

## ARAB KNOWLEDGE REPORT 2010/2011

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

## YEMEN CASE STUDY





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*As part of the general methodology of the Arab Knowledge Report 2010/2011, a number of Arab countries were selected to represent the reality of the Arab cognitive state and how it deals with its youth as young people make up about half or more of most Arab societies. Soon the youth will be integrated into the production and construction workforce. The current study seeks to discover how prepared Yemeni youth are to access the knowledge society. Yemen was chosen among other case studies as an Arab country that has a wealth of future opportunities. However, it is also a country in need of serious development, and faces numerous challenges that affect the efforts to lead its people and economy towards the knowledge society. Due to increased recognition of the significance of quality education and improved efficiency of the output of educational institutions as fundamental for preparing future generations for the knowledge society, calls for intensified education reform in Yemen are currently growing.*

*This section of the report includes a general explanation of the methodology of the study, a description of knowledge status in Yemen, a review of the preparation systems for Yemeni youth for the knowledge society, an analysis of the readiness of Yemeni youth to engage in the knowledge society through reviewing the outcomes of field surveys and workshops, and finally the action mechanisms for the preparation and empowerment of Yemen's youth.*

*The study is based on methodologies which diagnose knowledge status and define the best ways to accelerate the movement towards the knowledge society. The theoretical part of the study relies on official documents, studies and reports of various social, economic and political issues in Yemen, and the relationship of these issues with the challenges and needs for the desired knowledge society. In addition, some background papers, covering a number of aspects of knowledge in Yemen, were used.*

*In an attempt to engage with, and seek out, the opinions of a large number of stakeholders in Yemen for this study, a comprehensive workshop was held in Sana'a on August 4th, 2010, entitled 'The Arab Knowledge Report 2010/2011: Yemen Case Study'. The varied views and opinions of decision-makers regarding the status of knowledge in Yemen, and the challenges and opportunities for youth preparation for the knowledge society were reviewed. The workshop included a group of intellectuals, educators and stakeholders from different societal and professional groups: young people, NGOs, media, Yemeni universities, the Ministry of Education and the Ministry of Planning and International Cooperation (MPIC).*

*A field survey on the readiness of the youth in Yemen to access the knowledge society was also conducted. The survey sample was comprised of Yemeni youth who had finished the 11th grade, including male and female students of both scientific and literary streams in public and private high schools in Sana'a, to test their skills and measure the values gained by graduates of the public education system. The survey also included a sample of high school teachers of both genders.*

Yemen is a country in need for serious development, and faces numerous challenges that affect the efforts to lead its people and economy towards the knowledge society





# CONCEPTUAL INTRODUCTION: 'KNOWLEDGE' AND 'THE KNOWLEDGE SOCIETY'

## INTRODUCTION

*The revolution of technology, information and telecommunications in developed countries has created an expanding dependency on modern technology, which is reflected in the rapid growth of their economies. As a result, a need for change in education systems has developed. Individuals need to be provided with new skills that are compatible with the emerging requirements of technology and knowledge. This transformation has been accompanied by new terms such as the 'knowledge society' and 'information society' to describe the features of modern societies based on knowledge and technology. The Arab Human Development Report 2003 (AHDR) defines knowledge as the tool for expanding human options and abilities, achieving freedom and a decent life, overcoming poverty and deprivation, building prospering societies, and as the cornerstone for achieving comprehensive human development.*

*The first Arab Knowledge Report 2009 expands the concept of knowledge to include the cultural, cognitive and scientific stock of a society in a context that governs all human development activities, aimed at providing Arab societies with options for progress and freedom. Therefore, knowledge, with its various processes of acquisition, production, indigenisation, and deployment, is at the same time a means and an end to equally reach the different segments of society. The Arab Knowledge Report 2009 adopts the triad of knowledge, development, and freedom, emphasising the firm correlation between these elements.*

*The Arab Knowledge Report 2009 concludes by developing a plan for future action in order to create the knowledge society in the Arab world. It is based on three complementary fundamentals: expanding freedom, responding to development needs*

*and intercommunicating productively, demonstrating how central the building of human capital is to all these processes. Therefore, the preparation of future generation has been the theme of the second Arab Knowledge Report 2010/2011.*

## REVIEW OF THE STATUS OF KNOWLEDGE IN YEMEN

### HUMAN DEVELOPMENT: THE BROADER FRAMEWORK OF THE KNOWLEDGE SOCIETY

The concept of development has been expanded from bringing about economic growth, high growth rates, the welfare of individuals, and the provision of services to include human development that targets the individual. The concept's focus is on the person as the means to and an end of development. Human development means increasing and expanding options for people, who are considered the core of the development process itself. If the social and economic conditions are right for knowledge acquisition, an appropriate environment will be created allowing high economic growth by investing resources in knowledge. This leads to new production of knowledge that accordingly accelerates economic growth. If intensive knowledge is not a central determinant of economic output, the community demand of knowledge will be zero, and subsequently the creation of an effective knowledge system will be impossible (UNDP, in English, 2003).

The Arab Knowledge Report 2009 expands this concept to show that building a knowledge society means disseminating, producing, and using knowledge in all aspects

*The concept of development has been expanded from bringing about economic growth, high growth rates, the welfare of individuals, and the provision of services to include human development that targets the individual*

TABLE 4-1-1

**Yemen Status in Human Development Reports\***

Description	2007/2008	2010	Change
Human Development Index (HDI) rank	153	133	+
HDI value	0.508	0.439	-
Life expectancy at birth	61.5	63.9	+
Fertility rate	6.0 (2005)	4.7	+
Percentage of adult literacy % (> 15 years)	54.1	60.9	+
Enrolment in public education %	55.2	-	
Gross national income per capita (equivalent of purchasing power \$)	930	1160	+
National poverty line		41.8 (2006-2007)	
		< 1.25\$ 17.5%	
Population below poverty line %		< 2\$ 45.2%	
		Multidimensional poverty* 52.5	

Source: UNDP website, 2007/2008 and 2010 HDRs, 2009 and 2010 HDRs  
 \*Multidimensional poverty is a new measurement used in 2010 HDR to measure the percentage of people who lack a number of education, health, and economic indices.

*In the current world, knowledge is simultaneously the tool and the product; therefore, it is the gateway for reform that consolidates knowledge and turns it into behaviour and method*

of community activity; the economy, civil society, politics, and private life, to ultimately achieve the welfare of the Arab societies. In addition, the report indicates that knowledge is flourishing in societies of advanced social and economic development and is mainly supported by freedom. In the current world, knowledge is simultaneously the tool and the product; therefore, it is the gateway for reform that consolidates knowledge and turns it into behaviour and method.

### **THE STATUS OF HUMAN DEVELOPMENT IN YEMEN**

In 1990, the Republic of Yemen reunited its two parts, divided due to the traditional 'Imamate rule' in the north and the British occupation in the south. The newly-born country has shouldered the burden of developing the two former states, creating more complex challenges over the past two decades. Yemen faces several common challenges of developing countries such as population growth, limited resources and slow economic growth, in addition to new, serious challenges such as extremism, piracy in local and regional waters, climate change, and the impact of the global financial crisis, disrupting efforts for achieving

sustainable development.

### **DEMOGRAPHY**

Yemen is ranked as a country of low human development, with a Human Development Indicator (HDI) of 133 out of 169 according to the HDR 2010. However, Yemen has high population growth, with a 3% increase according to the Population Census 2004. Statistics show that the population has increased from 19.7 million in 2004 to 22.5 million in 2009, with an increase of 2.8 million between 2004-2009.<sup>1</sup> During the next 24 years, the population is expected to double if the rate of increase remains unchanged. In Yemen, the number of children is about 9.6 million, and they will become part of the production power during the next 10 years adding to the national labour force and surpassing the absorption capacity of the national economy.

The large development gap between rural and urban areas is another developmental issue (Yemeni rural and urban populations are 73.7% and 26.3% respectively). Many within the rural population, especially young people, move to the cities for better opportunities, expanding unplanned settlements and overloading their infrastructure and

services. In addition, large segments of the rural population are still deprived of basic services. Electricity services cover the needs of only 42% of the population. About 32% of families in Yemen faces severe food shortages (MPIC, 2010 A).

## HEALTH INDEX

As for health, despite efforts to expand health care services, real improvement remains low. From 2005-2009, in every 100,000 live births, 370 mothers died. The fertility rate decreased from 8.1 in 1990 to 5.1 in 2009. In 2008, the percentage of people using safe water resources was below 62%.<sup>2</sup> One third of the population (34%) are not covered by health care services, with an obvious disparity between rural and urban areas.<sup>3</sup>

## PROGRESS TOWARDS THE MILLENNIUM DEVELOPMENT GOALS (MDGS)

Yemen is ranked as an off-track country which means that it will be unable to achieve the MDGs by 2015. Despite achieving the primary education goal and combating some diseases during the last two decades, progress towards many goals is less than required, particularly those relating to the indices of gender equality and the mortality rate of under-fives. The performance on some goals has declined,

especially those relating to poverty reduction, the decrease of the maternal mortality and the provision of safe water.

Challenges that hinder the achievement of goals on schedule are highlighted by the most recent MPIC report for measuring the MDGs progress in Yemen in 2010. The wide-scale need and the large financing gap are the most prominent problems. The actual total expenditure of local and foreign resources is less than 8.6% of the required need. To achieve the goals on time, Yemen needs about \$45 billion to finance the eight MDGs.

## ECONOMIC GROWTH

The global financial crisis, rising food prices and the Yemeni political situations have affected economic growth rates. However, the economic growth trends in the last three years have shown good performance given the hard economic and financial conditions in Yemen. In 2009, the gross domestic product (GDP) at fixed prices increased by 4.7% (MPIC, 2010 B).

## POVERTY

Yemen is among the poorest countries in the MENA region, with 47.6% of the population living on less than \$2 per day in 2007. While the 2005 poverty survey showed Yemen's success in reducing the number of people living below the national poverty line from 40.1% in 1998 to 34.8%

*Yemen is ranked as an off-track country which means that it will be unable to achieve the MDGs by 2015*

TABLE 4-1-2

Indices	MDGs Progress			
	1990	2004	2008	2015
Percentage of population living on less than \$2 per day (%)	..	46.6 (2005)	47.6 (2009)	23.5
Underweight children aged less than 5 years (%)	30 (1992)	42.9 (2005)	..	15
Net enrolment rate in primary education (%)	52.7	62.5	69.8	100
Ratio of female to male in primary enrolment (%)	44.6	70.6	74.8	100
Under-5 mortality rate (%)	122	102 (2003)	78.2 (2006)	40.6
Maternal mortality rate per 100,000 live births (%)	..	365 (2003)	..	87.8
Percentage of people who lack a public water supply (%)	65.1 (1991)	..	52	32.6

Source: UNDP and MPIC, 2010

*Economic conditions and growing development challenges force resources to be allocated mainly to food provision and combating local and global economic fluctuations that threaten the national economy*

in 2005, reports indicate that the last global food crisis has undermined this progress. From 2005-2008, the poverty rate rose again (MPIC, 2010 A). Many political strategies have been adopted to reduce poverty and boost economic growth; including giving priority to heavy labour investments in all economic sectors, with an emphasis on rural areas; expanding the financing mechanisms and programmes for offering loans to small companies and micro enterprises; empowering poorer groups, rural women in particular; developing and implementing a national strategy for food security in Yemen; and directing government spending towards infrastructure and basic services to meet the needs of the poor (Saleh Al Solamy, in Arabic, 2010).

Economic conditions and growing development challenges force resources to be allocated mainly to food provision and combating local and global economic fluctuations that threaten the national economy. Therefore, education development receives limited resources, despite attempts to allocate a high ratio of expenditure to it. Here a question arises: In such an economic situation, how can we keep track of building a knowledge society and enabling the human capital which can shoulder the burden of developing a new economy?

## **GENERAL STATUS OF KNOWLEDGE IN YEMEN**

### **MEASUREMENT AND DESCRIPTION OF THE STATUS OF KNOWLEDGE IN YEMEN**

In all development plans, Yemen confirms the importance of education, training and skill development, as first priorities. The vision of building the knowledge society is available, the Strategic Vision 2025, which outlines Yemen's goals and ambitions over 20 years (2005-2025), stresses the building of a knowledge economy and society. The united country has witnessed great progress in the movement of culture, information, and knowledge due to the

relative democratic atmosphere, political and party plurality, and the expansion of political and social freedoms compared to pre-unification. Many civil, independent and party-affiliated newspapers have appeared. Intellectual and cultural institutions have flourished, creating a cultural movement in the civil society, enriched by the political transformation and the increase of party competition. However, media and cultural speech is sometimes characterised by enthusiasm and even stress. Political and ideological tones have overpowered cultural and development issues. Intellectual products are subject to censorship. The cultural, intellectual and art activities in state-owned institutions are often under the control and direction of the authorities, putting all cultural tools such as printing, media, and communication means in the hands of the authorities.<sup>4</sup> On the other hand, publications and the cultural and political speeches of opposition parties tend to introduce opposite or unique views, marginalising other voices.

## **KNOWLEDGE INDICES IN YEMEN**

### *KNOWLEDGE ECONOMY INDEX (KEI)*

As part of the Knowledge Assessment Methodology (KAM), prepared by the World Bank, Yemen has low indices, according to the KEI. KAM measures the readiness of a country to become a knowledge economy through four pillars: Economic Incentive and Institutional Regime, Innovation and technology adaptation, Education and training, and Information and Communications Technologies (ICT) infrastructure. 140 countries have been measured according to this scale from 0-10.

The transformation to the knowledge economy in Yemen still requires great efforts on multiple fronts. Despite Yemen's slight improvement in KEI, Economic Incentive and Institutional Regime, and

Innovation, there is a decline in Education and ICT. Yemen's KEI (2.2) is less than the average of MENA's (5.4) and is next to last among Arab countries.<sup>5</sup>

Yemen's third Human Development Report (HDR, 2004), states that poor economic, social, and cultural structures pose a serious challenge for the requirements of the knowledge society in Yemen. The information, cultural, and educational development needs the introduction of the technology of communication, information and the internet, involvement in the information industry, updating educational technology, and linking educational output to the labour market. Meanwhile, Yemen needs to continue to improve its health and education services, infrastructure and living conditions. Knowledge building should have three directions:

1. Information Transfer and Communication; through developing the necessary infrastructure, building information and communications networks, drawing up policies and preparing cadres who are capable of using their abilities in knowledge production.
2. Education Formation and Establishment; through focusing on the policies and institutions of human resource preparation such as schools and universities, and adopting quality education that develops the person culturally and cognitively and is linked with societal needs.
3. Cultural Originality and Enlightenment;

through global communication and familiarity with our heritage to build a self-renewable culture able to cope with information and communication development.

### INFORMATION TECHNOLOGY

In the Digital Opportunity Index (DOI)<sup>6</sup> for 2005/2006, Yemen ranks low. It ranked 16 among Arab countries and 128 out of 181 countries worldwide. Its DOI was 0.28, less than the international average (UNCTAD and the International Telecommunication Union (ITU, 2007).

The Public Telecommunication Corporation; a government company, offers land lines and data communications services via DSL and ISDN. The private sector, along with a government organisation offers mobile phone services. Table 4-1-4 illustrates the telecommunications services and numbers of users in Yemen.

The number of public internet cafes, except those available in NGOs, training centres, universities, schools, and institutions, has been estimated to be about 898 (up to the survey year, 2008). Internet cafes have spread rapidly in urban areas where the required infrastructure was available.

What follows are the efforts that Yemen seeks to provide for information and communications technology:

- Establishing a National Information Centre to be responsible for implementing, managing and operating

*Yemen's third Human Development Report (HDR, 2004), states that poor economic, social, and cultural structures pose a serious challenge for the requirements of the knowledge society in Yemen*

TABLE 4-1-3

#### Measurement of the knowledge status in Yemen according to KEIs

	2000	Most updated data (2009)	Change
KEI	2.03	2.2	+0.17
Economic Incentive and Institutional Regime	2.12	2.66	+0.54
Innovation	1.55	2.76	+1.12
Education	2.14	1.79	-0.35
ICT	2.32	1.67	-0.65

Source: The World Bank Database, KAM, 23 May 2011 [http://info.worldbank.org/etools/kam2/kam\\_page5.asp](http://info.worldbank.org/etools/kam2/kam_page5.asp)

TABLE 4-1-4

### Number of Subscribers in different telecommunications (2007-2009)

	2007	2008	2009
Local phone	1,021,988	960,588	996,981
International phone	74,116	92,643	107,993
Mobile phone	4,348,264	6,445,033	8,312,773
Internet	205,613	305,762	452,132

Source: CSO website, Annual Statistical Book 2009 <http://www.cso-yemen.org>

*The lack of knowledge and its slow development leads to poor productivity and diminishes the opportunities of development in a country*

a national comprehensive information system that connects information centres in various sectors and institutions. It will be operated through a national information network.

- Introduction of competitive internet providers in Yemen.
- Adoption of an IT strategy and policy in the Republic of Yemen and allow multiple mobile phone carriers to operate to prevent a monopoly.
- Connecting the country with fibre optic networks.
- Establishing a city of information technology and communications with a nationwide modern fibre optic network for analogue input.
- Establishing a Public Institute of Communications, associated with foreign institutes and specialised companies, to provide various advanced training programmes.
- Establishing a centre for Innovation Development to support creative projects and sponsor talent and innovations.

Among the most serious challenges that faces IT dissemination in Yemen are:

- Poor command of foreign languages.
- The purchasing power of most people is too limited to afford computer technology and its requirements.
- The low presence of technology and information in curricula and government education institutions due to limited capabilities and little emphasis on it within education plans (though, the situation in urban schools is better).

- IT investments are not exempted from taxes on profits leading to rising IT costs (they don't benefit from the facilities given to investment, and the increase of customs tax which raises IT costs).
- Limited coverage in the countryside, where about 75% of the population live, due to the geographically harsh nature of the mountain areas containing mountain ranges causing barriers, and the high cost of service coverage in such areas.
- Poor education outcomes, insufficient interest in scientific research, and the weak coordination between the socio-economic development requirements and the education output (Sharaf Eldin, in Arabic, 2007).

### INNOVATION AND SCIENTIFIC RESEARCH AND ITS LINK TO PRODUCTION

The lack of knowledge and its slow development leads to poor productivity and diminishes the opportunities of development in a country (AHDR 2002). However, research experience, knowledge accumulation and practice result in innovation, creation and original production. The AHDR 2002, highlights the critical situation of scientific research in the Arab world indicating that: allocated funds are limited, a clear Arab scientific strategy for research is absent, databases for Arab researchers are unavailable, coordination of pan-Arab research institutions are poor and funds to support, promote and finance research and study are unavailable. Compared to GNP, Arab spending on scientific research is the lowest worldwide. In addition, the development outcome of Arab scientific research does not match the expenditures and is weakly linked to production. As a developing country that has massive political, economic, and development pressures, Yemen faces the Arab scientific research dilemma.

In the past decade, scientific research

has received much attention. Many research centres of government universities have been established. Since 2008 based on established selection criteria, the President of the Republic's Award for Scientific Research has been granted across many disciplines. In addition, the Innovation Award for Young People is annually granted to young people of both genders for their innovations in arts, science, sports, and others. A scientific research budget has been allocated to every university, either from public funds or internal resources (MPIC, 2010 C).

Financing is among the numerous challenges facing scientific research. Only 0.05% of the gross national income (GNI) is usually spent, by the government, on scientific research. Most of this funding is spent on items that have no relation with scientific research. In addition, the contribution of the private sector in supporting research is lacking due to the absence of innovative researchers who can provide services to this sector (Yemeni Shura Council, Committee of Education and Scientific Research, 2010).

There is a focus on the expansion of research, both strategically and academically. Many research centres have been established to enlarge the strategic, economic, and social scope of research. About 30 science magazines are published by Yemeni universities in addition to a number of

academic research centres. However, they suffer from limited funds. Examining the research projects in various universities and research centres, it is obvious that strategic planning and evaluation are required nationwide so the research fulfils the needs of the country (World Bank and the Republic of Yemen, 2010).

However, the cultural and knowledge publication is very weak either on the intellectual elite or academic level. Following are the biggest challenges facing cultural publications and knowledge exchange in Yemen, as reported by one of the studies (Ahmed Ali Al Haj Mohamed, in Arabic, 2009).

- The absence of a comprehensive future vision to create a complete system of knowledge and information; in terms of production, deployment, storage, retrieval, distribution and marketing.
- Knowledge production institutions (universities and research centres) focus on theoretical education without finding new applications for knowledge. Cooperation among the institutions for knowledge spread, documentation and application is weak.
- Translation movement from live languages is largely absent, except for some limited individual attempts.
- Universities and research centres depend upon reproducing and publishing knowledge produced by industrially

*There is a focus on the expansion of research, both strategically and academically. Many research centres have been established to enlarge the strategic, economic, and social scope of research*

BOX 4-1-1

### Example of the private sector's contribution to knowledge development in Yemen

As an example of the private sector's support to spread cultural and scientific activities, the Al-Saeed Foundation for Science and Culture has taken an interest in the cultural, scientific and knowledge activity in Yemen through sponsoring creative works. A large number of creative events are held annually; such as art and photography exhibitions, artistic events including cinema, theatre and the art of caricature. Weeks dedicated to art and the cinema are organised in partnership with foreign cultural centres and book fairs. Launched with 5,000 titles,

the Al-Saeed Public Library now has around 100,000 titles. It offers services for people with special needs, and has expanded to cover all governorates through 76 libraries and a comprehensive cultural centre in Hadhramaut. Al-Saeed Foundation for Science and Culture has also launched the Al-Saeed Annual Award for Scientific Research. It allocates a fund with an annual budget of \$100,000 to support scientific research in six scientific disciplines. Awards are granted for proven research based on the criteria of efficiency and excellence.

Source: The website of Attagamua Newspaper <http://www.attagamua.net/index.php?action=showDetails&id=1688>, accessed on 15 May 2011

- advanced countries.
- Public and private business and production organisations rely on using or reproducing information and knowledge models to facilitate economic tasks.
- A real trend of training, meaning continuous retraining in all institutions in society is absent. Training is only regarded as a temporary remedy for urgent and important needs.
- The infrastructure of IT and communications for the knowledge system is poor.

### *INFORMATION ACCESSIBILITY*

Among the most apparent requirements of the knowledge society is a free and comprehensive information accessibility for all members, the availability of an advanced IT and communications infrastructure along with the legal bases that protect the rights and secure free and transparent information access. In Yemen, internet use and information access has been growing. Most government, political, partisan, educational (schools, universities, and institutes) and civil society organisations have their own websites and periodically post reports. The National Information Centre (NIC) offers free information services. It collects information from different sources, including the government and academic organisations, reorganising and storing them to provide a database for users. The government has published information about government tenders on the NIC. In addition to their research production, many specialised research centres currently make efforts to post reports, studies, and information on their websites.

The communications sector in Yemen has been increasingly growing. The number of online news websites have increased and created an effective interaction and expression space for visitors. Recently, the number of blogs has also increased, creating a virtual social network for journalists,

politicians, intellectuals and young people of both genders. In addition, the number of users of social networks have been rising. However, online information access to the majority of Yemenis is subject to the challenges of communications and basic infrastructure. Having a computer is unaffordable for many. In a positive step towards better communications growth and a larger internet access on a wider geographical scale, the provision of internet services via land lines has been free since 2010, with no monthly fee, and at the rate of an ordinary phone call. Internet censorship is still a controversial issue. Many websites are blocked for social and security reasons including some news, political and cultural sites.

### *EDUCATION AND HUMAN RESOURCES*

Since its unification in 1990, Yemen has considered education as the basis for renaissance of the new country. Swift efforts have been exerted to unify the Yemeni education system and expand educational enrolment for all school age children. The Constitution of the Republic of Yemen states that primary education is compulsory and free, with no discrimination for both genders. However, due to political, economic and social challenges and conditions resulting from the incorporation of two systems of different political ideologies to form the Yemen of today, no comprehensive strategies for educational reform have been prepared till up to the turn of the new millennium. Yemen relies on human resources in its development drive, as it is the most densely populated state in the Arabian Peninsula, which constitutes a challenge and dilemma for development efforts. Nevertheless, this dilemma can be a national wealth, if the investment in human capital becomes a priority and efforts are focused on it. There has been a quantitative expansion in the number of educational institutions, such as schools,

*Internet control is still a controversial issue. Many websites are blocked for social and security reasons including some news, political and cultural sites*

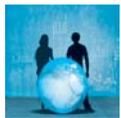
universities and institutes; however, this was accompanied with improvement in quality (depth and pace). High school enrolment rate among young people has been targeted, but the wide spread of the population and the tough geographical nature of the country undermined efforts to progress and develop in this area. Therefore, it is necessary to define the elements of the desired knowledge society in Yemen and the means for achieving it.

### **THE MODEL OF ARAB FUTURE GENERATIONS WHO ARE CAPABLE OF ACCESSING THE KNOWLEDGE SOCIETY**

In its theoretical section, the current Arab Knowledge Report 2010/2011 develops an outline of a typical type of Arab youth capable of entering the knowledge society. The model is based on a group of required skills, such as analytical and critical thinking, creativity, decision making and problem solving; technical skills such as computing and use of modern technologies; learner-related skills such as hard work, persistence and desire to learn everything new; enabling environments, including educational, home, and community settings in general, intellectual empowerment and freedoms; and the necessary infrastructure for the knowledge society and learning (see the introduction of the General Report). All elements of this typical system will be reviewed and compared later (see Chapter 5) with the scheme outlined by a group of Yemeni experts and intellectuals. The outcome of a field study on a sample of twelfth graders will be presented to check the availability of these components; skills, values and enabling environments, and to understand the gaps.

*The high school enrolment rate among young people has been targeted, but segmentation of the population due to the tough geographical nature of the country undermines efforts to progress and develop*





# THE EDUCATION SYSTEM AND THE PREPARATION OF FUTURE GENERATIONS FOR THE KNOWLEDGE SOCIETY

## INTRODUCTION

*Having reviewed the general conditions of development and knowledge in the previous chapter, this chapter will address the situation of education, its indicators, and environment, its ability to provide the youth with necessary skills and abilities for accessing the knowledge society.*

## EDUCATIONAL DEVELOPMENT IN YEMEN

In the 1960s of the past century, after the September 1962 revolution in the north, and the October 1963 revolution in the south, Yemen expanded the spread of official education. Formal education organisations were established and policies developed in the two separate Yemeni states. In 1963, the first education laws were issued. Before that time, a limited number of schools were supervised by the rulings of the two Yemeni states (Imamate rule in the north and British occupation in the south). Education was limited to the few wealthy, especially in cities.

Since the start of formal education and over the past 30 years, Yemen made good efforts in making official education more accessible for all, resulting in high rates of enrolment at all educational stages. The illiteracy rate had decreased in 2004 to reach 45% from total population, compared to 90% in 1973. There is great ambition to provide high quality education though it is hindered by economic and demographic challenges. 1.8 million children are not

enrolled in school, as most of them live in rural and remote areas (The World Bank and the Republic of Yemen, 2010).

## EDUCATION GOALS AND THEIR RELATION TO PREPARING THE FUTURE GENERATIONS FOR THE KNOWLEDGE SOCIETY

Education in Yemen is based on a unified national system for all enrolments in public and private schools, subject to the supervision of the Ministry of Education. Schooling within the public education system lasts 12 years and is divided into two stages; primary education (grades 1-9) and higher education (grades 10-12), with two departments of science and literature. Specialisation starts in grade 11. After unification in 1990, numerous efforts have been made to unify the education system and curriculum.

