

The Road Traveled Thus Far in MENA

Has the MENA region adopted education reforms that combine measures to improve the engineering of their education systems, along with measures to improve the incentives facing the main actors involved and enhance public accountability? Has their reform approach evolved over time? What were the justifications for the approach they adopted historically? Finally, what are the implications of these actions for the course to be taken in the future? These are the questions to be addressed in this chapter.

In addressing these questions, we focus on the nature and trend of MENA's reform programs *over time*, rather than on the *variations* of these reform programs (as reflected in the current features of their education systems) among countries. These variations will be taken up in the next chapter, when we attempt to explain why some countries did better than others. In that sense, the analysis in this chapter aims primarily at identifying the road historically taken by the MENA region, with a view to finding out whether the region needs to change course.

The upshot of the analysis, on the basis of both *qualitative* and *quantitative* review of all major reform episodes in the region over the past few decades, is that the countries of the MENA region have attempted to achieve similar objectives and have broadly followed a similar path to achieve these objectives. Typically, MENA countries initially attempted to ensure that eligible children were enrolled in school, thus using education to enhance their national identities. Subsequently, the focus shifted to the quality and efficiency of education, both of which remain the principal preoccupation of most policy makers in the region today. Throughout, their reform path was dominated by an engineering approach to education, with limited attention being paid to the use of incentives and public accountability. This feature is changing and the region has begun to experiment with new types of education reform, but these experiments are partial and concentrated in a few countries. Thus, the time is ripe for considering alternative paths to reform.

The remainder of this chapter is organized in two main sections, followed by a summary of the key points made. The first section provides a qualitative review of the reform path taken by MENA countries. The second section provides a quantitative account of all reform measures (under the headings of engineering, incentives, and public accountability), mapped against different education objectives (equity, quality, efficiency, and national identity), different levels of education (from preprimary to tertiary), and over time.

The Path Taken So Far: A Qualitative Story

Education reform programs in the MENA region were often initiated in tandem with major political events. Independence was the obvious start in most countries, but other political events also played a role. The unification of Yemen, the formation of the new state in Djibouti, the rise of the Baathist regime in Iraq, the revolution in Iran, and the formation of the Palestinian Authority all heralded new education reform programs in these countries. Major crises were sometimes the opportunity to set out new reform programs, such as in Kuwait after the Gulf War in 1991. Sometimes, more subtle political changes prompted reform: parliamentary elections in Morocco provided the opportunity for a new reform program in 2000, entitled the Charter of Education and Training.

Whenever reforms were initiated, they were typically launched through a political or legal act that bound government and citizens to a coherent set of sector priorities and outcomes, defined in more or less precise terms (e.g., a government white paper or an executive decree). Government would use these documents as a framework for planning sector changes, allocating and prioritizing resources, and measuring their success.

Although not all education objectives were emphasized at the same time, most countries pursued the following: enhancing national identity, expanding enrollment to eligible children and adults in formal education, and improving the quality and efficiency of delivering education services. In the majority of cases, national identity and mass education were a priority in the wake of independence. Countries placed a high premium on forging a common heritage and understanding of citizenship, and used a certain reading of history, the instruction in a particular language, and the inclusion of religion in the education curriculum as a way of enhancing national identity. Mass education was pursued by initiating and accelerating the building of schools, recruiting teachers, and attracting students, along with a special effort at including specific groups such as girls, rural children, children of particular ethnic groups, and the disabled into the education system.

As time went by, the quality and efficiency of education came to the forefront. Today, these two objectives remain the most important pre-occupations of policy makers in the region. To ensure that students learn enough or learn something useful, countries have attempted to reduce repetition and dropout rates, increase graduation rates, and improve the allocation of resources. They have also attempted to improve *students' academic achievement* such that a greater proportion of the students are mastering the pedagogical objectives set by the education system.

In the process of trying to achieve the above objectives, most MENA countries encountered similar challenges. They all had to: (i) establish a mass national education system; (ii) create demand for formal education, and manage demand subsequently; and (iii) provide nonformal education for adults. A description of how MENA countries attempted to meet these challenges, through the lens of the analytical approach presented in chapter 4, is presented below.

