



Building human capabilities: education

Chapter 1 emphasized the importance of knowledge acquisition as a cornerstone of human development. This chapter focuses on building human capabilities for knowledge acquisition in Arab countries through education. The assessment of the state of education using such indicators as enrolment and illiteracy rates and per capita expenditure reveals tangible achievements but also significant areas for further progress in the Arab countries as a whole. In addition, a mismatch between educational output on the one hand and labour-market and development needs on the other could lead to Arab countries' isolation from global knowledge, information and technology at a time when accelerated acquisition of knowledge and formation of advanced human skills are becoming prerequisites for progress. To address these and other quality issues, a radical vision of education reform is put forward, including strategic directions and policies and specific areas for educational expansion and improvement.

THE STATUS OF EDUCATION

Arab countries have made great strides in education, particularly since the middle of the twentieth century. Nevertheless, educational achievement in the Arab countries as a whole, judged even by traditional criteria, is still modest when compared to elsewhere in the world, even in developing countries.

LITERACY

While education has made headway among the younger generations, illiteracy has proved difficult to eradicate. Therefore, the overall educa-

tional achievement among adults in Arab countries remains low on average. Arab countries have nevertheless made tangible progress in improving literacy: the estimated rate of illiteracy among adults dropped from approximately 60 per cent in 1980 to around 43 per cent in the mid-1990s.¹ However, illiteracy rates in the Arab world are still higher than the international average and are even higher than the average in developing countries. Moreover, the number of illiterate people is still increasing, to the extent that Arab countries embark upon the twenty-first century burdened by over 60 million illiterate adults, the majority of whom are women (figures 4.1 and 4.2).

Most importantly, the illiteracy rates for the more vulnerable social categories, such as women and the poor, are relatively higher, particularly in the rural areas. Girls and the poor, especially in the countryside, suffer from more intense deprivation of education, especially at the higher levels. In other words, differences in literacy follow the same patterns as differences in enrolment in basic education by gender, social status and locale. Therefore, differences in enrolment in basic education aggravate disparities in educational attainment by gender, social status and rural/urban residence. It should be noted that illiteracy among males in Arab coun-

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BOX 4.1

Gibran: on teaching

No man can reveal to you aught but that which already lies half asleep in the dawning of your knowledge.

The teacher who walks in the shadow of the temple, among his followers, gives not of his wisdom but rather of his faith and his lovingness.

If he is indeed wise, he does not bid you enter the house of his wisdom, but rather

leads you to the threshold of your own mind.

The astronomer may speak to you of his understanding of space, but he cannot give you his understanding.

The musician may sing to you of the rhythm which is in all space, but he cannot give you the ear which arrests the rhythm, nor the voice that echoes it.

Source: Kahlil Gibran, *The Prophet*.

¹ The data in this section are derived from the statistical yearbooks of UNESCO (1996 and 1998). It has been noted elsewhere in the Report that education statistics in the Arab countries are often incomplete.

Despite the substantial quantitative expansion of education in Arab countries, including education for girls, female enrolment rates are lower than those for males.

tries is not expected to disappear before the end of the first quarter of the twenty-first century, and for women, not until 2040.

PRE-SCHOOL EDUCATION

The steady affirmation by recent scientific research of the importance of the early years of childhood in configuring the human brain and shaping its faculties underscores the need to concentrate on pre-school education. However, this is another area in which the Arab countries fall behind developing countries.

Despite a doubling of the number of children who enrolled in pre-school education in the Arab countries between 1980 and 1995, the figure for 1995 did not exceed 2.5 million,

corresponding to an enrolment rate that was below the average for developing countries. Moreover, the percentage of children enrolling in pre-school education actually fell over this period (from 4.8 per cent in 1980 to 4 per cent in 1995). Furthermore, despite the steady increase in the percentage of girls in pre-schooling, the percentage was also less than the average for developing countries (42 per cent versus 47 per cent in 1995).

ENROLMENT IN FORMAL EDUCATION

The data on enrolment in the three levels of education² in Arab countries show a steady quantitative increase. The number of students enrolled in all three levels combined jumped from 31 million in 1980 to approximately 56 million in 1995. However, the rate of increase in enrolment for the three levels slowed during the 1990s compared with the 1980s (figure 4.3).

Available data on school enrolment for the first level of formal education indicates that to date, the Arab world has been unable to absorb new generations of Arab citizens. There is also an apparent bias against females whether the comparison is made with developing countries or the world as a whole.