The Law of Public Education defines the educational goal as the formation of “a good citizen of integrated personality” through the acquisition of a number of capabilities, values, and general directions that moulds a citizen’s personality. This includes the ability to contribute to the creation of an educated and productive community, and achieve comprehensive cultural, social, and economic progress of the individual and the country; confirming the individual’s responsibility, respecting the rights of others and collaborating and promoting research and studies,

*The Law of Public Education defines the educational goal as the formation of “a good citizen of integrated personality” through the acquisition of a number of capabilities, values, and general directions that moulds a citizen’s personality*

*Despite the clear basic principles and goals of different educational phases, there is a gap between the regulations and laws and the actual application, adversely affecting the ability of the education system to provide comprehensive and high quality education*

institutions development, and deepening teachers' systematic scientific teaching approaches. This vision targets the preparation of a learner that is capable of being active in a productive society, and ensures comprehensive development for the people and the country, in harmony with the vision of the knowledge society, particularly in terms of highlighting values, research, development and scientific thinking that are the tools of knowledge production and that should be provided for the youth through education. The general goals of education in Yemen open doors to reach the knowledge society. Similarly, the transitional goals of curriculum can be built upon; however, their application poses a challenge in keeping the large theoretical gates that are opened by the general objectives to access the knowledge society (Al Mekhlafy, in Arabic, 2010).

## **THE EDUCATIONAL STAGES**

Law No. 45 of 1992 of Public Education defines the basics of the education system in Yemen as follows:<sup>7</sup>

### **EARLY CHILDHOOD/ PRESCHOOL**

This phase prepares children for the next stage of formal education. It is informal and optional, in which the private sector plays a large role, particularly in the urban areas.

### **PUBLIC EDUCATION STAGE**

This is divided into two stages:

**Primary Education:** A unified and compulsory public education for all students in Yemen of enrolment age: 6 years and last for 9 years.

**Public Secondary Education:** A three-year phase following primary education offers the option of joining either the literary or scientific streams in the second grade of secondary education.

## **TECHNICAL EDUCATION AND VOCATIONAL TRAINING (TEVT):**

TEVT offers many disciplines to choose from depending upon the talents and capabilities of students and allows direct access to the labour market.

## **HIGHER EDUCATION/ UNIVERSITY:**

Students with a Higher Secondary Certificate or an Intermediate Technical Diploma can attend to complete their specialised theoretical and applied studies. Within the qualification frameworks and institutions, university education targets the balance between social demand and development needs. It manages a framework that embraces technical and scientific developments, develops and follows up on the outcome of research, and adapts it to the needs of the society.

Despite the clear basic principles and goals of different educational phases, there is a gap between the regulations and laws and the actual application, adversely affecting the ability of the education system to provide comprehensive and high quality education. This will be noted upon in the presentation of the indices of education enrolment and quality in the different stages of study. Due to the existing systems, higher education enrolment lacks the flexibility that allows learners to choose other courses, hindering life-long education and encouraging students to leave school early as a result of administrative policies and enrolment practices. The TEVT, for example, does not allow access to university, even for excellent students, and the same applies to graduates of community colleges.

## **EDUCATION STAKEHOLDERS IN YEMEN**

Many official bodies are responsible for carrying out and supervising education in

Yemen:

1. The Ministry of Education supervises the public education of both government and private primary and secondary phases. It also houses the Literacy Authority that is responsible for adult education and literacy.
2. The Ministry of Technical Education and Vocational Training (TEVT) oversees technical education, vocational, industrial, commercial and agricultural training.
3. The Ministry of Higher Education and Scientific Research manages government and private university education, and centres for research and studies.
4. Some authorities have roles that affect the education system through the budget (the Ministry of Finance) and recruitment (the Ministry of Civil Service and Insurance), or through allocating subsidies and foreign loans (the Ministry of Planning). However, they have no direct supervision over educational institutions.
5. The High Council of Education Planning is a research supervising body that is responsible for periodic reports and statistics.

They may seem like different supervisory organisations that work in parallel, but in fact, each works independently, with its own strategies, budget, and plans. Hence, it is necessary to adopt an extensive strategic approach to control the different educational systems in order to unify their

visions of the required education output to meet the current and future needs of development.

## EDUCATION QUANTITATIVE INDICES IN YEMEN

### PRIMARY EDUCATION

According to a recent report, public education enrolment totals about 6 million male and female students. In the school year 2010/2011, about 750,000 students were enrolled in primary school in 16,000 schools in different Yemeni governorates. The number of educators and teachers is 260,000.<sup>8</sup> Such figures suggest that enrolment rates in Yemen have experienced great increases during the last 20 years due to the expansion of the education infrastructure.

The table shows that the enrolment rate of males and females in primary education in 2008/2009 was 75.4% of the 6-14 age group, i.e. the age that corresponds with primary education. Male enrolment rate has increased to 84.5% while female enrolment rate was at a lower rate of 65.7%.

Some recent reports indicate a decline in male enrolment rates due to poverty increases in certain areas, and a better female enrolment rate in primary education as a result of the policies that have targeted girls in rural areas in particular, including a tuition exemption for girls, conditioned financial incentive programmes, and a school nutrition programme (The World

*According to a recent report, public education enrolment totals about 6 million male and female students*

TABLE 4-2-1

**Enrolment indicators in the various educational stages in Yemen**

Stage	Survey Year	Student No.			Enrolment Rate		
		Males	Females	Total	Males	Females	Total
Kindergarten (KG)		13,684	12,208	25,892	0.56%	0.50%	0.53%
Primary Education	2008/2009	2,498,676	1,828,775	4,327,451	84.5%	65.7%	75.4%
Secondary Education		374,317	206,512	580,829	46.6%	26.9%	36.95%
TEVT		11,203	1,306	12,509	2%	1%	1.1%
University	2007/2008	169,067	66,905	235,972	18%	7.5%	13.2%

Source: Hamoud Al Seyani, background paper for the report

Bank and Republic of Yemen, 2010). However, there are problems that affect the rates of school completion, failure, and moving up to the next grade that need serious comprehensive solutions.

## SECONDARY EDUCATION

In the academic year 2008/2009, enrolment in secondary education for both males and females was 36.95% (Table 4-2-1).<sup>9</sup> In recent years, secondary education has been expanded in terms of the number of students and schools built. Some believe that this increase in public secondary education has affected other types of secondary education. Secondary education is still linked to the academic nature of university education rather than to the needs of development. All of the above make it necessary to reconsider the education philosophy; introduce various forms during the coming years; review and develop the curriculum content of secondary education and balance its theoretical and applied aspects; prepare and qualify teachers; and provide the schools with their basic needs such as labs, educational aids, and buildings. Schools lack guidance and educational services that help students of both primary and secondary education choose the specialisation that matches their capabilities, preferences, needs, social, economic and health conditions, serves their society, and meets the needs of comprehensive development.<sup>10</sup> In this context, we should refer to an experimental activity of the Ministry of Education to establish a professional guide for students of both primary and secondary stages. Though still in the testing stage, it is a positive step to bridge the gap between schools and other educational and vocational organisations.

The improvement in the enrolment rates of both primary and secondary education has been the product of endeavours to implement the timetable of the Primary

Education Strategy over less than a decade. The progress can be seen in:<sup>11</sup>

**Expansion of infrastructure:** The numbers of classrooms and teachers have increased. Many schools across Yemen have been equipped and furnished for educational and training settings, especially central schools used for training and as information centres.

**The adaptation of financial and other in-kind incentive programmes:** Encouraging the enrolment of students from poor families and those with special needs, through the provision of school bags and uniforms; tuition exemption for male students in grades 1-3 and female students in grades 1-6 of primary education; and the conditioned financial incentives for girls from poor areas.

**The increase in the social demand for education:** Through raising awareness in local communities of the importance of education via different means of media and religious discourse; promoting community involvement in the education process through parent boards in the majority of schools. As part of the Comprehensive School Development Programme, the Yemeni Ministry of Education has expanded the role of schools in planning, implementing, following-up, and the evaluation of various educational issues within the schools.

**Focus on students with special needs:** Providing educational needs such as wheelchair ramps in all schools and learning aids for blind and deaf students.

Despite the efforts made in education in Yemen, the impact on raising the enrolment rate is still less than expected due to many reasons, most of them are out of the control of the Ministry of Education; these include:

- Continuous population growth, which resulted in an insignificant enrolment rate
- Increased food prices along with the high rates of poverty have changed the priorities of Yemeni families, making food and clothing a priority over education.

*As part of the Comprehensive School Development Programme, the Yemeni Ministry of Education has expanded the role of schools in planning, implementing, following-up, and the evaluation of various educational issues within the schools*

## TECHNICAL EDUCATION AND VOCATIONAL TRAINING -TEVT

Technical Education and Vocational Training started later than the general education. Due to intense focus on the development of public education, the increase in the number of schools and the rise in enrolment rates, a relatively negative opinion has been formed of the TEVT. It is regarded as an option for those too poor to join public education and those who have failed to achieve good enough grades to complete their higher education (Badr Al Akbhary, 2010). Recently, the TEVT has been receiving attention for its expansion and plans to furnish TEVT institutes in different governorates. There are about 27 government TEVT institutes and 12 civil institutes, which are not governed by the Ministry of TEVT but are under the administrative control of various ministries and organisations.<sup>12</sup> According to 2007-2008 statistics, about 25,098 students have been enrolled in the different centres and institutes. TEVT aims to prepare and qualify a technical and vocational labour force for work in the industry, commerce, and agriculture areas, and provide them with the technical and scientific skills to cope with the developments of these areas. (Republic of Yemen, High Council of Education Planning, 2009).

Compared to public education, the enrolment rate in the TEVT is much lower, with 1.1% enrolled among the TEVT age groups. The male enrolment rate increased to 2% while female enrolment doesn't exceed 1%.

Opportunities for TEVT graduates to join higher education are severely limited, causing reluctance to enrol. Technical and community colleges put a lot of restrictions on the registration of TEVT graduates due to their limited absorption capacity, discouraging TEVT enrolment. The World Bank Report 2010 mentions that TEVT is more expensive than public education due to its technical needs and high tech labs for different disciplines.

The most prominent challenges that face the TEVT are the inconsistency between its output and the needs of the local and regional markets of skilled labour and professional technicians, in addition to the challenge of achieving TEVT quality, and sources of financing.

## HIGHER EDUCATION

Yemen has about 14 government and private universities, mainly based in the major cities, with branches in towns of the governorates.<sup>13</sup> Recently, many universities have been expanded in terms of premises and equipment. Some new universities have been built in a number of governorates. A decline in the number of government university enrolments has been noted due to many reasons. As a result of the flexible enrolment conditions, if compared to government universities, secondary education graduates join civil university education, with 54,073 male and female students registered in 2007/2008 (Republic of Yemen, High Council of Education Planning, 2009). Recently, it has been notable that some students do not complete their university education as it does not meet their future ambitions. The unemployment rate among university graduates has increased, especially graduates of the humanities that offer limited job opportunities, and who have a 67% enrolment rate, compared to 33% for science departments.<sup>14</sup> On the other hand, wealthy families seek to enrol their children in private universities that do not need high grades and don't limit the options of disciplines.

The challenges of higher education in Yemen include:

1. The curriculum of university education does not complement the modern advances of science and technology and responds poorly to the changing needs of the labour market. Both the theoretical and practical aspects of studies need to be balanced and reflected by the hours of practical training.

*Recently, it has been notable that some students do not complete their university education as it does not meet their future ambitions*

*A large gap can be seen between the needs of the labour market and the education output so only a small portion of graduates are embraced, especially those with a specialisation in communication and maintenance*

2. Study curricula are based mainly on summaries and booklets instead of textbooks written by the education committee members.
3. Lectures are commonly used as the main method of learning and teaching in universities, followed by discussion, researching and reporting. Methods stimulating creative thinking such as problem solving, investigation, work groups and projects are used less.
4. Opportunities for practical application and field training are limited.
5. The interaction of the private sector to determine its needs from graduates and the provision of training during study is limited.

### **ENROLMENT CONDITIONS AND FLEXIBILITY IN EDUCATIONAL STAGES**

In primary education, there are no limitations on enrolment except reaching the age of six. As for university education, secondary education graduate enrolment in public universities is postponed by one year. As part of two policies approved at that time, some males were expected to attend the National Defence Services, while others, including females, would teach in order to cover the shortage of teachers and also for the 'Yemenisation' of education.

Many issues emerged from forbidding secondary education graduates to directly enrol in government higher education institutions. The knowledge output of secondary graduates is basic. There are no alternatives for the students to gain skills and abilities unless they are wealthy enough to afford enrolment in private institutes, training institutions or private universities (this is according to unofficial documents waiting to be issued by the Ministry of Education). University enrolment conditions include a waiting period from the issuance of secondary school certificate (between 1 to 4 years); and a final score of no less than 70%, and even sometimes 80% and 90% for

top colleges. In addition, some colleges have admissions exams that reduce the number of students chosen even among those who get high scores in the secondary stage.

### **QUALITATIVE INDICES FOR EDUCATION STAGES**

Due to the challenges facing education, the low learning achievements of students in different educational stages and the disconnection between the education output and the labour market needs have been increasingly discussed. The following are some of the studies that have investigated the level of primary students' learning achievements:

1. The Monitoring and Learning Assessment (MLA) survey was carried out in 2002 and 2005, targeting grades four and six in primary education in four subjects: science, maths, Arabic language, and social skills.<sup>15</sup> The findings showed a slight improvement in the scores of students in 2005 compared to 2002, with an average of 50% in the four subjects, except for social skills which had an average of 60% (Tawfeeq Al Mekhlafy, background paper for the report).
2. The Trends in International Mathematics and Science Study (TIMSS) was conducted in 2007 for grade four. The six participating Arab countries came last among the 36 participating countries; with Yemen in last place. Yemeni students scored 224 in maths, less than the international performance average (500) and the Arab average (332). In science, they scored 179, less than the Arab average (324), (UNDP, 2007). In a serious attempt to address the quality of education, Yemen will take the TIMSS tests in 2011, regardless of the criticism that such international evaluation may bring to the society.

As for the TEVT, Yemen is working hard to improve and expand it. A large gap can be seen between the needs of the labour market and the education output so only a

small portion of graduates are embraced, especially those with a specialisation in communication and maintenance (GTZ, A study of TVET Sector, 2008, in English). Moreover, the recurring low rate of secondary and university graduates reflects the need for developing education quality and effectiveness to meet the needs of the market.

In higher education, enrolments in humanities and social arts departments outnumber those in applied science departments. This is due to the limited number of science programmes offered by universities, compared to those offered in humanities and art departments. University students of humanities and social arts have increased from 30% in 2003/2004 to more than 67% in 2007/2008, the highest in the region. Such numbers do not match the students of science departments in secondary schools who exceed the numbers of students in arts departments. Many major secondary schools (for males in particular) have closed literature departments due to a lack of popularity among the students (Hamoud Al Seyani, background paper for the report).

A study has outlined many reasons for the low quality of education, including:<sup>16</sup>

1. Primary students have weak basic skills due to weak teachers. The outcome of student test results in maths and science (TIMSS) indicated that their low achievement was due to their poor command of reading and writing skills.
2. The extensive accelerated expansion of education negatively affects its quality. With limited financial and human resources, the country attempts to respond to the increasing demand on education, impacting the quality of education.
3. In urban areas, primary and secondary classrooms have high numbers of students. About 50% of students study in classrooms with more than 50 students. In rural areas, there is a shortage of educational materials and capacity, along with low numbers of students in

classrooms (average of 23 students). Thus affecting the quality of learning.

4. Expansion of parallel education in government universities to increase their financial resources. However, it is offered by the same staff who teach the public courses, which impacts negatively on improvements to the public education system.
5. Actual learning hours are low due to the high rate of teacher absences. In April 2006, a survey was conducted on a sample of schools, and approximately 19% of teachers were absent on the survey day, with 3/4 of them absent without notice. The Ministry of Education has taken serious steps to control teacher absences, such as publishing information about the issue and its consequences and taking severe action when needed (including payment deductions for absence without permission). Positive results have been noted, with teacher attendance at 85%. However, the actual time of learning and education (69%) is less than government expectations. It may be much less than this, given the absence of students.
6. The Ministry of TEVT has adopted a competency-based policy towards the curriculum, but this has not been accompanied by teacher training to apply it in classrooms. TEVT's connection with the labour market's needs is fragile. TEVT does not concentrate on gaining industrial experience. Practical and life skills do not constitute part of the students' educational experience, and TEVT schools and universities have a severe shortage of libraries and computers. Currently, the TEVT facilities are being improved and expanded.

*The Ministry of Education has taken serious steps to control teacher absences, such as publishing information about the issue and its consequences and taking severe action when needed*

## **METHODS FOR INSTILLING SKILLS INTO THE YEMENI EDUCATIONAL SYSTEM**

### **THE CURRICULA**

The curricula for basic and secondary

*Appropriate education material that helps both the teacher and learner is rare, making the educational content hard to understand, and forcing some teachers into dictation and encouraging memorisation-based studying*

schools provide students with a strong foundation of skills and information acquisition. In terms of planning, they have a good level of efficiency and effectiveness. Curricula documents are available for each subject separately, including the curriculum guidelines, learning plans and objectives, and listing the content and skills in detail and in clear order. Most of the curricula are based on learner-centred exploration. However, the curricula are not actually applied in this way. There is a conflict between the curriculum and its required interactive teaching methods due to the poor qualifications and training of the teachers. Appropriate education material that helps both the teacher and learner is rare, making the educational content hard to understand, and forcing some teachers into dictation and encouraging memorisation-based studying. As for the curricula of private secondary schools, the theoretical nature is dominant, providing students with the basics to prepare them for higher education. Higher education institutions take in about one third of secondary graduates. The curricula of secondary schools are blamed for the lack of recruitment and lack of social skills, information technology skills, and problem solving skills that qualify graduates to successfully enter the labour market. As a result, confidence in the qualifications and abilities of secondary school graduates to directly engage with the job market has been reduced (The World Bank and the Republic of Yemen, 2010).

The sector of curriculum and orientation centrally develops school curriculum documents for primary and secondary education. Analysing the number of classes for different primary and secondary curricula, it is noted that the Arabic language, Islamic subjects and maths, in the secondary stage, come first in both the departments of science and literature respectively, followed by department-specific subjects, i.e. science classes for the science department, and social subjects for the department of arts.

English language comes last. Though important, this large quantity of theoretical and art subjects, when compared to science classes and languages, does not serve the need for the student's acquisition of thinking, analysing, and exploration skills because the curricula is dominated by theory.

As part of the preparation for this report, a field survey was conducted to survey the teachers' opinions regarding the school curriculum that they teach. They did not unanimously agree that the current status of the curriculum prepares students for the future (29.9% 'totally agree' and 36.4% 'somewhat agree') nor provides students with basic skills (28% 'totally agree' and 53.3% 'somewhat agree'). Less agreement was recorded concerning the questions about the curriculum's ability to handle scientific advances and address problems of everyday life. The disagreement varied from 42.4% (35.8% 'disagree' and 6.6% 'totally disagree') and 36.4% (30.8% 'disagree' and 5.6% 'totally disagree') respectively (see Table m4-1 in the Appendix). Therefore, this percentage of teachers in the capital Sanaa believes that the curriculum does not adequately respond to the components of social skills and knowledge aspects required for the knowledge society.

## **FOREIGN LANGUAGE AND COMPUTER SKILLS**

The absence of a high command of foreign languages and computer skills is a dilemma for both job seekers and public, private and foreign employers. In government schools, the teaching of the English language starts in the seventh grade at the primary stage and before that in a number of experimental schools. In the secondary stage, some schools offer German and French as well as English, especially in the major secondary schools in urban areas. Private schools tend to have English departments for all stages,

providing the students with a chance to master English. They also gain computer skills and have access to IT and more information than their peers who have less command of the language. Similarly, there is a difference between rural and urban areas regarding the learning of foreign languages and computer skills, due to the limited capabilities of teachers and schools in rural areas. This gap in language and IT skills remains up to the university level, pushing many young people of both genders to use the compulsory gap (for one school year before university enrolment) to join private and public institutes to improve such skills. The government should work hard to make up for the shortage and minimise the gap so that opportunities of involvement in the knowledge society are not restricted to young people from cities or wealthy families. The principles of equal opportunities and expanding the options for the youth should remain uncompromised so as not to limit the ability of the majority of young people to gain knowledge and master its tools.

## TEACHING METHODS AND APPROACHES

Despite training programmes that are carried out in education methods and classroom management, the volume of the curriculum and the time limit of school terms affect the performance of many teachers and can force them into traditional teacher-centred and memorisation-based approaches. This does not mean that these methods are the only option for teachers. The teacher survey, conducted in the course of the preparation for this report, indicates that some of them use modern teaching approaches. 71.1% of teachers said they discuss the lesson concepts with the students in all classes and 21.1% do the same in most classes. 20% stated that they participate with the students in learning activities in all classes and 31.1% follow these activities in most classes. However,

the traditional approaches are still dominant. 74.1% of the teachers said they write the lesson on the board in all classes while 10.7% do that in most classes. Due to the long and difficult educational content, the short time of classes, and the crowded classrooms, teachers have to concentrate on keeping order in the classrooms, explaining theoretical concepts, writing the lesson, and discussing it with the students. Therefore, maintaining silence in the classroom and controlling troublemakers are the most important practices, with 80.5% of teachers doing this in all classes and 13.3% in most of the classes (see Table m4-2 in the Appendix).

Teachers' awareness of the importance of the modern approaches has been noted. Practices such as 'encouraging the students to interact with the teacher', 'dictating the social principles and values to the students', 'training the students on problem solving', 'training the students on analysing information', and 'familiarising the student with teamwork' are top priorities for teachers, reflecting their understating of their role in providing cognitive and social skills to their students, even if this is not widely practiced. It is also remarkable that teachers are reluctant to promote exploration skills and give the students the freedom and independence to analyse and criticise ideas. The educational practices relating to the teacher's role as a supervisor over the students' activities and a motivator for independent work, ability to take the initiative, and the development of critical thinking have close percentages, with the surveyed teachers confirming their necessity (47.4%, 49.1% and 52.2% respectively), (see Table m4-3 in the Appendix). These outcomes may be interpreted as the limited confidence of teachers in the abilities of their students, as 95.6% of teachers (65.2% strongly agree and 30.4% somewhat agree) believe that the students' interest in study is continuously declining (see Table m4-4 in the

*It is also remarkable that teachers are reluctant to promote exploration skills and give the students the freedom and independence to analyse and criticise ideas*

*Local and professional activities that require co-authoring and co-evaluation are usually assigned to the supervisors of different educational stages and experienced teachers are rarely chosen*

Appendix). On the other hand, many teachers are not familiar with managing these kinds of activities because of their weak preparation and poor practice of modern teaching approaches and methods.

What reduces learning opportunities outside the classroom is the unavailability of sufficient additional learning sources in schools, such as libraries, computer rooms, activity rooms, playgrounds, and others. This hinders the acquisition of self-learning skills and decreases the ability of both teachers and students for scientific research. The situation gets worse if school activities, extra-curricular ones in particular, are poor, and if the classroom activities centre around the traditional tasks of the teacher such as lesson preparation and correction of assignments, with little attention given for learning-growth activities. The results of the field study prove this trend (see Table m4-5 in the Appendix).

Local and professional activities that require co-authoring and co-evaluation are usually assigned to the supervisors of different educational stages and experienced teachers are rarely chosen. This is understandable due to the professional criteria of choosing the candidates of these supporting activities. However, professional meetings, gatherings and educational workshops can partially fill this wide gap in professional performance development, providing more chances for teachers to consult and learn about educational performance. On the other hand, the shortage of such opportunities, the absence of incentives for teachers, and the pressures of a heavy teaching load may discourage teachers to act to develop their performance and abilities.

Meanwhile, 78% of teachers (33.3% totally agree and 44.7% somewhat agree) have recognised that the approved teaching methods and approaches they follow do not capture the students interest for learning. 62.8% of teachers (16.7% totally agree and 46.1% somewhat agree)

have said schools play a secondary role in providing the students with science and knowledge. The administrative pressures imposed by the Ministry of Education and the educational administrations, the absence of updating of the curriculum and teaching methods make the teaching process routine and unvarying. The school turns to the dictation of knowledge and theoretical concepts to the students and abandons its educational role of cultivating both their thoughts and talents, undermining the school's role in preparing the youth for the knowledge society (see Table m4-4 in the Appendix).

While the initiatives of professional performance development, either self or administration-driven, are stagnant, making summaries and notes that draw students' attention to the main points in general exams, particularly for the third secondary grade by individual teachers are popular. These materials are well liked by students. They sometimes provide more detailed explanations for ambiguous topics and additionally summarise and organise the information for the students to make it easier for memorisation and studying. Thus the students' acquisition of organisational skills and devising ways of studying and reviewing are limited.<sup>17</sup>

Certain teachers may be excused as a result of the educational environments imposed by the conditions of the society. Teachers in urban areas, for example, have to deal with overcrowded classes. Many teachers in the countryside encounter low numbers of students as well as colleagues forcing them to teach multiple grades (Multi-Grade teaching) with the absence of the appropriate environment that enables this type of teaching

## **METHODS OF DIVIDING EDUCATIONAL ACTIVITIES**

Learning assessment is divided into two systems: A school-led evaluation and a Ministry of Education-led evaluation through nationwide official exams upon

the completion of different education stages.

## THE SCHOOL ASSESSMENT<sup>18</sup>

The school-led evaluation consists of evaluating many different student activities, called ‘the year’s achievements’ and the exams of both school terms. The year’s achievements refer to the continuous follow-up on the learner through monthly tests, homework, attendance, discipline, and any activity that may be required. The scores are added to the exam marks of the two terms. From the fourth grade, the student must get the ‘minimum score’ (50) in all subjects in order to move up to the next grade. In grades 1-2, the student automatically passes to the next class and the same applies to the third grade, providing that the student masters the basics of reading, writing and maths. The assessment measures the students’ acquisition of basic skills by the end of the first three grades.

## THE GENERAL EXAMS

The general exams follow the same 100% benchmark of the evaluation. However, passing the exams moves the student to the next educational stage. Those who pass the exams at the end of the ninth grade join secondary education, and by the end of grade 12 the student leaves school for higher education, either at university or a technical education institution. The MOE-led evaluation does not include ‘the year’s achievements’ nor the periodic exams. It depends solely upon the final exams, with a weight of 80% of the score, authorising schools to estimate the remaining 20 marks for the students.

To investigate how teachers view the various evaluation practices, the field study prepared for the Arab Knowledge Report 2010/2011 has shown a mix between modern and traditional approaches. 87.7% of teachers believe in the importance of active classroom participation while 85.3%

think that punctual attendance has large significance too (see Table m4-6 in the Appendix).

However, the use of modern methods has some weaknesses. The Education Development and Research Centre conducted a study, Classroom Evaluation in Grades 1-3 of Public Education, (Al Masory and Al Haj, 2005) in which the teachers, the principal and the educational supervisor were the respondents. Among the 10 points of the student’s prior assessment, the study showed that defining the “abilities and previous experiences of students” came first while being aware of their “learning difficulties and reasons” came last. Among the eight interests of the teacher, “follow-up on homework” and “ask questions that consider individual differences” are at the forefront while “feedback-based improvement of teaching” and “the improvement of classroom management” come last.

One researcher concluded (Al Mekhlafy, in Arabic, 2010), in a review of studies examining the reality of the application, that the challenge of application is the most notable element in the system of learning assessment as the means of verifying the quality of education results. Evaluation tools are not on an equal track with the curriculum goals that offer great opportunity to reach the knowledge society. Most assessment methods focus on the lower learning levels (remembering, understanding), taking the learning-teaching process off track from the modern ambition of using and producing knowledge.

## METHODS TO INSTIL VALUES INTO THE EDUCATIONAL SYSTEM

Since the school is the most important social institution outside the family in which children spend many years, the development of values and correct behaviour is a fundamental pillar of learning.