Establishing a Mass National Education System

Following independence, most MENA countries faced the daunting task of setting up a new national mass education system. To quickly develop the human capital base necessary for a modern nation-state and create a nation of citizens bound by a common heritage, culture, and political ideals, authorities turned to the education system.

In most MENA countries, European colonial powers had put in place schools restricted to children of European settlers and a very limited number of nationals; these were usually based on mass education systems of the metropole. In addition, a substantial network of education facilities that provided religious instruction existed throughout the region. More or less structured, depending on country and history, these education systems had been in place for centuries: “Koranic schools” provided religious instruction to children; religious universities helped form the religious and sometimes political elite of many countries (Kijima and Vollmer 2006). Thus, developing the key components of the new mass education system required the mixing and matching of old and new components. This constituted the most important challenge facing the education authorities throughout the region during the early reform periods, mostly in the 1950s and 1960s.

Each MENA country faced this challenge with a particular configuration of engineering, incentives, and public accountability reform measures. The first act in all cases was related to *public accountability*. Every country in the region codified access to free education as a right of, and compulsory for, all citizens at independence. In virtually every constitu-

tion and basic law in the region, education figured prominently, as illustrated by a few examples in box 5.1.

The second act undertaken by almost all MENA countries under this rubric of reform was the orchestration of official events that bring together members of different constituent groups to discuss and validate the government's education reform program. This was, in fact, the most frequent vehicle of *public accountability* identified in the region. The degree to which participants were truly representative, actually influenced reform programs, or were able to critique past reforms varied from country to country. However, most governments recognized the advantage of providing a venue to gauge difficulties in meeting reform objectives and to solicit support.

BOX 5.1

Education in the Constitutions of Selected MENA Countries

Country	Excerpt from the constitution
Algeria	<u>Article 53</u> . The right to education is guaranteed. Education is free within the conditions defined by the law. Fundamental education is compulsory. The state organizes the educational system. The state ensures equal access to education and professional training.
Egypt, Arab Rep. of	<u>Article 18</u> . Education is a right guaranteed by the state. It is obligatory in the primary stage and the state shall work to extend obligation to other stages. The state shall supervise all branches of education and guarantee the independence of universities and scientific research centers, with a view to linking all this with the requirements of society and production. <u>Article 20</u> . Education in the state educational institutions shall be free of charge in its various stages. <u>Article 21</u> . Combating illiteracy shall be a national duty for which all the people's energies should be mobilized.
Iran, Islamic Rep. of	<u>Article 3</u> . The government of the Islamic Republic of Iran has the duty of directing all its resources to the following goals: ... (3) free education and physical training for everyone at all levels, and the facilitation and expansion of higher education. <u>Article 30</u> . The government must provide all citizens with free education up to secondary school, and must expand free higher education to the extent required by the country for attaining self-sufficiency.
Jordan	<u>Article 6</u> . The government shall ensure work and education within the limits of its possibilities, and it shall ensure a state of tranquility and equal opportunities to all Jordanians. <u>Article 20</u> . Elementary education shall be compulsory for Jordanians and free of charge in government schools.
Lebanon	<u>Article 10</u> . Education is free insofar as it is not contrary to public order and morals and does not interfere with the dignity of any of the religions or creeds. There shall be no violation of the right of religious communities to have their own schools provided they follow the general rules issued by the state regulating public instruction.
Morocco	<u>Article 13</u> . All citizens shall have equal rights in seeking education and employment.
Syrian Arab Rep.	<u>Article 37</u> . Education is a right guaranteed by the state. Elementary education is compulsory and all education is free. The state undertakes to extend compulsory education to other levels and to supervise and guide education in a manner consistent with the requirements of society and of production.
Yemen, Rep. of	<u>Article 37</u> . All citizens have the right to education. This right shall be guaranteed by the state, through the establishment of different schools and educational and cultural institutions.