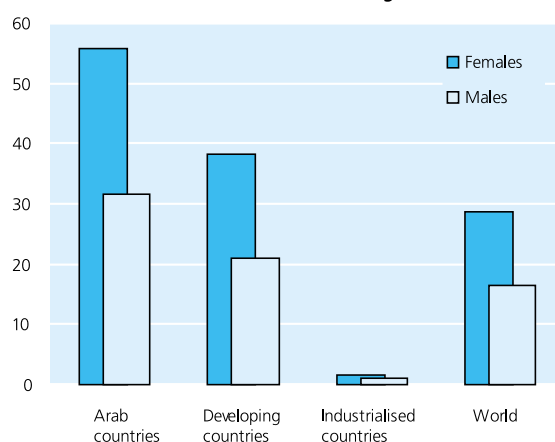
The mid-1990s witnessed higher total enrolment rates for the secondary and tertiary levels in the Arab countries (54 per cent and 13 per cent, respectively) compared to developing countries (49 per cent and 9 per cent, respectively). However, these percentages are lower by far than those prevailing in the industrialized countries for that period (106 per cent³ and 60 per cent, respectively). Arab countries are not expected to catch up with the industrialized countries' mid-1990s enrolment levels for the three levels of education before 2030.

Despite the substantial quantitative expansion of education in Arab countries, including education for girls, female enrolment rates are lower than those for males, particularly at the tertiary level (higher education). The Arab countries also lag substantially behind other regions of the world in female tertiary enrolments (figure 4.5).

Figure 4-1
Illiteracy rate (%), Arab countries and selected world regions, 1980 and 1995



Figure 4-2
Illiteracy rate (%) by gender, Arab countries and selected world regions, 1995



² According to the standard international definition, an educational level consists of six educational grades.

³ The gross enrolment rate could exceed 100 per cent.

EDUCATION SPENDING

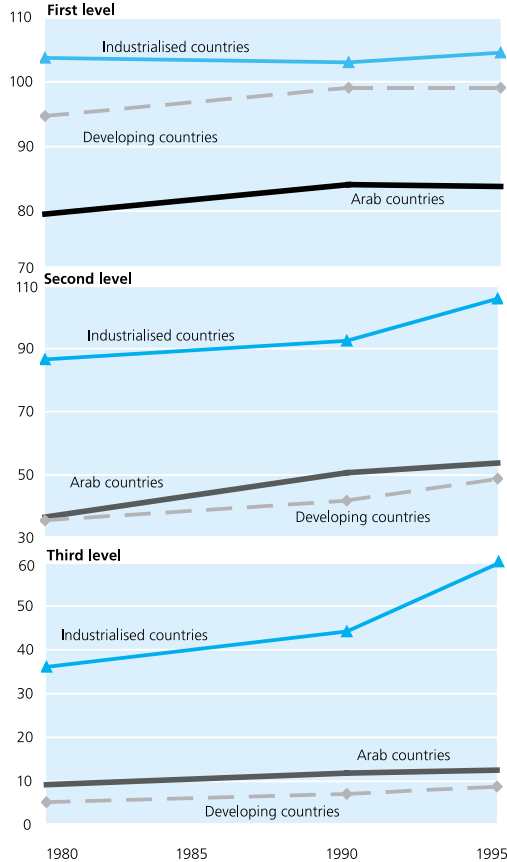
There are indications that rising expenditure on education in the Arab world began to taper off after 1985. Education spending increased, in current prices, from US\$18 billion in 1980 to US\$28 billion in 1995. However, the rate of increase since 1985 has been much slower than that during the period 1980-1985, unlike the situation in both developed and developing countries (figure 4.6). On the basis of the rather defective indicator often used in international comparisons--education expenditure as a percentage of GNP--Arab countries do better than developing and developed countries alike and the percentage was on the rise between 1980 and 1985. However, the percentage was lower in 1995 than in 1985.

A better indicator for the purpose of this analysis is per capita expenditure on education. At current prices, this indicator rose over the years from 1980 to 1985. However, this rise was followed by a deterioration during the latter half of the 1980s. Figure 4.7 shows the contrast between this situation and that of both developing and industrialized countries, especially the latter (which had been spending substantially on education to start with). While Arab countries continued to spend more on education per capita than developing countries as a group, their relative edge has been eroding since the mid-1980s. In addition, per capita expenditure on education in Arab countries dropped from 20 per cent of that in industrialized countries in 1980 to 10 per cent in the mid-1990s. The slowing rate of growth of education spending took place in the context of the macroeconomic difficulties in which many Arab countries found themselves after the mid-1970s, together with the ensuing structural adjustment programmes, which put substantial pressure on spending, including rates of growth of education expenditure.

EQUITY AND AFFORDABILITY

There is a danger that the education systems in the Arab countries will be split into two unrelated parts: very expensive private education, enjoyed by the better-off minority, and poor-quality government education for the major-

Figure 4-3
Gross enrolment ratio (%) by level of education, Arab countries and selected world regions, 1980-1995



While Arab countries continued to spend more on education than developing countries as a group, their relative edge has been eroding since the mid-1980s.