According to the Law of Public

*Since the school is the most important social institution outside the family in which children spend many years, the development of values and correct behaviour is a fundamental pillar of learning*

*The education curriculum has been revised to introduce many international concepts and values such as human rights, gender equality, and children's rights*

Education, the goals of the curriculum include a number of original values as the bases of education philosophy in Yemen. The first three value principles stress the belief in Allah and Islam, the love and esteem of the country; belonging to Islamic and Arab nations; and reasonable openness to world civilisations and cultures to achieve freedom, justice, equality, peace, and multi-cultural understanding. The philosophy of the curriculum is based on the idea of Islam as a comprehensive system that honours the man; respects the mind; encourages science, creativity and innovation, and respects human rights, freedoms and dignity. Emphasising the national, Arab, and Islamic identity, interaction with others, the pursuit of the values of the knowledge world, and multi-cultural understanding are not excluded. It can be concluded that the educational system provides a value cluster that can be a foundation for the knowledge society (Al Mekhlafy, background paper for the report).

The education curriculum has been revised to introduce many international concepts and values such as human rights, gender equality, and children's rights. Nevertheless, some researchers believe that the Ministry of Education, since its establishment, has not achieved the general goal of this education philosophy for many reasons. The school has abandoned its main role of maintaining identity and culture through teaching and learning. However, the school curriculum, such as Islamic education and the national education, provide a large group of positive social values. A disconnection can be seen between the ethical values promoted by the school books and those acquired by the surrounding environment, confusing the youth in Yemeni society. Hence, some young people disobey their families, educational organisations, and social norms and values. The educational system is central in the community and mainly responsible for educating and raising new generations to ensure their

inclusion in society and their contribution to development and entering the knowledge society, while maintaining a national, Arab and Islamic culture and identity (Al Hakeemy, background paper for the report).

## **ENABLING SYSTEMS AVAILABLE FOR THE FUTURE GENERATIONS**

### **THE PUBLIC SCHOOL ENVIRONMENT**

The classroom size policy of the Ministry of Education in both primary and secondary education is based on the grade and whether it is in an urban or rural area. Generally speaking, the student/teacher ratio (STR) is about 30 and 50 students for rural and urban classrooms respectively. However, urban schools are very overcrowded, affecting the quality of teaching and student-teacher interaction. At the same time, the population dispersion in the countryside reduces the student numbers in the classrooms. Therefore, a recent study recommends the building of small schools in rural areas and expanding urban schools (Republic of Yemen and the World Bank, 2010). Nevertheless, the small areas of most urban schools, due to their location within towns and cities, and the high numbers of students, limit the available spaces inside the schools; hence decreasing the student share of school facilities such as playgrounds, yards, libraries, etc. In addition, the open spaces in many private school premises are too limited and too close to the classrooms, stairs, etc., so intentions to use them for a school activity are hindered.

### **IT AND COMMUNICATIONS IN EDUCATION**

Integrating both the practical and the theory, educational technology is essential in teaching and learning processes as it helps and motivates the acquisition of

skills and methods of scientific thinking; in view of its practical side which is compatible with the theoretical side. The educational environment requires a group of tools, equipment, and supplies of learning and knowledge resources such as computers, libraries, labs, and art rooms. However, the mere availability of these does not necessary mean that the conditions of the educational settings are met. The good educational environment prepares and prompts the students to learn, use and apply new skills and use the skills of exploration and experimentation. Computer labs equipped with up-to-date machines are ineffective if the students are unable to explore, use, and apply the computer software. Teaching how to surf the internet is useless unless the students can search, organise, analyse, summarise, save the needed information, identify it and draw results from it. Within the available capacities, the Ministry of Education seeks to provide the equipment and hardware necessary for a motivating educational setting. Schools are equipped with labs, school radio, libraries, computer labs and internet access (mostly in towns and cities).

The use of educational technology by teachers depends on two elements: the availability of computers and internet access and the teacher's ability to use technology for educational purposes. In the study sample conducted in the context of this report, 71.6% of teachers said they own personal computers at home. 47% of them use their computers for educational purposes. Technology is mostly used in lesson preparation (83.3%), searching for teaching situations (89.6%) or selecting exercises (78.3%), (see Tables m4-7, m4-8, m4-9 in the Appendix).

The high percentage of teachers who use technology for lesson preparation and communication indicates the personal efforts of teachers to improve their performance and lessons, so that they can be easily developed, with technology

becoming a part of modern teaching methods. It is worth mentioning that many schools have launched free training on low-cost PCs for teachers as a part of specific training programmes (Ministry of Education, 2008).

## **GIFTED STUDENTS AND STUDENTS WITH SPECIAL NEEDS**

In 2003, an administration for talented and creative students was established in the Ministry of Education, and in 2004, the Comprehensive Education Administration was formed to care for students with special needs. The two administrations seek to support gifted students and those with special needs through appropriate programmes and activities, despite the shortage of human and financial resources that limit the coverage or the development of such programmes. In cooperation with the Arab Council for the Gifted and Talented, training courses have been organised to prepare teachers for gifted students, covering all topics and issues related to their discovery, and their cognitive, social, and conative characteristics, as well as teaching methods and strategies to develop their skills of thinking and creativity. More attention should be given to the issue. Some major schools in main cities, government or private, develop their own programmes for gifted students, arrange training programmes, contests, and initiatives inside and outside Yemen.

## **TEACHER PREPARATION AND TRAINING PROGRAMMES**

Education Colleges in various universities are responsible for preparing teachers for different educational stages through training programmes as part of their pre-service qualifications. The real issue is that most teachers of the first grades do not have university degrees.<sup>19</sup> The recent Education Status Report by the World

*Some major schools in main cities, government or private, develop their own programmes for gifted students, arrange training programmes, contests, and initiatives inside and outside Yemen*

*The majority of teachers managed to define the characteristics of the knowledge society and admit the significance of modern teaching methods; however, an examination of their behaviour shows that a high percentage of teachers commonly use traditional methods*

Bank shows that 46% of teachers of grades 1-6 (the stage of providing the student with basic skills) do not have secondary certificates. According to the Educational Survey 2005/2006, 18% of teachers have secondary degrees and are spread in rural and remote areas, worsening the quality of education (The World Bank and the Republic of Yemen, 2010).

The low standard of teachers' qualifications is a critical issue that needs special attention if we are serious about preparing the youth for the knowledge society. Indicators show that 40% of basic and secondary teachers do not have enough professional qualifications according to the law of the Ministry of Education. Most of them are located in rural schools (76%), and especially in primary education (91%). In addition, the well-qualified educational TEVT teacher is a challenge for Yemen. The qualification enhancement of academic staff in Yemeni universities is urgent, with only 58% of the staff having PhDs while the remainder are under-qualified (Hamoud Al Seyani, background paper for the report).

To avoid the existing accumulated deficiencies of educators, the Ministry of Education has executed extended in-service training programmes targeting the primary education stage, and then more specialised training for the teachers of higher grades in primary and secondary education. However, being short-term, these courses do not offer an official degree or a diploma, for example that enables teachers to be promoted or qualify for a salary raise. No adequate attention is paid to the competency of teachers. A recent report indicates that no systematic or institutional mechanism is followed in education colleges to integrate teaching requirements into the curriculum. Additionally, there is no framework for the professional standards of teachers, nothing that defines teacher competencies, the subject-specific knowledge, and the skill requirements to be used as a reference for the various organisations of teacher preparation and training (Republic of

Yemen and the World Bank, 2010). The training of graduates is not compatible with the vision of the knowledge society. The programmes have not been recently refined or updated. The practical in-classroom training of teachers is inadequate. Training programmes focus on teaching philosophy and history rather than the skills needed for most Yemeni schools such as multi-grade teaching. Moreover, the graduates have only an average command of the Arabic and English languages, and computer and IT skills (Republic of Yemen and the World Bank, Education Status Report, 2010).

As for the teacher's status, according to the field survey results; about 90% of teachers (51.7% agree and 38.8% 'somewhat agree') believe that teachers in Yemen no longer have the same respect as they have in the past. 90.4% of teachers (60% 'totally agree' and 30.4% 'somewhat agree') said the students' respect for their teachers has declined. Since education arose in Yemen in 1960s, teachers have enjoyed a high degree of social respect. This is still the case in many rural areas where the teacher is considered an influential figure in the local community. However in urban areas, the respect shown by the students for their teachers has deteriorated, particularly in boys' schools (see Table m4-4 in the Appendix).

The majority of teachers managed to define the characteristics of the knowledge society and admit the significance of modern teaching methods; however, an examination of their behaviour shows that a high percentage of teachers commonly use traditional methods, such as "focusing on the improvement of the student's memorisation abilities for success in studying". 86.5% of teachers (23.4% 'totally agree' and 63.1% 'somewhat agree') admitted to using this method (see Table m4-10 in the Appendix). This indicates that the teachers have some knowledge of modern teaching methods and are aware of the attributes of the knowledge society. However, they still mix modern and traditional teaching methods and behaviour. The use of traditional

approaches is enhanced by the inflexible educational system that focuses on quantity and targets the quantitative indicators of planned goals.

## TEACHER JOB SATISFACTION

In Yemen, teaching is not a favoured profession among the youth, especially males. However, it is still a good option because the education sector offers many job opportunities annually, and it recruits the majority of employees in the Yemeni service sector. The field study examined the job stratification and the relationship between teachers and other education stakeholders. Low satisfaction has been observed among most teachers. 91% of teachers (74.8% 'totally agree' and 16.2% 'somewhat agree') said teaching does not make them self-sufficient while a higher percentage, 96.6% (80.9% 'totally agree' and 15.7% 'somewhat agree') said they felt that they had a mission. Questions investigating the financial sufficiency of teaching may explain this contradiction. About 43.9% of teachers said they would change their career if a job with a higher salary was available. Hence, financial compensation for teachers is not satisfactory, despite improvements introduced by the so called Teachers Law and the wage reform of the education administration that raised salaries in recent years (to a minimum of \$200).

The majority of the sample (81.4%) admitted they were dissatisfied with their educational qualifications to meet the teaching requirements (see Table m4-11 in the Appendix). Being aware of the need for professional development paves the way for a teacher capable of producing a generation that can live and interact with the knowledge society. Since teachers are still the main source of information and skills for the students, the preparation and improvement of teachers in the terms of the profession, skills, and knowledge should be fundamental in preparing the next generation in Yemen.

## EDUCATION REFORM EFFORTS

Post-unification, the Ministry of Education sought to re-evaluate the curriculum. For the merger of public education in the recently unified country, a new curriculum (for primary and secondary education) was drawn up by selected educators from various disciplines of science, humanities and literature, in order to unify school teaching curricula. The education system was modified from six primary grades, three preparatory grades and three secondary grades into nine basic grades and three secondary grades. It has been recognised that the expansion of schools and gender equality in education, made compulsory and free by the Yemeni Constitution, should be accompanied by education service enhancement. Over the last ten years, efforts have been made to reorganise the education sector and shape education policies. Five sector-specific strategies have been developed and approved for the reform of various education stages: the National Basic Education Development Strategy 2003-2015, the National Secondary Education Development Strategy 2007-2015, the National TEVT Development Strategy 2005-2015, the National Higher Education Development Strategy 2006-2015, and the Literacy and Adult Education Strategy 1998-2020. All strategies seek to create a balance between quality and quantity. They emphasise expanding education, decreasing the failure and leaver rates, narrowing the gender equality gap, enhancing the quality of education, and building the institutional competencies of educators. However, they also reflect the lack of coordination among the organisations responsible for the implementation of these strategies, which sometimes work independently.

The National Basic Education Development Strategy aims to increase the enrolment rate, particularly of girls in rural areas. It aims by 2015 to have 95% of children aged 6-14 years enrolled in

*The National Basic Education Development Strategy aims to increase the enrolment rate, particularly of girls in rural areas. It aims by 2015 to have 95% of children aged 6-14 years enrolled in education*

education (the Ministry of Education, 2003). Due to the shortage of funds that has hindered the achievement of generalising the primary education target by 2015, Education for All by 2015 has been adopted. Yemen has been chosen among ten countries to be supported by the Education for All – Fast Track Initiative. Experimental government-led procedures to promote basic school enrolment include:

- Experimental programmes such as cash for families of girls to keep them in school, and enhance community participation and support education.
- The Countryside Female Teacher Programme in which a large number of female secondary graduates are contracted and trained to work as teachers in rural schools where the presence of female teachers is a prerequisite for families to enrol their girls, especially in higher grades.
- A number of initiatives have been adopted to enhance and strengthen the educational situation in schools, support the school's financial independence and promote family involvement in education improvement such as school-based development, child-friendly schools, and girl's education support.

*Yemen has been chosen among ten countries to be supported by the Education for All – Fast Track Initiative*

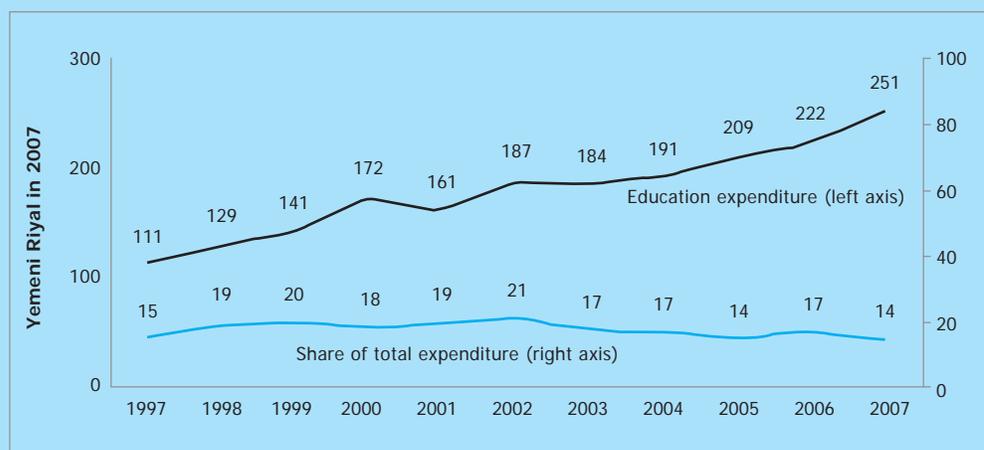
Successive endeavours have been taken, either by the implementation of policies and progress monitoring or by the practical expansion of the educational input, especially in the past decade. However, the challenges are still critical because the reform focuses on education delivery for all; provision of education input; and attempts to improve education quality via on-going training, enabling environments, technology in schools and support for gifted students. The challenges pose a serious situation that must be addressed, i.e. the current direction of reforms has not paid appropriate attention to the knowledge dimension that enhances the creation of the knowledge society. If it is decided to introduce youth preparation methods through schools, the real producers of knowledge, then the reforms should go hand in hand with the existing patterns, emphasising the innovation of new educational alternatives that give excellent educational output and are equipped with the basics for entering the knowledge society.

## GENERAL SPENDING ON EDUCATION

Moving forward towards the knowledge society requires the allocation of sufficient resources to improve the quality of

FIGURE 4-2-1

### The development of government expenditure on education 1997-2007



Source: Republic of Yemen and the World Bank, 2010

education, extend the delivery of various educational opportunities and prepare the educational infrastructure. However, countries with government-financed education often have less ability to balance the quantitative expansion of education services with quality enhancement and offering numerous educational options.

While the support offered to Yemen by official international development aid is low (\$13 per capita in 2006), education receives the largest share (Republic of Yemen and the World Bank, 2010). Reports show a 125% growth in allocated education spending from 1997-2007. According to statistics of 2007/2008, the expenditures of public education were 73%, university education 19% and TEVT 8% respectively out of the total education allocation of government spending (Republic of Yemen, High Council of Education Planning, 2009). Public spending on education increased from 1997-2007 to 5.8% of the GDP, a high percentage when compared to other countries with largely government-supported education such as Egypt, Oman, and Pakistan with 3.8%, 4%, and 2% respectively. With this high government spending, private financing

resources are totally absent. The spending on education from foreign finance is only 4% (The World Bank and the Republic of Yemen, 2010).

The Table 4-2-2 illustrates that the country considers education to be a top priority for human development, and at the same time, indicates the challenges resulting from the limited public resources to meet the growing demand of improving education enrolment and quality.

While examining education spending, it is noted the period 1997-2005 received the largest share, 80-85%, which then decreased in the following years to 78% in 2007, as shown in Figure 4-2-1. The major part of this expenditure goes towards the remunerations of teachers and educators, with 70% for basic education and 65% for secondary education, rather than direct spending on educational services where the administrative costs of primary and secondary education are 25% and 30% respectively.

Less than 6% of the current expenditure go towards improving the quality of public education. Similarly, higher education spending has two focuses; the salaries and scholarship costs that constitute about

*Moving forward towards the knowledge society requires the allocation of sufficient resources to improve the quality of education, extend the delivery of various educational opportunities and prepare the educational infrastructure*

TABLE 4-2-2

**The distribution of education expenditure 1997-2007**

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
<b>Total education expenditure (%)</b>											
Primary and secondary education	85	82	84	85	84	82	80	80	80	79	78
TVET	1	2	2	2	4	2	3	3	3	5	6
Higher education and research	14	16	14	12	13	16	17	17	16	16	17
<b>Total</b>	<b>100</b>										
<b>Recurrent education expenses (%)</b>											
Primary and secondary education	89	88	88	89	88	85	83	82	83	82	81
Primary				66	65	62	61	61	61	60	60
Secondary				24	23	22	22	22	22	22	22
TVET	1	1	1	1	1	1	2	2	2	2	2
Higher education and research	10	11	11	10	10	14	15	16	15	16	17
<b>Total</b>	<b>100</b>										

Source: Republic of Yemen and the World Bank, 2010

80% of the total current expenditure (Al Hawary, Mohammad, in Arabic, 2006).

Since it is completely financed by the government, the delivery of high quality education and meeting the increasing demand for higher education has limited resources. Hence, additional resources must be found to cover the required expansion in higher education. Higher education faces immense pressure to enrol more students in government and private universities due to the increased output of secondary education, the growing population rate, and the socially prestigious consideration of university education rather than the TEVT. Public and higher education budgets are still controlled by the Ministry of Finance, the authority with the final decision regarding spending and goals. Government universities, for example, negotiate with the Ministry of Finance every year; however, the allocations are distributed unevenly, giving no flexibility for higher education to plan and put strategies in place based on the changing opportunities and needs (Al Hawary, Mohammad, in Arabic, 2006).



# THE UPBRINGING INSTITUTIONS AND PREPARATION OF THE FUTURE GENERATIONS

## INTRODUCTION

*The upbringing process involves many social institutions. These institutions are involved in preparing youth for their expected roles in the future and in society, including the family, school, place of worship, peer groups, mass media and youth organisations.*

## THE FAMILY

The family is the first institution that educates the child on values, manners and principles before encountering outside influences. Crucial to the formation of character, psychologists believe that early childhood is of great significance. Families may be classified per their structure (nuclear or extended), economic status, social class, education level, religion, and other influences that define the child's personality, social development, and behaviour towards others and society, it even affect his or her future choices.

Prior to the revolutions of 1962 and 1963, Yemenis lived in an environment dominated by traditional values where the family was responsible for instilling social values, customs, and norms, followed by the mosque and the surrounding community. This can be attributed to many reasons, including the subsistence economy that was prevalent at the time. Individuals were entirely dependent on their families in terms of their social and economic life. The family's role was not

only included in the child's upbringing and instilling social values, but also in training them for a lifetime craft or career, usually an extension of the family's profession (Abdel Salam Al Hakeemy, background paper for the report).

A study examining the role and effect of social upbringing institutions in rural areas of Yemen, has reported that families of high social and economic levels want a high level of education and prestige for their children in order to maintain the family's position. Dialogue and understanding usually prevails to achieve the parent's ambitions for their children. On the other hand, families of a low social and economic position often have many children. Due to increased social and economic pressures, parenting is often based on obedience, punishment and early responsibility (Salem Al Shamsy, in Arabic, 2005).

## THE FAMILY AND LEARNING VALUES

While enrolment and staying in school rates are low, the value of learning is high and positive in Yemeni society. The better educated the family is, the keener they are to send their children to school. Additionally, middle-class families in urban areas often spend a lot of money enrolling their children in private schools due to their interest in extra-curricular activities, less crowded classrooms, and early teaching of

*The family is the first institution that educates the child on values, manners and principles before encountering outside influences*

English. It is noticeable that the education level of mothers is reflected in daughters' education level in the family, and increases their opportunity to complete their study to a higher level (Ministry of Education, 2009). In Yemen, obtaining and competing for a degree or an educational qualification is greatly respected. Many families put pressure on their children to obtain high grades and educational excellence to enter university or benefit from special advantages, such as getting an internal or external scholarship, or a tuition deduction in institutes and educational institutions.

The situation changes in low-income families. The investment in educating boys is linked to the opportunity of getting a job. On the other hand, educating girls is seen as a limited investment, because traditionally, girls marry and move into their husbands' homes, giving their families little to no return. Therefore the opportunity for girls to complete their education is greatly reduced. This is the reason for the low rate of female education and early marriage. Also, the high unemployment rate and the decline in economic conditions have led to negative trends regarding the feasibility of getting a degree that ensures jobs. Therefore, poor families push their children into labour at an early age to help secure the family's needs, which affects their school attendance and eventually causes them to leave.

In many families, children do not have a choice but to accept the decisions made by their parents, who claim that they are better at choosing what is best for their children. In few cases, where parents are highly educated and with a good income, options for studying and the future may be discussed with the children. Upbringing methods effect children's personalities - whether they are able to make their own decisions or not - and children move from an authoritative family to a school in which rules and laws are applied and teacher-centred traditional methods are followed and the mosque where other rules must be respected. In these situations, there

is no room for discussion, objection, explanation, or reasonable justification by the members of these institutions - the child must obey without any discussion. Therefore, the child tends to memorise and depend on the limited information provided by teachers in school.

## **FAMILY AND CHARACTER-RELATED VALUES**

Due to the traditional parental structure of the Yemeni family, respect, obedience and submission to elders are characteristics which control the parent-children relationship. With the extended pattern of family in the countryside and large parts of towns, elders guide the young people who are expected to show obedience in all orders and follow instructions determined by the father, the grandfather, the mother or other family members.

Under the parental family structure, gender inequality is common inside the family, in terms of behaviour or events that are either allowed or forbidden. The family show bias towards males and is much more firm with girls. Powers and freedoms are given to males and they gain prestige after their maturity, and are allowed to voice their opinions and have some authority over the girls. The brother does not only limit the actions of his sisters but can also influence decisions of learning and marriage. Thus the pattern of the traditional authoritative culture and masculine dominance is reproduced again in future families formed by those men and women.

While common in families with highly educated parents, positive communication methods and developing the child's communication and dialogue, supporting their opinions and respecting the views of others are absent in the traditional family pattern in Yemen. However, no generalisations can be made. The trend towards a nuclear family, an increased education level, and working mothers in urban areas have helped bring about

*Under the parental family structure, gender inequality is common inside the family, in terms of behaviour or events that are either allowed or forbidden. The family show bias towards males and is much more firm with girls*

some transformations within the family. In emerging families, many parents use dialogue and persuasion with their children, enhanced by the youth's openness to mass media and technology, positively affecting the formation of the child's personality to be more challenging, questioning, and seeking explanation.

## THE FAMILY AND INTERPERSONAL VALUES

Family upbringing is based on emphasising the values of cooperation, solidarity, and helping others, but shows caution regarding the relationships of their children with others. A survey study has indicated that 73% of families are protective of their children when they are young as they fear that some friendships and relationships could lead to them becoming involved in bad or extremist behaviour (Abdel Salam Al Hakeemy, background paper for the report). The protective role is present for both boys and girls, but girls' relationships are much easier to control because of the culture. It is preferable for girls to be kept at home and to limit their acquaintances to a certain number who the family know. Boys however, have the freedom to move so it is more difficult for parents to monitor their friendships. The excessive fear within the family may be due to the emergence of a number of ideological extremist movements that encourage the youth of different social classes in both rural and urban areas to join them. Families have become increasingly afraid and seek to prevent their children from being influenced by these radical movements. Moreover, the family concerns may be increased by the ineffective role of the school and the mosque to complement the role of the family and spread values of tolerance, non-aggression, and interpersonal communication. Such extreme precautions in upbringing generates a mentality of fear and caution, hindering interpersonal communication, and diminishing the youth's ability to improve basic life skills

such as decision making, problem solving, and differentiating between right and wrong - all fundamentals for the knowledge society.

## MASS MEDIA AND FUTURE GENERATIONS PREPARATION

With advanced communication technology and the huge number of satellite channels received by televisions and receivers, the role played by these channels, with various orientations and tendencies, is maximised for preparing the Arab youth. It is obvious that most of these channels are dominated by consumption patterns and depend on entertainment and product marketing. So, they enhance imitation-based behaviours and excessive consumption and do not promote any skills or capabilities desired by the society and family. With its uncontrolled, unlimited varieties, the mass media has been central in raising the youth. So, some countries, such as Yemen, implement procedures to control and codify the internet and media space. Justified on the grounds of being culturally, religiously or politically inappropriate, some channels and websites have been banned to protect society and youth, in particular, from the uncontrolled openness. Sometimes, security reasons are behind a ban.

With political openness accompanying the unification of the country, political plurality and the support of freedom of expression, many political parties of various ideologies have been established, and this has coincided with an increase in publications and papers exceeding 400 official, civil, party related and independent publications, as well as news websites which have started to attract the youth in particular. Maybe due to the special nature of the political situation in Yemen, the content of these sites is remarkably characterised by political controversy, criticising and blaming other parties for the events and developments. The websites neglect the critical informative role they should assume, i.e. focusing on

*Justified on the grounds of being culturally, religiously or politically inappropriate, some channels and websites have been banned to protect society and youth, in particular, from the uncontrolled openness*

the development and educational aspects and contributing to building the national personality, culture and knowledge (Rashad Al Yosfy, in Arabic, 2010).

## **THE VALUES SYSTEM AND SOCIAL UPBRINGING IN YEMEN**

Prior to the 1960s revolution, traditional Yemeni society experienced the social hierarchy of the prevailing ruling regime for political reasons. The social hierarchy was classified into ranks and categories (masters, sheikhs, judges and the common people of tribes, traders, business owners, slaves, and servants).<sup>20</sup> Based on certain standards, i.e. genealogy, social origin, profession, religion, and race, it was found that the masters or the nobles were at the top of the hierarchy while the servants were last. As a result of this social order, some careers had been scorned, not those practising them. In former South Yemen, a large segment of the population was deprived of education, health care, and the basics of a good life as the occupation provided services which were limited to certain ranks and foreigners. The schools had been a manifest example of this deprivation; no educational institutions had been built in the other governorates except in the major cities and for some students of the wealthy classes. The system of social class dominated the governorates controlled by the sheikhs and sultans. In national liberation movements against the British occupation and the revolution against the traditional regimes in the southern, eastern, and northern areas, most of the revolution leaders promised real development in the society to gain their legitimacy. However, political and economic changes were faster than social transformations. And while the post-revolution independent governments chose modern education and used advanced technology, no significant changes were noted in the social behaviours of individuals. The

matrix of the traditional values remained dominant in the upbringing of the youth, in which the family and the direct environment continued to be the main socialisation sources. Even the scorn of some professions and social classes had not changed while some of these segments reached leading positions in the country, benefiting from the post-1960s modifications (Abdel Salam Al Hakeemy, a background paper for the report).

## **THE RELIGIOUS UPBRINGING AND VALUES SYSTEM<sup>21</sup>**

The family is the first institution of upbringing and religion for children until school where they are provided with typical unified patterns of acts of worship and religious issues, mainly in the form of memorisation of desired behaviours. Sometimes, families do not encourage their children to ask questions and have queries; therefore, religious upbringing is limited in many cases to orders, prohibitions, observing acts of worship, and the practice of reward and punishment in relation to behaviours. As a result, the deep penetration of religious basics may be affected, slowing down the mental growth and the development of thought and analysis skills of the youth.

