cultural and media institutions to introduce, discuss and further promote the concepts and characteristics of good citizenship among young Emiratis.

Openness and Global Communication

Table 4.12

Openness and Global Communication

Arithmetic Average	Standard Deviation	Lowest Score	Highest Score
0.30	0.11	0.00	0.75

Scores are on a scale of 0-1.

The results of the survey showed a general weakness in openness to the world, with an arithmetic average (mean) not exceeding 0.30/1. Around 96.9% of respondents scored less than 0.5. In other words, almost 2,000 student respondents did not get half the scores in terms of openness and global communication as well as the associated elements of reading of publications in foreign languages, proficiency in other languages, travel information and internet use on these topics. This result also points to a lack of engagement among the participants with regards to associations and regional and international activities, as well as a lack of communication with people from outside their own country and weak levels of participation in scientific or cultural competitions.

This result was surprising considering that the Emirati society is reputed for its diversity as people from all nationalities and cultures live in the country. These results can be attributed to the conservative culture of the UAE society where many households still prefer not to integrate and remain closed off from the outside world.

Box 4-1

Internet Usage among the Emirati Youth

The Ministry of Culture, Youth and Community Development conducted a study in collaboration with the Decision-Making Support Centre for the Dubai Police in 2012, looking into the patterns of internet usage among the Emirati youth and its impact on knowledge formation. The following are the main findings:

1. Almost 90% of young Emiratis own at least one computer, with higher rates among females between 12 and 25 years of age.
2. The percentage of internet users, both males and females, amounted to 98.3%.
3. The overall average number of hours young Emiratis spend online is 4 hours and 36 minutes per day.
4. There is a general belief among young Emiratis that internet is highly reliable as a main research source, at a rate of 61.6%. The percentage of young Emiratis who rarely or very rarely use the internet for their research did not exceed 10.7% of youth.
5. The top ten internet usage in descending order of importance were:
   - Study-related research 77.2%;
   - Checking email 76.6%;
   - Downloading and listening to music/ watching movies 71.4%;
   - Searching for general information 71.4%;
   - Games and entertainment 64.6%;
   - Contribution to forums 63.8%;
   - Religious sites 62.8%;
   - Self-learning 59.8%;
   - Checking news 54.8%;
   - Chatting 54.6%.

These findings confirm that young Emiratis know how to deal well with the internet. This is a skill that should be invested in effectively and directed towards increasing their interest in learning and knowledge, and the transfer and building of knowledge.

Source: Quoting the Ministry of Culture, Youth and Community Development 2012. (Reference in Arabic)

For instance, travelling abroad remains reserved for either business or medical purposes. One also cannot overlook the lack of participation of young people in the country's general social and cultural life as one of the factors contributing to the lack of openness. It is only natural that their openness to the rest of the world stays limited or rather humble if their cultural and social participation inside the country is already limited.

Low levels of cultural and social effectiveness are not a good indicator of the youth's ability to build the desired knowledge society

This result was surprising considering that the Emirati society is reputed for its diversity as people from all nationalities and cultures live in the country

The intriguing part is that these results come at a time when the country is employing significant efforts in technology and communication infrastructure and is providing the nation with the newest and fastest technological services. It seems that the main use of this technology among the youth is for communication on social media rather than for information and knowledge that pave the way for the transfer and localisation of knowledge and the creation of a knowledge society in the country.

Analysis of the Results according to Gender

With respect to gender-based differences among young people in terms of knowledge, values, effectiveness, skills, citizenship and openness, the results showed no statistical difference between male and female students. Generally, females were not different from males neither in terms of cognitive skills nor in terms of values and other areas of effectiveness.

With respect to gender-based differences among young people in terms of knowledge, values, effectiveness, citizenship and openness, the results showed no statistical difference between male and female students

Youth Opinions on the Transfer and Localisation of Knowledge and the Necessary Enabling Environments

The report also addressed a number of indices and practices relevant to young people's involvement in the transfer and localisation of knowledge. These included accessing foreign resources and translated books related to the students' disciplines, where the analysis showed that 65.1% of participants do not read translated books related to their discipline. This can be attributed to several factors, the most important of which being the students' exclusive focus on the courses they are taking, considering that what the university offers them is sufficient information and knowledge needed in their area of specialisation. The remaining 30.8% who reported reading foreign translated books related to their specialised subjects, resort mostly to these reference points when doing projects or homework. This shows the weak role that universities are playing in general to encourage students to research and read translated foreign books as part of the educational experience. This is also consistent with the results of the study conducted by the Emirati Ministry of Culture, Youth and Community Development on prevailing knowledge trends among young Emiratis aged 18 to 23. The study noted a reluctance among the youth to visit public libraries and access knowledge.[5]

The high percentage (80.4%) of respondents who reported having carried out research or presentations since starting university could be related to the nature of educational systems within universities. Most courses require students to conduct research or write reports on topics related to the subject for a certain percentage of the total course score; for example, research, projects and presentations could account for 50% of the final score. However, it is essential to note that the reports, projects and presentations

Figure 4.4

Student Access to Translated Books Related to Their Disciplines (%)

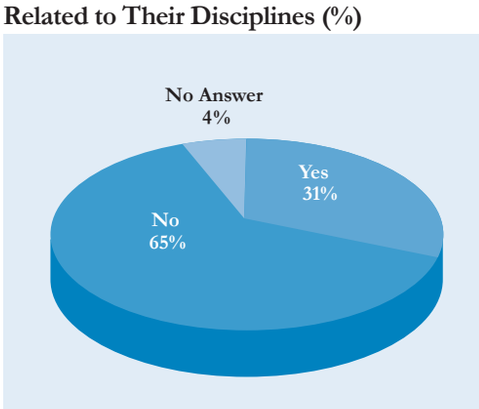
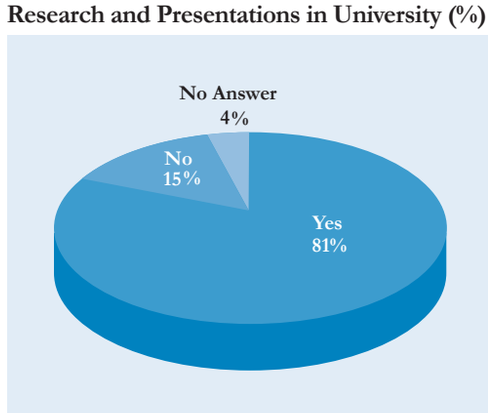


Figure 4.5

Research and Presentations in University (%)

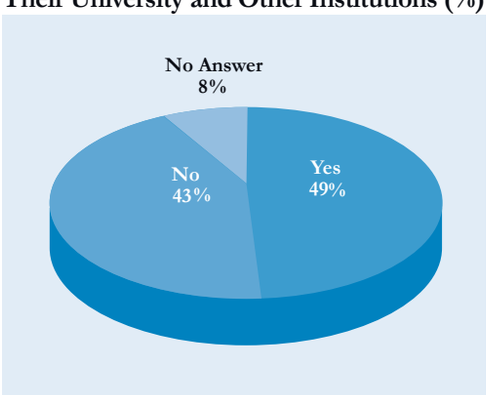


that students carry out at this stage are mostly essays in which they express their opinions on given topics or simple research projects that merely require the collection of scientific material or a summary of literature. Outcomes of studens' responses should be dealt with carefully. In light of the educational environment at the three universities involved in the study, the high percentage of positive answers to this question most probably indicates that the concept of scientific research is not clear enough among students. Most of them, based on the previous result, think that by carrying out the work required of them on the course, they are conducting scientific research. This calls for action to raise awareness of the steps, procedures and controls of scientific research and revaluate the prevailing conditions of scientific research at university as a gateway for moving into the knowledge society.

Concerning university partnerships, 48.9% of respondents were aware of the available partnerships and agreements between their

Figure 4.6

Student Awareness of the Existence of Partnerships and Agreements between Their University and Other Institutions (%)

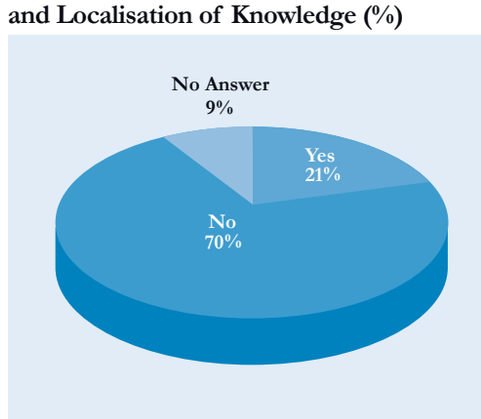


university and other institutions. This shows that almost half of the students are aware of such partnerships and realise that their faculties are using these partnerships and agreements to raise the university's standing in terms of programmes and adopted teaching methods. The universities' goal is to obtain academic accreditation and access to appropriate training related to the specialisations they offer. However, this result also shows that almost half of the students are not aware of these partnerships and agreements in the first place. Therefore, more should be done to increase the awareness and knowledge of young people of the various institutions that support educational programmes offered in their disciplines.

Almost 70% of the participants reported not being aware of the existence of youth institutions involved in the transfer and

Figure 4.7

Student Awareness of the Existence of Youth Institutions Involved in the Transfer and Localisation of Knowledge (%)



localisation of knowledge in their country. This could be an indicator of either the lack of cultural education among the youth or their lack of interest in the pursuit, transfer and localisation of knowledge and the attempt to make it part of their lives. This result may seem understandeable for two reasons; the first being that young people focus, during this period of their life, on their study and scholarly accomplishments. Therefore, they are not preoccupied with this issue as much as with other ones related to friends, family and their social life. The other reason is the lack of publicity of these institutions in the community in general, whether in media or institutions in the country. In general, these youth institutions are present and active in the country, however, their focus on the transfer and localisation of knowledge does not seem to be clear, explaining the respondents' answers. Therefore, educational, cultural and media

Almost 70% of the participants reported not being aware of the existence of youth institutions involved in the transfer and localisation of knowledge in their country

institutions should work to raise awareness of the existence of such institutions and encourage students to benefit from them as well as from global best practices to develop local programmes that aim at building the human capital.