Figure 4-4
Higher education students, per 100 thousand inhabitant, Arab countries and selected world regions, 1980-1995

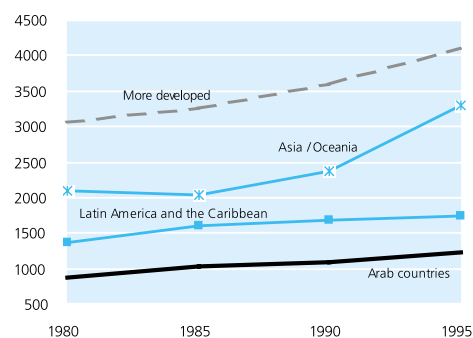


Figure 4-5
Females' gross enrolment ratio in higher education, Arab countries and selected world regions, 1980-1995

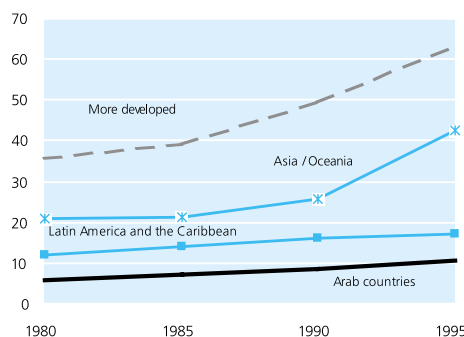
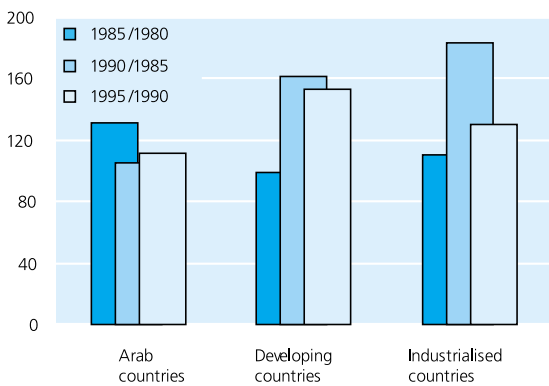


Figure 4-6
Relative total expenditure on education (at current prices) of Arab countries and selected world groupings (Indexed) 1980-1995



Problems of quality and relevance have led to a significant mismatch between the labour market and development needs on the one hand and the output of education systems on the other.

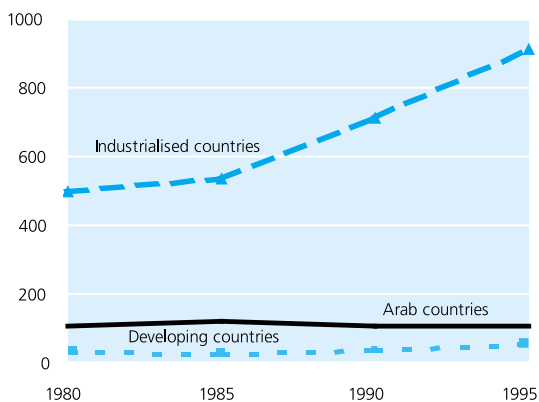
ity—and even the latter can be costly for the less well-off in view of cost-recovery policies adopted by Arab countries in the context of structural adjustment programmes, a problem that is exacerbated by the phenomenon of widespread private tuition. Unfortunately, private tuition has become indispensable in order to obtain high grades on public qualifying examinations for enrolment in higher education, especially with respect to the disciplines considered most likely to lead to better professional and career prospects. The result is that these disciplines are becoming almost exclusively the preserve of financially privileged groups. Thus, education has begun to lose its significant role as a means of achieving social advancement in Arab countries, turning instead into a means of perpetuating social stratification and poverty.

There are many signs of decreasing internal efficiency of education in the Arab world, including high failure and repetition rates, leading to longer periods spent at different stages of education. However, the real problem lies in the quality of education. Despite the scarcity of available studies, complaints concerning the poor quality of education abound. The few available studies identify the key negative features of the real output of education in Arab countries as low level of knowledge attainment and poor and deteriorating analytical and innovative capacity.

Problems of quality and relevance have led to a significant mismatch between the labour market and development needs on the one hand and the output of education systems on the other. This situation leads to poor productivity, a distorted wage structure and a meagre economic and social return on education. The prevalence of unemployment among the educated and the deterioration in real wages for the majority of them exemplify this problem. Poor quality has become the Achilles heel of education in the Arab world, a flaw that undermines its quantitative achievements.

The most worrying aspect of the crisis in education is education's inability to provide the requirements for the development of Arab societies. This could mean not only that education loses its power to provide a conduit for social advancement for the poor within Arab countries but also that Arab countries become isolated from global knowledge, information and technology. If the current situation is allowed to continue, the crisis can only worsen-- this at a time when accelerated acquisition of knowledge and formation of advanced human skills are becoming prerequisites for progress. If the steady deterioration in the quality of education in the Arab countries and the inability of education to meet the requirements of development are not reversed, the consequences for human and economic development will be grave. Comprehensive action to reform education systems is therefore urgent. A strategic vision for such reform is presented below.

Figure 4-7
Public expenditure on education per capita (in current US\$), Arab countries and selected world regions, 1980-1995



Source: UNESCO, 1996 and 1998a.

EDUCATION REFORM ⁴

Education is a key factor in today's knowledge-intensive world. As education stimulates a critical outlook and creative skills, it simultaneously accelerates the pace of change, development and progress. Education and progress should therefore be mutually reinforcing. To help to achieve this goal, this section proposes a radical revision of education systems in Arab countries as they move into the twenty-first century.