Source: El-Haichour 2005 and <http://www.oefre.unibe.ch/law/icl/index.html>.

Although most consultations were ad hoc events, most countries have institutionalized the process through the creation of specialized commissions whose mandate is to monitor the implementation of educational reforms. These commissions had different configurations: some were emanations of political parties in power; some consisted of political and social personalities chosen by the executive; others were inter-ministerial commissions. In most cases, these commissions provided the analytical work to be discussed and validated during national conferences; in some instances, they continued to function (more or less regularly) as monitoring agencies of reform efforts.

To establish a national mass education system, each country also needed to create a new institutional framework for education provision. With few exceptions (i.e., Lebanon), MENA countries adopted a highly centralized education system with the government assuming all key functions: policy making, financing, and service delivery. Thus, “command and control” typified the organization of education in most MENA countries. Schools and universities were the property of the state; schoolbooks and other materials were produced by the Ministry of Education; and, most importantly, teachers were civil servants. Ministries’ responsibilities have included training and employing teachers; designing curricula and syllabi; producing and delivering textbooks; developing national exams; preparing meals; setting educational policy; and regulating educational practice. Detailed curricula—including the number of hours to be spent learning specific subject areas—were delineated for each year of schooling.

Typically, MENA countries also established a professionally trained body of inspectors who visited schools on a regular basis and filed reports to a central authority. These reports would have a direct impact on the career paths of teachers, school directors, and other staff. The establishment and maintenance of these corps can be considered a form of *incentives*-type measures, as they exist to enforce the “contract” between education ministries on the one hand, and schools and teachers on the other. However, they essentially constituted the enforcement arm of the command and control governance structure of most MENA education systems. MENA’s centralized education systems have managed teachers and school activities through standardized plans and schedules, including detailed curriculum guides, policy handbooks, instructions, standard forms, and lesson plans for all the teachers in each grade to follow as well as detailed guidelines about other aspects of educational practice. The inspectors’ job was to ensure compliance.

In addition, of course, MENA countries have undertaken a number of *engineering* endeavors. The most obvious was the construction and equipment of new schools and facilities. Planning and public works divi-

sions of education ministries would identify sites and take responsibility for contracting entrepreneurs for the construction and equipment of facilities. As demand for schooling grew, ministries began using more sophisticated planning techniques to determine where and how to build schools (e.g., school maps, revised construction norms). A key innovation was the development of a “girl-friendly” educational environment at compulsory education levels: countries built separate latrines for boys and girls, boundary walls, and schools placed within walking distance to most households. Also, considerable effort was made to distribute inputs throughout the education system: textbooks, teaching guides, didactic supports, pedagogical equipment, etc.

In every country in our sample, curriculum development and change were a key engineering endeavor during all periods of reform. In the earlier phases, curriculum reforms identified the basic knowledge sets for each level of instruction. Pedagogical practices were often “traditional” in nature, focusing on memorization of school subjects and lecturing to large groups of students (Zafeirakou 2006). In addition, curriculum reforms evidently involved a revision of social studies curricula to reflect the new political and social realities. Finally, curriculum reforms had two other components: the instruction of Standard Arabic and the place given to religious education within the curriculum. Arabization, which, as discussed in box 5.2, was carried out with varying degrees of success, was particularly important in the Maghreb countries. As for religion, the proportion of time allocated to the study of religion was as high as 13 percent in the 1950s and 1960s, but that percent has later come down to 9 percent today (Meyer et al. 1992).

MENA countries faced an acute shortage of teachers while trying to expand access to compulsory and noncompulsory education. Teacher training facilities for primary and secondary teachers were established hurriedly in many countries and accelerated programs to prepare teachers were often developed (Chapman and Miric 2006). The expansion of the higher education system has also faced an acute shortage in instructors, made even more chronic because the production of doctorates could not keep up with demand.