The sample recorded high rates in areas the students considered effective (whether highly or just acceptable) in offering them the qualifications needed for the transfer and localisation of knowledge

Enabling Environments in the UAE

With regard to the opinions of the students on enabling environments, the analysis showed high levels of satisfaction regarding these components and their effectiveness. The study examined the opinions of the students on the effectiveness of a number of factors in their universities in terms of qualifying students for the transfer and localisation of knowledge. Opinions of youth were investigated through 15 questions.

Most answers about the effectiveness of university were notably positive. The sample recorded high rates in areas the students considered effective (whether highly or just acceptable) in offering them the qualifications needed for the transfer and localisation of knowledge. The availability of internet use comes at the forefront of these components, with a 97.4% approval rate (75% for high effectiveness and 20.4% for acceptable effectiveness); followed by the availability of educational equipment and tools with a 94.1% approval rate (65.8% for high effectiveness and 28.3% for acceptable effectiveness). The scientific level of university teachers came in third place, with a 92.8% approval rate (48.3% for high effectiveness and 44.5% for acceptable effectiveness), followed by the electronic interactive means that enable communication, with a 91.8% approval rate (59.2% for high effectiveness and 32.6% for acceptable effectiveness), and followed by books and references available, in fifth place with a 91.1% approval rate (51% for high effectiveness and 40.1% for acceptable effectiveness).

Other less effective elements were reported by students to the attention of decision-makers. These included aspects that were seen by a significant number of students as having weak effectiveness. Although most young people highlighted the effectiveness of the "system of material

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

	Inexistent Effectiveness (%)	Weak Effectiveness (%)	Acceptable Effectiveness (%)	High Effectiveness (%)
a- The prevailing higher education system	3.1	6.7	41.8	48.4
b- Academic research system	1.7	10	46.1	42.2
c- Teaching methods adopted in universities	1.2	9.3	49	40.4
d- Rating methods adopted in universities	3.1	12.5	42.8	41.6
e- Books and references available for students	1.3	7.6	40.1	51.0
f- Educational equipment and tools	2	3.9	28.3	65.8
g- Scientific and pedagogical (educational) level of university teachers	2	5.2	44.5	48.3
h- Physical and moral incentives system for students	8.3	19.5	37.5	34.7
i- Vocational training system during studies	5.4	16.7	43.1	34.8
j- Correspondence between the knowledge offered by the university and the requirements of the labour market	5.5	15.3	46	33.2
k- Current admissions system of the university	3.3	10.7	48.3	37.7
l- Activities held by your faculty or the university where you study	2.7	15.1	39.7	42.4
m- Internet availability and access/use	1	3.6	20.4	75
n- Interactive electronic educational means that allow remote educational communication between students and teachers	2.3	5.9	32.6	59.2
o- Financial resources to support the students' university research projects	4.8	19.1	38	38.1

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

	Inexistent Confidence (%)	Weak Confidence (%)	Acceptable Confidence (%)	Complete Confidence (%)
a- Civil Society Organisations	3.7	7.8	56.1	32.4
b- Media (Traditional and New)	2.8	10.7	43.5	43
c- Vocational Associations	3.9	12.2	56.3	27.6

and moral incentives for students" with 72.2% (34.7% for high effectiveness and 37.5% for acceptable effectiveness), 19.5% of them felt that the effectiveness of this component was "weak" and 8.3% said it was "inexistent". Therefore, a total of 27.8% of young respondents were not satisfied with this aspect and its effectiveness in the transfer and localisation of knowledge. The same could be concluded for the following areas: "financial resources to support the student research projects", "vocational training system during studies", "link between the knowledge offered by the university and the requirements of the labour market", and the "activities offered by the respective faculty or university". The combined percentages of "high" and "acceptable" effectiveness for these aspects were 76.1%, 77.9%, 79.2%, and 82.1% respectively.

Comparing the components that scored high effectiveness in the sample with those deemed available to a lesser extent, we find that the UAE has been able to provide a considerable set of material requirements such as books and references, equipment and tools and internet access; as well as professors and means of interaction and communication between teachers and students. The state, however, has not established the required culture for the transfer and localisation of knowledge at university and among the student community. The UAE has expressed a strong will to provide the components necessary to qualify students to engage in the processes of knowledge transfer and localisation. However, the three universities must provide other components needed to support these processes.

Participants mentioned that they maintain an "acceptable" or "complete" confidence in the ability of traditional and new media to contribute to the engagement of young people in the processes of knowledge transfer and localisation. This is justifiable

Table 4.15

Students' Opinions on the Contribution of the Following Components

	Inexistent Contribution (%)	Weak Contribution (%)	Strong Contribution (%)	Very Strong Contribution (%)
a- The contribution of the private sector to the advancement of scientific research	10.3	30.3	43.8	15.6
b- The contribution of economic institutions to the funding of research	6.9	23	49.7	20.4
c- The contribution of micro-enterprises to the effective integration of youth in the transfer and localisation of knowledge	1.8	16.6	51.1	30.5
d- The contribution of prevailing economic patterns to the transfer and localisation of knowledge	3.7	13.8	49	33.5
e- The contribution of foreign investment projects to the transfer and localisation of knowledge	4.8	18.8	44.7	31.7
f- The contribution of governments to supporting youth	1.9	10.3	35.8	52

The surveyed youth acknowledged the government's great efforts in supporting them; 52% and 35.8% of the sample claimed that the government had a "very strong" and "strong" contribution in this area

in light of the evolution of the media in the country. However, when addressing civil society organisations in the study, the proportion of young people's confidence was found to be 88.5% (32.4% have full levels of confidence and 56.1% have acceptable levels of confidence). The percentage of young people's confidence in the vocational associations came at 83.9% (27.6% have full levels of confidence and 56.3% have acceptable levels of confidence). These results indicate that the youth expressed confidence in the institutions' capacity to engage them in the processes of knowledge transfer and localisation, which is a reassuring point. However, these results should be examined carefully as many young people could have given "safe" middle-way answers, especially in light of the earlier results showing that many young people lack knowledge of cultural and social activities in the country.

The surveyed youth acknowledged the government's great efforts in supporting them; 52% and 35.8% of the sample claimed that the government had a "very strong" and "strong" contribution in this area. These results reflect reality as several institutions, such as the Ministry of Culture, Youth and Community Development, have developed and implemented programmes and projects targeting youth engagement and motivation. Among them are the development programmes of the Ministry of Education that target young people in addition to the efforts of public and private institutions of higher education. The government's support for the youth was one of the most obvious aspects as the results showed the percentage of those who believed that the contribution was "inexistent" or "weak" did not exceed 12.2%.

As for the contribution of micro-enterprises and prevailing economic patterns for effective youth integration in the transfer and localisation of knowledge, the rates of "inexistent contribution" and "weak contribution" were low, indicating the strength of these two elements. The adoption in 2012 of a new law by the Council of Ministers on micro and medium enterprises that aims to support young people in transforming their ideas into projects and products supports this finding. Other

Table 4.16

Students' Opinions on the Processes of Transfer and Localisation of Knowledge

	Totally Disagree	Somehow Agree	Agree	Totally Agree
a- The transfer and localisation of knowledge in the Arab countries is vital for the future of the country	3.9	24.8	34.7	36.6
b- The process of the transfer and localisation of knowledge will contribute to the reduction of unemployment	3.7	19.9	38	38.4
c- The process of the transfer and localisation of knowledge will contribute to a heightened level of creativity and innovation	3	15.1	36.3	45.5
d- The process of the transfer and localisation of knowledge will contribute to revitalising the economy	3.1	17.2	32.8	46.9
e- The process of the transfer and localisation of knowledge will contribute to the diminishing borders between the world countries	7.5	24.2	36.5	31.8
f- The process of the transfer and localisation of knowledge will contribute to more dependency of the Arab world on the West	24.2	30.6	24.8	20.4
g- The process of the transfer and localisation of knowledge will contribute to marginalising local products	27.4	28.8	26.4	17.4
h- The process of the transfer and localisation of knowledge is not among the current concerns of young people	24.6	37	25.7	12.7
i- The process of the transfer and localisation of knowledge can contribute to changing societies' cultural features	7.5	36.8	32.9	22.8
j- The process of the transfer and localisation of knowledge can contribute to reinforcing the economic competition	1.7	25.1	39.7	33.4
k- The process of the transfer and localisation of knowledge can contribute to reducing disparities in society	6.3	23.8	37	32.9

initiatives also exist to support the youth such as the Sheikh Khalifa Fund supporting youth projects, the Mohammed bin Rashid Al Maktoum Foundation for young business leaders and other bodies supporting the youth at various social, educational, health, cultural and humanitarian levels.

Around a quarter of the participants considered the contribution of foreign investment projects in the transfer and localisation of knowledge as "weak" or "inexistent". These percentages were even higher in the contribution of economic institutions and the private sector to the funding of research and the advancement of scientific research, where the rate was 29.8% and 40.7% respectively for "inexistent" or "weak contribution" in these sectors. Greater attention should be paid on these three components in future strategies on the transfer and localisation of knowledge.

Participants' responses on issues related to the transfer and localisation of knowledge raise many issues. To start with, there is no doubt that the answers of the youth were positive in some dimensions. For example, 81.8% totally agree or agree on the fact that "the process of the transfer and localisation of knowledge will enhance creativity and innovation". This also applies to other elements, although to lower extents, such as "the process of the transfer and localisation of knowledge will contribute to revitalising the economy," "the process of the transfer and localisation of knowledge will contribute to the reduction of unemployment" and "the transfer and localisation of knowledge in the Arab countries is vital for the future of these countries" where the proportions of "totally agree" and "agree" were respectively at 79.7%, 76.4% and 71.3%. Other aspects registered positive feedback such as the argument that "the process of the transfer and localisation of knowledge can contribute to reinforcing the economic competition" with a 73.1% agreement/total agreement rate. All the results indicate that young people are aware of what knowledge and the transfer and localisation of knowledge can offer.

However, participants's responses on other elements raise some concerns. For example, 61.6% of participants tend to agree with the argument "the process of the transfer and localisation of knowledge is not among the current concerns of young people," where 38.4% of the respondents expressed their total agreement. Similar results, although at lower rates, were noted for the arguments that "the process of the transfer and localisation of knowledge will contribute to marginalising local products," "the process of the transfer and localisation of knowledge will contribute to more dependency of the Arab world on the West" and "the process of the transfer and localisation of knowledge can contribute to changing the societies' cultural characters", where respondents tended to disagree with these terms with 56.2%, 54.7% and 44.3% respectively. Given these rates, we can sense some concern among the youth regarding the transfer and localisation of knowledge as a considerable number of participants feel that it could reinforce a subordination to the West and change the cultural characteristics of the UAE or contribute to the marginalisation of local products.