TEN PRINCIPLES

The following 10 normative statements define the philosophy underlying a new education structure that puts humanity at the centre of the cultural process.

- The individual should be central to the learning process. Without implying indifference to the community or absence of cooperative behaviour, the dignity of the individual should be respected.
- Modern knowledge is power. The critical faculties of Arab youth should be encouraged as both a guide and an approach to better societal structures.
- Without denigrating higher values and established creeds, intellectual and cultural heritage should not be immune to criticism and change in the face of scientific evidence. Dialogue should be valued as an indispensable process, one that is as likely to end in agreement as in creative disagreement.
- Creative human effort lies at the heart of progress. Arab education systems should be restructured to give precedence to creativity and the dignity of productive work.
- The spirit of challenge should be stimulated in the Arab people, who should shape their future through creative responses to their natural and human surroundings.
- Equal educational opportunities should be made available to all children. Disadvantaged groups should be able to participate in the various levels of the education process in a manner commensurate with their abilities rather than the financial and social means of their

BOX 4.2

Education in Lebanon

The educational system in Lebanon is considered one of the most advanced in the Arab region in so far as quality and gender equality are concerned. The gender gap in enrolment has been bridged, that is, female enrolment has become a bit higher than that of males at the preparatory and secondary stages of education. Illiteracy rates in Lebanon are the lowest in the Arab region.

The rise in enrolment rates and the curbing of illiteracy are achievements realized during the past 25 years, in the course of which Lebanon was mostly in a state of war. That was the outcome of an

Source: National report prepared for the AHDR, 2002.

undeclared partnership between the public and private sectors of education and determination on the part of Lebanese families to get their children educated.

The educational context in Lebanon, however, still faces the problem of low compatibility with the requirements of the labour market. Reforming curricula, particularly the introduction of new subjects dealing with civil education, and social and technical topics in the early stages of education, might be appropriate steps towards tackling this problem.

parents. At the earliest stages of this process, a degree of affirmative action would be required through fellowships, tuition loans, health care and proper nutrition.

- Education should aim at promoting, in a cohesive and harmonious manner, students' physical, emotional and societal well-being as well as their acquisition of knowledge.
- Education should help children and youth to understand themselves and their own culture, past and present, creatively and in the context of a world where cultures can flourish only through openness and dialogue.
- The objectives of the education process should be derived from the global vision of twenty-first-century education. Education should integrate the Arab people into the age in which they live, an age governed by the exactness of science--its causality, rigour and method.
- Education should help the young to cope with a future of uncertainty, acquire flexibility in the face of uncertainty and contribute to shaping the future.

THREE STRATEGIC DIRECTIONS

Strengthening the education systems in Arab countries requires action in three broad areas: enhancing human capabilities, creating strong synergy between education and the socio-economic system; and formulating a programme for education reform at the pan-Arab level.

Education should integrate the Arab people into the age in which they live, an age governed by the exactness of science--its causality, rigour and method.

⁴ This section is based largely on "A vision for the future of education in the Arab world", a document prepared for the Arab League Educational, Cultural and Scientific Organization (ALECSO).

Enhancing human capabilities

Strong human capabilities are critical to the achievement of progress in the Arab world. To create such capabilities, it will be necessary to achieve three main objectives:

- full (100 per cent) enrolment in basic education and an extension of mandatory schooling to at least 10 years, with simultaneous efforts to expand post-basic education;
- creation of an institutional system for adult education that continues for life and that is flexible enough to allow for constant improvement. Its purposes would be to eliminate illiteracy and institutionalize the principle of lifetime education for graduates of the education system;
- quality enhancement of all phases of education to pave the way for renewal, excellence and creativity and incorporate modern knowledge and technology into Arab societies.

The creation of quality education should be given the priority it deserves if the Arab world is to achieve its full potential. This will mean both allocating increased resources to education and using resources more efficiently.

It might be necessary to seek higher financial contributions to education, particularly higher education, from those able to pay. This could be accomplished through either tuition fees for well-off students or the use of tax incentives to motivate businesses and the rich to make donations and endowments to education institutions, with objectives much broader than providing assistance to outstanding poor students. The private sector in particular has an interest in supporting education since it needs to secure the supply of human skills and aptitudes necessary to improve its productivity and maximize profits. This interest should be translated into more attention to, and increased finance for, all types of education.

Good education, particularly at the higher levels, is expensive. Arab countries, particularly the poorer ones, cannot afford to match the level of education spending prevalent in industrialized countries. While spending alone cannot solve the education crisis, appropriate policies, combined with a favourable public context and sufficient funding, can. It may be argued that the main challenge facing

Arab countries is that of devising an alternative education system that can provide good education at the right cost. This is an area calling for more innovation.

Addressing the improvement of education at the pan-Arab level, discussed later in this chapter, could help to alleviate financial constraints that could be overwhelming at the national level.