Post unity, the partisan plurality and the growing freedom of the political environment helped some religious schools and institutes to emerge in a group of governorates such as Sufi, Salafi and other schools. During this period religious schools of different political orientations and methodologies also grew in Yemen. Many of them were built without a license from the education authorities for several reasons; the lack of regulation of the civic and private bodies and the absence of supervision and monitoring of some concerned organisations over these schools, religious schools and institutes in particular. As a result, some religious trends used mosques and religious schools and institutes to teach their ideology

*The matrix of the traditional values remained dominant in the upbringing of the youth, in which the family and the direct environment continued to be the main socialisation sources*

and beliefs to the youth. Some religious schools, institutes and centres in Yemeni cities are not subject to supervision or modification of the concerned bodies of the Ministry of Education. Therefore, the efforts for education reform have been intensified in Yemen to unify the paths of the public education, including the inclusion of the educational institutes into the education system, monitored by the Ministry of Education; and the refining of the curriculum to exclude any radicalism or extremism.

With multiple sources of religious and social upbringing formed post-unity in 1990, the major institutions affecting the values of Yemeni youth have been multiplied and the family has become no longer the sole source. The changes in the social, economic and political conditions of the society, living standards, the increased rates of unemployment and poverty, the associated social issues of the rising school dropouts rates in different education stages in rural and urban areas, rising youth deviance, the absent role of the family, and other problems, all have played a part in the deterioration of Yemen's social structure.

These conditions and other social issues have helped some ideological groups to induct many young people with the aim of educating them on certain values and orientations. Additionally, some existing political parties have begun to attract the youth seeking to influence them intellectually and ideologically. Political disputes between the government and the opposition parties, the armed conflicts and the instability in many areas have also contributed to the emergence of some radical groups.

## CONCLUSION

The dynamic socio-cultural context in Yemen and its changes have affected the direction and content of the youth's value matrix. Since the division of the country into 2 parts in the 1660s until the establishment of the unified Yemen in 1990, society has experienced various social, economic, and intellectual transformations, with one part of Yemen following capitalism while the other chose socialism. Post-unification, the Yemeni society has gone through rapid and successive alternations in all social, economic, and political aspects due to the combination of two different ideologies. Such transformations have resulted in the youth acquiring values and orientations that have divided them due to the cultural duality of the new and the traditional methods. Consequently, the youth has shaped new values and orientations due to the multiple sources of socialisation, formed after this period, consolidating a number of social norms and trends characterised by conservation, stagnancy and the rejection of renewal and development (Abdel Salam Al-Hakeemy, a background paper for the report). Therefore, the reform of the education system and the unification of religious and ethical values, in the formal sources of upbringing, are the main paths to raising and educating the generations in a way that helps them integrate into society and to develop and move into the world of knowledge, while maintaining the national, Arab, and Islamic culture and identity.

*The reform of the education system and the unification of religious and ethical values, in the formal sources of upbringing, are the main paths to raising and educating the generations in a way that helps them integrate into society and to develop and move into the world of knowledge, while maintaining the national, Arab, and Islamic culture and identity*





# ENABLING ENVIRONMENTS AFFECTING FUTURE GENERATIONS' PREPARATION

## INTRODUCTION

*Enabling environments intersect with the triad of knowledge, development and freedom in preparing the appropriate setting for knowledge acquisition and production. The enabling environments are linked to the reality of a society's development and the presence of political management committed to allocating the necessary resources for such environments, and establishing institutions that support and foster knowledge growth to achieve a comprehensive development. According to the Arab Knowledge Report 2009, the enabling environments for cognitive performance are the weakest points in the Arab world, especially in terms of the freedoms that support knowledge growth. The AKR stresses that the enabling environments are maximised under the prevalence of freedom, however, they also need supporting institutions that manage knowledge growth, production and circulation, and are backed by legal frames to gain the legitimacy of their continuation.*

*In Chapter 4, the status of enabling environments in Yemen is examined, with reference to the conditions of freedoms, the related institutions, legislations, laws and the support directed to achieve knowledge growth in the society. Additionally, the obstacles, pressures, and the limitations that hinder building the components of the knowledge society are also highlighted.*

## POLITICAL FREEDOM

The reunification of 1990 constituted specific transformations in social, economic and political life in Yemen and has created a new and good environment

for freedom with laws such as Law No. 25 of 1990 on the press and publications. Political plurality has been announced; Law No. 66 of 1990 on Political Parties and Organisations. Article 3 of this states, "Freedoms, including the political and partisan plurality, based on the Constitutional legitimacy, is one of the crucial pillars in the state's political and social system that may not be cancelled, limited or used otherwise to prevent the citizens from practicing this right." Article 5 reads, "Yemeni citizens have the right to form and voluntary join political parties and organisations according to the Constitution and the provisions of this law." Following the unification of the country, a democratic atmosphere prevailed in Yemen. The number of political parties and organisations grew to 46, and included various ideologies across the political spectrum (Ahmed Al-Asbahi, in Arabic, 1998). Following the formation of the Committee for Parties and Political Organisations in 1995, the number of parties decreased to 22, and they have the constitutional and legal right to do political work. From this year up to today, many rounds of local and parliamentary elections have been held which has been a new experience for the people of Yemen. Regardless of the advantages and disadvantages of this experience, it has added a new dimension for the youth to understand new concepts of democracy, local government, people representation in various authorities and the presence of the different political trends.

*The reunification of 1990 constituted specific transformations in social, economic and political life in Yemen and has created a new and good environment for freedom with laws such as Law No. 25 of 1990 on the press and publications*

## INDICATORS OF GOOD GOVERNANCE

Since the independence of the former two parts of Yemen, the country lives under a republican presidential system. After the reunification declaration, the Republic of Yemen was established as a republican, democratic, and constitutional regime. The governance is a pillar of the 2025 Vision. Additionally, the Third Socio-Economic Development Plan for Poverty Reduction (2006-2010) has emphasised the practice of good governance with an increase in the separation of powers, an improved judiciary improvement, enhancement of the judiciary's independence, reform and upgrading of government management, the development of anti-corruption policies and mechanisms, freedom and human rights protection, the promotion of decentralisation and the activation of the local authority. The National Reform Agenda 2006-2008 has focused on many areas including judiciary and administrative reform, updating of the civil service, economic and financial improvement, improvement of the investment and work atmosphere, the control of corruption, and the increase of accountability and transparency.

The World Bank Governance Indicator (WGI) for Yemen has shown slight improvement in the Regulatory Quality indicator and a decline in 5 major indicators:

Voice and Accountability; Political Stability and Absence of Violence; Government Effectiveness; Rule of Law; and Control of Corruption.<sup>22</sup>

Some attribute this decline to the political instability in some areas of Yemen that have experienced armed conflicts, causing the emigration of numerous families from these areas.

As for the control of corruption, the Anti-corruption Law No 36 for 2006 was enacted followed by the establishment of the National Supreme Anti-Corruption Authority (NSACA). Article 24 of the above law clearly reads that anyone who has information about a corruption case should report the concerned authority or body and submit the available information to be examined in order to take the necessary action. Moreover, the NSACA investigates the corruption crimes published in the various mass media. Under Article 27 of the law, the NSACA is committed to providing legal, career, and personal protection for witnesses, experts, and reporters of the crimes. The Executive Regulation defines a number of related protection procedures and measures.

The problem can be seen in some economic, social, and cultural reasons that affect the application of the law provisions, particularly if some social elites are not aware of the significance of the equal application of laws for protecting

*After the reunification declaration, the Republic of Yemen was established as a republican, democratic, and constitutional regime*

TABLE 4-4-1

### Yemen Status in WGI\*

Description	Yemen		MENA	
	2007	2009	2007	2009
Voice and Accountability	16.8	11.8	23.8	23.2
Political Stability	8.2	2.4	37.9	38.6
Government Effectiveness	15.9	11.4	45.3	47.8
Regulatory Quality	26.2	29.5	45.3	48.3
Rule of Law	16.2	13.2	47.5	49.0
Control of Corruption	25.6	15.2	48.3	49.1

Source: World Bank WGI website, on 14 May 2011 <http://info.worldbank.org/governance/wgi>

\* The indicator shows the worldwide rank of the country, where 0 is the lowest and 100 is the highest.

the public interest and the supreme social benefits.

## LOCAL GOVERNMENT AND DECENTRALISATION

The experience of local councils in Yemen is approaching 9 years, with increased attempts to delegate wider powers for the local governments. Over the past few years, a number of democratic activities have been practised, including some elections on all levels, starting from the presidential, local, parliamentary, and finally governor elections.

Local councils are still new experiments and have had mixed positive and negative results. They need urgent assistance particularly regarding the operational budget and the reinforcement of accountability and control mechanisms. Despite the short length of time, the experience has proved a success in achieving various projects and controlling the performance of different executive offices. However, they have not yet accomplished what they were set up to do as those involved have not had enough time to accumulate the expertise and knowledge required to manage them. The experiment is characterised by the positive role of the local councils in broadening the base of political participation, where the citizens of both genders have the chance to choose the members of the local councils or stand as candidates. Nevertheless, there is still a lot of work to be done. Accountability and transparency mechanisms should be developed for local revenue collection within the decentralisation system. Effective coordination must also be achieved among the provinces and governorates with the major ministries. After this, confusion and conflict arising from the short length of experience should decrease. Further efforts should be made for the participation of NGOs and strong partnerships should be formed with the local authorities to push forward the development of the local communities.

## GOVERNANCE IN EDUCATION

As for governance in education, “The Road Not Travelled”, a World Bank Report (WBR) 2008, found that the education systems in the MENA region have neglected public accountability in education despite the focus on education reform. In this context, the WBR has confirmed a number of procedures for successful modifications in education which generally can be applied to Yemen. These include:

- Focusing on the education operations, with all their input,
- Motivating the concerned parties of education through follow-up, evaluation, supervision and incentives,
- Strengthening public accountability and engaging all stakeholders including parents, students and teachers in its issues.

In this regard, the endeavours of the Ministry of Education can be seen in the establishment of central and local departments for community engagement to promote the involvement of local communities to improving the education quality in their schools. Tangible results have been achieved in the formation of democratically elected parent boards and training them to take up their tasks in schools; those in remote rural communities have been more successful than those in the cities. The effectiveness of such boards varies from one area to another. There are many remarkable stories of success in which the locals along with the boards have brought about a great move in education quality, the improvement of educational environments and the provision of the education input. Nevertheless, the practice of accountability in education issues needs more work. In partnership with the local selected councils, community elected boards such as parent boards should be motivated to maturely and responsibly employ accountability. With the emergence of the local councils

*Local councils are still new experiments and have had mixed positive and negative results. They need urgent assistance particularly regarding the operational budget and the reinforcement of accountability and control mechanisms*

and their relatively short life, some new problems and disputes have arisen among the education departments, the provinces and the members of the local councils that can disturb the process.

## CITIZENSHIP

Citizenship has many definitions. However, it can be agreed that it includes, under its comprehensive meaning, equality in basic rights such as a decent life and justice; equality in duties and responsibilities for the members of society regardless of their gender, origin, class and religion; and the right to decide their representatives and ruler. The articles of the Yemeni Constitution underline this comprehensive concept of citizenship but the structure of the Yemeni society is very complex and overlapping. As such, Yemen follows a partisan plurality; it has room for political and economic freedom; owns the legislative, executive and judiciary authorities; has people of all classes who democratically participate in the elective representation of the parliament, local councils and others to help build a modern system for the country. Nevertheless, the socio-cultural structure largely dominates the institutional performance and the political scene in Yemen. Tribal influence and authority prevail and clan loyalty can outweigh loyalty to the country. Some analysts go further to say that tribal law is the applicable law that is really governing in Yemen and that the

political system is based upon a combination of the modern political institutions and the traditional tribal cultural system (Al Shargaby et al, in Arabic, 2009).

The school, through its educational philosophy, curriculum and teaching methods, has a great role in infusing and developing citizenship values since the objective is to let the youth acquire a group of values, skills, and orientations that make them able to adapt to their community and contribute to its improvement and building. Over the last 20 years, new directions in Yemen have led to a combination of various conceptual frames of modern citizenship values, including human rights, democracy, the rights of others, freedoms, etc. However, citizenship is restricted to the values and concepts circulated in educational institutions, publications, printed media, seminars and conferences, without actually applying the supporting theoretical orientation. This confuses the youth between what the school tries to enhance and the actual practice of society.

With the participation of selective professors of Yemeni universities, experts and specialists, the Ministry of Education conducted a one-year study to review the values of national loyalty to consolidate the national identity and belongingness into the curriculum from the third primary grade to the third secondary grade, covering 78 school books in the humanities. Following the study, it was decided to add the subject of national education to secondary

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BOX 4-4-1

### Platforms for Yemeni Juveniles and future generations

Child Parliament (CP) establishment and activation, two successive rounds of elections have been held. It performs numerous activities such as following up the juvenile conditions and delinquent care centres and spreading the awareness of child rights. The CP holds regular meetings that are broadcast on national television. Ministers are invited to discuss the raised issues.

Some NGOs seek to enhance democratic concepts in children and teenagers, with initiatives including

the democratic school, in which young activists, with the participation of the CP, carry out many field studies, awareness programmes and trainings in schools and communities.

The Youth Radio has been launched in April 2003. It works 24 hours a day broadcasting programmes for all young people in Yemen, giving the youth of both genders the opportunity to contribute, develop their abilities and talents and find jobs as mass media specialists.

Source: The website of Attagamua Newspaper <http://www.attagamua.net/index.php?action=showDetails&id=1688>, accessed on 15 May 2011

education to keep the students updated on the latest development and priorities of the country. In this regard, we find that the discussion of the values of national loyalty and civic education are limited and the school assumes it without considering the socio-cultural reality of the society and the complementary institutions that contribute to raising youth, especially in the secondary stage when they are open to political and community institutions.

## TRIBALISM AND THE ARGUMENT OF DEVELOPMENT AND POLITICS

Tribes in Yemen have a special particularity; they are stable and form a political community power that has some characteristics of a political party, lobby, or administration. In Yemen, the clan seeks to influence political decisions, and many of its sheikhs pursue authority or try to pursue their own interests. In addition, if the ruler loses political legitimacy, the tribe assumes the responsibility to fill the political vacuum that may be caused by “the moral or functional withdrawal of the state’s authority” when the individuals feel that the regime neither represents their ambitions nor meets their needs. In this case, tribal loyalty precedes loyalty to the state and the country (Mohammad Al Dhahary, in Arabic, 2004). Many intellectuals in Yemen criticise the politicisation of the clan, believing that this has emptied the tribes of their original ethical values and replaced them with external thoughts, including opportunism, dominance and a merciless struggle to keep all benefits and gains exclusive, even through the use of weapons.

Tribes had played a positive role in resisting the Ottoman invasion of Yemen and supporting the revolution of 1962. Socially, the tribe has maintained the historical identity and heritage of Yemen, values of courage, generosity, helping people in need and the morals derived from religion. On the other hand, it has

strengthened blind tribalism, revenge, ignorance, legends, self-isolation and the disregard of experiences of other nations and civilisations. Some blame the clan for hindering development (Nezar Al Abady, in Arabic, 2006). Unfortunately, the majority of the youth in such an environment absorb these negative values, and some take them as a way of life.

Unlike the relationship between power and wealth in industrial societies where fortune leads to power, authority in Yemen brings wealth. Since the 1960s, some tribal leaders have managed to collect huge sums by being a part of the bodies of authority and decision-making institutions. By the mid 1980s and 1990s, they have started to invest in the market. Being protected and supported by leading positions in power, the freedom of economic competition and the market has been disturbed due to the spread of corruption. In parts of Yemen, the tribes’ tendency to use violence to articulate their demands and solve their disputes (either by kidnapping, destroying buildings, mugging, imposing compulsory charges on entrepreneurs) is a great obstacle for investment and development projects in some remote and tribal areas with deteriorating conditions (Adel Al Shargaby et al, in Arabic, 2008). This poor environment in terms of economy, development and knowledge prevents the youth from obtaining the minimum rights of education, health and growth.

Despite the announcement of political and partisan plurality and many clan individuals receiving membership in political parties, the political and social practices of tribal leaders are still influenced by tribal concepts and norms. The dilemma of the tribal role in development is still present in the cultural scene. Some researchers believe tribal influence hinders modernisation, the development of new institutions and consolidation of the state’s power. On the other hand, some believe that the clan system in Yemen does not contradict the state since it is historical and present part of it (Al Mansoob, in Arabic, 2006).

*Tribes in Yemen have a special particularity; they are stable and form a political community power that has some characteristics of a political party, lobby, or administration*

Under tribal dominance, it is evident that loyalties and citizenship rights cannot be complete or equal. The discriminatory class and social divisions form the values and concepts for youth. They suffer from such separation and even impose the same product of the prejudiced traditional inheritance. This is again an obstruction for shaping the desired positive values for a society in which the characteristics of the knowledge and science society prevail, especially tolerance, openness and intercommunication.

## BASIC FREEDOMS

Human development is linked to the concepts of freedom, the secured provision of basic rights and the involvement of people. This necessitates the presence of freedoms and the expansion of opportunities for participation. After reunification in 1990, a democratic approach and political plurality have appeared in Yemen. Transformations have been seen in the political, legal and economic systems of the former parts of Yemen. Therefore, Yemen has a relatively open atmosphere for political freedoms and the freedom to express one's opinion. The Republic of Yemen has been based on political plurality and economic liberalism under the provisions of the Constitution. Article 5 states that, "The political system

of the Republic of Yemen is based on political and partisan pluralism with the aim of enhancing the peaceful transfer of power...". Under Article 7, the national economy is based on freedom of economic activity. According to Article 10, "the state shall sponsor free trade and investment..." Thus, the constitution states the basics for political pluralism, freedom of the press and expression, people involvement and a free economy. Article 4 of the constitution states that, "the people of Yemen are the possessors and the sources of power, which they exercise directly through public referendums and elections, or indirectly through legislative, executive and judicial authorities, as well as through elected local councils."

## SOCIAL AND ECONOMIC FREEDOMS

For equality of a decent life for both genders, the constitution secures economic and social freedom as it does for political rights and freedom. The constitution acknowledges the right to practice private economic activity and the right of ownership. This is without prejudice to the interest of society where it states that the protection of private ownership cannot be confiscated unless necessary in the public's interest, in lieu of fair consideration and in

*Yemen has a relatively open atmosphere for political freedoms and the freedom to express one's opinion.*

TABLE 4-4-2

### Yemen's Rank in the Economic Freedom Index 2010/2011 (%)

Indicator	2010	2011
Economy Freedom	54.4	54.2
Business Freedom	74.4	73.7
Trade Freedom	76.1	81.6
Tax Freedom	83.2	83.2
Government expenditure	51.3	44.5
Monetary Freedom	65.1	82.3
Investment Freedom	45.0	45.0
Financial Freedom	30.0	30.0
Property Rights	30.0	30.0
Freedom from Corruption	23.0	21.0
Labour Freedom	65.4	50.9

Source: Heritage Website, 22 May 2011 [www.heritage.org](http://www.heritage.org)

accordance with the law (Article 7, c).

The Economic Freedom Index<sup>23</sup> shows a decline of 0.2 in 2011 for Yemen, which ranked 127 among 179 countries and 13 among 17 Arab countries whose data are available, while it was 121 among 179 countries in 2010, and rank 13 on the level of 17 Arab countries with available data.<sup>24</sup> The Yemeni constitution admits the right of citizens to articulate thoughts with all available media and by the means they believe would express their opinions and stances, including speech, writing and gathering (Article 42). It also guarantees the protection, freedom and confidentiality of correspondence, including mail, telegrams or telephone, which may not be censored, exposed or delayed except in cases specified by the law (Article 53). Yemen has signed international conventions for the protection of innovation, creativity and intellectual property rights, such as the Paris Convention in 1994 that regulates intellectual property in all aspects, including rights and commercial purposes. Although an intellectual property law exists, it needs to be modified to cover all types of intellectual property, namely the technical aspect, and to develop and facilitate the procedures for registering the various creativities, particularly inventions and to state the appropriate penalties to control intellectual property violations.

Modifications to the Law of Press and Publication are currently being discussed in the Shura Council with the Syndicate of Journalists arguing that the modifications proposed by the government would further restrain the freedom of journalists more than the existing law. The actual situation shows politicisation of the formal and opposition press that are obsessed with political competition instead of the concerns of people, development and youth. This can be partially attributed to the domination of the political situation and instability that has preoccupied public opinion. However, a country such as Yemen needs its journalists to be more responsibly and effectively

engaged with the issue of development. The interest in education and knowledge is not represented in reportage, field examination and coverage of conferences and workshops. Newspapers dedicate little space for in-depth discussion and diagnosis of the issues of education and knowledge infrastructure in Yemen.

## INDEX OF OVERALL PROSPERITY AND PERSONAL FREEDOM

According to the Legatum Prosperity Index, personal freedom is limited in Yemen but there is a space of freedom in the daily life of Yemenis. The index indicates that Yemenis do not have limitations to practice their religious beliefs or freely express their opinion without fear of government control. Under the indicators of 2010, Yemen, regarding personal freedom, ranks 107th worldwide, compared to Algeria (101), Egypt (109), Jordan (105) and Morocco (100).<sup>25</sup> So, personal freedom is close to that of some Arab countries; however, the index clearly shows the need for the expansion of freedom and creation of more investment opportunities in social capital.

## LEGISLATION AND LAWS

The Yemeni constitution emphasises that, “all citizens are equal in rights and duties”. To this end, “the state shall guarantee equal

*The interest in education and knowledge is not represented in reportage, field examination and coverage of conferences and workshops. Newspapers dedicate little space for in-depth discussion and diagnosis of the issues of education and knowledge infrastructure in Yemen*

TABLE 4-4-3

### Yemen’s Rank in the Overall Prosperity Index 2010

Indicator	The rank among 110 countries
Overall Prosperity	105
Economy	99
Entrepreneurship and Opportunity	106
Education	102
Health	94
Safety and Security	96
Governance	103
Personal Freedom	107
Social Capital	79

Source: Legatum Website, 23 May 2011

*In an attempt to revise legislation and laws for the benefit of the youth, a thorough revision of some national laws has been conducted to reconsider and remove discrimination*

opportunities for all citizens in the fields of political, economic, social and cultural activities” (Article 24). Every citizen has the right to participate in political, economic, social and cultural life (Article 42). The state guarantees education as a right for all citizens through building educational institutions and providing the appropriate conditions. Basic education is obligatory (Article 54).

In an attempt to revise legislation and laws for the benefit of the youth, a thorough revision of some national laws has been conducted to reconsider and remove discrimination, such as the Child Law, Juvenile Law, Crime and Punishment Law, Personal Affairs Law, and Prison Regulation Law. The laws have been modified to correct some inconsistencies, including the age of childhood to correspond to the Convention on the Rights of the Child and the legal protection of children living in harsh conditions. It also addresses issues relating to violence against children, such as female circumcision, early marriage, child labour, rights of teenagers as well as maximising penalties for violators of child’s rights. These laws have become a vital tool for the institutions of the civic society and human rights, as well as for activists advocating youth rights. There are emerging organisations concerned with the issues of children, the youth, public awareness and mobilisation for violations against these age groups. Among the issues most advocated are for juveniles, child labour, early marriage, violations and violence against children.

As for policies and programmes many have been developed such as the National Children and Youth Strategy and the Supreme Council for Motherhood and Childhood. General strategies have been devised for developing basic, secondary and vocational education. The Child Parliament has been activated to follow juvenile conditions and delinquent care centres, spread awareness of child rights among the youth, and involve children in drafting childhood-related policies.

## **LOCAL AND INTERNATIONAL CHALLENGES FOR HUMAN DEVELOPMENT IN YEMEN**

### **POLITICAL AND SECURITY CHALLENGES**

Since the establishment of the unified state, the security and political challenges facing the young country over 2 decades have affected economic, social, political and cultural development in Yemen (Abdulmalek Al Doraay, in Arabic, 2010). Examples include:

- The Summer war of 1994 had excessive economic, social and political consequences on the national economy.
- The Saada wars which began in 2004, with the most furious and final round in 2009. Experts estimate losses to be around \$750 million. As a result, food insecurity indicators increased in the conflicting areas. Thus, the reconstruction costs have multiplied to around 20 billion YER.
- The impact of the conflict in Somalia has driven large numbers of Somalis, Ethiopians and others to emigrate. The number of African refugees in Yemen is more than 700,000. In addition, the threat of piracy has spread to Yemeni territorial waters, affecting trade, navigation and the life of numerous fishing-dependent communities along Yemen’s coastal strip on the Gulf of Aden and off Somalia.
- The escalation of the activities of radical groups and terrorist assaults targeting buildings, service sectors, government and foreign interests and security, and affecting local and international investments.
- Political and security instability in some governorates adversely impact the development of these communities.

### **DEMOGRAPHIC CHALLENGES**

Continuous population growth in Yemen has led to an increase in the average

number of family members and a rise in the sustenance rate. This has affected the family's ability to provide for health, food and education. As a result of the population growth, government spending necessary to meet the growing needs has also increased. This reflects how the infrastructure is too poor to afford private investment and the increase in economic activity to realise the development. In 2015, the population of those under 25 years of age is expected to reach 18 million; constituting 63% of the total population.<sup>26</sup> This poses a great challenge for the educational system in Yemen to prepare for this excessive number for the knowledge society. Among the major demographic challenges is the vast population scattering that undermines the state's ability to reach out to all communities and provide basic services, especially in rural and mountainous areas. The harsh geographic nature of the communities living in the highlands, plains and deserts increases the cost of delivering these services and hinders the provision of a decent life. Additionally, it puts pressure on the limited resources, the water supply in particular, so the people of some mountainous areas leave due to severe drought and lack of fresh water.

## **SOCIAL CHALLENGES**

The variation of the social structure, classism, the control of conservative powers and traditions are major factors that have great influence. Because of such a traditional structure, the youth are not supported by the society to grow independently. They are often marginalised in both political and social participation in their communities. This has a negative influence on their personality formation, independence and development of social skills.

As a consequence of poverty and economic conditions of many families, child labour has increased. The official statistics of child labour in Yemen are

conflicting.<sup>27</sup> However, according to a recent international study of children in a number of governorates, the most recent data in 2005 indicate that more than a million child in the 6-14 years age group work and 80% of these children perform dangerous and hard tasks (Cooperative Housing Foundation (CHF), in English, 2009).

Early marriage is common in Yemen, especially in the countryside, because of traditions that emphasise the practice for both genders. It impacts female educational enrolment and completion where they are usually forced to leave. In such cases, girls are deprived of their educational rights, aside from the health threats due to giving birth at this early age. Despite efforts to raise awareness of the health problems for both the couple and children, early marriage still widely prevails.

## **ECONOMIC CHALLENGES**

After reunification in 1990, Yemen has faced major economic difficulties. The incorporation of two political systems has had an enormous impact on the economy. As a consequence of the First Gulf War (1990/1991), a million Yemeni emigrants returned from neighbouring countries. The 1994 civil war in Yemen additionally impacted the economy and initiated a severe economic crisis. In 1995, an economic and administrative reform programme and market-based economy have been employed. In addition, the role of the private sector has been enhanced in the area of economic growth.

## **POLICIES OF ECONOMIC AND ADMINISTRATIVE REFORM**

The reform programme, backed by revenues from crude oil, has successfully decreased the macroeconomic imbalances, created some economic stability and made progress in the infrastructure and the basic services. The government budget has been improved, moving from a 14.9% deficit

*The variation of the social structure, classism, the control of conservative powers and traditions are major factors that have great influence*

*Variation in economic activities should be stressed, since relying on limited sources of income, such as oil, emigrant money transfers, foreign aid and others shall not realise the desired growth*

of the GDP in 1994 to a surplus of 7.1% in 2000 (MPIC, 2010 A). A social security network has been developed with various approaches to alleviate the impact of the reforms on the poor.