Although these views are marked by a lack of sufficient understanding of the nature of the transfer and localisation of knowledge, a process that can actually lead to a more competitive capacity in the global market, they also came consistent with the findings of the qualitative study highlighting that some young people and experts fear the obliteration of the Arabic language and that of the national identity. They have called, and on more than one occasion, for caution when transferring knowledge, claiming that only knowledge beneficial to the country should be transferred, without affecting its culture and identity. The country should work on clarifying these issues and reassuring young people that the processes of the transfer, localisation, production and employment of knowledge is in the interests of the society's advancement and a necessity for this era.

In terms of catalysts and obstacles facing the integration of the youth into the processes of knowledge transfer and

we can sense some concern among the youth regarding the transfer and localisation of knowledge as a considerable number of participants feel that it could reinforce a subordination to the West and change the cultural characteristics of the UAE or contribute to the marginalisation of local products

Table 4.17

Students' Opinions on Motivating and Impeding Factors in the Integration of the Youth in the Transfer and Localisation Processes

	Required and Available	Required but Not Available	Not Required but Available	Not Required and Not Available
a- Social participation (such as the participation in associations…)	63.3	20.1	9.9	6.7
b- Providing/finding opportunities/places of work for young people	51.4	43.1	3.1	2.4
c- Cultural participation (attendance/participation in cultural activities, arts, theatre, poetic evenings, reading)	76.3	12.1	7.1	4.5
d- Arabic language proficiency	57	30	8	5
e- Foreign languages proficiency	65.4	24.2	9.2	1.2
f- Gender non-discrimination	72.4	15.8	7.5	4.3
g- Traditions, cultures, and common practices	80.1	14.1	3.8	2

Students' responses concerning rights and freedoms registered high rates with mostly "excellent" or "good" levels

localisation, the results shown in Table 4.17 demonstrate that students viewed cultural and social effectiveness as well as proficiency in English and Arabic languages to be among the required and available elements, though in varying levels. However, the previously presented outcomes of surveys demonstrated that social and cultural effectiveness among participating students were below the required levels. The same applies to mastering English and Arabic languages. This could be interpreted by the youth tendency to give the "socially acceptable answer" when answering these questions. Meanwhile, the other issue is that a proportion of young people have expressed concern about job opportunities. This can be attributed to the rapid changes in the labour market in the UAE that may not always be in line with the specialisations of the young Emiratis, despite the various government programmes that address the youth and positioning them in various sectors.

Students' responses concerning rights and freedoms registered high rates with mostly "excellent" or "good" levels. Most categories exceeded 95% approval rates. In fact, the percentage of those affirming freedom of opinion and expression was 98.4% (68.6% answered "excellent" and 29.8% "good"). The percentage of affirming the freedom of principles was 98.2% (82.6% described it as "excellent" and 15.6% as "good"), and 96.4% confirmed the presence of social justice (81.4% answered by "excellent" and 15.1% by "good").

These results are indicative of a positive trend and an enabling environment that supports young people in the processes of transfer and localisation of knowledge, as there is no knowledge without freedoms

Table 4.18

Students' Opinions on the Status of Freedoms and Rights

	Excellent	Good	Bad	Very Bad
a- Freedom of opinion and expression	68.6	29.8	1.1	0.5
b- Freedom of principles	82.6	15.6	1.1	0.7
c- Gender non-discrimination	63.1	31.3	4.6	1
d- Social justice	81.4	15.1	2.2	1.3
e- Freedom of individuals to practice their religious beliefs	78.1	20.5	1.3	0.1
f- Availability of an atmosphere of freedoms at university (academic freedoms)	70.4	24.3	4.4	0.9
g- Availability of an atmosphere of freedoms within the family	65.2	31.7	2.2	0.9
h- Respect of personal freedom in society	62.7	31.5	5	0.8

as demonstrated by the Arab Knowledge Report's triad of knowledge, freedom and development.

Outcome of Focus Group Sessions with the Youth

Focus groups were conducted with a number of young citizens aged between 25 and 34, with 11 males and 5 females from various emirates and various backgrounds. The sessions were designed to explore their points of view with regards to several relevant issues including the transfer and localisation of knowledge, the role of the youth, the required skills and values and the enabling environments.

Support for the Concept of Openness and the Transfer and Localisation of Knowledge

Participants engaged in a transparent discussion of these topics and it was remarkably active. Concerning their opinions on the transfer and localisation of knowledge, some supported the process of the knowledge transfer and regarded it as an important step that should be followed by further steps including "the adaptation of knowledge to better suit the Emirati environment in line with the society's culture and identity". Supporters of this viewpoint stressed that this process of re-drafting or the so-called acculturation or adaptation must be conducted in accordance with a scientific methodology, so that the foundations of transferred knowledge could not be lost or become ponderous. This group of participants did not see any drawbacks in the transfer of knowledge, arguing that the UAE is only 43 years old, and as other countries have progressed, it is very logical to benefit from these countries' experiences and knowledge and build on them.

A small group of participants saw that the process of transfer itself was a negative one because the process of transfer includes importing. The group feared that the country would remain in the circle of transfer and import without moving beyond it to other stages. This group considered that the transfer presumes a lack of "knowledge" within the country, which will always make it copy from others and remain subordinate to them. This opinion was similar to that of a small group in the brainstorming session with experts on whether the transfer of knowledge was linked to dominance (which will be explained in the next section).

Participants in the focus group hoped to move beyond the transfer stage to the stages of knowledge development, advancement and export to other countries. This will take place, they claimed, only if "we consider creativity a complementary stage to the stages of the knowledge transfer"; transfer and localisation will lead to innovation or a culture of new knowledge to be later transferred. They gave examples of the country setting its own standards in roads and bridges, while benefiting from international standards and expertise. The fact that this proposal came from a group of young Emiratis strongly suggest their unquenchable desire to move towards the transfer and localisation of knowledge as well as towards its local cultivation and to contribute to the global knowledge.

As for knowledge localisation, participants noted that the concept of knowledge localisation was relatively new to them. The majority considered that the term "localisation" refers to the acquisition of knowledge by UAE Nationals, as they believed that non-Emirati residents, no matter how long they stayed in the country, would "go back to their countries". The residents, or "experts" as they were described, carry knowledge and are currently present in the country, but may not be in the future. So "in order to maintain the stability of the society on the long run, this knowledge must be transferred". Therefore, many of the participants stressed the importance of benefitting from the majority of the residents and transfering the knowledge and experiences they have, as well as "documenting" it in order to retain and accumulate it, so the state would not remain "always dependent on an external source". Some considered that the localisation of

The majority considered that the term "localisation" refers to the acquisition of knowledge by UAE Nationals, as they believed that non-Emirati residents, no matter how long they stayed in the country, would "go back to their countries

knowledge "contradicted" with its transfer because knowledge moves to the inside from the outside, while localisation reflects the diffusion of the knowledge among Emirati citizens. However, it should be noted here that knowledge is transferable when moving from the outside to the inside, but it must be transferred within the country as well. The establishment of a knowledge society does not mean bringing and importing knowledge then localising it within specific bodies or individuals, but rather spreading knowledge among large segments of society and renewing it with time.

As for the concept of "Territorisation of Knowledge" – i.e. keeping knowledge in a specific space, not localised among citizens – some participants viewed this knowledge as a source of pride because "the fostering environment is an Emirati environment and the product is made in UAE". They added that the UAE has allowed many intelligent individuals and experts of different nationalities to live in the country, work on the production of knowledge and compete in the global market. Therefore, this is knowledge produced on the territory of the country, such as "the manufacturing of drones" or "alternative energy sources". In contrast, others considered that this kind of knowledge could be affected by any shock and was unsustainable. The production factors that are based on this knowledge are currently present in the UAE for certain reasons, and once these reasons disappear, the production of knowledge could be suspended. This demonstrates that the participants' views on territorisation were dominated by the transfer and localisation of knowledge among citizens and not just the knowledge mastered by residents only. It was clear from the discussion groups that participants were aware that knowledge was mobile, and could go wherever the facilities for its growth are located. The latter is true as knowledge is affected by many factors, including economic and political aspects, conflicts and tensions.

As for the concept of "Territorisation of Knowledge" – i.e. keeping knowledge in a specific space, not localised among citizens – some participants viewed this knowledge as a source of pride because "the fostering environment is an Emirati environment and the product is made in UAE

Another group considered that, at the very least, intelligent individuals among Nationals must be distinguished in several vital areas. These should not be limited to transfer, adaptation and territorisation, but should also expand to creativity, excellence and pioneering at the international level, in order to gradually widen those spheres. One participant mentioned the issue of "knowledge management", and proposed the establishment of a guide and mechanisms for dealing with knowledge, not only for a specific ministry, directorate or individual, but also at the comprehensive societal level through the establishment of a public body for knowledge. These two proposals are considered important for the UAE in its quest for the transfer and localisation of knowledge. Pioneering in specific scientific domains is recommended for several reasons, due to the small population of the UAE and the lack of specialised citizens in many domains. As a beginning, the country can focus on a few specific priorities and then expand to other areas. As for the second proposal – to establish a body for knowledge – it aims at coordinating and unifying efforts so that the concerned institutions would not experience disconnection, miscommunication, disharmony or duplication of efforts in pursuing their objectives and strategies.

In addition to emphasising the importance of embracing the issue of knowledge management as a national project, the majority of the participants tended to consider change as leadership driven through its commitment to the transfer and localisation of knowledge. This was expressed by the participants as follows: "We are tribal people who follow their leaders" and "if the leader is committed, everyone is". These words can be explained in two ways: the first is that the leader referred to here is the leader of the country and the rulers, and there is no doubting of the commitment of the political leadership at the highest levels and its support for the knowledge transfer, localisation and production. Such commitment is most clearly evidenced through the Mohammed bin Rashid Al Maktoum Foundation, which was previously mentioned, and which will be

addressed in some detail in the last chapter. However, the research team conjectured that the leader referred to here is the "manager" at work, which raises concern. Some young people mentioned that their managers at work were not proactive, did not take the initiative and even impeded the transfer of knowledge only because it is something new to their management style. Hence, the demands of the youth that all managers and leaders be committed to the transfer of all new knowledge to the institution should not be ignored. It was further confirmed through the brainstorming session with citizen experts that work institutions, headed by a manager, sometimes stood in the way of aspiring members of the youth who tried to bring new ideas and knowledge.