Creating strong synergy between education and the socio-economic system

Many of the factors affecting the quality of education relate to the education-learning process in its broader sense. Education is a societal effort involving the interaction of various forces active in society. There is little benefit from maintaining a single-sector outlook, which narrows the scope of interest in education and curbs efforts to improve it. Education should become a concern for society as a whole, for government agencies generally (rather than one or two ministries) and for business and civil society, particularly in local communities. This synergy is particularly important with respect to institutions of higher education.

This societal synergy would harmonize education systems--their structure, input and output--with the needs of production, development and progress. It would also help in resolving the financial problems of education. Moreover, this societal partnership, if effectively created, could alleviate the structural tension that might develop between the education system and the needs of business and production. Improved planning and cooperative efforts among all sectors of society (the state, the private sector and civil society) would be necessary to harmonize the systems of education and employment.

There is little hope for education reform unless a strong synergy emerges between schools and local communities. Embedding schools in society requires multiple channels for interaction between the school and the community as a whole, not simply the parents. The demand side of education, represented by families and business, also needs to be understood, particularly as the role of market forces increases in Arab countries. Plans and re-

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forms that ignore the demand side are bound to fail. At the same time, the role of education as a vehicle for social progress should be maintained.

The diversification of education means, among other things, a change in the pace of school life so that it remains in tandem with the realities of life outside the classroom. There should be room for part-time education and for the possibility of alternating between school duties and student participation in the socio-economic activities of the local community.

Unconventional schools, such as one-room or one-teacher schools, deserve to be part of the educational diversification process. They could meet the need to expand education in distant areas and help to eliminate the remaining pockets of education deprivation in small communities.

The question of encouraging the private sector to venture into the field of education is often broached in the context of structural adjustment. Certainly, building human capabilities can benefit from an education system that is national, vibrant, non-governmental and non-profit. However, such a system should be capable of competing with state-run education. In particular, it should operate under strong guarantees of quality, enforced through a rigorous system of quality control through accreditation.

In the current institutional context, it is difficult for the profit motive to provide for the educational needs of the weaker social groups, a majority in the Arab world. The deprivation of these groups is likely to increase if the state fails to guarantee their education. However, in cases where for-profit enterprises provide education services, partnerships between the state and society should regulate this activity to ensure that it serves the public good and ensures quality.

Formulating a programme for education reform at the pan-Arab level

Effective Arab cooperation is one of the keys for dynamic development in the Arab world. This is true for human development in general and for building human capabilities through education in particular. The considerable disparity in human and other resources among

Arab countries means that some of them would find it difficult, if acting alone, to make tangible progress in the expansion and improvement of education. While there has been considerable Arab cooperation in education for decades, the outcome of this cooperation has been modest to date. The regional challenges facing Arab countries call for strong synergy in efforts to build the human and technological abilities of Arab countries. Furthermore, Arab cooperation in education can promote social integration in a manner conducive to higher forms of Arab cooperation in the future.

The creation of high-quality human resources is an abiding need in all Arab countries. National efforts have achieved a high degree of quantitative expansion in basic education, particularly in richer and less populated Arab countries. The need to boost quantity remains high in poorer Arab countries, particularly with regard to higher education. It should be noted that eliminating the last pockets of education deprivation is harder than initial achievements in expanding education. Nomadic and desert communities pose special difficulties in this respect. Previous educational expansion has also created problems of quality in both rich and poor Arab countries. Improving quality represents a greater challenge than the mere expansion of numbers.

A pressing need exists for a purposeful programme of action to improve education across the Arab world, based on national programmes but designed within the framework of effective Arab cooperation. This programme should also go beyond government action to strong partnerships between states, the private sector, and civil society.

Arab education reform and the avoidance of disastrous isolation from active involvement in the world of the twenty-first century require the establishment of a supranational education authority. The closer Arab countries come to building this authority, the more they will be able to resolve their current development crisis and acquire the capacity to participate in shaping the new globalizing world.

Arab education reform should be a main and permanent item on the agenda of Arab summit meetings. There is still much room to

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create pan-Arab education institutions and enhance the efficiency of existing ones, both governmental and non-governmental. Existing development institutions also need to pay serious attention to education reform. The horizons are limitless, the challenge immense, and current efforts are meagre at best.

Higher education, perhaps one of the most important areas of Arab cooperation in education, deserves special attention. The need for such cooperation is as great as its expected returns. Graduate studies, research and publication are among the areas that should be given priority in such cooperation efforts. Virtual networking among education institutions using ICT and the creation of knowledge networks among researchers would be effective means of building collaboration. Stimulating Arab cooperation requires that pan-Arab dimensions take precedence over national rivalry in higher education.

The list of areas for possible Arab cooperation is extensive. In addition to higher education, it includes curriculum development, textbook production and teacher training, areas in which a common language represents a major advantage. Cooperation in some of these areas can lead to opportunities for private-sector activity--as in the case of textbooks, for example, where the size of the market depends critically on the extent of Arab cooperation in curriculum development.