With the decline in oil revenue, the global economic crisis, the growing population, the recent political and security circumstances in many parts of Yemen, public limited resources have been reduced and the state's ability to provide public services has been lowered. Economic growth is still the biggest challenge. In the coming period, increasing the growth rate should be a top priority. Variation in economic activities should be stressed, since relying on limited sources of income, such as oil, emigrant money transfers, foreign aid and others shall not realise the desired growth. The structure of the economy can only be changed by a wide-scale growth rate of income resource diversification (MPIC, 2010 B).

Yemen gives priority to economic, financial, and administrative reforms, the implementation of the national agenda of corrections, enhancing partnerships with the private sector and civic society and building development partnerships with donors.

## UNEMPLOYMENT

Unemployment is and shall be a major challenge in Yemen over the next few years if the educational system is not updated to reasonably focus on practice and link its output to the requirements of local and regional markets and the knowledge society. Since beginning of the 1990s, the national rate of unemployment has risen to 14.6% in 2009 due to the deteriorating economic situation and delayed development of a central recruitment strategy. Statistics show a recent further decline.<sup>28</sup> The unemployment problem in Yemen is structural; it is mainly a product of the incapacity of the national economy to accommodate the annual new labour, and structural unemployment results from the incompatibility of skills required for existing job opportunities and those of

job seekers. Unemployment has evolved to be a youth issue that is common among the graduates with different specialities. The problem is also evident among students of production age that have never worked, which is 52.9% of young people aged 15-24 years old (MPIC, 2010 A).

The number of unemployed graduates has increased as they don't meet the labour market needs. In addition, the private sector hardly ever finds the skills required in those graduates. TEVT and university graduates find it more difficult to enter into the labour market, due to a weakness in the required skills, a poor command of foreign languages and the use of computers, and decreased job opportunities in the state's administrative authority. Inappropriate education output for the labour market requirements and the diminished role of the private sector to offer new jobs are demanding challenges. New national programmes of graduate requalification to meet the market needs should be approved. TEVT institutions should be restructured to be more responsive to current and future requirements, particularly those of the knowledge economy. Moreover, the private sector should play a pivotal role in management and recruitment.

Non-traditional solutions of unemployment are numerous,<sup>29</sup> including the expansion of local heavy-labour developments, self-employment ventures financed either by the government through the Social Development Fund, Social Care Fund and Youth Fund, or by lending and financing organisations of micro and small-sized enterprises, such as Bank of the Poor and NGOs that are concerned with funding youth, women, and small enterprises and the activation of employment services. Two fundamentals should lead to this end. First, an information infrastructure should be developed and a labour market analysis unit should be created with a website that allows local and international employers to record their vacancies and requirements. Second, employment offices should be improved in terms of human power, infrastructure and connection to labour market analysis units.

TABLE 4-4-4

**Social Gender Indicators for 1990-2008 and Target Indicators for 2015**

Indicators	1990	2000	2004	2008	2015
Ratio of females to males in primary education (%)	44.6	55.7	70.6	74.8	100
Ratio of females to males in secondary education (%)	13.7	36.6	44.8	58.8	100
Ratio of females to males in university education (%)	20.5	23.3	35.3	37.5	100
Ratio of educated females to males aged 15-24 (%)	34.1	--	57.8	--	100

Source: UNDP and MPIC, in English, 2010

Knowledge society requirements are not only limited to narrowing the supply/demand gap in the labour market, but also to developing the local market economy to be on a par with regional and international knowledge economies. Then, the actual situation needs to be corrected in multiple directions, such as devising strategic plans to move into the knowledge economy and defining the required skills and abilities to be simultaneously developed.

The modern state of Yemen has faced harsh situations that have affected the efforts of structural stability and comprehensive development that aim at expanding individuals' options. Most endeavours have focused on meeting basic needs, such as spreading education rather than improving its quality and implementing the planned visions of preparing the youth for the knowledge society. Therefore, bridging the skills and digital gap and drafting a practical strategy for human capital investment are among the most outstanding knowledge challenges for Yemen.

## GENDER EQUALITY

When it comes to preparing the knowledge generations, we should not disregard the issues surrounding girls who represents half of the Arab youth. They experience, in many Arab countries, social traditions that further restrict their abilities and talents and hinder their involvement in the knowledge society more than males.

Like other Arab societies, Yemen is a male-dominated society where social customs play a primary role in

discriminating against women. There have been efforts made to increase the number of feminist and rights organisations, as well as the participation of women in elections as candidates and voters with some leading positions occupied by women, such as ministers, ambassadors, members of parliament and Shura and local councils. However, many challenges slow the desired progress, and this is mostly attributed to inherited social traditions and customs, poverty, the harsh economic situation, increased illiteracy and a low community awareness of the significance of women in development. In addition, radical political and religious movements have played an adverse role in limiting the opportunities to improve the conditions of Yemeni women and have hindered development efforts targeting women. They have successfully misled people about the woman's situation and role as prescribed by our true religion. Consequently, the enrolment of girls in school is low in the countryside with the excuse that the availability of female teachers is a must. Many girls leave school after the 4th or 5th grade. Early marriage is common in the rural areas. Women are prevented from participating in public issues in favour of their traditional role. Significant efforts have been made to raise girls' school enrolment in the countryside by building girls' schools and classrooms, providing female teachers and offering food and financial incentives within various programmes of the Ministry of Education. Nevertheless, there is much more to be done. Local councils and communities are still required to play a more effective role

*Radical political and religious movements have played an adverse role in limiting the opportunities to improve the conditions of Yemeni women and have hindered development efforts targeting women*

TABLE 4-4-5

**Women's Representation in Parliament and Shura and Local Councils**

Role	Women	Men	Total	Ratio of women to men
Parliament members	1	300	301	0.3 %
Shura members	2	109	111	1.8 %
Local council members	38	7,594	7,632	0.5 %

Source: Women National Committee, 2010

*In an astonishing fact, formal statistics indicate that less than half of the girls in Yemen enrol in primary education and the majority of them receive little education*

to support the girls' right to complete their education.

According to the Interim Audit Report of the Third Socio-Economic Development Plan for Poverty Reduction, the economic activity of women was 8.8% during 2006-2008, with 24.6% of total workers and 15.5% of the official labour force. In the informal sector, sometimes called the unregulated sector, women account for 92.7%. This sector is less committed to labour laws and workers' rights and provides lower wages (Women's National Committee, 2010). Many achievements are noteworthy; however, there is much to be done if we want to prepare half of the youth, namely girls, to actively participate in the desired knowledge society.

In an astonishing fact, formal statistics indicate that less than half of the girls in Yemen enrol in primary education and the majority of them receive little education. Most of them get married, especially in the countryside, at an early age before developing their physical and mental maturity to find themselves responsible for children while they are in great need of care. How can we expect these adolescent mothers to raise, guide and develop their children in early childhood, the formative age of personality and cognitive growth? Yemeni girls, the future mothers, need real progress away from misleading ideas spread by radicals and a sincere orientation to improve their situation and provide basic needs, such as education, health and awareness. Women's development should be a central theme in development programmes and plans instead of political parties' overstatements

about uncompleted achievements.

## **COMMUNITY AND PROFESSIONAL INSTITUTIONS AND FUTURE GENERATIONS' PREPARATION**

The role of the government in providing and spending on social services has declined because of economic, political and social changes, the trend towards the market economy, structural reform policies and other reasons. Therefore, other entities should be involved to complete the state's role in achieving sustained community development, such as the private sector, civic society institutions and other community organisations. Being much closer to the different categories of society, the role of these organisations has become more significant in building the knowledge society and preparing individuals for it. The knowledge society is greatly concerned with activating various community bodies.

## **CONTRIBUTIONS OF THE PRIVATE SECTOR**

The review of the recent progress of the Development Plan 2006-2010 has highlighted the vital role to be played by the private sector and the appropriate conditions to be secured for its development. Private investment has grown during the first years of the plan, from 23.6% of the GDP in 2006 to 33.6% in 2007, and then it has significantly slowed during 2008 to be 21.1% of the GDP (MPIC, 2010 D). The effective

role of the Yemeni private sector has been undermined by being dynamic and small. A real desire of cooperation between the government and the private sector is clearly seen. Both the government and civic society institutions have numerously approached this through various corporate social responsibility conferences for the private sector and developing communication channels. However, more confidence, cooperation and integration seem to be needed between both parties. The private sector is still inactive in providing social services except some endeavours by the major commercial entities. However, the scope of such services does not cover the issues of sustainable development.

As for the private contribution in education and knowledge, it runs parallel to rather than complementary and uncontrolled in terms of quality and quantity. Its role is limited to for-profit nurseries, schools, universities and training institutes. Additionally, the small-scale private sector affects the knowledge demand and lessens competition in the market. Having joint projects or communication among the private sector, NGOs and the Ministry of Education is lacking except for the Education for All Coalition, an initiative created in 2010 by the civil society that seeks to include the private sector.

## CIVIL SOCIETY INSTITUTIONS

NGOs, sometimes called the ‘third-sector’, are not only integral to the state’s role in social development, but are also fundamental to the state’s system when involved into creating, implementing, and controlling policies. The number of civil society organisations in Yemen is estimated to more than 7,000, varying from developmental, cultural, or rights institutions, or trade unions.<sup>30</sup> Nevertheless, most NGOs are limited to charity, with increasingly emerging activity in organisations concerned with rights, political and social, and childhood issues. There are few development-oriented NGOs

that manage to implement development and training programmes, in partnership with the government and private sector. Strongly linked to the government sector, private sector, or influential political groups are the civil society institutions that have adequate resources and capacities to continue their work.

NGO activity in education is almost absent, except for limited supplementary events performed by some major NGOs, local ones in particular, which provide adult literacy classrooms for rural women and school uniforms and bags for poor students. This does not mean that Yemeni civil society is unable to make an effective contribution to education and development. There are some unique experiences of boards of mothers in rural schools from which development NGOs have emerged. Due to the continued training and raised awareness of such boards, young female leaders have appeared and some successful NGOs have created and implemented some developmental and educational projects, for example in Yarim, a rural town.

Some development-oriented NGOs have leading programmes of building professional, informative, and administrative abilities and supporting small enterprises for young people until they can operate them independently.

This shows that the activation of civil society is possible if the political will allows it for further involvement in educational issues. Additional school independence, increased support of local authorities and enhanced decentralisation of decision making, a package that the Ministry of Education started in 2006, shall solve many educational issues, create leading development patterns and devise innovative solutions to the educational challenges in remote rural areas. Due to the transition to decentralisation and lack of experience of the executive authorities, the integration of non-educational NGOs is still currently not possible.

*NGO activity in education is almost absent, except for limited supplementary events performed by some major NGOs, local ones in particular, which provide adult literacy classrooms for rural women and school uniforms and bags for poor students*

## MAJOR CHALLENGES FOR PREPARING THE FUTURE GENERATIONS FOR A KNOWLEDGE SOCIETY IN YEMEN

The development situation in Yemen suggests that the vision, foundations and legal frameworks for the knowledge society are available. Moreover, among the most significant methods for economic growth is the focus on human capital investment. Therefore, it is possible to move into the knowledge society if real opportunities of enhancing political and economic stability become attainable in Yemen.

*The development situation in Yemen suggests that the vision, foundations and legal frameworks for the knowledge society are available*

The inadequate training and rehabilitation for teachers' changing needs, and maybe students too, are among the adverse factors. Teacher preparation in educational colleges is not evolving to match the changing learning situations that are influenced by some new elements, such as the increased use of technology in education, knowledge challenges, an information explosion and communication technology. Thus, teachers are not prepared for today's students and accordingly do not educate the students for the future society.

Poor command of the native and foreign languages of both learners and teachers is evident; both lack the medium of knowledge, i.e. the language. Recent reports on labour market requirements in Yemen confirm that job seekers are weak in both foreign languages and computer skills.

Although the goals of curricula concentrate on comprehensive knowledge objectives, their practical part does not reflect this. Analytical and cognitive skills are rarely considered. Mechanisms of turning from education and dictation to learning and building effective self-learning abilities are absent. The status of development, education and enabling environments shows that efforts are centred on the quantitative expansion of basic educational services via providing its input, such as school infrastructure, teachers and curricula. Endeavours to improve the quality and outcomes of education are undermined by geographic and financial challenges and lack of resources.

The great difference between the countryside and urban areas, in terms of education environments or input that come in favour of the latter, prevents a high percentage of young people from an equally high quality education, impacting the educational outcome in rural areas. University education evidently shows this difference.



# READINESS OF YEMENI FUTURE GENERATIONS FOR THE KNOWLEDGE SOCIETY: RESULTS OF THE FIELD STUDY

## INTRODUCTION

*This section aims to measure the extent of youth readiness in Yemen to access the knowledge society through a field survey conducted to measure student possession of a number of skills, values and enabling environments that are required for the knowledge society. The survey also examined the opinions of students and teachers regarding the appropriateness of their environments to enable them to acquire the required skills and values.*

## SAMPLES OF FIELD STUDIES IN YEMEN

Within the general goals of the current Arab Knowledge Report, three categories from the society were chosen in order to survey their opinion. The first category and main sample is the students. The teachers of those students in the sample schools are the second category. The third category includes experts, intellectuals and decision-makers representing Yemeni society and the stakeholders.

## RANDOM SAMPLING OF STUDENTS

Similar to the general methodology followed in other case studies, in Chapter 5 of the General Arab Knowledge Report, stratified random sampling was drawn to collect a sample of twelfth grade students in Sana'a schools.

The sample was taken according to the

data approved by the Ministry of Education, showing the number of students and their educational disciplines. It included 207 schools and 21,022 students. For systematic purposes, sampling was limited to twelfth grade Yemeni students in the capital. The random sample included students in government and private schools only.

## SAMPLE DESCRIPTION

The sample included 29 (20 government and 9 private) schools in the capital Sana'a.<sup>31</sup> The student sample was 1,724 (860 males and 864 females) from all departments. The field survey was conducted between 17 and 20th October, 2010.

## SAMPLE OF TEACHERS

The teachers of the same students were randomly drawn for the sample, with disciplined variation considered. The number of teachers sampled was 117.

## GROUP OF EXPERTS AND DECISION-MAKERS

To examine the opinions of specialists and other representatives of the Yemeni society, a brainstorming workshop was held in August, 2010, to select experts, intellectuals and educationalists. 48 various specialists in the private and public sectors participated in the workshop. They were asked to give their views on major issues

*The survey also examined the opinions of students and teachers regarding the appropriateness of their environments to enable them to acquire the required skills and values*

that need to be addressed to prepare the youth for effective involvement in the knowledge society, define the requirements and suggest methods to attain this end.<sup>32</sup>

## RESULTS OF THE FIELD STUDY

### SKILLS

Three skills were measured: cognitive, conative and social. The results of students' responses are detailed below.

#### COGNITIVE SKILLS

This section measured 4 basic skills: information search and processing, written communication, problem solving and use of technology. The findings were analysed by calculating arithmetic means, standard deviation and difference analysis.

Generally, it is obvious that the students who responded have poor cognitive skills, as illustrated in Table 4-5-1.

The above table shows that the students' scores vary between 3.5 (as a

minimum score) to 64.5 (as a maximum score) with an average of 27.72. This clearly indicates the poor level of students in the target skills, as their performance is less than the first 1/3 of the scale and significantly below the average score (50 out of 100) for the minimum level required to possess cognitive skills.

An examination of the components of the cognitive skills and the averages shows that written communication skills are the weakest.

Females outperformed males in the skills of information processing and written communication, and males exceeded in use of technology. There was no significant difference for problem solving. When talking about the skills collectively, the difference vanishes, and the performance of both males and females is equal. Written communication and information processing, both needing writing and accuracy, may be attributed to the fact that females are more patient than males.

The detailed results of the students for cognitive skills are below:

*An examination of the components of the cognitive skills and the averages shows that written communication skills are the weakest*

TABLE 4-5-1

#### Results of aggregate cognitive skills (measured from 0 to 100)

Average (Arithmetic mean) <sup>33</sup>			Standard deviation <sup>34</sup>		Standard <sup>35</sup> deviation	Lowest score	Highest score	Statistical differences between males and females
Males	Females	Total	Males	Females				
27.91	27.54	27.72	10.35	9.98	10.16	3.57	64.49	No difference

TABLE 4-5-2

#### Results of detailed cognitive skills (measured from 0 to 25)

Skills	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Information searching	8.83	9.91	9.37	3.43	3.71	3.35	0	20.24	In favour of females
Written communication	4.41	5.14	4.79	5.04	5.14	5.11	0	25	In favour of females
Problem solving	5.87	5.91	5.89	3.64	3.59	3.61	0	19.44	No difference
Use of technology	8.79	6.56	7.67	3.67	3.39	3.71	0	20.28	In favour of males

## Information searching and processing skill

Students' scores varied from 0 to 20.24, and no student received the maximum score (25). The arithmetic mean is 9.37 out of 25. This means that the general performance of respondents is less than expected. Only 312 students, i.e. 18% of participants, received the minimum score (12.5).

Many reasons can explain the evidently poor skills of information searching and processing, including:

- School curricula do not focus on such skills; questions focus on information memorisation and rarely tackle information processing and analysis.
- The practical content of data and chart processing and analysis are insufficient, and the students lack the ability to deal with realistic data and examples of other resources other than the books used in schools.

## Written communication skill

The scale for this skill was 0 - 25 score. Respondents' scores varied from the minimum to the maximum, with 365 students (21.2%) receiving 0 and only one received 25. The arithmetic mean was 4.79 out of 25, indicating the great lack in this skill, with a difference of 8 points between the students' scores and the minimum required level (12.5 out of 25).

The written communication skill is the poorest skill of the Yemeni young people. It may be attributed to the students, males in particular, being uninterested in questions, even those with few words. It may also reflect the fact that teachers modestly concentrate on enhancing all types of writing skills, as they often focus on writing essays rather than other kinds of writing.

## Problem solving skill

The scale of this skill was 0 - 25. It is

obvious again that the youth are poor in this skill, with 18 students receiving 0, no student received the maximum of 25 and 4 students receiving 19.4. The arithmetic mean is 5.89 out of 25, with only 4% of students receiving at least the minimum score (12.5).

Two explanations can highlight the reasons for the students' poor command of this skill. First, students are unable to read instructions and link them to the provided map keys, as they do not practice such kinds of questions in the curriculum. Second, most students depend on the teacher to explain the question (sometimes due to being lazy or unconfident). Therefore, when the teacher repeats the instructions, the students become more confident with the meaning behind the question. The survey does not allow this, so the students had to rely on themselves to understand the instructions. These low results indicate an urgent need for concentrating on problem solving, understanding instructions and enhancing and strengthening the practical part.

## Use of technology skill

Although computer labs are available in schools, especially in secondary schools, and computer subjects are included in the curricula of both the basic and secondary education, the arithmetic means of this skill (7.67 out of 25) is remarkably low. So, the general performance of the sample is 5 points below the expected level. 23 students received 0, and no one received the highest score (25), with the highest score being 20.2.

These results may be due to the inadequate number of computers in labs, so students do not practice using them enough. In addition, few students have personal computers at home due to their high price. The use of the internet is primarily limited to entertainment, chatting and games. The internet is available in internet cafes for males who

*The practical content of data and chart processing and analysis are insufficient, and the students lack the ability to deal with realistic data and examples of other resources other than the books used in schools*

are allowed to stay outside the house, but not for girls. So, the narrow use of technology for entertainment outweighs its use in science. No attention is given to research and stimulating students to search for information rather than the school content, thus reducing the development of these skills.

### Analysing differences between cognitive skills

The differences in the averages of the cognitive skills measured are statistically significant. This shows the actual variation in skills, so the general performance of students in all cognitive skills is poor but to

*No attention is given to research and stimulating students to search for information rather than the school content, thus reducing the development of these skills*

FIGURE 4-5-1

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

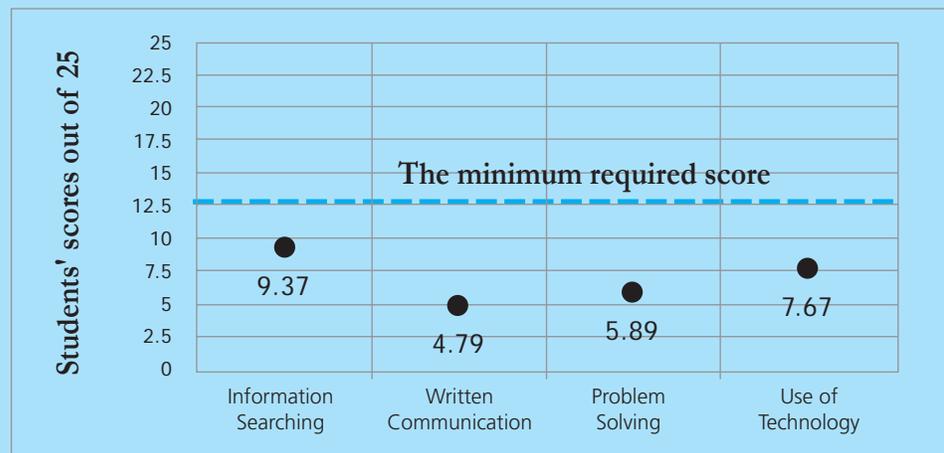
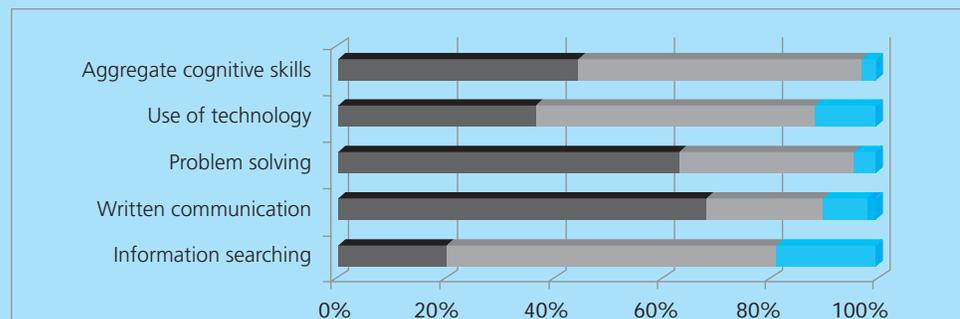


FIGURE 4-5-2

### Students' readiness in terms of cognitive skills



	Information searching	Written communication	Problem solving	Use of technology	Aggregate cognitive skills
■ Not ready (less than 25% of total score)	20.4	68.3	63.9	36.9	44.3
■ At the beginning (25% to 50% of the score)	61.5	22	32	51.9	53
■ In the process of being ready (50% to 75% of the score)	17.8	7.7	3.9	10.9	2.7
■ Ready (75% or more of the score)	0.3	2	0.2	0.3	0

varying degrees. Written communication skill is the lowest, followed by problem solving skill, then the use of technology skill, and the highest performance was in the information searching and processing skills.

### Students' readiness in terms of cognitive skills

It is noted that 44% of the responding students did not receive the minimum score that prepares them for the knowledge society, while more than the half of the sample are still on the way. On the upper half of the scale, 2.7% of students reached the 'phase of acquiring readiness elements', but no one reached the phase of 'readiness completely.'

As for the sub-skills, most students are in the lower half of the scale, so they do not have the adequate ability to respond to the cognitive requirements of the knowledge society. When the 4 skills are compared, the skills of information processing and use of technology are in a relatively better position than those of problem solving and written communication. More than 50% of students are on the cusp of readiness for the former

skills, while 60% of students are completely unprepared in terms of the latter skills. For more accuracy, we found that 114 students were 'not ready' in all skills, accounting for 6.6%, with no one reaching the fourth level in all skills. This clearly shows that cognitive skills are poor and a prompt revision of the Ministry of Education's curricula is needed.

### CONATIVE SKILLS

Conative skills include 3 sub-skills: self-knowledge and self-esteem, motivation to learn and planning for the future. Collectively analysed, the outcome of the conative skills are better than the cognitive skills.

Theoretically, the total scores for the 3 conative skills are collectively calculated, with a range of 0-75. The students' scores varied from 0 to 63.10, with 107 students (6.2%) receiving 0 and only 7 students receiving 60 and above. Measured against the arithmetic mean (39.99), most of respondents obtained the minimum score for conative skills, with 78.8% receiving 37.5 or more.

Comparing the result with the gender variable, females outperformed males in the skills of self-esteem and planning for the

*Written communication skill is the lowest, followed by problem solving skill, then the use of technology skill, and the highest performance was in the information searching and processing skills*

TABLE 4-5-3

**Results of aggregate conative skills  
(measured from 0 to 75)**

Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest degree	Highest degree	Statistical differences between males and females
Males	Females	Total	Males	Females				
37.81	42.03	39.99	15.57	11.42	13.68	0	63.10	In favour of females

TABLE 4-5-4

**Results of detailed conative skills  
(measured from 0 to 25)**

Skills	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Self-esteem	20.22	20.60	20.42	3.63	2.91	3.27	0.89	25	In favour of females
Motivation to learn	18.6	18.56	18.58	3.45	3	3.22	1.39	25	No difference
Planning for the future	4.07	4.89	4.48	3.39	3.79	3.62	0	25	In favour of females

*The increased level of self-esteem and planning for the future with girls positively indicates how they are highly self-confident, contrary to the social and cultural conditions that show a basis for male self-appreciation and prestige inside the family, like many Yemeni families*

future, while males exceeded in motivation to learn. However, these results were not statistically significant. All differences are statistically significant for girls, even with collective skills. The increased level of self-esteem and planning for the future with girls positively indicates how they are highly self-confident, contrary to the social and cultural conditions that show a basis for male self-appreciation and prestige inside many Yemeni families. In addition, this indicates that girls are able to overcome social obstacles for becoming involved in the knowledge society.

### **Self-knowledge and Self-esteem**

Students performance in this skill was high, with 35 students (1.9%) receiving the maximum score, and arithmetic mean of 20.42 out of 25, which is 8 points above the theoretical mean (12.5 out of 25). This reveals an increased level of self-esteem for most of the students who responded.

They are able to judge the consequences of their actions, are confident in having the necessary abilities for success and are willing to openly learn their faults from others so as to correct them. As positive indicators of psychological balance, students highly appreciate knowledge for future progress. This confirms the high value placed on learning and knowledge and the confidence of youth in their abilities.

### **Motivation to Learn**

Scores varied from 1.39 to 25, and only 3 students (0.2%) received the maximum score. The arithmetic mean was 18.58, with around 6 points above the theoretical mean (12.5 out of 25). More than half of the students received high averages in this skill, with 58.5% of students receiving a score of 18.58 and above. The standard deviation indicates that the students' scores are close.

Sections covering objective clarity and the use of self-learning and self-evaluation methods highlight the trend of students

towards learning. A high percentage of them have some control over their self-orientations and strategies (varying from 86% to 76% for those who responded with 'totally apply' and 'somewhat apply').

The high scores for motivation to learn may be explained by family-related factors, such as education welfare at home and parental encouragement. Since the sample included students from the third secondary grade, i.e. the final year of secondary education, students were very competitive to obtain high scores in order to join universities that raised its enrolment rates (a minimum of 70%) or receive local or foreign scholarships. Therefore, the future options of the young people are highly determined by the marks of the secondary certificate.

### **Planning for the future**

287 students received 0, and only one student received the maximum score (25). The arithmetic mean was less than 4.48 out of 25, with 8 points below the theoretical mean (12.5 out of 25). This suggests respondent students' poor ability to plan for the future.