The Importance of Youth Participation and Formation for Building the Knowledge Society: Between Ambitions and Limitations

Participants were aware of the youth's important role in the transfer and localisation of knowledge. They saw that "*young people are an energy which, if not exploited positively, will turn into a negative energy*". Accordingly, the youth should be relied on, trained and given the opportunity to lead in this role. However, the participants split into two groups when discussing the role of education in helping students and young people acquiring the knowledge and skills that facilitate their integration into the knowledge society and the transfer of knowledge. One group said that there was an imbalance between education outputs and labour market requirements; what students are learning was not significantly serving the labour market. However, the majority of the participants felt that the educational system faced real problems. This system, they claimed, should be "the source of knowledge transfer". The problems mentioned included the limited enrolment in some majors while others were very popular, such as media and management, whereas others were non-existent. Participants recommended that universities stop flooding the market with certain majors and invest in new subjects for students, provided they are required in the labour market. Some participants also pointed to the weak formation at university stages, to the extent that some *"reached university and cannot express their opinions or formulate their own ideas"*.

Scientific specialisation at university and for post-graduate studies is important when discussing the transfer and localisation of knowledge. A real transfer of scientific knowledge cannot take place without a considerable number of specialists. These specialists should explore new research issues and complete what specialists in other countries have started. Another controversial issue, as claimed by the participants in the brainstorming session, is that many students both female and male reach university without written communication skills. Although this may seem an opinion subject to negotiation, the field study supported it. Results showed that participants' skills in written English and Arabic were among the weakest cognitive skills. Youth in the brainstorming session were aware and recognised these weaknesses among their peers and, therefore, their viewpoints should be taken into serious consideration.

During the focus group session, participants also expressed that students did not plan for their majors or future careers. When asked "what will your profession be once you graduate, and what will you major in?" many responded with the following: "*wherever we get to work and get the best privileges*". Students should be better prepared to answer questions about specialisations while still at school, as it will help them think in different ways that are not solely focused on salaries. However, the reality of schools today does not allow students to do so. Once again, there seems to be a problem with young people's vision of the future. They are dominated by material considerations and the value of the salary. The importance of the salary in building and securing a young person's future and needs cannot be neglected, but the over-emphasis on income and the refusal to practice a certain profession

Some young people mentioned that their managers at work were not proactive, did not take the initiative and even impeded the transfer of knowledge only because it is something new to their management style

because of its income undoubtedly show that professions have turned into products (as the theoretical study indicated). On the other hand, we must not discriminate against a person who chooses the profession or job with the highest salary as family, society, school and university push students to do so. However, the country must not stand idly by on this issue but should raise the value of the professions related to knowledge, sciences and scientific research. Only then will larger domains of future careers be open to young people who will have the chance to actively participate in the establishment of the knowledge society and benefit from its outputs in the UAE.

The Development of Skills: An Important Necessity for Knowledge

The establishment of the knowledge society will not take place without reading, instilling a love to read, and without making reading a part of children and the youth lives

Some participants pointed out that students were in dire need of learning new skills. Such skills would help them in the future to continuously learn and develop their knowledge, transfer and localise it. Among these are also the skills of critical thinking and social intelligence. Supporters of this opinion pointed out that the students are not empowered to create their own line of thought as students are taught that *"his or her opinion should be that of the book… and what is written in the book is right... we even memorised mathematics lessons!"* This group noted that "*the child is exhausted by routine, and grows up hating books until they become the enemies*". And this is apparent with university students, because they "*do not read books, but memorise parts from the summaries and the presentations of the professors*". The establishment of the knowledge society will not take place without reading, instilling a love to read, and without making reading a part of children and the youth lives. The child or young person who has the same opinion as the book will not be able to produce new knowledge. Herein lies the importance of changing education views and teaching methods which is a complex issue not only restricted to the UAE, but to all other countries adopting relative standardisation in education. Educational systems following standard criteria, where both the teacher and the student are evaluated, will inevitably lead to a greater focus on the achievement of the teacher and the student who currently rely on memorisation to obtain recognition and scores and prove their achievements. The final chapter will discuss a proposed vision for dealing with this problem in the Emirati educational system.

An important way to help the youth master learning and thinking skills, in a manner that would enable them to transfer knowledge, is by cultivating an interest in reading. This is the priority for critical thinking. However, according to some participants, schools fail to take this into consideration. Throughout their years of study, students do not have the opportunity to bring new knowledge in, so how can they bring it in after working in a certain profession? As one expert puts it: "restricting students' intellectual abilities and defining their lines of thought hamper their ability to innovate and transfer knowledge and limits their future success".

One group of participants also pointed out the deficiency in student counselling services and the lack of sufficient awareness to help them in determining their "personal will" and "choices". Some also expressed the need to nurture the will and curiosity in children and teach parents about the importance of reading and providing children with opportunities to express their ideas, discuss them and develop their cognitive intelligence and foster their creative ideas.

Some participants noted the deficiency in national competencies in the fields of sciences and scientific research, adding that they do not imagine any knowledge transfer and localisation without national researchers and scientists. They noted that many citizens obtain high scientific degrees, such as PhDs, but then stop learning. They regard the degree as the end of the road and a qualification for a position. They also noted that there was a serious shortage of research centres as well as a general trend towards steering away from these domains.

Criticism of the Successive Educational Plans

Some participants feared that the educational system might give the impression that it is improving, while its outputs cannot compete with people who have received their education abroad. Nothing is more indicative of this than the adoption of successive initiatives, where some of these initiatives are even launched before the others end, and without carrying out an assessment that shows the impact, success or failure of its predecessor. This will be more evident when we discuss the brainstorming session with experts.

The Important Role of the Media

Some participants viewed media as one of the enabling and supporting elements for the dissemination of the knowledge-based culture in the country. According to them, the media plays an important role in shaping the mind-sets of young people. Some participants criticised the fact that the media copies American programmes, immersing young people in American culture, for example, more so than the Arab culture. Broadcasting programmes similar to Western ones is nothing more than a "copy and paste" process that will not contribute to breeding new knowledge and skills. Moreover, the content of these programmes is alien to the Emirati environment. Participants suggested reconsidering the media industry in the country, so that its role becomes more involved in motivating citizens to learn, highlighting the value of scientists and innovators, and presenting role models. Some participants also pointed out the issue of instilling patriotism in the hearts of young people through the media: "*Young people must maintain the achievements of their country... each individual should feel that he or she is an integral part of the development of the country as a whole*". Moreover, some considered that the role of the youth in the transfer and localisation of knowledge is linked to citizenship, patriotism and the sense of belonging to the homeland. One participant even considered that enabling emanates from being loyal to the homeland and aware of the future. Participants demanded that there be incentives for anyone who masters a particular domain in order to set an example for other citizens.

Activating the Role of the Private Sector

Some participants considered that private sector is required to integrate young people in companies and give them the opportunity to learn new skills and gain experience. Also, localisation in professions should not be limited to a rate or a number of citizens, it should rather be expanded to enable the transfer of knowledge and expertise to citizens. Knowledge is not only limited to the public sector or the private sector; there must be an intersection between the two sectors with regards to the transfer, localisation and production of knowledge. Non-governmental institutions in the country, or what is referred to by some as the "civil society", are also important in the transfer and localisation of knowledge.

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Outcomes of the UAE Workshop

Considering the importance of the efficient integration of young Emiratis in the knowledge transfer and localisation processess for the community as a whole, and in accordance with participatory principle that was adopted in the preparation of the report, a brainstorming workshop was held on December 12, 2013. About 35 stakeholders attended the workshop, including decision-makers and representatives of the sectors of civil society, the government and academia. A number of Emirati youth and experts also participated in the discussions and the workshop, in addition to a group of experts working in the field of knowledge and the knowledge economy.

Debates and discussions were focused on the most important related issues. Concerning the concept of knowledge localisation, participants felt that the issue should be regarded as a large system to be achieved within the community on many levels and by many institutions, including the Ministry of

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

During the workshop conducted for this report, his Excellency, the UAE Minister of Education, stated that His Highness Sheikh Mohammed bin Rashid Al Maktoum wanted the Mohammed bin Rashid Al Maktoum Foundation to be an incubator for the creativity of sons and daughters in the Arab region, and a platform towards the knowledge society, HH the Sheikh had requested more focused efforts in the area of empowering the younger generations to master and employ knowledge, and innovate sustainable solutions to face the challenges of knowledge in the Arab world. The Foundation stresses the importance of empowering the youth, by offering innovative initiatives to contribute to the preparation of a generation of future leaders and raise the aspired-for generation of knowledge-makers.

His Excellency the Minister stressed that with the "UAE Vision 2021", the Emirati people are looking for an even better future, with reference to the importance of bringing up a generation of good citizens who are confident of their abilities and able to work in the world of the future. The minister cited a series of proposals to achieve this goal, including:

- Providing advanced national curricula that go beyond the prevailing stage to the thinking stage and that promote higher skills and knowledge required for the future, while confirming that these curricula emphasise the Emirati values of national identity and social traditions;
- Providing the latest and most powerful scientific series in the courses of sciences and mathematics;
- Providing the latest technology, modern techniques and teaching methods associated with them;
- Continuing with disseminating large-scale implementation of the Mohammed Bin Rashid Smart Learning Programme, in accordance with a five-year plan. The Programme is currently being applied in 123 schools. The ministry counts a lot on this programme to enable the Emirati people to master the language of this era, which would enhance their role in building the knowledge society;
- Developing the academic and professional advising programme and developing a curriculum to enable young people to choose the right direction towards university and beyond. Raising awareness among young people with regards to the requirements of the knowledge society and the needs of the labour market, while showing them their responsibilities and their expected role in the sustainable development path of the country;
- Emphasising on the national identity in education, consolidating the Arabic language in the teaching methods, and nurturing pride in the heritage, culture and traditions;
- Partnering with various educational boards and relevant ministries and institutions concerned with the youth towards raising a generation of citizens who will lead the country to the knowledge society.