The Arab League Educational, Cultural and Scientific Organization, suitably strengthened, is the obvious choice to play a leading role in the institutional structure of a pan-Arab education-reform programme. Other Arab institutions should also be mobilized for this task, particularly the Arab development funds. Arab NGOs could also be created to revitalize education and learning.

POLICIES FOR EXPANDING AND IMPROVING EDUCATION

A comprehensive, cohesive renovation of the structure, content and tools of education would release creative potential and revitalize Arab society. The following policies could bring about this renovation:

- *Self-education, or learning to learn.* Self-education means many things, but for the

most part, it means greater focus on the tools of education. In the case of basic education, these tools are reading, writing, verbal expression, arithmetic, problem-solving, elementary science and social sciences. The tools also include manual and technical skills, values and a proper attitude towards work and production as well as the capacity for the autonomous search for knowledge. Self-education should aim to provide learners with knowledge, abilities and attitudes that will equip them for life-long learning and continual development.

- *Diversification of education and renewal of its framework.* This policy calls for making education opportunities available to all age groups. Workers should have the chance to learn through part-time study and through teaching and training centres in the workplace. In cases where students must work, part-time teaching should be made available. For this to happen, guidance in education should be taken seriously. The present education system grades and selects but does not guide.

- *Benefiting from modern education technology and ICT.* These technologies have an important role to play in formal education and an even more significant role in informal and casual education. They can provide learners with strong tools enabling them to engage in self-teaching, encouraging learning and stimulating their potential and talents. Arab satellite television stations, if well used, could make a considerable contribution to remote learning.

- *Constant evaluation of education.* The success of educational efforts in meeting the needs of learners and society as well as the requirements of comprehensive development needs to be measured. This measurement is the launching pad for innovation, which in turn calls for evaluation since the latter paves the way for further renewal and improvement. Special focus should be placed on modern methods and concepts used in the evaluation of educational attainment, such as portfolio evaluation, summative evaluation, and self-evaluation.

- *Teacher-centred renewal.* The teacher should play a multifaceted role, e.g., as guide, source of learning and knowledge, coordinator of the learning processes, evaluator of the

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outcomes of learning, and judge of the individual learner's aptitudes and preferences.

Teachers should be prepared for profound changes in the structure, methods and goals of education. They should become familiar with self-learning, be willing to perform in tandem with other teachers and cooperate with parents and the local community. Teachers should be adept at using the new methods of evaluating students and providing education guidance. They should also be mindful of the link between basic education and the needs of society and the workplace. This calls for a new type of teacher. Therefore, a radical change is needed in the methods of preparing and training teachers.

The professional structure of education needs to be improved through the creation and strengthening of professional associations that formulate the codes of ethics for the profession, endeavour to enhance teacher performance, protect teachers' interests and participate effectively in the improvement of education in general and teacher training in particular.

A grade-based professional career structure for teachers should be introduced, with each grade having a clearly defined level of responsibility, independence and set of incentives. This will encourage excellence in teaching. A system for awarding professional teaching licences could be of considerable help, but only if it is combined with a set of verifiable criteria. The government, teachers colleges and the teachers association should jointly decide upon these criteria. A system of periodic re-licensing could also be put into effect, with teachers undergoing refresher training as needed.

- *Development administration, not management administration.* An innovative education administration, capable of leading the process of renewal, is indispensable. This calls for decentralized administration, the empowerment of local management, greater educational freedom for management and continual updating of management's knowledge of new trends in education. Administrators should apply education methods that enhance the spirit of solidarity and teamwork, consolidate the concepts of democracy and citizenship, strengthen the link between education and the workplace,

encourage constant and continuous education and serve local communities.

Democracy and the decentralization of education administration should be encouraged. Only then would schools become active participants in the improvement of education. Only then would the role of the local community in shaping and running the schools become substantive.

- *Effective participation of various societal groups in learning,* particularly basic education. Families, NGOs, the business sector and local communities should be able to take part in policy-making, finance and supervision. As noted earlier, private education (particularly non-governmental and non-profit) must be encouraged but kept under close supervision to ensure quality.

AREAS FOR EDUCATIONAL EXPANSION AND IMPROVEMENT

This section describes, in some detail, suggested policies in selected areas crucial to the expansion and improvement of education: adult education; pre-school education; children with special needs, particularly the gifted; technical and vocational education; higher education; and cultivation of talents in early childhood.

Adult education

Adult education is concerned with the continued improvement of the abilities and skills of the graduates of various phases of education. One of its main functions is to ensure the continued development of the abilities and skills of graduates of literacy programmes so as to avoid a relapse. Adult education is one of the requirements of contemporary society, but it has hitherto not been given the attention it deserves.

Defining various consecutive phases of adult education will help Arab countries to tackle the crucial issue of continuing education and self-learning. The successive phases of adult learning need to evolve in tandem with the explosive growth of knowledge that is the dominant characteristic of today's world.

Broader societal resources should be allocated to eliminate illiteracy and educate adults. These resources should not be limited

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to finance but encompass other societal resources, such as students in higher education.