Teenagers should have the ambition to achieve current and future objectives which is a sign of self-esteem. The students already articulated some goals relating to wealth and social status. It seems contradictory to the significant percentage that said they act according to their parents' planning. A small group said they do not have objectives or did not set their goals yet. This reveals that some families fail to develop the skills of planning for the future and others restrict the freedom of their kids to choose their future options.

Weak skills for planning for the future is an evident product of the absence of professional and personal guidance programmes that help secondary graduates to define their preferences and choose their study or career path. Additionally, parents are usually the ones who select this path for their children. Therefore, the absence of the freedom to choose and

learning options do not allow the building of strong and independent personalities that enable young people to identify goals, abilities and preferences.

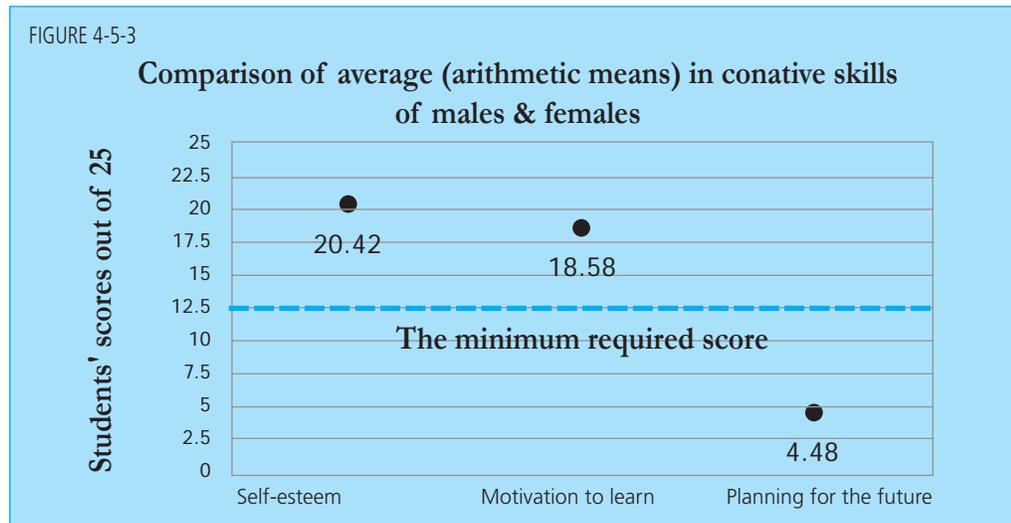
### Analysing differences in conative skills

Comparing the averages of the conative skills examined, they are statistically significant. This confirms that the levels of the skills vary among the sample, self-esteem was the strongest skill and planning for the future was the weakest.

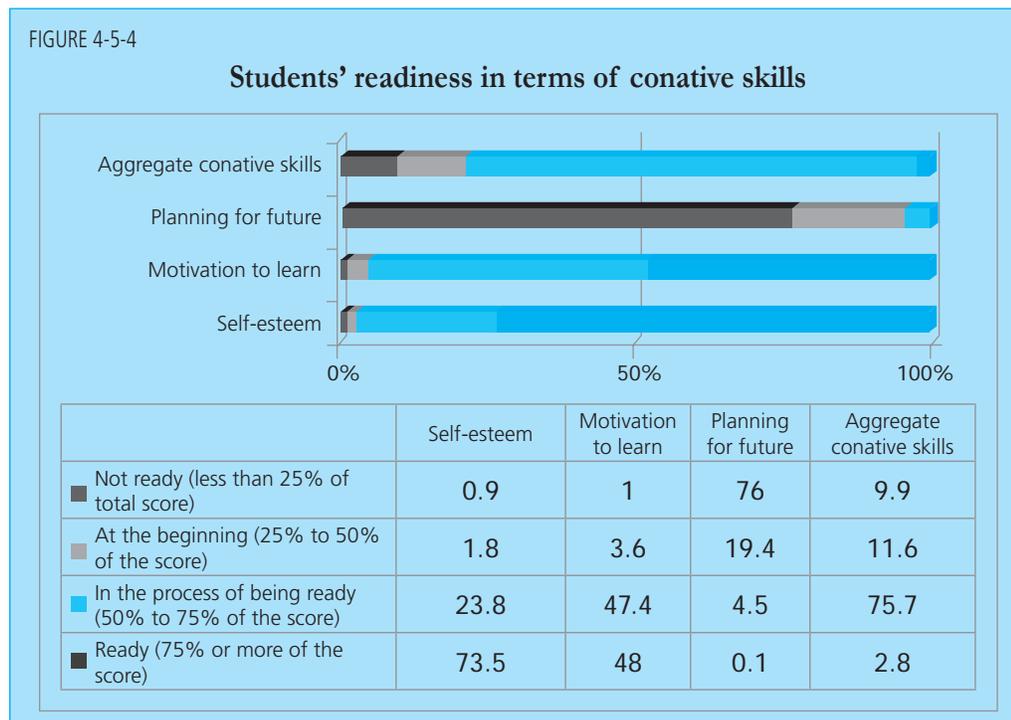
### Students' readiness in terms of conative skills

Students' performance in conative skills is better than cognitive skills, collectively and in detail. Most of students are in the third level, i.e. the phase of acquiring the necessary skills. Only 9.9% of the students do not have the minimal conative skills needed for the knowledge society. At the other side of the scale, few are ready (2.8%).

As for the conative sub-skills, most students fall in the third and fourth levels



*Weak skills for planning for the future is an evident product of the absence of professional and personal guidance programmes that help secondary graduates to define their preferences and choose their study or career path*



*We can conclude that the youth have good self-esteem; however, further support of educational institutions, such as the school and family, are required for skill integration*

of the readiness scale, except for planning for the future. For more accuracy, we found that 3 students were ‘not ready’ in all skills, with no one reaching the fourth level in all skills at the same time.

We can conclude that the youth have good self-esteem; however, further support of educational institutions, such as the school and family, are required for skill integration. Although the curriculum objectives include the development of such aspects, reality does not reflect these goals.

### SOCIAL SKILLS

Social skills include 3 sub-skills: communication with others, teamwork and participation in public life. Collectively analysed, the outcomes of the social skills are better than the cognitive skills as shown in Table 4-5-5.

The total scores of the 3 social sub-skills collectively vary from 0 to 75. 209 students (12.4%) received 0, and 9% received 60 or more. The arithmetic mean (37.54) corresponds to the theoretical mean (37.5) that can be considered the minimum score for social skills. Accordingly, 60% of participants reached the minimum and above, with girls clearly

outperforming boys.

Females outperformed males in skills of communication with others and teamwork, while males exceeded in participation in public life. The difference is statistically significant and becomes larger if the skills are collectively combined. This confirms again that girls generally exceeded boys in this area.

### Communication with others

22 students (5.3%) received 0, and another 22 students (5.3%) received the full score. The average (15.86 out of 25) exceeded the minimum score (12.5) with 3.5 points. More than 61.7% of students attained the mean. This indicates that most students have the minimum limit of communication with others, although the limited social environment is not motivational, particularly in the case of girls who face more restrictions on communicating with others.

Upbringing methods may have an impact on the students not performing well in the skills of communication and ability to manage dialogue and accept others’ point of view. Families do not often promote discussion and argument, primarily with elder members. Just like

TABLE 4-5-5

#### Results of Aggregate social skills (measured from 0 to 75)

Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
Males	Females	Total	Males	Females				
34.05	41.18	37.54	17.49	17.49	19.93	0	71.10	In favour of females

TABLE 4-5-6

#### Results of Detailed social skills (measured from 0 to 25)

	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
Communication with others	15.12	16.51	15.86	6.47	5.35	5.94	0	25	In favour of females
Teamwork	11.5	14.65	13.05	8.03	6.94	7.68	0	24.12	In favour of females
Participation in public life	15.08	13.69	14.33	6.92	6.5	6.73	0	25	In favour of males

the pattern of Arab families in many conservative societies, the older member dominates, and the younger is instructed to show respect and silence instead of communication. Additionally, the school does not pay sufficient attention in developing the skills of discussion and dialogue methods because of the tight curriculum and classroom size.

### Teamwork skill

289 students received 0, and no one received full marks (25). The arithmetic mean (13.05) is higher than the required minimum limit for possessing this skill (12.5 out of 25). Therefore, the performance of the students with regards to teamwork is within the required average; it is generally moderate.

While training on teamwork skills is limited in schools, the youth experience in working in groups shows a great awareness of this skill. This can be explained as a characteristic of Yemeni society that still has positive qualities, such as helping others and cooperating in group work, such as weddings, funerals, disasters and charity. This is still a part of the original heritage, either in rural or urban areas, so young people spontaneously gain these skills.

### Participation in public life skill

Participation in public life is significant since it is a major part of the aspiration of the community and educational institutions towards preparing the youth. To measure this skill, many questions were chosen to examine the youth's participation in voluntary activities, local elections and community work outside school.

49 students (3.9%) received 0, and 128 students (10.1%) received the full score (25). This is a positive indication that the students who actively take part in public life outnumber those who completely refrain. More than 50.4% of students received the arithmetic mean (14.33 out of 25), revealing that half of the students has a reasonable degree of this skill, with the difference in the favour of males.

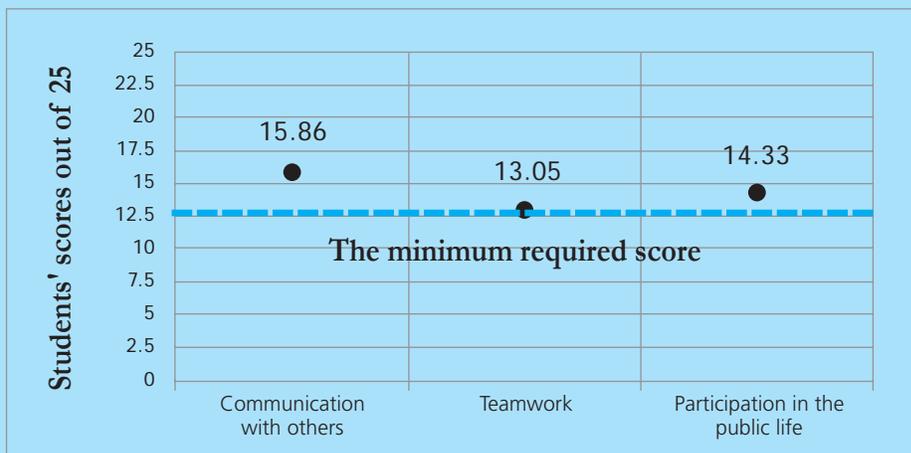
### Analysing differences in social skills

Comparing the arithmetic means of the social skills examined, shows they are statistically significant. This confirms that the levels of social skills vary. Students show varying performance in the skills, with teamwork being the weakest, followed by participation in public life, and then direct communication with others being the highest.

*Upbringing methods may have an impact on the students not performing well in the skills of communication and ability to manage dialogue and accept others' point of view. Families do not often promote discussion and argument, primarily with elder members.*

FIGURE 4-5-5

**Comparison of average (arithmetic means) in social skills of males and females**



## Students' readiness in terms of social skills

The survey results show that most students fall in the third and fourth levels of the readiness scale, and about 20% of respondent students do not have sufficient social skills, so they fall in the first level for accessing the knowledge society. On the other side of the scale, few are ready (17.2%).

Focusing on the upper category, at least 30% of respondents in each skill have reached the 'ready level', with varying performance between students between one skill and the other (teamwork at the top and communication with others coming last). For more accuracy, we found that 91 students (5.3%) are 'ready' for all social skills, and 8 students are completely 'not ready'.

The survey results have been compared to the views of experts and intellectuals in a discussion workshop held in Sana'a. Below are the most remarkable findings relating to skills and abilities.

*Specialists agreed unanimously that the poorest skills of Yemeni youth are those relating to critical and analytical thinking, creativity and planning*

## VIEWS OF WORKSHOP PARTICIPANTS ON THE DESCRIPTION OF THE FUTURE GENERATIONS' SKILLS THAT ARE REQUIRED FOR ACCESSING THE KNOWLEDGE SOCIETY

Intellectuals and decision-makers concentrated on skills that they believe cannot be covered by traditional memorisation-based education. Skills of critical thinking, creativity, information processing and analysis are the most needed for preparing the youth in Yemen for the knowledge society. At the same time, experts think these skills are currently the poorest.

Figure 4-5-7 shows the most compelling skills, according to the experts. Cognitive skills, such as analytical thinking, decision-making and problem solving, are at the top.

Specialists agreed unanimously that the poorest skills of Yemeni youth are those relating to critical and analytical thinking, creativity and planning. Such skills are essential for dealing with the massive flow of internet information, satellite channels and

FIGURE 4-5-6

### Students' readiness in terms of social skills

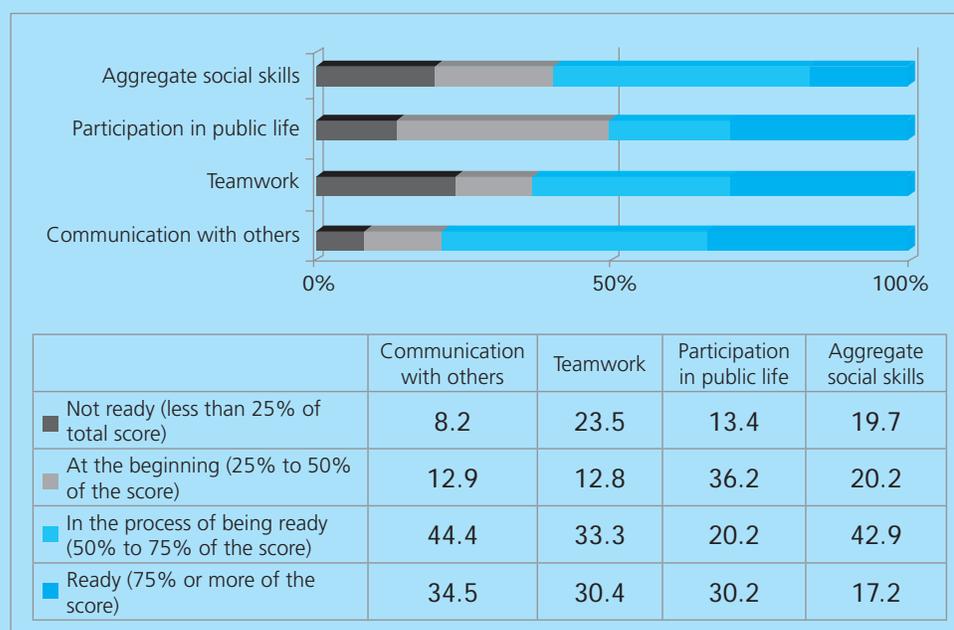
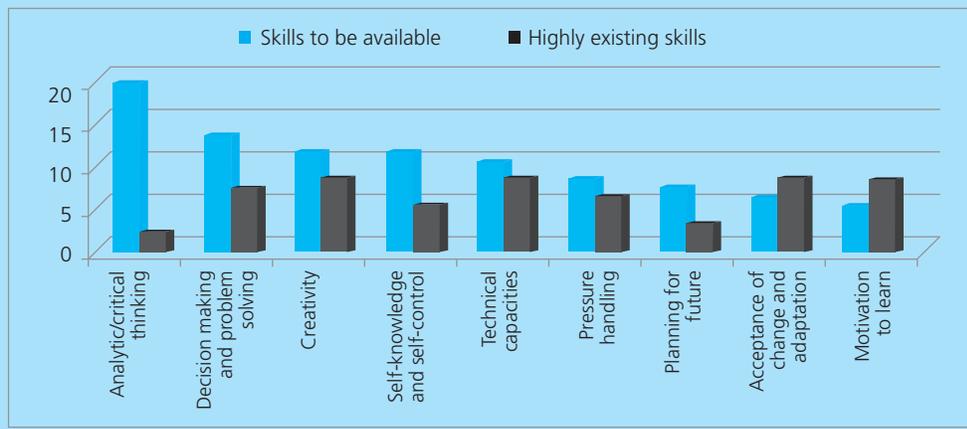


FIGURE 4-5-7

**Views of workshop participants on the major skills and their availability**



*Comparing the expert views to the survey findings, there is agreement that the skills of analysis, thinking, planning for the future, decision-making and problem solving are low*

newspapers. They represent uncontrolled and open resources of knowledge so the users should be able to process, refine and use this information stream.

Comparing the expert views to the survey findings, there is agreement that the skills of analysis, thinking, planning for the future, decision-making and problem solving are low. On the other hand, experts believe that the skills of self-knowledge and motivation to learn are absent, while the students show high performance in both.

Again, cognitive skills were found to be the poorest, followed by self-development

skills, such as decision-making, planning for the future, negotiation, dialogue management and acceptance of others' views. In the course of curriculum revision, these self-learning skills and practical exercises should be considered in teaching methods and approaches.

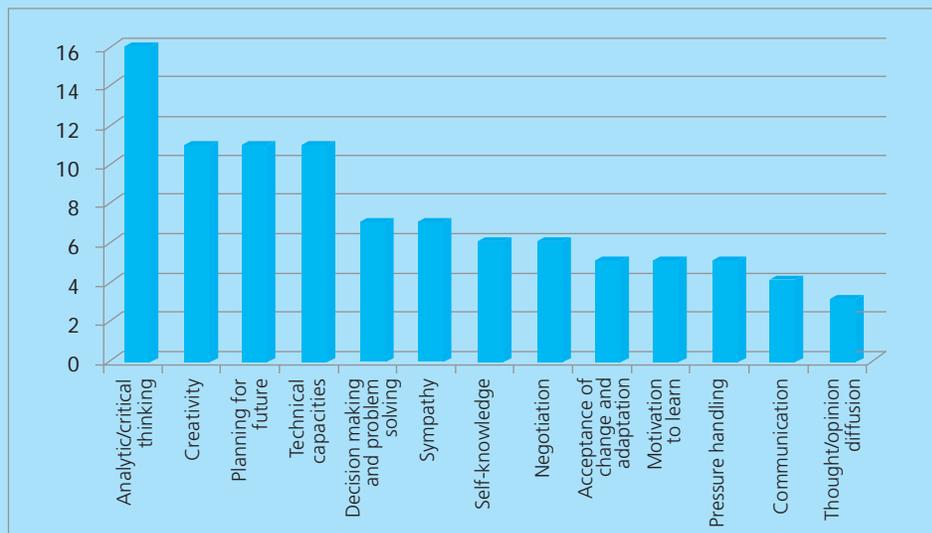
**VALUES**

*AGGREGATE VALUES*

Analysing the arithmetic means of all surveyed values (1-5 scale), the actual

FIGURE 4-5-8

**Views of workshop participants on the weak skills in Yemen**



scores of the students range between 2.22 and 4.65, with only one student receiving the minimal mark while the remaining exceeded the theoretical mean (3 out of 5). This indicates that the great majority of students possess the examined values.

### COGNITIVE VALUES

This part focuses on measuring the cognitive values relating to the significance of knowledge and education, individual initiatives, renewal, overcoming learning difficulties, excellency, success and appreciation of educational contributions. The students' scores vary from 1.84 to 5, and the arithmetic mean is 4.05. This reveals that most students have a strong sense of cognitive values based on their statements.

### SOCIAL VALUES

Students' scores ranged from 1.67 to 4.72, with an arithmetic mean of 3.75. This indicates that most students have a good grasp of social values but with lower marks than for cognitive values.

The results of the social values are in line with social skills, including teamwork. This is reflected by the strong presence of the values of community work and helping others. In addition, most society members are characterised by modesty and gentility that can be seen for example in the various social occasions where the elite gather side by side with poorer individuals.

### CONATIVE VALUES

Most students showed high marks for conative values, with scores ranging from 2.74 - 5 and averaging 4.03. During adolescence, ideals greatly increase. This may partially explain the students' answers concerning such values.

### UNIVERSAL VALUES

Just like other values, students seem to have a high sense of universal values, even if relatively less than cognitive and social values. The minimum score is less than the theoretical mean (3), and 96% of students received 3.93 and above. This robust understanding of universal values can be in part attributed to the inclusion of the concepts of human rights and demography in curricula. Another positive factor is the political momentum in Yemen during the first decade of the current millennium, such as the local, parliamentary and presidential elections in which all classes participated. This creates some recognition of concepts of democracy and political involvement.

Girls outperformed males in both social and universal values; however, there is no statistically significant difference in cognitive and conative values.

### STUDENTS' READINESS IN TERMS OF VALUES

As for collective values, most students

*Just like other values, students seem to have a high sense of universal values, even if relatively less than cognitive and social values*

TABLE 4-5-7

#### The results of values (measured from 1 to 5)

	Average (Arithmetic mean)			Standard deviation		Standard deviation	Lowest score	Highest score	Statistical differences between males and females
	Males	Females	Total	Males	Females				
<b>Collective outcome of values</b>									
	3.9	3.97	3.94	0.28	0.26		2.22	4.65	In favour of females
<b>Detailed outcome of values</b>									
Cognitive values	4.04	4.06	4.05	0.39	0.87		1.84	5	No difference
Conative values	3.96	4.10	4.03	0.37	0.36		2.74	5	In favour of females
Social values	3.76	3.74	3.75	0.35	0.32		1.67	4.72	No difference
Universal values	3.85	4	3.93	0.39	0.26		2.47	5	In favour for females

FIGURE 4-5-9

Comparison of average (arithmetic means) of values (males & females)



reached the upper two levels of the readiness scale, with 55.7% in the course of being ready and 44% ready.

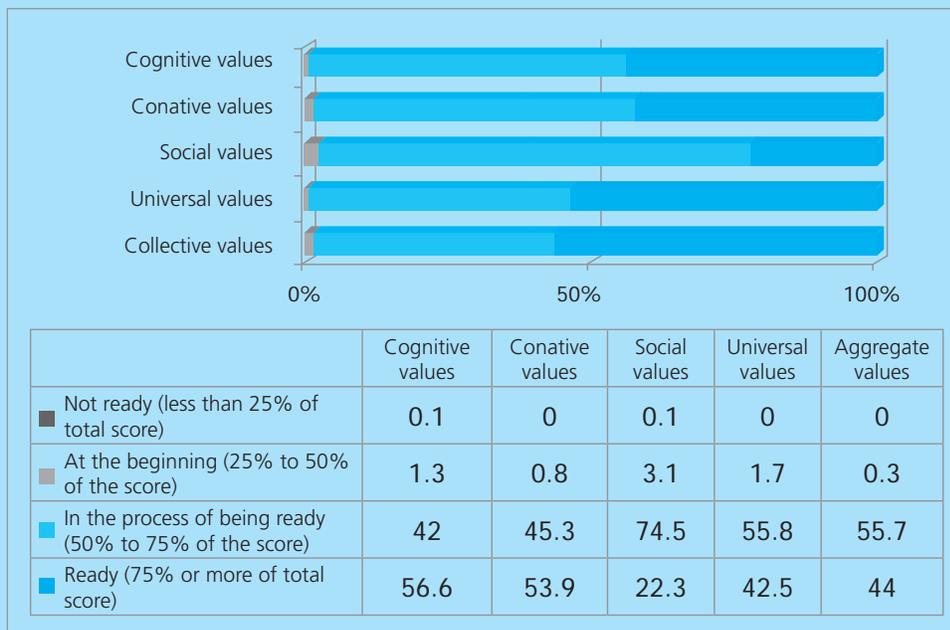
Examining the upper part of the scale (the ready), it is remarkable that students are more ready in cognitive and conative values, followed by universal values, then social values. Generally, the situation is better than with collective skills since students who responded, except very few, have the minimum limit of values that make them in the

course of being ready or are already ready. Accordingly, the youth's readiness regarding the values is much better than the skills. This again reconfirms that the component of skills in educational content needs careful revision and attention to the quality and practice of the skills. Educational objectives clearly underline the importance of skills for the preparation of the youth; however, the curriculum does not actually reflect this.

*Girls outperformed males in both social and universal values; however, there is no statistically significant difference in cognitive and conative values.*

FIGURE 4-5-10

Youth readiness in terms of values



*VIEWS OF WORKSHOP PARTICIPANTS ON THE REQUIRED VALUES FOR THE FUTURE GENERATIONS TO ACCESS THE KNOWLEDGE SOCIETY*

It has been agreed that the youth must have three values related to learning and an increase in knowledge to enter the knowledge society: passion and curiosity for knowledge, creativity and responsibility. As for personal values, belonging has been emphasised. When talking about dealing with others, participants have stressed the value of national, Arab and Islamic affiliation.

The participants agreed that ambition, diligence, perseverance, modesty, desire for new information and self-esteem are the most powerful personal values the youth have, as shown in Figure 4-5-12. Such values are good indications that the youth are willing to know the latest and develop a curiosity for knowledge and information, i.e. the basic values for learning. Comparing this outcome with the expert views regarding the necessary values for the knowledge society, a conflict appears between what is needed and what

the youth already have.

The participants attributed these values to the family upbringing that emphasises the respect and appreciation of knowledge, and they described the skills as characteristics of Yemenis. Others believe that these are inherent values and have nothing to do with upbringing and/or political orientation. On the other hand, there was an evident weakness in personal values, especially in confidence, personal balance, self-honesty, participation in public life and independence of thought. This may be justified by the poor attention paid by the educational institutions, such as the family, schools and social culture that always expect obedience and compliance to their instructions and pre-set behaviours, as seen in the traditional families in many Arab societies.

In addition, the experts blamed curricula fluctuation for not practically reflecting these values within the value system that young people should have. Moreover, they have criticised the educational methods that are based on memorisation and instruction and do not develop independence of thought. Religious strictness and radical groups are additional elements. In general, there is

*The participants agreed that ambition, diligence, perseverance, modesty, desire for new information and self-esteem are the most powerful personal values the youth have*

FIGURE 4-5-11

**Views of workshop participants on the major values and the extent of their availability among the youth**

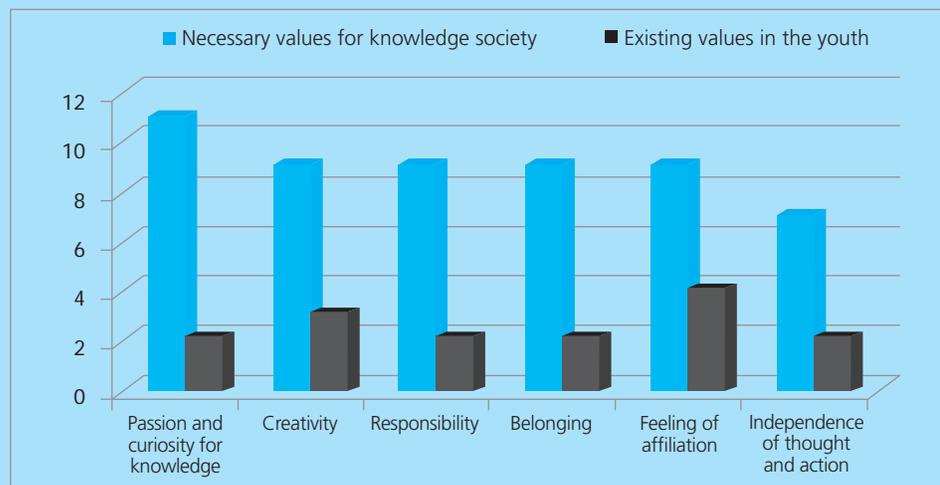
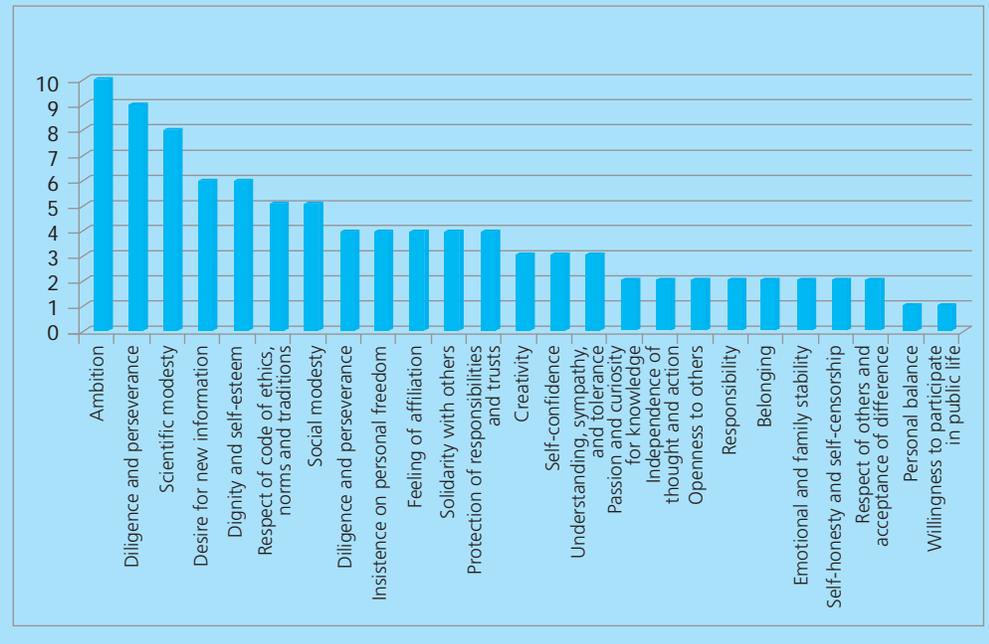


FIGURE 4-5-12

### Views of workshop participants on the major values available in Yemen



*The survey includes an examination of enabling environments, either at home, school or in the community. It covers the social and educational situations of the family, home welfare, family pattern of upbringing and their effect on the level of values and skills acquired*

decreased sense of group responsibility due to tribalism and the absence of good examples for the youth. Poverty and the great difference in standards of living are influences that cannot be neglected in this regard.