Education, the Ministry of Information and other community institutions. All of these institutions must work together in harmony to qualify young cadres of citizens to gain knowledge and then use it in the optimal way, disseminate it in the community, employ it and develop it. Perhaps this supports one of the intellectual foundations that we discussed in the first chapter of the report, i.e. that the transfer and localisation of knowledge should be regarded as a national project. The way expert citizens think with regards to the implementation of this project will become apparent later in more than one instance, through their proposal to establish a body that sponsors knowledge in the country and identifies the corresponding national priorities.

Clear Perceptions on the Subject of the Transfer, Localisation and Employment of Knowledge

The discussions noted that knowledge has complementary and cumulative properties, in the sense that the knowledge of other countries must be built on and benefited from. "*Cultural cross-pollination is important, and human beings have always worked on the transfer and exchange of knowledge through translation and exchange of scientists*". However, the process of the transfer of knowledge from other countries should be directed in favour of the production of a new knowledge specific to the society. This is when the process of localisation and employment takes place. The process of knowledge transfer must first satisfy the needs of the society and emanate from its culture, and then the localisation of knowledge would take place. After that, focus should be on the knowledge associated with the cultural context of the society and society should establish its own distinctive knowledge. If this does not occur, the community will remain in the orbit of other societies, looking at others, copying from them and regarding them as models.

In addition to the awareness expressed of the importance of knowledge, participants were also conscious of the link between knowledge and the economy, as well as the importance of diversifying the country's economy, without restricting it to the returns of petroleum products. They claimed that: "knowledge employment and production would entail a diversification of the economy, which should not depend on oil or other traditional resources. If this happens, the country would witness development in various fields, and will no longer absolutely rely on others, but will deal with them cautiously because it will have its own distinctive knowledge". The idea of cautiousness in economic dealing carries the meaning of economic competition. This is one of the development requirements and competition will not occur unless the UAE

is able to have something to add to the production of knowledge.

The Most Important Skills and Required Elements

Concerning the means of production of new knowledge for society, the discussions construced a framework based on strengthening five competencies in children and youth. These competencies would help them effectively integrate into the knowledge society so that they could contribute to the production process. When we examine these competencies, we find that they are a detailed review of some of the most important drawbacks that children and the youth in the UAE should dispose of to be able to move towards building the knowledge society. All concerned institutions (or the so-called enabling environments) should help them achieve this. The first competency is promoting the love of knowledge and the culture of achievement. Participants said knowledge is power, and those who possess knowledge have power; indicating their awareness of the issue of knowledge, its possession and production. "*Natural resources deplete, but knowledge is an inexhaustible wealth*". And the employment of this knowledge is what leads to the achievement. "*Today, I do not need a student graduating with honours if he or she does not know how to think... We want young people who enjoy knowledge and the ability to employ it, and if they do not know how to employ this knowledge, it will remain abstract and impossible to use. However, if the young individual was able to employ knowledge, he or she would be able to face the world at this stage*".

To achieve the knowledge skill, participants highlighted the necessity of promoting a culture of achievement among children at a young age. This means "*that we teach children how to set goals for themselves and strive to achieve these goals, without waiting for such things to be accomplished for them or for an adult to do them on their behalf*". The promotion of the culture of achievement is very important in the Emirati society, especially among school and university students. Participants felt that people in charge of education should consolidate a culture of achievement among students at a young age and lay the foundations of pride in the individual and collective accomplishment, regardless of the quality, which will come at a later stage. They asserted that the lack of confidence among some students in their ability to accomplish anything in Emirati society was linked to the students' love for scores and their tendency to obtain high scores, regardless of the means of doing so. For example, some pointed out that, in some student circles, the phenomenon of resorting to private commercial services to assist students in writing their research and projects was spreading. As such, how can the youth get motivated to work seriously on knowledge when such offices write their homework and assignments?

The second agreed-upon component in supporting the production of knowledge was the skill of social networking, "because whatever the knowledge you possess without social networking, it will not do you any good unless you can deliver it". A real cross-pollination of knowledge cannot occur without communicating and interacting with others or without understanding their different viewpoints and frameworks and accepting them. The skill of social networking is important in order to establish the knowledge society, and this is clearly obvious at university level. There is less social interaction between students and professors for many reasons. These could be due to the lack of self-confidence among some Emirati students or to the fact that teaching is often conducted in English, or for other reasons. This dimension also shows the importance of openness and acceptance of different points of view. And this is one of the skills required for the exchange of knowledge. The study showed in the first section of this chapter the extent of young people's need for these skills.

A real cross-pollination of knowledge cannot occur without communicating and interacting with others or without understanding their different viewpoints and frameworks and accepting them

According to the discussions, third among the components of the knowledge production and the establishment of the knowledge society was the promotion of labour-related values. These values are highly desirable among citizens. Participants in the workshop pointed out that the values

that govern citizens' work in developed countries have been a powerful factor in the rise of these countries. Some noted that young people take their monthly salaries for granted whether they work or not, and without any link to the level of productivity, and "therefore there is no incentive to work hard and no assessment of the efforts or a reward for diligent individuals". The latter is one of the arguments that do not call for work and for upgrading the knowledge and skills of workers. Young Emiratis should know that "institutions do not only exist so people work in them and get a job, but also for human beings to develop to achieve the bigger goal, i.e. the development of society". Participants noted the need to instil this value through universities, media and various institutions in society.

The fourth component is related to the value of the cultural identity. External knowledge cannot be localised per se, because it embodies components of foreign cultural values. According to participants: "Knowledge is a cultural product and it is not value-free". If the values carried by the knowledge are good and suitable for society, meaning if they are related to sublime human values, then there is no harm in applying them. "But if knowledge carries values that are hostile to the culture of a society and threatening to it, then we should be careful in transferring it, because this would be a threat to cultural identity. And just as we should open ourselves to the world, move within the framework of globalisation and keep up with development, evolution should not sweep away our culture and identity", and a balance must be established between the act of transfer and the culture and identity of society.

According to the participants, the last component required for proceeding with the processes of knowledge transfer is disabling the destructive social values that hinder it. Prevailing lifestyles in the Emirati society reinforce some negative values among the youth, such as materialism and consumption at the expense of other more humane values. For example, "we often face ads that promote consumption in search for quick wealth, such as winning a luxury car. How can we ask the youth to work and persevere on knowledge, while these ads tell them that they could collect quick money without getting tired or *working? If you foster a culture of quick profit, consumption and wealth without effort... this would not be in favour of the knowledge project*". The transfer, localisation and production of knowledge require time and great effort, and such negative values do not help young people; it is as if "*you are telling young people to move away from domains that require effort and time*". Hence, decision-makers should emphasise that work must be the basis of a decent life in the country, and knowledge should be the basis for development. Lifestyles of the youth should be more supportive and propel towards increased efforts and diligence. Media outlets should play a constructive role by not showing these negative values and supporting values of respect to knowledge and knowledge workers. "*Media outlets in their present state do not help in the transfer or dissemination of knowledge*". The process of knowledge localisation and production must be conducted in an integrated manner with the contribution of all institutions.

Fear of the Potential Negative Consequences of Openness and the Transfer and Localisation of Knowledge

The discussions revealed an evident issue, shared by some participants, regarding the nature of the knowledge to be transferred. Moreover, some participants were extremely worried about "domination" in the name of development or the transfer of knowledge. Meanwhile, some attendees expressed fear over the possible negative consequences of calling for openness and the transfer and localisation of knowledge. An attendee expressed this by saying: "*talking about development presupposes the existence of societies that need intervention in order to be put on a roadmap so as to move towards development... and this entails an assumption that these societies do not have knowledge, and that the major powers are trying to make them adopt a different "knowledge*". People who share

this opinion fear "cognitive domination" or domination in general under the name of knowledge transfer. Another important point, according to one participant, is the emphasis on the fact that "*we cannot assume that the Arab world does not have knowledge. We have a deep cultural and intellectual stock and we should not look at knowledge as a material that can only be transferred, but as moral ideas*".

However, on the other hand, some noted "*there are cognitive gaps in the Arab world that must be bridged*". Such gaps include those related to scientific research, publishing and patenting inventions. Speakers pointed out that the amount of money spent on scientific research was very low and not commensurate with its role in the development and employment of knowledge to improve the community. In this regard, some attendees noted that cultural heritage exists, "*but we do not produce knowledge*"; the publications from the Arab countries, books and research combined, are not equal to the publications of one developed country. "*Scientific research is underdeveloped, the amount spent on it is little, and this indicates that we can neither produce science nor knowledge*". Efforts shall therefore be maintained in this regard without fear of domination, because the transfer and localisation of knowledge, as participants previously noted, should go in accordance with the cultural trends and communal conventions.

Previous reports on Arab knowledge as well as international reports and local writings have pointed to the fact that there are many gaps in education and scientific research, which limit the ability of the Arab countries to transfer and localise knowledge. This was discussed earlier upon analysing the status of education and scientific research in the UAE. However, this does not mean that we are assuming that the Arab world does not have knowledge. It means that there is a clear gap that requires bridging through being open to others and learning from the experiences of developed countries in the fields of education, scientific research, knowledge production and the establishment of the knowledge economy.

Fear of Cultural Consequences

Also obvious among participants was the concern related to the transfer of knowledge in the humanities and a fear that this would infiltrate and threaten the cultural fabric of society. Some participants even exaggerated their fear, claiming that there were ideological prohibitions against the transfer of knowledge, or against new ideas sometimes, because "*they might change our children's system of thinking, or threaten faith and promote a culture of violence, consumption; and/or laziness and lethargy among our students. Such new ideas might even call for disobeying the authority of the parents and the father's will, leading to unhealthy behaviours*". One attendee felt that transfer of knowledge should not be limited to science and technology. "*Architects can build houses and buildings, but cannot build intellect... humanities are also the basis of progress in societies and the evolution of thought, not only applied sciences. Thinkers are the ones who teach the concepts and ideas that shape the society and draw its map. There is no harm in studying humanities and transferring them*". Another participant discussed the importance of universities accepting students in humanities based on their high school grades equivalent to that required for applied sciences, such as medicine and engineering. He argued that when they are accepted with lower scores than for other sciences, this contributes to the perception of inferiority to these disciplines despite their importance.