There will always be a need for large numbers of teachers, supervisors and guidance experts who are qualified in adult education and this need is likely to grow with time. Therefore, deep reform of the professional structure of adult education is required so that it is appropriately linked and coordinated with the Arab system of teacher training and the professional organization of the teaching profession.

Pre-school education

The development of the abilities of the child is a multifaceted, comprehensive, continuous process that takes place through interaction with natural and social phenomena. The ability of children to learn depends greatly on the age at which they are enrolled in pre-school education, the number of years they spend at this level and the quality of teaching. However, pre-school education has not received the due attention of Arab governments and is rarely a priority.

Pre-schooling should not be a miniature replica of elementary schooling, with graded classes and set syllabuses. A pre-school should be a transitional institution that provides children with space in which to play and learn, stimulates their physical growth and the development of the senses, helps them to adjust to their peers and stimulates their mental, emotional and social abilities.

International and national experience shows that parental awareness and integration of the parents into the formulation of education programmes encourage them to improve their communication with their children. This enhances their awareness of the multiple needs of the child, provides them with new abilities and exposes them to new modes of education, which leads to more successful interaction in the family, the pre-school and, later on, the school.

Children with special needs

Arab education systems need to pay attention to all their citizens, providing them with the opportunity to grow and take an active part in social life according to their individual abilities and encouraging them to fulfil their maximum

potential. To achieve this goal, substantial improvements are needed in the teaching of children with special needs, including those who must grapple with physical impairment. It is also essential to focus on the education of gifted students since they are likely to play an important role in innovation, a prerequisite for progress in the age of knowledge and technology. This valuable potential deserves the wholehearted support of the education system; at the same time, however, attention paid to gifted students should not mean neglect of others.

Technical and vocational education

Of all the categories of education, technical and vocational education is the closest to the workplace and every effort should be made to keep it so. This has too often not been the case in Arab countries, where this category of education has become distant from the hands-on experience of the workplace, alien from the everyday needs of production.

Most technical professions now require a high level of education and a longer period of general education. Demand for traditional manual skills has declined and interest in the worker's social, communication and mental skills has risen. Technical and vocational education needs to take account of changing patterns of demand. It is desirable for graduates of technical and vocational education programmes to have several broad-based skills that can be applied in multiple professional disciplines. They should be able to use their skills in new fields and take initiative in unconventional situations rather than remain confined to localized vocations and a narrow range of professions.

Standards of technical training should be adaptable to the needs of production. Technical and vocational education should be linked to the labour market and the needs of development. This calls for continuous revision of the content of technical and vocational education. Standards used to determine the required skills and knowledge should be continually monitored and revised. Business, specialized education centres and professional societies should take part in this process of continuous adaptation.

Higher education

Four main policies are urgently needed for a serious reform of higher education.

- The responsibility of the state should continue, but higher education should be liberated from the domination of both government and the unregulated profit motive. The government's responsibility for higher education does not mean that institutions of higher education should be government-owned. Such institutions should be governed by independent boards with quadripartite representation (the state, the private sector, civil society and academia). The profit motive should be regulated to ensure the public interest, and the creation of non-governmental, non-profit organizations should be encouraged.

As part of its responsibility for higher education, the state should: (a) increase government and societal funding of higher education; (b) increase the efficiency of the use of resources in institutions of higher education; and (c) maximize the knowledge and societal return on these institutions. To accomplish these tasks, institutions of higher education should be financially accountable, and strict accreditation systems should be put in place and rigorously monitored to ensure quality.

- Higher education should be expanded. As noted earlier, there is a wide gap between Arab countries and the developed world with respect to enrolment in higher education. Building human capabilities in the Arab world requires expansion of this level of education. However, expansion needs to be carefully designed, especially in the case of existing institutions, where expansion in the past has led to a deterioration in quality. Institutions of higher education, both old and new, should be of high quality, diverse and flexible, with a focus on the fields and institutional forms required for scientific and technological progress. No new institutions, public or private, should be created unless they offer higher standards of quality than the existing ones.

- In a related area, a powerful shake-up to improve quality is needed in the existing institutions of higher education. As part of an integrated plan to improve quality, salaries of higher-education faculty and staff members should be increased, teaching and research capacities should be enhanced, and facilities

should be improved to accommodate the size of the enrolment. Effective programmes should be implemented to improve the capabilities of faculty and staff through training, research and study programmes at home and abroad, especially in preparation for assuming faculty positions. Competition must be established as an essential, ongoing condition in the filling of faculty posts; tenure should be confined to professors with exceptional performance; academic ranks higher than professor should be created; and the creation of scientific professional organizations for academics and researchers should be encouraged.

The quality of higher education can be improved only by freeing the system from repetition, increasing its flexibility and making it more adaptable to the needs of development. This task calls for coordination with state institutions, the private sector and civil society.

There is also a need for reform of the rules governing enrolment in institutions of higher education. Rather than relying solely on the scores of public examinations, institutions of higher education should introduce a system of admission tests, tailored to the needs of each institution. This may also alleviate the problem of private tutoring by reducing the pressure on students to scramble for higher scores in general public examinations, in turn reducing the cost of education.