It can be concluded that the youth's assessment of values they have is higher than that of the experts and teachers. This can be explained in that the youth somewhat ideally evaluate their values or that the experts are more pessimistic about the values of the society for various reasons. Since reunification, Yemeni society has experienced a transitional period with attempts at harmonisation among the various social and ideological trends. Tribal loyalty, political parties and religious movements have emerged. All these factors have resulted in alien values to Yemeni society.<sup>33</sup> Dissimilarity in value concepts among the different social classes and educational institutions may interpret the view of teachers and specialists. It additionally reveals a gap between the youth and both teachers and experts, especially because of media openness and the information

and technology revolution that have influenced the youths' values away from traditional institutions.

### ENABLING ENVIRONMENTS

The survey includes an examination of enabling environments, either at home, school or in the community. It covers the social and educational situations of the family, home welfare, family pattern of upbringing and their effect on the level of values and skills acquired. As for the school, the survey handles issues of educational welfare in schools, availability of facilities such as libraries, science labs, extracurricular activities and others, as well as the effect and support of the local environment on knowledge and education.

Some issues of the enabling environments have been combined into a number of variables. Regression analysis has been used to check the most influential factors on the acquisition of skills and values for the knowledge society. Below are the variables summarising the enabling environments, according to the student

*It can be concluded that the most influential variables in the acquisition of skills and values are related to the family, such as the family upbringing pattern and parental education level, followed by school-related variables, then those linked to the local environment*

questionnaire:

- Family structure
- Father's education level
- Mother's education level
- Family's attention to the student's study
- Family financial welfare
- Educational welfare at home
- Educational welfare in the local environment
- Educational welfare at school
- Family upbringing pattern

As for cognitive skills, regression analysis (see Table 4-16 in the Appendix) reveals five variables that have significant influence.

The most influential factors are educational welfare at home, such as having a home library, a computer, access to the internet and subscriptions to magazines, newspapers or reference books. The attention of the father, mother and family on the children's study come in second. Educational welfare at school, including science, language and computer laboratories, libraries, playgrounds and educational aids, has a much less effect. This suggests the need for more improvement and activation of school educational settings. Alternatively, it indicates that the students do not properly use them or are not allowed to make the desired use of them. It should be considered that most secondary schools in Sana'a are much better equipped than rural or primary schools.

As for conative skills, regression analysis shows four variables that have significant influence. The family upbringing pattern is the most powerful element in the acquisition of conative skills, followed by educational welfare at school. This indicates the major role of the family and the importance of the mutual efforts of both the family and the school in developing these skills, instead of each working independently.

As for social skills, there are two significantly influential variables, i.e. family upbringing pattern and educational welfare at school. Thus, the orientation of the family, its role in activating discussion

and dialogue and the availability of learning sources and educational welfare at school enhance the youths' acquisition of communication skills. Both are crucial in gaining social skills, and other skills.

Regression analysis shows three other variables to be significantly effective in gaining cognitive values. The family upbringing pattern is the most influential in developing such values, followed by educational welfare in the local environment. Here, it is notable that the school settings do not appear to be as effective in developing cognitive values, suggesting the poor role of the school in enhancing this aspect.

As for social values, four variables have significant influence. There are two similarities between social skills and values: the family upbringing pattern and educational welfare at school have an effect.

As for conative values, there are four significantly effective variables. The family-related variable dominates, especially the family upbringing pattern. For the first time, family structure appears as a variable. This may be interpreted as the absence of the father (not only by divorce but maybe due to death or immigration) which allows the mother to take responsibility in developing the values of her children alone. Findings show that these factors may affect the enhancement of these values, perhaps because of the mother's sense of responsibility.

As for universal values, four variables are significant. Noticeably, the variable of the financial welfare of the family has a reverse relationship with universal values. This variable includes technology equipment and its prevalence at home. It may be explained that the more luxurious the house is, the more the consumptive behaviour of the individual is. Family members are often preoccupied with entertainment and lose some interest in interacting with international or public issues, such as human rights violations and the environment.

It can be concluded that the most influential variables in the acquisition of

skills and values are related to the family, such as the family upbringing pattern and parental education level, followed by school-related variables, then those linked to the local environment. Therefore, the family still plays the main role in youth acquisition of skills and values. Since school-related variables come in second, there is clearly a shortage in the family's role of empowering the youth to gain the basic skills. The need for activating the coordination and integration of both family and school roles is highly emphasised.

These variables, despite their importance, do not explain all differences among the students. In other words, they are not the sole determinants of the level of acquisition, with an effect range of 4.8-12.7%. Therefore, there are other elements that affect student empowerment.

#### STUDENTS' VIEWS REGARDING ENABLING ENVIRONMENTS

Students were surveyed regarding some school and community environments to check their contributions to building their skills and values with regard to the educational aspects and the school environment. Table 4-5-8 shows that paragraphs relating to interrelation among the students had the most agreement. It also reveals that the school environment is motivating and encouraging for most students.

The student-school relationship is generally good. Most students tend to agree on the positive features of their schools,

particularly in terms of relationships and interaction at school. These are positive indications that students accept and feel comfortable towards their school and teachers in general. They may also reflect the peculiarity of the educational phase surveyed (final secondary year), in which both the school and teachers are more eager for students to achieve higher marks to keep the good reputation of the school. Therefore, most schools pay much attention to students of the third secondary grade, extra lessons are provided and students are given assistance to overcome their educational difficulties.

As for the evaluation of the health enabling environments, students' views varied. Almost 50% agreed that the school carries out anti-epidemic campaigns. This may be attributed to the condensed health awareness in school with the outbreaks of swine influenza.

Students' responses are positive in terms of the availability of basics, such as a social advisor to help them solve their social problems.

Teachers were surveyed regarding the support provided to the students by the school to improve performance and educational processes, and overcome difficulties. Teachers' views are different in this regard. However, it can be considered a positive indication that a quarter of the teachers sampled agreed that specialists exist and offer guidance and support to students. Different views may be attributed to the recent wide activation of this role in Yemeni schools, after being

*The student-school relationship is generally good. Most students tend to agree on the positive features of their schools, particularly in terms of relationships and interaction at school*

TABLE 4-5-8

#### Students' views on school and their relation with its components (%)

	Totally agree	Somewhat agree	Disagree	Totally disagree
A. I can easily understand the subjects.	23.7	67.7	7.4	1.3
B. The school enhances my desire to seek knowledge and excellency.	49.4	37.8	8.9	3.9
C. I feel comfortable and secure at school.	58.3	31.2	7.4	3.1
D. I have good relationships with my teachers (mutual respect).	75.1	21	2.2	1.7
E. I have good relationship with my schoolmates.	78.2	19.6	1.2	1
F. The school prepares me well for the future.	53	35.9	7	4.1

TABLE 4-5-9

### Students' views on health enabling environments (%)

	Totally disagree	Disagree	Somewhat agree	Totally agree
A. The school provides periodic medical examinations for students.	25.8	20	20.3	33.9
B. The school provides free treatment for students.	30.3	19.6	18.4	31.7
C. The school clinic provides all necessary supplies (a bed, medical equipment, basic medicines).	22.3	14.6	22.3	40.8
D. The school organises medical campaigns against incidental pandemics.	17.6	13.2	26.3	42.9
E. The school offers educational programmes against dangerous diseases.	10.8	11	29.1	49.1
F. The school has a social advisor to help students solve their social problems.	13.4	10.8	24.9	50.9
G. The school has an educational advisor/psychologist to help students solve their psychological problems.	19.5	14.7	23.1	42.7
H. We study health-related topics.	18.7	16.9	27.5	36.9

*Teachers were surveyed regarding the support provided to the students by the school to improve performance and educational processes, and overcome difficulties*

neglected. On the other hand, teachers are dissatisfied with the system for filling the teacher shortage or other alternatives, particularly in government schools. 46.8% of the sample responded that this system is not available (see Table m4-12 in the Appendix).

As for the support offered to teachers, a dissatisfied tendency is evident in teachers' answers regarding the support provided by the school to develop their abilities, skills, financial situations and incentives for excellence. The highest percentage of total disagreement comes with the sentence, "There are associations to protect teachers' rights" with 14.7% (see Table m4-13 in the Appendix).

It is worth mentioning that government schools cannot provide training courses unless they are under the supervision of the concerned educational departments with the availability of financial support to cover related expenses. So schools, even private schools, use this for justification. However, school administrations do not show any interest in holding periodic short courses or meetings after working hours to develop professional performance (weekly or monthly). Both teachers and school administrations give excuses that the curricula are too condensed to have either time or effort for other activities. Therefore, schools are limited to routine courses held by the Ministry of Education (through educational departments).

### *FUTURE GENERATIONS AND POLITICAL PARTICIPATION*

The issues of political participation and freedom of choice given to youth have been covered. The findings show some interaction with political orientations, with more than one third of students expressing their willingness for political involvement.

The results indicate a low interest in political participation. This might be attributed to the Ministry of Education and school administrations attempt to keep political and partisan issues away from schools to avoid their politicisation, contrary to universities where various student unions are very active.

Table 4-5-10 shows the students' more positive responses to the freedoms they have.

Personal and intellectual freedom of choice outweigh that of the educational choices. This is a positive indicator that the school or society does not push the youth to adopt a certain political orientation.

When it comes to the freedom given to teachers, the results were less positive. 55.3% state that they have absolute personal options. However, professional options come last after both intellectual and scientific freedom, with only 26.2% saying they have full freedom for professional choices (see Table m4-14 in the Appendix).

In general, two-thirds of the teachers

FIGURE 4-5-13

**Students' views on political participation (%)**

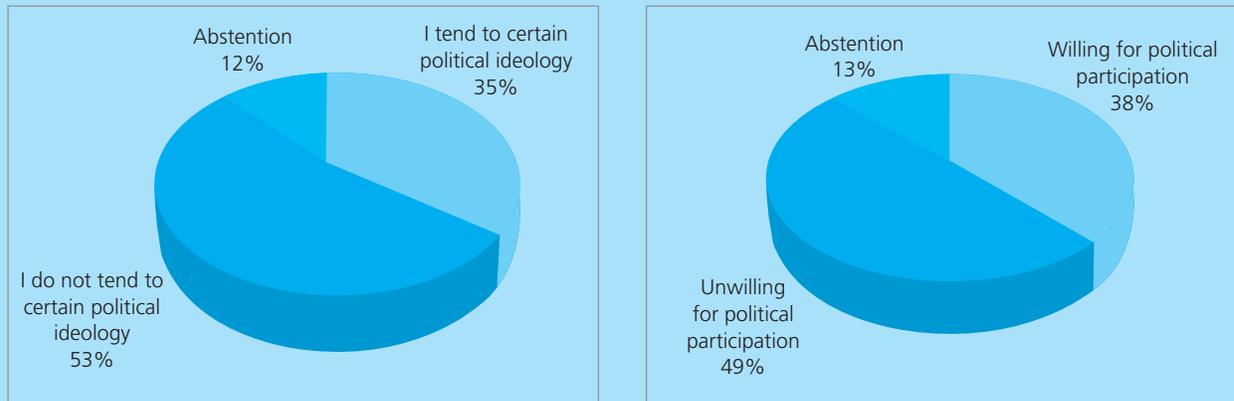


TABLE 4-5-10

**Students' views on freedom of choice (%)**

	Good freedom	Moderate freedom	Poor freedom	Absent freedom
A. Personal choices	61.1	33.9	3.2	1.7
B. Educational choices	49.2	41.5	7.1	2.2
C. Intellectual choices	57.3	32.1	8	2.6

sampled (66.7%) agreed that the expression of freedom is absent, while one-third believe there is an expression of freedom (see Table m4-15 in the Appendix).

*STUDENTS' VIEWS ON LEGAL AND SOCIAL ENVIRONMENTS*

The student's evaluation of the legal and social controls and standards inside and outside school are somewhat positive, as most of them either 'somewhat agree' or 'totally agree'.

It is remarkable that the students' confidence in the application of strict rules in the society is less than at school. The connection between money and better education is highlighted. Students may link private education, foreign language studies or studying abroad to nepotism or to those who are wealthy.

On the other hand, students show some confidence in the mass media, either government or private, as shown in tables 4-5-12 and 4-5-13.

However, we are not sure if the students' views are based on personal content formed due to watching various mass media, especially in light of the widespread satellite channels that attract a massive youth audience. Most of these channels are not local. The students' views may be partially based on adopting the opinion of their parents or the public.

*VIEWS OF WORKSHOP PARTICIPANTS ON ENABLING ENVIRONMENTS REQUIRED FOR THE KNOWLEDGE SOCIETY*

In conclusion, the 3 most important enabling environments that should be made available for the desired knowledge society are:

- An environment that provides knowledge infrastructure,
- An environment that offers basic education and prepares for life-long education,

*Students may link private education, foreign language studies or studying abroad to nepotism or to those who are wealthy*

TABLE 4-5-11

**Students' views on legal and social enabling environments (%)**

	Don't know	Totally disagree	Disagree	Somewhat agree	Totally agree
A. There are strict rules inside school for people to ensure their rights.	4.1	4.1	9.1	33.5	49.2
B. There are strict rules in the whole society for people to ensure their rights.	5.3	10.5	18.9	31.3	34
C. Because of applicable rules at school, the student is reluctant to violate the norms.	6	4.6	12.9	37.2	39.3
D. Because of applicable rules in the whole society, individuals are reluctant to violate the norms.	8.6	7.9	15.9	31.5	36.1
E. Regardless of the capacity or position of the violator, rules are strictly applied at school.	5.3	8.6	16	28.1	42
F. Regardless of the capacity or position of the violator, rules are strictly applied in society.	8.3	16.1	20.2	22.3	33.1
G. Having more money equals better education.	3.9	10	14.3	20.5	51.3
H. Jobs are given based on applicant qualifications rather than other considerations (e.g. cronyism).	9.2	18.4	20.1	20.8	31.5
I. Promotion is based on subjective rather than objective views.	13.9	5.6	13.7	34.8	32
J. Objective considerations are taken into account with recruitment, certification, promotion and other advantage rather than cronyism or nepotism.	15	12	13.6	28.2	31.2

TABLE 4-5-12

**Students' views on government mass media (%)**

	Don't know	Totally disagree	Disagree	Somewhat agree	Totally agree
A. The audio and video mass media are fair and honest in their coverage.	5.2	7.7	15.6	42.6	28.9
B. The audio and video mass media reflect the various views of society.	6.8	5.4	8.8	41.5	37.5

TABLE 4-5-13

**Students' views on non-government mass media (%)**

	Don't know	Totally disagree	Disagree	Somewhat agree	Totally agree
A. The audio and video mass media are fair and honest in their coverage.	9.4	7.5	14.2	39.2	29.7
B. The audio and video mass media reflect the various views of society.	10.1	5.6	10.7	38.9	34.7

- An environment that respects the freedom of thought, opinion and belief.

Figure 4-5-14 compares the enabling environments available and those that are required. It can be deduced that the environment that respects freedom is necessary for accessing the knowledge society. As a good indicator, such an environment exists in Yemen.

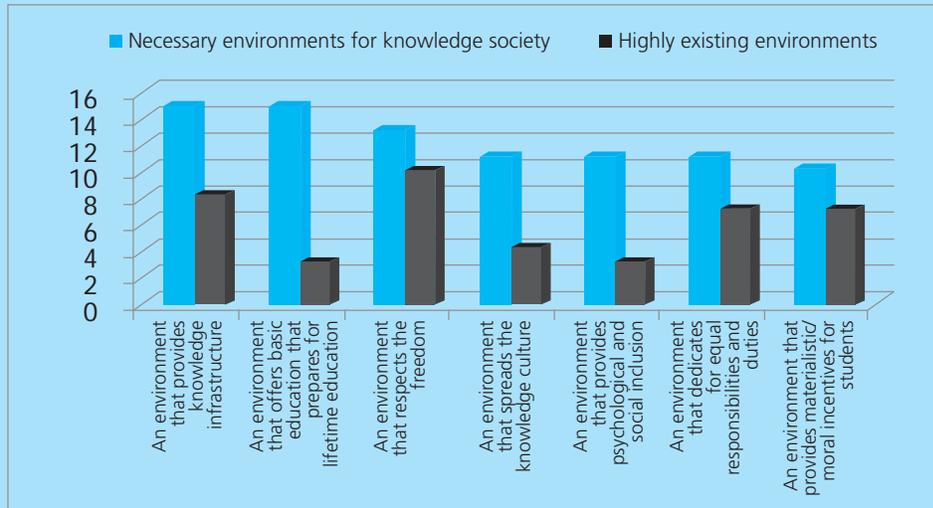
It can be noticed that the most

significant enabling environment available provides knowledge infrastructure. It is preceded in ranking by environments that respect freedom and provide materialistic/moral incentives for the knowledge students.

Participants see the reasons for having these environments available in Yemeni society are the religious and family influence that respects the freedom of

FIGURE 4-5-14

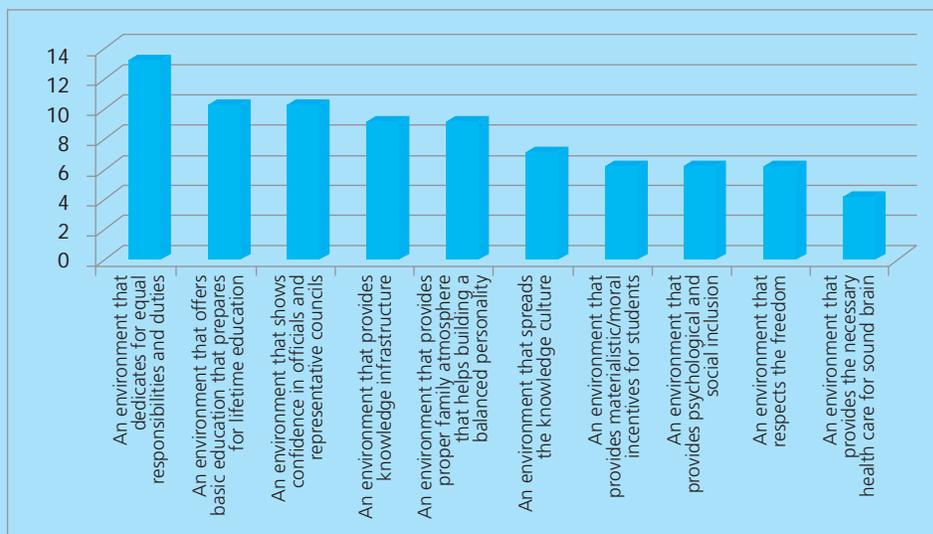
**Views of workshop participants on the most remarkable values in Yemen**



*It can be deduced that the environment that respects freedom is necessary for accessing the knowledge society. As a good indicator, such an environment exists in Yemen*

FIGURE 4-5-15

**Views of workshop participants on the weak environments in Yemen**



belief and opinion, in addition to some laws and legislations that protect such environments. Educational support via school infrastructure plus family stability are advantages for spreading the knowledge culture.

An environment offering basic education that enables life-long education is essential for the knowledge society. However, it is poor in Yemen due to the challenges in providing education for all

and a qualitative expansion that usually outweighs the concern of quality. This clearly indicates the need for reviewing the education systems and practices and to make them more responsive to the demand of the knowledge society.

In Figure 4-5-15, the experts identified the poor enabling environments in Yemen. An environment that is dedicated to equal responsibilities and duties was the most significant, followed by one that offers

*It can be said that Yemeni youth are motivated and able to enter the knowledge society if the appropriate conditions and capabilities are provided, with the supportive, enabling environment at the top*

basic education that prepares for life-long education and then one that shows confidence in officials and representative councils.

## **CONCLUSION**

From the above analysis of the findings of the field studies carried out as part of this Arab Knowledge Report, it can be concluded that Yemeni youth suffers from weakness in the cognitive skills which are required to become involved in the knowledge society. However, they do well in conative skills (self-esteem and motivation to learn) and social skills (communication with others, teamwork and participation in public life), except in the skill of planning for the future. As for the values necessary for the knowledge society, the field research shows that Yemeni youth have such values in general, particularly cognitive and conative values. Therefore, it can be said that Yemeni youth are motivated and able to enter the knowledge society if the appropriate conditions and capabilities are provided, with the supportive, enabling environment at the top.



# PREPARING YEMENI FUTURE GENERATIONS FOR THE KNOWLEDGE SOCIETY: PROPOSED VISION

## INTRODUCTION

*The ‘Strategic Vision 2025’ for Yemen emphasises the building of the knowledge economy and society. This vision sets out, in detail, the objectives and ambitions of becoming a medium human development country that has economic diversity and social, scientific, cultural, and political development. This aspiration needs reconsideration of the youth preparation systems, either educational or societal for those responsible for the development of human capital to make a multi-skilled generation adaptable to social and economic changes brought about by the techno-information revolution. The spread of education across the country has expanded despite huge challenges, such as wide population dispersion and geographic and economic obstacles. However, the quality of this vital aspect of human capital development, namely education, is still poor with output failing to meet the requirements of actual development.*

## QUATERNARY OF ACTION FOR FUTURE GENERATIONS PREPARATION

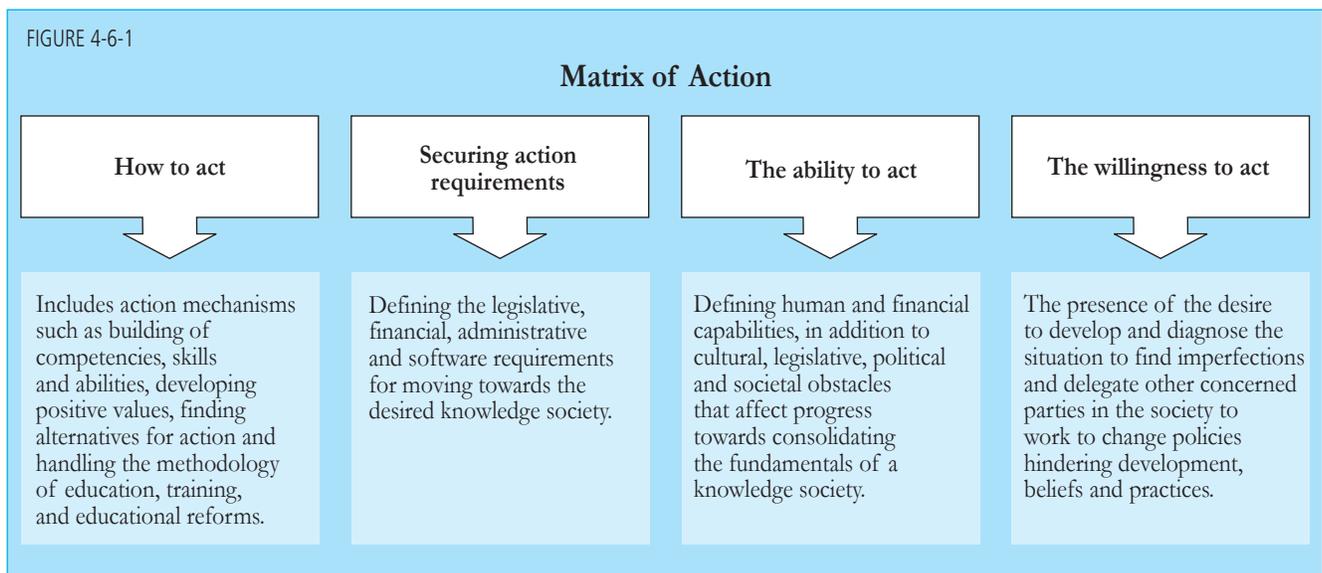
The proposed action towards the desired knowledge society can be summarised in an interactive matrix of 4 main pillars: the willingness to act, the ability to act, securing action requirements and how to act.

Based on the previous chapters, which reviewed the status, findings of field studies, and the vision of the general Arab Knowledge Report, a visualisation of the quaternary of action in Yemen is provided below.

*The spread of education across the country has expanded despite huge challenges, such as wide population dispersion and geographic and economic obstacles*

## THE WILLINGNESS TO ACT

Some indicators and evidence can help us know Yemen’s willingness for change.



*Due to challenges facing education in Yemen, educational expenditure are still low when compared to the requirements of developing high quality education*

Below are some of these indicators:

**Education spending:** Generally speaking, the increase in education spending for quality improvement vs. operational expenditures is a main sign of a serious trend towards developing educational output. Due to challenges facing education in Yemen, educational expenditure is still low when compared to the requirements of developing high quality education. In addition, most of the resources are spent to improve salaries and other matters. Education spending during 2002-2007 decreased from 21% to 14% (Republic of Yemen and the World Bank, 2010). This is not enough to cover the increased demand on education, the population growth and the requirements for expansion. Schools still complain about the lack of operational budgets and support of creative and extracurricular activities. Therefore, the budget for education and its spending items urgently need reconsideration.

**Nationwide reform plans:** Public acknowledgement of the issue among the official authorities, rather than denial, is a further step towards reform, since education modification requires national efforts and institutions for planning, implementation and follow-up. It is unacceptable to entirely shift the blame to the Ministry of Education in working separately from the Ministry of Higher and Vocational Education. Educational reform should include a deeper and more comprehensive development vision for the current situation and the future. Human cognitive development should be central to such a vision. Then we should move into sector reforms of public, higher and TEVT education. The details of the elements and input of education and learning, such as learners, teachers, structural content, infrastructure as well as evaluation methods should be reconsidered.

With the turn of the millennium, Yemen has experienced some educational reform. A number of various strategies for different types and stages of education have been developed. This momentum

has led to a focus on human resources and improvement of educational paths. The increased enrolment rates, continuing expansion of the educational structure and the growing number of training programmes are evidence of this. Many strategies are in progress for different educational stages (see Chapter 2, Yemen case study).

Meanwhile, annual plans are followed up and evaluated through the common annual review held every May and attended by central and local officials from the Ministry of Education, representatives from ministries concerned with education and education-supporting development partners. The common annual review includes the progress evaluation of the annual plans and results and the mid-term outcomes, development and approval of recommendations and policies that guarantee the implementation of the objectives of short, mid, and long-term plans.