Fear of the knowledge effect on young people was mentioned more than once during the discussion and in several ways. There were also clear responses to this concern. For example, one participant said: "*this generation is open to knowledge which reaches it in various fields, so how can we supervise this matter so knowledge does not dominate our traditions and customs*?" Being over-cautious with regards to customs and traditions is understandable, but, according to one of the speakers, *"I am convinced that we have the most powerful religion and this religion constitutes a protection. If the true religion is instilled in young people with freedom, we must not be worried about them. Islam is tolerant in its values and practices, and helps in facing difficulties and challenges, whereas over-cautiousness and the*

Speakers pointed out that the amount of money spent on scientific research was very low and not commensurate with its role in the development and employment of knowledge to improve the community

permanent ongoing monitoring process is impossible and might backfire. We should not push our children to fear knowledge because they will integrate into the knowledge society whether we like it or not". Another speaker said that "*Arabs relied on other civilisations and the West copied from Arabs... so the enthusiasm for the transfer of knowledge should not be scary. Transfer is the axis of evolution in all civilisations, and nations cannot evolve without copying from one another; transfer is a goal that we must seek.*"

Disagreement over the Nature of the Required Knowledge

Discussions showed a disagreement among participants over the nature of the knowledge to be transferred and localised

Discussions showed a disagreement among participants over the nature of the knowledge to be transferred and localised. One of the attendees, a researcher in the field of knowledge, saw that the knowledge to be transferred and localised is one that is specialised and advanced, and not the prevailing knowledge provided by the curricula set by the Ministries of Education or Higher Education. It is rather the modern knowledge related to sciences, mathematics and manufacturing and production technologies. As for humanitarian or social knowledge, and in particular, knowledge that interferes with customs, traditions and culture, it already exists in society, and no cultural values should be transferred to it from the outside unless they promote the existing ones. This would take place by promoting for instance specific values that serve the establishment of a knowledge society, such as values of punctuality, professionalism, perseverance, accomplishment and social values that improve human behaviour, and promote tolerance, interaction, expansion of horizons, and acceptance of the views of others.

It must be noted here that knowledge, in the broad sense of the word as adopted in this report, is part of a society's culture or, alternatively expressed, creates a knowledge society not only at the science and knowledge level, but also at the level of values and skills related to the acquisition, transfer and employment of knowledge. This does not mean denouncing cultural heritage; if we are to localise new knowledge and related values, we must have "firm ground" to build upon. This also does not mean denying the existence of values in society. However, these values are not as evident, as they should to support the establishment of a knowledge society. What is meant by "ground" here is of course the prevailing customs, traditions and culture, which are to be enriched with new and virtuous cultural notions that advance them and society, notably in terms of work and production. Thus, the transfer of knowledge can be seen not only a transfer of sciences and technologies in all fields related to industrial development and production, it can also be seen as a transfer of social values that help and motivate people to work and be productive for this knowledge to become ingrained in society and in the minds of citizens themselves.

Arabic Language: The Incubator of Culture and Knowledge

An inferior look to the Arabic language does not serve the creation of a knowledge society, and the English language should not be given more importance than one's native language

The issue of language was brought up during the brainstorming sessions as well as during focus group discussions with the youth. Many participants argued that the localisation of knowledge cannot be accomplished without the native language, as many believe that people are capable of "*absorbing knowledge in their mother tongue more than in any other language, and no real transfer of knowledge can be made unless students learn it in their own language. Countries that have evolved were not hampered by their language*". In the same context, one speaker wondered, "*how can we build a knowledge society when we make young people look down on their language? An inferior look to the Arabic language does not serve the creation of a knowledge society, and the English language should not be given more importance than one's native language. The more our youth respect themselves, their country and their language and arm themselves with the appropriate knowledge, the more we would be respecting others. However, if we distort citizens' ideas, impose on them cultural masking, and bring them a knowledge other than their own, what would it be like then?*" However, agreeing on this point should not drive us away from helping children and young people learn and use other languages. Learning languages means opening up to and communicating with new cultures and knowledge, which is

absolutely essential for the Emirati society in order to transform into a knowledge society.

Reproaching the Educational Institutions

Some attendees considered that ever since the Ministry of Education was established to replace the Knowledge Authority, knowledge and its presence in the community has been neglected. They suggested the establishment of a special committee or body for knowledge as in the past. This is an essential point, because if we look at the transfer and localisation of knowledge as a national project, which institutions would be responsible for leading this project? What would be their role? In other words, if we leave the various institutions with their efforts uncoordinated, these efforts will be scattered and there will be more division than common ground for the transfer and localisation of knowledge as a first step in producing and putting knowledge into use and creating a knowledge society. This underscores the need to establish an authority for knowledge management at the government level to coordinate the efforts of all institutions and shape the relationship between them as will be discussed in the final chapter of this report.

The attendees reiterated the importance of education, which, once reformed, can help the whole society. They also expressed their rejection of the many pedagogical experiments that surprise them every year, which may not fit with societal values and which are carried out, in some cases, without adequate study or knowledge of what the other initiatives achieved. New pedagogical experiments are launched without conducting a prior objective evaluation of previous experiments in order to determine their strength and weakness points and learn from them, to the point that education in the country has become, according to them *"… a testing ground. We often adopt initiatives to make a reform in the education sector and copy other countries' experiments without first conducting evaluation studies to assess the other experiments to see whether they succeeded in enabling the youth to deal with knowledge and learning requirements*". This group of attendees also criticised a specific initiative that was launched without enough preparation, namely the use of iPads in schools. The discussants wondered about whether educators were prepared and trained to deal with new technologies. "Educational Fashion", as some of the attendees called it, is not enough by itself. Educational development should rather be built on new plans and studies. One of the discussants noted that "*the iPad issue is being given more attention than it should. The iPad is just a tool like books, and should be regarded exactly as our ancestors had regarded books; a way to facilitate learning, make it more available, and achieve more communication and information, and not as a substitute for classrooms and teachers. If we continue using the same teaching methods, even with the iPad, learning will not be achieved*". What matters here is to adopt new teaching methods that allow students to express themselves. "*Many students are frustrated because teachers do not accept their opinions, suggestions and questions. This leads to their capacities being wasted and to them not learning creative self-expression*". The participants' enthusiasm when talking about education is understandable as the Minister of Education said, education has many concerns that should be addressed and which are magnified when education is linked to the establishment of a knowledge society.

The attendees reiterated the importance of education, which, once reformed, can help the whole society

A Call for Better Organisation of Relevant Institutions

In addition to the big role that education plays in the establishment of a knowledge society, the contribution of the various institutions involved in the transfer and localisation of knowledge is a very important topic. The process of transfer and localisation of knowledge should not be addressed without considering the role that various types of institutions play. These are the institutions which are to put the knowledge outcomes to use and contribute to the introduction of new types of knowledge. And the question posed here is: how can these institutions contribute to the transfer and localisation of knowledge when each institution is working alone in isolation of others? Moreover, many of

these institutions are highly bureaucratic as many participants noted. Some participants suggested that a defined strategy be developed for the coming years, with clear objectives, to be followed and implemented by the various institutions. This suggestion confirms the importance of setting general national objectives and strategies for the transfer and localisation of knowledge, where all educational, research, cultural and media institutions as well as other State institutions have their share of objectives which they should strive to achieve. As such, all institutions work together to nurture Emirati citizens. This suggestion, no matter how reasonable it sounds, reflects the centralised nature of the State which watches over citizens and their future, as most of the participants believe that everything must begin with the State. There is no harm in the State developing a strategy and goals in order to unite efforts. However, there must also be initiatives and contributions from the various society institutions in the process.

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Creativity, Transfer of Knowledge and Labour Markets

The discussants raised an important point, which is that the current labour market hinders the transfer and introduction of new knowledge. Some attendees noted that the labour market "*imposes on us what to specialise in and what to do for a living… thus we cannot offer the knowledge we are capable of producing, because we are bound by the labour market and by working day to day.*"

Some of the attendees pointed out that institutions and the work culture represented an obstacle to creativity and new ideas. Whatever employees are used to doing is considered the path to follow, and it is very hard to break this cycle. The discussion pointed out to a fear of young people in general and of their ideas. Managers fear being replaced with young people and therefore see their new ideas as a threat. *"Many institutions that claim to support young people are highly bureaucratic and deal with the youth in a frustrating and conventional manner. As a result, those young people's ideas are not taken into consideration and their potential is smothered.*" Some of the attendees, especially the younger ones, noted that the "conventional" work environments in various institutions were preventing the transfer and production of knowledge. The problem facing the youth, as they put it, was that they cannot make their voices heard professionally by their superiors. Many stated that "*young people need to make their voice heard by superiors, just as was the case in the brainstorming session that was held in preparation for this report. Young people's ideas need to be nurtured, just like a seed: if you do not give it the care it needs, it will die*".

It was apparent from discussions that the institutions' negative role did not encourage the youth to innovate or to abandon traditional labour methods. "*When presenting any new idea [to your superior], you are faced with rejection. There is no promotion of cultural and scientific exchange through the encouragement of personnel to attend conferences and work with external or internal partners. Managers regard new ideas as though they have nothing to do with work. They have no desire to start anything new, and only encourage professional development in old traditional ways*".