As an important component of the accreditation system, a target standard of quality should be set for new institutions of higher education and it should be strictly enforced. As noted earlier, new institutions should be created only if they can raise the general level of quality by competing with existing institutions.

A powerful shake-up to improve quality is needed in the existing institutions of higher education.

BOX 4.3

Assuring the quality of higher education

Today's global information marketplace requires a different kind of education, one that imparts the competencies, attitudes and intellectual agility conducive to systemic and critical thinking within a knowledge-driven economy. The calibre of their higher-education systems vitally influences how countries and people perform in this environment.

The UNDP Regional Bureau for Arab States is supporting an initiative to help to raise the local and global compet-

itiveness of Arab higher education. Using international standards and benchmarks, this pilot project aims to introduce Arab universities to the methodology and practice of independent quality assessment of selected academic courses. It will also develop systems of statistical data management to strengthen university strategic planning. Some 40 Arab universities across the region have joined in and will benefit from the first phase of this initiative.

Higher education should encompass the concept of lifelong education through various modes of continuing learning.

- A versatile, flexible system of higher education that is compatible with the needs of development should be established. To achieve versatility, basic programmes should not be replicas of old ones. At the policy level, greater attention should be paid to institutions of higher education that are not part of universities. For example, an open university could be created that would offer a range of programmes from single courses to higher scientific degrees, an approach totally different from that of existing universities in Arab countries.

In view of the accelerated obsolescence of technological skills in the modern world, higher education should encompass the concept of lifelong education through various modes of continuing learning. This should be achieved through collaboration with the state, private sector and civil society. Versatility also means an emphasis on the productive function of institutions of higher education, a function that can boost both their financial and research resources. Autonomous, multidisciplinary R&D centres should be created in active partnership with the state, private sector and civil society.

Flexibility on the individual level means the freedom to leave and to return to various institutions of higher education. Flexibility on the institutional level means that the structure of institutions and the content of their programmes are continually revised by governance boards to guarantee a quick response to local and international developments. Quadripartite representation in the governance of institutions of higher education would be of great value in supporting this type

of flexibility.

Cultivation of talents in early childhood

Talent can be considered as a predisposition for excellence and innovation in various spheres of human activity, one of which is academic achievement. In developing countries, especially in poor communities, children are often deprived of the family and societal environment needed to enrich their physical and emotional experience in ways that encourage the emergence of talent.

Overcoming these barriers so as to cultivate talent consciously in Arab countries could be achieved through a two-pronged approach: a sustained, widespread programme designed to instruct and educate parents and caregivers in child-rearing methods conducive to the emergence of talent; and a guarantee by the state, assisted by other social agents, that no child is denied the opportunity to develop his or her talents because of modest means.

This may mean rethinking the concept of security that underlies, for example, social assistance or social safety nets, which traditionally have been geared to guaranteeing basic food commodities to those in need. In a knowledge-intensive age, and one where knowledge rapidly becomes obsolete, the concept of security--for individuals and society equally--may need to be enlarged to include optimizing opportunities for the emergence of talent in childhood.

More specifically, education reform should include discovering, fostering and monitoring talent by, for example, introducing into schools special programmes for children who display a talent. This would broaden the

BOX 4.4

Gibran: on children

Your children are not your children.
They are the sons and daughters of Life's longing for itself.
They come through you but not from you,
And though they are with you, yet they belong not to you.
You may give them your love but not your thoughts,
for they have their own thoughts.
You may house their bodies but not their souls,
for their souls dwell in the house of tomorrow, which you cannot visit, not even in your dreams.
You may strive to be like them, but seek not to make

them like you
for life goes not backward nor tarries with yesterday.
You are the bows from which your children as living arrows are sent forth.
The Archer sees the mark upon the path of the infinite, and He bends you with His might that His arrows may go swift and far.
Let your bending in the Archer's hand be for gladness;
For even as He loves the arrow that flies, so He loves also the bow that is stable.

Source: Kahlil Gibran, The Prophet.

base for talent stimulation and enhancement and allow all children to develop the talent they potentially possess. Under this model, talented children could also advance through the various grades and curricula at an accelerated pace. Activities outside the schools should also be undertaken, including, in particular, the development of web sites (especially in Arabic), through the Internet and local networks in order to sharpen and enhance talent. Such web sites have a tendency to develop into virtual self-learning sites and would be a creative alternative, in a knowledge society, to segregating talented children in special brick and mortar schools.

This chapter has presented a number of strategic directions and policies for building human capabilities in Arab countries through revitalized education systems. These systems are the foundation on which societies must rely for the full use of human capabilities. The next chapter looks at a key area for the use of capabilities built by education systems that are responsive to the knowledge society of the twenty-first century: scientific research and technological development (R&D). It explores the relationships between research (as both a generator and user of knowledge), development (as a consumer of knowledge), and ICT (as a channel for the dissemination of knowledge).