**Projects and initiatives:** Yemen takes part in some initiatives, such as Education for All – Fast Track along with international evaluations, such as Trends in International Mathematics and Science Study (TIMSS) for 2003, 2007 and 2011. This shows a sharp trend toward problem identification and diagnosis. In spite of sever criticisms for Yemen's participation with countries who are economically superior than Yemen, an honest desire for reform is noted what is lacking Yemen is to benefit from the results of these evaluations to address vulnerability through a systematic reform of curricula and teaching methods, students' acquisition of mathematical and scientific skills thinking and analytical skills and developing evaluation approaches.

Along with that, evaluation centres were established for quality assurance. These include measurement and evaluation centres and educational research and development centres to develop and measure the efficiency of the educational system and identify its problems. Evaluation and follow up of strategic

plans for basic and secondary education are included in the medium term frame that has been divided into 2 phases to evaluate progress made from 2003-2009. The frame incorporates many issues such as improvement in educational quality and appraisal of fulfilled institutional reforms. The evaluative frame is featured by partnerships with all active educational players, such as financers, donators, executives and supervision authorities. Some research is conducted and followed up, and annual evaluation reports are made on achievement progress.

**The political will:** Human resource development and educational issues take priority in the national five-year plans and reform agendas. The National Strategy for Local Government has clearly modified the roles and process of local executive offices in the governorates and provinces. It has enhanced the decentralised decisions that are made for individual local communities. However, further promotion of decentralisation is needed, especially in terms of allocating financial resources.

**The societal will:** It includes the contributions of other concerned institutions and parties along with the government in preparing the society for action. There are many forms of societal participation that support the main educational issues, such as parent boards in schools, NGO coalition for education, bodies and organisations for education under the Ministry of Religious Endowments and legislative councils, i.e. Parliament, Shura Council and local councils. It is necessary to let such participation escape the institutional bureaucracy for actual practice, renewal and implementation.

It can be concluded that a real desire to act towards youth preparation can be felt, either in political or societal decisions. However, more effort should be made in many directions to visualise this desire. Financial allocations for education should be increased and clearer, applicable visions should be employed to prepare the Yemeni youth for the desired knowledge society.

## THE ABILITY TO ACT

The identification of weaknesses and strengths is a step forward in enabling the youth to enter the knowledge society. Chapter 2 has covered these points. Nevertheless, many advantages and enabling factors should not be disregarded in Yemen. These include:

**Current generations:** The current generations have an insatiable thirst for knowledge. Results of examinations have shown the motivation to learn skill to be significant. In addition, the findings of an expert workshop have indicated a high level of educational ambition in Yemeni youth.

**Progress in building enabling environments:** Yemen has expanded the infrastructure in terms of schools and educational centres built over the past few years, including computer and language labs, activity rooms and initiatives to create motivating educational environments. These are positive indications of Yemen's ability to build and improve. However, such expansion should include all geographic areas to offer equal opportunities for students nationwide. Since the financing resources are too short to cover needs, improving the quality of education should have a large presence in national plans. Partnership with other community parties, i.e. the private sector and local communities, are fundamental to further enhance the enabling environments.

**Motivating/hindering legislation, laws and rules:** Yemen's constitution expressly states that basic education is free and obligatory for all. Many policies have been developed to facilitate education for all, including exempting male students in grades 1-6 and female students in grades 1-9 from tuition fees. Nevertheless, there are legislative gaps to be bridged. Compulsory educational policies should be passed to force families to enrol their children in schools, with some penalties for violators. Laws for the application of educational quality standards should be enacted.

*It can be concluded that a real desire to act towards youth preparation can be felt, either in political or societal decisions. However, more effort should be made in many directions to visualise this desire*

## SECURING ACTION REQUIREMENTS

Some political, economic and social elements feature in the coming period. The trend toward development and construction is among the most prominent characteristics. Over two decades, Yemen has increasingly experienced security and political challenges that have adversely affected the drive of economic, political and social development. Due to low human development indicators and huge challenges on all levels, the status of Yemeni youth is poor despite the great efforts of the government, the sole provider of all basic services, to meet health and educational needs. Certainly, the increase in this age group and the overall status will influence the next stage. With escalating political tension since 2011, priorities are changing according to the situation. However, comprehensive reform should be the starting point.

To ensure continuous action, some requirements should be met by multiple parties within the society. Cognitive capital development is a group responsibility, and all should cooperate to ensure the move and support the enabling environments. Below are some strategies for doing so:

- Expand and support civil society participation in educational and cognitive aspects.
- Promote and activate participation of the private sector, either for profit (investments in educational institutions or offering various training programmes) or voluntarily within its social responsibility. Support the government sector to reach disadvantaged sections.
- Make the youth a 'critical mass', central to educational, cognitive and development reforms.
- Devise effective accountability rules for education.
- Involve the society and especially NGOs in developing performance standards and evaluating training and qualification systems.
- Adapting new, comprehensive and

unified reforms for all components of the educational sector, TEVT, pre-school, the university and public education to attain educational objectives. Such corrections are reflected in the joint initiative for a unified vision for the educational system, sponsored by the government and the World Bank, so its completion and implementation should be accelerated.

## HOW TO ACT

A comprehensive development vision of education should be employed. Executive plans should be drafted. Mechanisms of action should be identified. Investments in cognitive and human capital should be targeted, and enabling environments should be created. Mechanism of action can be summarised by creating a unified strategic vision for different educational sectors and paths (public, vocational and university) to determine the requirements and objectives of both current and future stages. The vision should be flexible, provide equal opportunities for all instead of the current selective policies that deprive many from certain curricula (university education for example) or impose different courses (such as TEVT) and focus on life-long education. Therefore, stages of educational reforms will be simultaneously accomplished to cope with the unified strategic vision.

Comprehensive educational reform is an effective tool for society to adapt to the current changes in Yemen and prepare its members to efficiently and positively deal with transformations locally and internationally. Four basic components for educational reform are highlighted:

### *DEVELOPING THE EDUCATIONAL COGNITIVE STRUCTURE*

More attention should be given to teacher training. The rapid progress of knowledge necessitates continuous education for all

*Cognitive capital development is a group responsibility, and all should cooperate to ensure the move and support the enabling environments*

without limitation to certain educational institutions, curricula or age group. Both knowledge and technologies used for education are ceaselessly evolving. Therefore, the best educational development programmes and plans will fail unless teachers are always qualified and trained in order to refine the cognitive skills of the youth to face life and embrace life-long education. The trio of teacher, student and curriculum in Yemen needs reassessment and revision to match Yemen's strategic vision to build a modern knowledge society. Below are some remedies:

- New vision for teacher preparation: Since teachers have a highly complex role, teacher preparation institutions should support their role to primarily be the guide and manager of educational processes instead of their traditional function as the only source of knowledge besides school books.
- Bring about a comprehensive change in curricula to be learner-based, motivating for life-long self-learning and skills of critical thinking.
- Provide educational environments such as libraries and free access to learning resources.

#### *EVALUATION AND DEVELOPMENT OF THE ORGANISATIONAL STRUCTURE OF EDUCATIONAL INSTITUTIONS*

To this end, educational institutions should be restructured, decentralisation should be promoted, independence should be secured by having operational budgets, school buildings should be repaired, recreational and educational spaces should be provided in schools, some financial and administrative independence should be given to schools and competition among schools should be encouraged for the institution to be a supportive environment for acquiring knowledge.

In this context, we should not forget the importance of supporting the educational

institutions with overlapping roles, so they should be considered as one integrated system when developed. Among these institutions are the family that should have effective participation in the cognitive preparation of the youth, the mass media that should realise its educational responsibility and mosques that should involve moderate religious trends helping to emphasise the values of tolerance, hard work and an appreciation for learning.

#### *DEVELOPMENT AND IMPROVEMENT OF TECHNOLOGY IN EDUCATION*

The infrastructure, information networks in particular, must be in place in all educational institutions. Technology services should be improved in schools by upgrading computer labs, internet service and making up for any shortage. In participation with local communities, science and language labs and libraries should be freely provided in educational and training centres. Educational technology should be further improved, and the private sector should be involved in this respect, within its social responsibility, to help in facilitating useful opportunities for educational institutions and the youth in particular. International cooperation programmes in education can effectively provide the technical expertise needed for educational development.

#### *DEVELOPING SCIENTIFIC AND EDUCATIONAL RESEARCH*

Local, regional and international search networks and units must be established and supported to be up to new cognitive, scientific and educational production. It is undeniable that Yemen needs to activate the meaningful search to support the knowledge society, i.e. a major shortage in Yemen's educational structure. As a starting point, some mid-term procedures can be implemented, such as equipping schools with modern libraries and promoting simple research at school stages, including

*The best educational development programmes and plans will fail unless teachers are always qualified and trained in order to refine the cognitive skills of the youth to face life and embrace life-long education*

basic search methods within computer and science courses.

## CONCLUSION

*The task of preparing the youth for the knowledge society is very urgent; it comes before other development priorities*

The task of preparing the youth for the knowledge society is very urgent; it comes before other development priorities. Having creative and productive cadres that can localise knowledge will secure sustainable development based on productive human resources. If Yemen is resolved to move into the knowledge society, human and financial resources and capacities should be mobilised to secure requirements of action to prepare future generations for the knowledge society.

## End Notes

- <sup>1</sup> Central Statistical Organisation (CSO) website, Annual Statistical Book 2009, on 14 May 2011 <http://www.cso-yemen.org>
- <sup>2</sup> UNICEF website, on 15 May 2011 [www.unicef.org](http://www.unicef.org)
- <sup>3</sup> MPIC, Second Report on Major Indices of the Third Socio-Economic Development Plan for Poverty Reduction, July 2010
- <sup>4</sup> Nasr Al Dhabhany, Indicators of Knowledge, Information, and Cultural Reality in the Civil Society, <http://www.yemen-nic.info/contents/Informatics/studies/23.pdf> on 16 May 2011
- <sup>5</sup> The World Bank Database, KAM, on 23 May 2011 [http://info.worldbank.org/etools/kam2/kam\\_page5.asp](http://info.worldbank.org/etools/kam2/kam_page5.asp)
- <sup>6</sup> DOI measures the progress of a country in the digital divide. It is based on three sub indicators; opportunity, infrastructure and utilisation, to measure the 12 DOI variables.
- <sup>7</sup> This section is based upon background papers of specialised educators and official documents of the Ministry of Education.
- <sup>8</sup> Yemen's Ministry of Education website, on 23 May, 2011, <http://www.yemen.gov.ye/portal/2011>
- <sup>9</sup> The Ministry of Education, the Annual Progress Report, submitted during the Annual Review, 2010.
- <sup>10</sup> Al Maory, A Vision and a Conception of Secondary Education, 2004
- <sup>11</sup> Hamoud Al Seyani, op. cit.
- <sup>12</sup> MPIC, Evaluation of the Third Socio-Economic Development Plan for Poverty Reduction (2006-2010).
- <sup>13</sup> Recently, some universities are approved to be established but still under construction.
- <sup>14</sup> The Republic of Yemen and the World Bank, Education Report, 2010.
- <sup>15</sup> Monitoring and Learning Assessment
- <sup>16</sup> Hamoud Al Seyani, background paper for the report
- <sup>17</sup> Feedback of some teachers and parents during the survey.
- <sup>18</sup> This section is based on a background paper for the report by Tawfeeq Al Mekhlafy.
- <sup>19</sup> Meaning intermediate and general diplomas.
- <sup>20</sup> The masters or the nobles in the social hierarchy are the descents of the Prophet Mohammad (PBH). The servants are a group of Yemenis working in the trade who had been marrying for a long time women from nearby African countries, then their descendants moved to Yemen. They are spread in many parts of the country, in the major cities in particular, and tend to live in isolated groups to enjoy the full rights of citizenship. However, they are subject to severe classism.
- <sup>21</sup> This section is based upon a reference paper prepared for the AKR by Abdel Salam Al Hakeemy: (Value Matrix in the Yemeni Society: Continuation vs. Changing)
- <sup>22</sup> World Bank WGI website, on 14 May 2011 <http://info.worldbank.org/governance/wgi>
- <sup>23</sup> The index indicates how economic freedom prevails in a society, the freedom people feel to work, produce, consume, and invest in any way they desire, with that freedom both protected and unconstrained by the state. The index has 10 indicators, on a scale from 0 to 100, where 100 represents maximum freedom and 0 no freedom.
- <sup>24</sup> Heritage Website, 22 May, 2011 [www.heritage.org](http://www.heritage.org)
- <sup>25</sup> Legatum Website, 23 May 2011 [www.prosperity.com](http://www.prosperity.com)
- <sup>26</sup> Population Estimates and Projection Section, UN, 15 May 2011 [http://esa.un.org/unpd/wpp/unpp/panel\\_population.htm](http://esa.un.org/unpd/wpp/unpp/panel_population.htm)
- <sup>27</sup> A thorough, national survey is currently being conducted by CSO to gather child labour statistics.
- <sup>28</sup> CSO Website, Annual Statistical Book 2009, accessed on 14 May 2011 <http://www.cso-yemen.org>
- <sup>29</sup> Arab Labour Organisation website, Yemen Experience in Labour Market Regulation [www.alolabor.org/nArabLabor/images/stories/.../yaman-experience.doc](http://www.alolabor.org/nArabLabor/images/stories/.../yaman-experience.doc) on 30 August 2010
- <sup>30</sup> CSO Website, Annual Statistical Book 2009, on 14 May 2011 <http://www.cso-yemen.org>
- <sup>31</sup> See the Appendix for the survey participants' schools.
- <sup>32</sup> See the Appendix for the workshop participants.
- <sup>33</sup> A measure describing the central value of the sample data (a measure of central tendency).
- <sup>34</sup> Used for statistical testing
- <sup>35</sup> Measures the dispersion of data.
- <sup>36</sup> You can refer to the section of values and upbringing in the Arab Knowledge Report.



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- Hamoud Al-seyani. (Knowledge society in Yemen: Are we on track?).
- Abdulsalam Alhakimi. Manthoumat al keyam fi al mojtama' al Yaman: bayn al estemrar wal taqhayour (System of values and educating young people in Yemen: society).



# APPENDIX OF YEMEN





# LIST OF WORKSHOP PARTICIPANTS IN YEMEN

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 Dr Tawfeeq Al Mekhlafy  
 Dr Ahmed Awad bin Mubarak  
 Mrs Amal Al Kasby  
 Dr Hussnia Al Kadery  
 Mr Majed Abdul Rahman Al Aliy  
 Mr Abdul Bary Taher  
 Mr Morshed Abdullah Morshed  
 Dr Entlak Al Motawakel  
 Mrs Arwa Al Dram  
 Mr Alwan Al Shaybany  
 Dr Soad Al Saba'  
 Mrs Fawzya Noa'man

Dr Badr Al Aghbary  
 Mrs Nagla' Hassan  
 Mr Mohammad Najy Khomash  
 Mr Mahdy Al Badjy  
 Mrs Intesar Al Ady  
 Hana' Al Motawakel  
 Mr Amar Abu Ghanem  
 Dr Mohammad Abdulmalek Al Motawakel  
 Mr Za'fran Al Mohana  
 Mr Kasem Al Shawsh  
 Mrs Anisa Al Bared  
 Sheikh Abdullah Al Khodhamy  
 Mohammad Nageb  
 Abdul Aziz Badran  
 Yahia Ahmed Al Dhaify  
 Mr Anwar Al Roken  
 Mr Muin Al Aryany  
 Mr Mohammad Hamoud Al Feniary  
 Mr Ramy Shafiq Al Qbaty  
 Mr Hesham Al Absey  
 Mrs Boshra Abdel Salam  
 Mrs Nada Taha Mohammad  
 Mrs Fatima Ibrahim Al Deais  
 Mr Abdul Rahman Ahmed Abdu Al Salahy



# LIST OF SCHOOLS PARTICIPATING IN THE SURVEY IN YEMEN

Sonaa Al Hayat	Hussein Al Ahmar
Al Forsan Al Ahylia	Aisha
Al Nahda Schools	Asmaa for girls
Al Shoruq	Balkis Primary School
Zaid Shcools	Arwa
Al Rashed Al Haditha	Sakina
Modern Zal, Hyda branch	Khadijah bint Khuwaylid
Al 'Olom w Al Teqniah	Um Salamah
Al Ajjal	Mogama Al Thaorah
Khalid bin Al Waled	Al Kuwait Secondary School
Nashwan Al Homairy	Bilal bin Rabah
Al Sha'b	Al Horesh
Martyr Mohammad Yahia	Salman Al Faresy
Ibn Majed	Hayel Saeed
Al Hamzah	



# YEMEN SURVEY RESULTS

**Table m4-1: Teachers' views of curricula (%)**

	Totally agree	Somewhat agree	Disagree	Totally disagree
A. Educational curricula and programmes prepare students to face future challenges.	29.9	36.4	30.9	2.8
B. Educational curricula and programmes help students acquire necessary skills.	28	53.3	16.8	1.9
C. Educational curricula and programmes help to prepare competencies that are able to compete internationally.	26.4	34.9	34	4.7
D. Educational curricula and programmes contribute to consolidating the values of citizenship and civilised behaviour.	31.8	57	10.3	0.9
E. Educational curricula and programmes prepare students to deal with life's daily problems.	23.4	40.2	30.8	5.6
F. Educational curricula and programmes provide a composition of cognitive, emotional and social dimensions.	22.6	43.4	27.4	6.6
G. Educational curricula and programmes are in line with scientific and technological advances.	26.4	31.2	35.8	6.6

**Table m4-2: Practice of following educational methods and activities (%)**

	In all classes	In most classes	In some classes	Do not practice
A. Participate with students in learning/educational activities.	20	31.3	47	1.7
B. Train students on problem solving.	10.4	36.5	47.8	5.3
C. Explain theoretical concepts.	48.2	34.8	13.4	3.6
D. Write lessons on the board.	74.1	10.7	8	7.2
E. Discuss the concepts of the lesson with students.	71.1	21.1	7.8	0
F. Discuss presentations made by the students on the concepts of the lesson.	9.8	35.7	42	12.5
G. Evaluate student achievement (tests, quizzes and examinations).	22.3	36.6	36.6	4.5
H. Help students to perform scientific/practical experiments.	4.6	13	56.5	25.9
I. Organise student work into small groups.	11.6	20.5	50.9	17
J. Connect the subject to the requirements of daily life.	41.8	30.9	24.5	2.8
K. Maintain silence in the classroom and control troublemakers.	80.5	13.3	5.3	0.9

**Table m4-3: Teachers' views on the following educational practices (%)**

	Unnecessary	Somewhat necessary	Very necessary	Do not know
A. Train students to analyse various sources of information.	3.5	19.1	77.4	0
B. Train students to think critically.	7	33.8	52.2	7
C. Motivate students to work independently and take initiatives.	7	41.3	49.1	2.6
D. Help students to do research.	1.8	40.3	55.3	2.6
E. Train students to solve problems.	2.6	15.7	80	1.7
F. Help students memorise the rules and laws of the subject.	2.6	20.4	77	0
G. Encourage students to interact with the teacher.	1.7	7	90.4	0.9
H. Participate with students in all activities assigned step by step.	7	43.9	47.4	1.7
I. Acquaint students with self-evaluation practices.	2.6	35.1	60.5	1.8
J. Familiarise students with teamwork.	2.7	27.4	69	0.9
K. Dictate social principles and values to students.	2.6	11.3	85.2	0.9
L. Obligate students to memorise the lesson.	15.8	50.9	30.7	2.6

**Table m4-4: Teachers' views on education, students and the school (%)**

	Totally agree	Somewhat agree	Disagree	Totally disagree
A. Education in the Arab world has improved when compared to the past.	18.3	48.7	21.7	11.3
B. Teachers no longer enjoy the same level of social respect.	51.7	38.8	6.9	2.6
C. Students' respect for teachers has generally declined when compared to the past.	60	30.4	7	2.6
D. Students' interest in studying decreases day by day.	65.2	30.4	1.8	2.6
E. The current generation of students is characterised by a strong personality.	13	37.4	38.3	11.3
F. The current generation of students is better prepared than previous ones.	6.1	21.1	36	36.8
G. For most students, materialistic values dominate over cognitive values.	59.6	31.6	7.9	0.9
H. The school's role as a knowledge and information source for students has become secondary.	16.7	46.1	25.4	11.8
I. Educational methods followed in school do not create a student's interest for knowledge.	33.3	44.7	16.7	5.3

**Table m4-5: The weekly time allocated for the following activities (%)**

	None	Less than an hour	1-2 hours	3-4 hours	More than 5 hours
A. Lesson planning and preparation	1.8	35.7	37.5	11.6	13.4
B. Grading students' assignments	4.5	19.6	40.2	22.3	13.4
C. Attending administrative meetings	11.6	58.9	25.9	1.8	1.8
D. Meetings with parents	44.6	43.8	8.9	1.8	0.9
E. Student activities (in clubs, extracurricular, ...)	55.8	30.1	10.6	2.6	0.9
F. Activities to increase professional performance (attending lectures, reading specialised magazines, ...)	20	27.8	35.7	13	3.5
G. Participation in educational products (writing books, setting programmes, participating in an evaluation, ...)	54.8	22.1	13.3	7.1	2.7

**Table m4-6: Significance of the following evaluation practices (%)**

	Insignificant	Low significance	Moderate significance	High significance
A. Regular school attendance (presence)	0	1.7	13	85.3
B. Effort exerted for school assignments	2.6	0.9	25.2	71.3
C. Steadily improved results	0	2.7	27	70.3
D. Good behaviour inside and outside the classroom	0	1.8	7	91.2
E. Active participation in the classroom	1.8	0.9	9.6	87.7
F. Creativity and innovation	0	5.3	38.9	55.8
G. Thinking and questioning	0	2.7	51.7	45.6
H. Taking initiatives	0	5.3	49.1	45.6
I. Giving correct answers on exams	2.6	0.9	24.8	71.7

**Table m4-7: Educational means available for teachers at home (%)**

	Yes	No
A. Computer	71.6	28.4
B. Internet access	27.6	72.4
C. Scientific encyclopaedia	55.4	44.6
D. Subscription to educational magazine	20.4	79.6
E. Dictionary	70.3	29.7
F. Library	74.1	25.9

**Table m4-8: Use of technology for educational purposes (%)**

Yes	No
47	53

**Table m4-9: Teachers' use of technology (%)**

	Yes	No
Search for educational situations	89.6	10.4
Prepare lessons	83.3	16.7
Select exercises and activities	78.3	21.7
Consult other colleagues	70.5	29.5
Communicate with students	60	40

**Table m4-10: Educational trends of teachers (%)**

	Totally agree	Somewhat agree	Disagree	Totally disagree
A. Focus on improving students' memorisation for success in studying	23.4	63.1	11.7	1.8
B. All students are able to learn and succeed if handled by efficient teachers.	54.1	38.7	5.4	1.8
C. Successful teachers are those who manage to finish the curriculum timely and properly.	63.1	36	0.9	0
D. Giving opportunities to teachers for pro-action or creation harm the educational system.	11.7	15.4	45.9	27
E. Teachers are not required to know various educational methods; perfect command of only one is enough.	1.8	24.8	47.7	25.7
F. Intensive tests and exams are the best way to push students to learn and concentrate.	12.1	50.5	31.8	5.7
G. The best approach for evaluating student learning is the use of a specific assessment of their performance (without assigning grades).	14.8	60.2	20.4	4.6
H. Discussion and coordination with parents are among the teacher's responsibilities.	36.4	43.9	14	5.6
I. Educational reforms exhaust teachers and reduce their product.	17.8	29	42.1	11.2
J. To be a successful teacher, it is sufficient to be experienced in your subject.	29	24.3	40.2	6.5
K. The teacher's role is to instil passion for knowledge and science in youth.	83.3	13.9	1.9	0.9
L. Information transfer is the major characteristic of a successful teacher.	50.9	38	9.3	1.8
M. Teachers must be familiar with other subjects in order to teach their disciplines well.	40.4	46.8	11	1.8

**Table m4-11: Teachers' relationship to their career, its requirements and education stakeholders (%)**

	Totally apply	Somewhat apply	Do not apply	Exactly the opposite
A. I will leave teaching if I find another job with the same salary and conditions.	22.4	19.6	37.5	20.5
B. I will leave teaching if I find another job with a higher salary.	43.9	21.9	26.3	7.9
C. Teaching income does not allow me to be self-sufficient.	74.8	16.2	9	0
D. Teaching allows me to feel as if I have a mission.	80.9	15.7	2.5	0.9
E. My relationship with students is based on mutual respect.	80.7	18.4	0.9	0
F. My relationship with my colleagues is based on mutual respect.	91.1	8	0.9	0
G. My relationship with parents is based on mutual respect.	81.4	15.9	2.7	0
H. My relationship with the administration staff is based on mutual respect.	82.1	15.2	1.8	0.9
I. I regularly meet with parents to discuss student-related matters.	7.9	41.2	42.1	8.8
J. I feel that the preparation I received does not correspond to teaching requirements.	81.4	15.9	2.7	0
K. I feel I need professional qualifications to be able to teach for the future generation.	32.1	43.8	18.7	5.4

**Table m4-12: Teachers' views on the support offered to students (%)**

	Always	Sometimes	Rarely	Never
A. The school assists students who have difficulties studying.	27.4	31	20.4	21.2
B. The school offers promotional incentives for excellent students.	28.9	30.7	21.1	19.3
C. The school has a system to replace absent teachers.	20.8	18	14.4	46.8
D. The school has specialists to help teachers handle students' difficulties, be they financial, psychological or social.	24.6	28.1	19.2	28.1

**Table m4-13: Teachers' views on enabling environments (%)**

	Totally agree	Somewhat agree	Disagree	Totally disagree
A. The educational system provides facilities for teachers to continue their in-service learning.	13.7	25.5	37.3	23.5
B. There are teacher training centres near the school that I can join when necessary.	12.3	12.2	33.7	41.8
C. The state provides incentives for highly competent teachers.	8.1	14.1	30.3	47.5
D. The state offers many in-service training opportunities to improve teaching.	9	40	28	23
E. The state provides training for beginning teachers.	8.3	36.5	29.2	26
F. Teacher candidates are selected according to strict standards.	6.2	16.5	33	44.3
G. There is a gap between teacher preparation and the actual requirements of teaching.	48	29.6	16.3	6.1
H. The state pays teachers to secure a good living for them.	12	10	18	60
I. There are rules and organisations in place that protect teacher's rights.	14.7	24.2	21.1	40
J. The state provides customised in-service training.	11.7	18.1	31.9	38.3

**Table m4-14: Teachers' freedom of choice (%)**

	Absolute freedom	Good freedom	Limited freedom	Absent freedom
A. Personal choices	55.3	24.3	19.4	1
B. Scientific choices	35	40.8	23.3	1
C. Intellectual choices	41.7	29.2	23.3	5.8
D. Professional freedom	26.2	33	34	6.8

**Table m4-15: Ability of teachers to express their opinions (%)**

Yes	No
66.7	33.3

**Table m4-16: Effect of available enabling environments on students' skills and values**

Enabling environments	Skills and values	Family upbringing pattern	Mother's education level	Family's attention to the student's study	Welfare of the family	Educational welfare at home	Educational welfare in local environment	Father's education level	Educational welfare in school	Family structure
Standard averages of cognitive skills			0.104	0.1		0.186		0.109	0.072	
Standard averages of conative skill		0.117			0.067		0.077		0.083	
Standard averages of social skills		0.169							0.129	
Standard averages of cognitive values		0.234				0.102	0.104			
Standard averages of social values		0.134				0.086		0.114	0.077	
Standard averages of conative values		0.235				0.111	0.068			0.063
Standard averages of universal values		0.197			0.080	0.156			0.071	