Scientific Research and Entrepreneurship: Issues of Vision, Supporting Political Will and Hesitation in Practice

One of the discussants, a former professor at the United Arab Emirates University noted that "*organisers of technological and scientific research initiatives lack clarity in their vision when it comes to the success and failure of a business. Failure for them is both improbable and unacceptable*". As for entrepreneurs, "*success comes out of failure*". The issue, as he said, is not about funding, but about an integrated system for the establishment of a knowledge economy. "*Funding was not the main factor for success in the West, but the fact that the Western environment understands the nature of work in the fields of technology and scientific research. Here, we always go for extremes in our choices. We want either complete openness or complete radicalism*". Another point is that there is a gap between decision-makers and citizens. "*Leaders and decision-makers have an entrepreneurial spirit and*

a desire to develop and take the society to whole new levels. However, executives and CEOs who come second or third in the hierarchical order have a fear of implementing decisions and having to deal with budgets and initiatives. Projects aiming at supporting the youth have a serious problem, as decision-makers are afraid of dealing with budgets". Executives must be proactive and not let fear and dread of dealing with budgets hinder them or wait until young people's projects achieve success to give them funding. "*They do not realise that the business world is founded on new ideas, that only 20% of the ideas work, and that we learn from failures too*". The discussant called upon managers to enjoy courage and a risk-taking culture because both were crucial for creativity. Another group of attendees saw that fear, when dealing with budgets, was necessary. "*Fear from spending is rational. We should not spend money on anything, rather make sure first of all the seriousness of the idea. Budgets are controlled and are subject to evaluation. That is why we should not adopt just any idea without first conducting a feasibility study.*"

One of the discussants gave an example on the lack of understanding of the meaning of scientific research and how to deal with it. "*When I received funding, one of the funds asked me to shift my company into a profitable project within two to three years. This shows how little they know about scientific research. Scientific research is a living being that requires effort, and trial and error… There are obstacles that sometimes lead to pivoting and coping with new circumstances. The process involves a lot of exploration. It is not as some people think of it, "as erecting a building and starting to make money from rent overnight. Knowledge and awareness of work in the field of scientific research is totally different in our society than that in other ones".* The discussant added that "*institutions are not run appropriately as business entreprises that evolve and compete in the market with the mentality of an entrepreneur. Rather they operate with the mentality that they are governmental institutions that do not have a motive to compete because their budgets are guaranteed by the government".*

Several participants have emphasised the creation of a culture of support and empowerment for young people. We should not let the financial aspect and fear of failure stop us, because that will not create a proactive and creative generation. Establishing a knowledge society requires an integrated system that excludes fear, dread, conventional norms or bureaucracy. We should know, according to the tech-firms expert, that there is a difference between the transfer and production of knowledge. "*Typical projects that rely on franchise are so easy to implement, but even with the presence of such projects, we cannot claim to be producing knowledge. This is a transfer of knowledge. The production of knowledge means adding a local character to it, in the sense of reformulating the knowledge to suit the local community. The true mark of producing knowledge is adding something to the transferred knowledge and not just transferring it and using it as is*".

Youth Support Institutions

It became clear from the conversations that there is a conceptual confusion in terms of the presence of institutions that support the youth, such as the Ministry of Culture, Youth and Community Development, and others. These institutions never had among their objectives enabling the youth to transfer and localise knowledge. However, since such institutions deal with the youth, their presence has led to some confusion with some participants thinking that they can do anything or that the transfer and localisation of knowledge should already be on their agenda. This reflects a defect in the perception and simplification of the process of transfer and localisation of knowledge. Some of the attendees mentioned that despite the presence of institutions that deal with the youth and offer them various activities, no assessment of the impact of such enabling environments exists. There is no evaluation of the impact and benefit of these institutions' various activities on the potential development of the youth.

Enabling and Motivating Environments

In terms of enabling environments, participants said that financial allocations were actually present and there was no doubt about that. The UAE is a rich country; political will and clear political vision also exist therein. These two represent significant enabling characteristics of the environment

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for the transfer and localisation of knowledge. However, attendees also cited some elements that were absent from the environment, and which were needed for the transfer, localisation and production of knowledge. This point perhaps is just a continuation of the discussion on competencies, mentioned earlier, with a focus on enabling environments for the transfer, localisation, and production of knowledge.

Research Enabling Environment

On top of these necessary enabling environments is the scientific research environment. Discussants noted that "compared to the road infrastructure, the research infrastructure is very underdeveloped and that this is why we are running behind in scientific research. There is no body determining scientific research priorities, and despite the presence of the National Authority for Scientific Research (NASR), the State cannot carry out research in all knowledge fields. Other countries have a special Bureau for Innovation and Science that sets research priorities".

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The second enabling environment is the presence of Emirati cadres. "*Where are qualified Emirati cadres to deal with this aspect? Emirati professors barely make up for 5% of foreign professors in the country in tertiary and university education. What role do qualifications and incentives of the national cadres play in making our youth pursue this direction, especially since many graduate study researchers fall within the age group 19-29?*"

The third issue is scientific publications, which is a very important issue. "*Where are our distinguished scientific journals which address important topics in the country and deal with its issues?*" Scientific output is low in general. Then comes the issue of scientific publications. Research can barely be useful if not published and transformed into beneficial products. In this respect, one of the participants wondered, "*Where are the institutions that are concerned with research outcomes and that work on turning them into products? All around the world, civil society institutions and companies are in charge of this task, where after research is carried out and published, the society starts benefitting from it. However, the civil society and its role in this regard are fully absent. The State does not have any institutions whose role is to take research findings and turn them into tangible products that serve the community.*" In return, others believed that there was nothing wrong with scientific research and that the State produced good research. This might be due to the good financial situation of the State. Some assume that since the government is rich and can fund scientific research, then there is no problem in that regard or that the problem, if any, is simple and easy to solve.

The Weak Role of Civil Society

There is no doubt that the government has a role to play when it comes to the transfer and localisation of knowledge, as evidenced by the views of the discussants. Knowledge and its transfer, however, as some explained, form an integrated scientific system that serves the interest of society as a whole. Enabling environments, legislations and regulations should come together in this regard. "*However, civil society and its engagement with the public sector should also be given adequate attention. In other countries, civil society, with all its different institutions and associations, plays a primary role in this process; universities, R&D centres and companies are all part of this civil society. Civil society is extremely important since the public sector is always less capable than the wide civil society. Moreover, we can't rely solely on the government to do everything and neglect the civil sector*".

What can be deduced here is that professional civil institutions should be established to allow scientific and cognitive systems to develop. They should be supported by a set of legislations and regulations on work with knowledge, research and sciences. At the same time, we can see that the government has an important role to play here in drafting legislations, laws, rules and regulations that guarantee the availability of financial resources and the continuity of the process of the transfer and localisation of knowledge. The civil society issue is very important. The results of the quantitative

study show a lack of awareness among young people concerning the role of civil society and trade unions in creating a knowledge society as well as in the transfer and localisation of knowledge.

Investment in the Current Enabling Environment in the UAE

In our mobilising efforts, it should be kept in mind that the UAE is naturally a stimulating environment for the transfer and localisation of knowledge, given the existence of people from all around the world. Moreover, this not mean that the process of transfer and localisation of knowledge in the country should be done by citizens alone.

On the other hand, as one of the discussants expressed, "*We should question the extent to which citizens have benefitted from the E/smart government revolution. Their benefit from the technology and knowledge revolution is actually very limited*". What is meant here is to question whether the benefit to citizens in the knowledge field stems from their own work. "We are talking here about using applications developed by the society, rather than consuming imported technologies. There is a call for a law to be passed that empowers citizens cognitively so that they play an effective role in society, or for a national committee to be formed that works on two aspects. It should first focus on playing the catalyst for motivating citizens to benefit from knowledge and come up with products that draw from it. On the other hand, it should provide care and guidance to support citizens in their knowledge production". Finally, citizens must embrace knowledge and support the government. The idea that the government alone supports citizens and goes to them in everything will not establish the world of knowledge, for "*the government cannot spoon-feed knowledge to citizens*".

Conclusion

Based on the quantitative and qualitative field studies presented in this chapter, the following important points can be concluded:

- Emirati youth possess good levels of cognitive skills that enable them to actively integrate in the transfer and localisation of knowledge. This was reflected in the increasing average of the overall score that participating students from both genders received in the cognitive skills, achieving good scores in most of them. However, there were some discrepancies in the main components of this important indicator. Whilst the overall performance of the sample population was fair or even good for the skill of solving daily problems and searching for information, their performance in the written communication skill was within average, despite the great importance of the latter in achieving an active youth integration in the knowledge society. The technology use skill ranged between good and fair. The overall performance of the youth in the use of a foreign language (English) skill was average, denoting a shortage in the command of that skill in understanding and writing. The same applies for the use of the Arabic language, but to even greater extent.
- The sample representing the Emirati youth also expressed high possession rates for most of the values essential for active integration into the processes of the transfer and localisation of knowledge. Despite the need to carefully address this score as it might represent the values that the youth aspire to, and might not necessarily reflect their practices and behaviours, it still is a reason for true optimism. This might even be capitalised on towards enhancing the values orienting the youth's behaviour, in a way that serves the higher cause of achieving the active integration of Emirati youth in the processes of the transfer and localisation of knowledge.
- In parallel, the analyses showed a weakness of the youth in social and cultural effectiveness. The rate however was acceptable in the field of economic effectiveness.
- The focused work sessions and the brainstorming workshops have shown a clear enthusiasm of the youth in belonging, citizenship and pride in UAE and its achievements. This impression was

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also enforced in the field research which came to the same results, and in rates higher than the rest of the participating Arab countries.[6] This enthusiasm and belonging can be built upon, particularly with respect to instilling the concepts related to the foundations and practices of good citizenship (their scores were average, in the range of 55% of the final score), and in what strengthens to a great extent the possibility of active integration based on good citizenship and the rights and obligations it entails.

- The analyses also showed that the level of youth openness globally (reading, travelling) was weak, where the average score of students was in the range of 33% of the final score. Also, 65.1% of the sample said that they are not exposed to the translated foreign books relevant to their specialties, which indicates a topic that should be addressed with greater efforts, whether by the development decision maker, or the youth themselves. It was also striking that 70% of the participants in the sample indicated that they were not aware of any existing youth institutions related to the transfer and localisation of knowledge. This indicates the necessity of expanding the promotion of programmes and institutions for the youth in the UAE, so that they can benefit from the tremendous opportunities the state is offering them.
- As expected, impressions of Emirati youth regarding the enabling environments were excellent in general. More than 95% indicated that providing the opportunity to use the internet contributes, with an acceptable or great effectiveness, to the youth preparation for the transfer and localisation of knowledge. The same applies for the availability of electronic interaction means (32.6% of acceptable effectiveness and 59.2% of great effectiveness). The Emirati youth also showed trust in the capacity of the working authorities in UAE, including media (43.5% of acceptable trust and 43% of full trust) and civil society organisations to contribute in integrating the youth in the processes of the transfer and localisation of knowledge, as well as the vocational associations. The youth believes the government is making huge efforts in supporting them; most of the participants in the sample indicated that the government has made "a very big contribution" or "a big contribution" in this field. However, this should be examined in light of the results of the social and cultural effectiveness of the youth, which were relatively low, showing that the youth might not be acquainted with the role of the civil society organisations, the associations and other governmental bodies, and therefore do not use the potential and opportunities these institutions provide, as required.
- It is remarkable that almost a quarter of the sample deemed "the contribution of foreign investment projects to the transfer and localisation of knowledge" as "weak" or "absent'. The same goes for the contribution of economic institutions to funding research and "the contribution of the private sector to the advancement of research". These answers, which were confirmed through the brainstorming and focus group sessions, direct attention to these three important elements while planning the transfer and localisation of knowledge.
- Responses of the youth on issues related to the transfer and localisation of knowledge raised numerous issues. These answers were positive with regard to certain dimensions, and indicative of their awareness of what knowledge, as well as its transfer and localisation, can offer. Such answers include "approving" or "highly approving" that the localisation of knowledge "will contribute to stimulating the creativity and innovation activity", and that this will contribute to "stimulating economy". This is in addition to acknowledging the positive impact of knowledge on important life issues such as "reducing unemployment", and that "the transfer and localisation of knowledge in UAE, as in the Arab countries, is a vital issue for the future of these countries", and that "this can contribute to enhancing

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the economic competition".

- Furthermore, some remarks can be examined. The explicit approval rate on the argument "the issue of the transfer and localisation of knowledge is not among current youth concerns" was 38.4% of the total sample. In addition, the focused interviews and the brainstorming session indicated the existence of some fear among the youth, and possibly to a greater extent among older participating experts, that the transfer and localisation of knowledge might entail subordination to the West or change the cultural characteristics of the UAE, including the suppression of identity or prejudice against the Arabic language. This result calls for attention and action towards increasing community awareness of the importance of constructive openness and intercommunication, and the transfer and localisation of knowledge as a developmental necessity benefitting the society, while focusing on the fact that openness does not mean the loss or suppression of identity. Focus should also be on strengthening the Arabic language as an incubator for culture and knowledge, without neglecting the importance of translation and learning foreign languages as a requirement that goes along with supporting the Arabic language, towards achieving productive cognitive openness.
- One of the most important positive issues that can be exalted, is the youth's concurance of availability of one of the most important knowledge society pillars; freedom. The vast majority of students declared that the basic freedoms were present at a score of "excellent" or "good" (freedom of expression and opinion, 98.4%, freedom of principles, 98.2%, and social justice, 96.4%). This constitutes a positive orientation and an enabling environment that helps the youth in the transfer and localisation of knowledge. This positive orientation can also be seen in opinions about customs, traditions and gender equality. The majority of the youth considered these to be incentives for the transfer and localisation of knowledge, and believed them to be present in the Emirati community. Concerning job opportunities for the youth, and despite their importance to the transfer and localisation of knowledge, 43.1% stated they did not exist. This situation requires attention.

Results of the focus and brainstorming sessions with experts and stakeholders supported these orientations and raised many important relevant issues. These qualitative studies revealed a number of issues whose main points can be summarised as follows:

- Concepts of the transfer and localisation of knowledge and openness were supported among the Emirati youth, who were noticeably excited about the process of the transfer of knowledge. This was considered an important step leading to "*the codification of knowledge for the UAE environment*", in the sense of "*its modification and formulation in the local form in a way that suits the culture and identity of the society*".
- As for the localisation of knowledge, participants expressed that the concept was relatively new to them. The majority thought that localisation here meant that knowledge would be localised to the Emirati people themselves, with focus on the importance and necessity of maximum profit from the residents, as well as the transfer of knowledge and experiences they have had; this included "documenting" them in order to preserve and accumulate them, so that the country would not remain "*always dependent on an external source*". The youth also confirmed that citizens should excel in many vital areas and not be restricted to transfer and localisation of knowledge, and to be creative and pioneering on a global level, there after they can gradually expand in these areas. The youth stated how important it was that the topic of knowledge management become a national project, with an awareness of the importance of the participation of the youth and their preparation for building a knowledge society.
- It is to be boldly noted that the young people themselves considered youth "*an energy that, if not used positively, becomes*

The youth stated how important it was that the topic of knowledge management become a national project, with an awareness of the importance of the participation of the youth and their preparation for building a knowledge society

a negative energy". Therefore, they should be counted on, trained and given the opportunity to lead in this role. A group of them said there were discrepancies between education outputs and the requirements of the labour market; what students are learning does not significantly serve the labour market. The majority of the participants stated there were real problems in the educational system, which they considered "*the source of transfer of knowledge*". Such problems included the scarcity of some specialisations and the relative abundance of others; while others were non-existent. Some participants also noted the decline in the academic level of male and female students at university.

- The youth noted the need to develop their cognitive skills in an appropriate way for the requirements of the knowledge and globalisation age. Some participants mentioned that students were in dire need for learning new skills to help them in the future, for continuous education and increasing their knowledge, towards transferring and localising it. Many of them criticised the existing educational plans. They feared that the educational system might give an impression of progress, whereas its graduates cannot compete with those graduating abroad.
- Participating experts and stakeholders demonstrated a good understanding of issues of knowledge transfer, localisation and employment, while confirming that these issues should be addressed in a systematic and comprehensive manner and at all levels of society and through numerous institutions, including the Ministry of Education, the Ministry of Information and other institutions. All these institutions should work together in harmony in order to form the young citizen cadres to acquire knowledge diffuse it in society, and employ and develop it.
- In addition to awareness of the knowledge topic and its importance, participants have shown an awareness of the connection of knowledge with economy, the importance of diversifying economy in the state, and not being restricted to the returns of oil products. In order to achieve the competency of knowledge, participants deemed it necessary to foster a culture of achievement among children at a young age. It means *teaching children how to make objectives for themselves and strive to achieve them, instead of waiting for things to be done for them or for adults to do them on their behalf.* "*Fostering a culture of achievement is very important in Emirati society, particularly among school and university students*".
- The second competency which participants agreed that it supports the production of knowledge is the social networking. A real pollination of knowledge can never take place without communication, interaction with one another and understanding different opinions and intellectual frameworks and accepting them. Another component of the production of knowledge and the establishment of a knowledge society in UAE – according to the discussions – is related to enhancing work-related values. Such values are in high demand among citizens. A fourth component is related to the value of cultural identity. Participants mentioned a dire need to establish a balance between transfer and the community culture and identity, along with disposing of any destructive social values that do not serve the transfer and localisation of knowledge, such as the prevalence of consumerism and materialism at the expense of human values.
- It was obvious throughout the discussions that some participants had issues regarding the nature of the knowledge to be transferred, with a strong fear of subordination in the name of development or transfer of knowledge. However, some participants considered that "there are knowledge gaps in the Arab world that have to be bridged", among which are research, publication and patent gaps.
- There was almost consensus over the necessity of strengthening and supporting the status of the Arab language as an incubator of culture and a recipient of the transfer and localisation of knowledge, while emphasising that

The youth noted the need to develop their cognitive skills in an appropriate way for the requirements of the knowledge and globalisation age

the localisation of knowledge cannot be achieved without the mother tongue. This should not entail neglecting other languages and using them to open up to and communicate with new cultures and knowledge.

- There were also calls for better organisation of concerned institutions. The idea raised here acknowledges the importance of the existence of general national objectives, or a strategy for the transfer and localisation of knowledge. Afterwards, each institution in education, research, culture and media, as well as other state institutions should take its share of responsibility towards achieving these objectives. This way, all institutions work together to nurture the aspired-for Emirati citizen.
- Participants argued that labour markets and institutions in their current situation did not support creativity and the transfer of knowledge. Some participants pointed out that the institutions and the labour culture therein represented an obstacle to creativity and to presenting new ideas. What the workers are used to is considered the trend they should follow, and it is often hard to break the routine.
- It is necessary to work on supporting and organising research, entrepreneurship and youth welfare. It became evident that there was confusion between these roles; the hesitation in real world practices on one hand, and the vision and the supporting political will on the other. Discussions indicated a perplexity and lack of harmony across the different concepts related to the existence of institutions to support the youth, such as the Ministry of Youth, and the work of these institutions in the area of knowledge transfer and localisation.
- As far as the enabling environments are concerned, everyone confirmed their appropriateness and existence. Everyone also confirmed that financial allocations exist, as well as political support and a clear political vision. These represent important characteristics of enabling environments for the transfer and localisation of knowledge. However, some participants indicated gaps in the research enabling environments, including support for creativity, research and publications among citizens, in addition to the deficiency in transforming research outcomes into tangible products to serve society.

In conclusion, the need to clarify the objectives and work towards the transfer and localisation of knowledge was reflected and emphasised throughout the discussions. Participants expressed this in various ways: "*For our society to be a knowledge society, we must know where it is, where we want to go and how. We must not reject opening up to others*".

This leads us to the discussion of strategies regarding knowledge transfer and localisation. Participants deemed that any strategy for the transfer and localisation of knowledge must begin with building the human being. Education is to be given top priority; it should be the top priority of the executive authority, with the objective of raising a human being capable of dealing with the future. "*The most important factor in the transfer and localisation of knowledge is education, and the basic step in education is how to achieve balance between memorising, understanding, critical thinking and balance between the access to information, obtaining it through the internet, and the local production of knowledge*".

"We must engage the youth in the means of knowledge transfer and in decision-making, in a sense that the youth are partners in creating the future. And we should not rely solely on the institutions working on behalf of the youth. We must believe in the youth and in their capacities and prepare them for the process of knowledge transfer and localisation."

One of the female speakers stated that if we do not engage with and integrate the youth, they will integrate using their own means, for the youth today are an energy: "The youth have integrated without us asking them to do so, without knowing it or noticing it. ...I was chatting with a female student on Instagram. I thought she was an old lady and was talking to her in a mature way. At the end she displayed her picture and I discovered she was a child... There is an infiltration of the youth into the world of adults, we must reach out to the youth and deal with them using the logic of current times... Let the youth become partners. They are energy. If we do not reach them it will be a negative energy... We should integrate with the youth and not distance ourselves from them, nor them from us."

Excerpts of participants' comments during the brainstorming sessions

Endnotes

1 UNDP and Mohammed bin Rashid Al Maktoum Foundation 2012. (Reference in Arabic)

2 UNDP and Mohammed bin Rashid Al Maktoum Foundation 2012. (Reference in Arabic)

3 UNDP and Mohammed bin Rashid Al Maktoum Foundation 2012. (Reference in Arabic)

4 Knowledge and Human Development Authority 2009. (Reference in Arabic)

5 Ministry of Culture, Youth, and Community Development 2009. (Reference in Arabic)

6 See the General Report of the Third Arab Knowledge Report 2014, UNDP and Mohammed bin Rashid Al Maktoum Foundation 2014.