Attracting qualified individuals to the teaching corps often represented a key challenge. The principal approach adopted throughout the region was to offer teachers a civil servant status, thus ensuring relatively stable conditions of employment. In addition, promotion schemes have been based on seniority and qualifications, thus ensuring a stable path of professional development to teachers (Chapman and Miric 2006).

Although teachers have usually been centrally recruited and assigned to schools, most countries have found it particularly difficult to attract teachers to rural areas. As a consequence, many countries put bonuses in

BOX 5.2**Different Paths to Arabization in the Maghreb Countries**

Arabization in the Maghreb countries was a challenging task. The translation and localization of textbooks; development of support materials, such as dictionaries, guides, and references; and pre-service and in-service training of teachers required a monumental effort that took different paths in the Maghreb countries.

Tunisia adopted a pragmatic incremental approach. Given the number of qualified Francophone nationals—few as they were—and the absence of qualified Arabized teachers to teach scientific subjects, policy makers maintained French both as a foreign language and as a medium of instruction for math and science in primary education. Humanities and social sciences were Arabized incrementally, initially in primary and subsequently in secondary education.

The bilingual education policy adopted by Tunisia helped ease the pressure on the state for the hasty training of teachers to keep pace with high enrollment rates, and allowed the country, initially, to use existing French textbooks and support materials for scientific subjects. In the late 1970s, the decision was made to Arabize the entire primary curriculum, but it was only in the early 1990s that the decision was made to extend Arabization to all subjects in post-primary education, except vocational, professional, and technical tracks. At the university level, French was maintained as the language of instruction in technical institutes and sciences faculties.

Morocco followed a different route to Arabization, which hastily covered different disciplines and grades in primary education in the early stage of the process. Owing to the absence of qualified teachers, especially in math and science, the authorities had to recruit a large number of underqualified teachers. By the early 1960s, 50 percent of the teaching force in primary education were themselves graduates of primary education.

A new policy was adopted in the mid-1960s: all subjects were Arabized in the first and second grades, while French was maintained as the language of instruction of math and sciences in the third, fourth, and fifth grades. French was also maintained as the language of instruction for math and sciences in both lower and upper secondary schools. To meet the demand for secondary education in the 1970s, Morocco had to import French-speaking teachers from countries such as France, Romania, and Bulgaria to teach math and sciences, and Arab teachers to teach humanities and social studies (Merrouni 1996). By 1989, Arabization of all subjects across all grades in both primary and secondary education was accomplished. However, Morocco maintained French as the language of instruction of scientific subjects in technical and professional secondary schools, and in technical institutes and faculties of sciences at the university level.

(Box continues on the following page.)

BOX 5.2 (CONTINUED)

Algeria followed a more aggressive approach to Arabization, largely in reaction to the French attempt during the colonial era to forge a new identity for the Algerian population. Thus, upon independence, Arabic became a compulsory subject for all grades across all education cycles, and gradually all the subjects were Arabized, starting with the first grade and moving up the ladder. Textbooks were also translated from French to Arabic. Initially, graduates of the religious and private schools—often with little subject matter and pedagogical training—were recruited. Math and sciences proved to be a challenge, in particular as the Francophone teachers of math and sciences were converted to language teachers, after brief professional training.

In response to the shortage of Arabophone teachers, Algeria, between 1967 and 1970, created 12 teacher training institutes and increased that number to 51 by the 1980s. Arab teachers' trainers (mostly from Egypt) were also recruited, although their expertise was not always suited to the Algerian education system (Bennoune 1988, p. 250). The challenge was substantial, particularly as the Arabization process was extended to technical subjects at postbasic education.

Source: Houcine 2005.

place to offset the hardship of particular teaching posts, including housing and travel allowances; the ability to request reassignment after a shorter posting; special benefits for families; etc. To encourage greater success for girls in school, countries often targeted the recruitment of female teachers and instituted special benefits for female teachers, such as maternity leave. Aggregate data indicate that the feminization of the teaching profession in the MENA region has been rising since 1980 and reached around 50 percent in the 1990s (Ayyash-Abdo 2000).¹ However, wide disparities in the number of female teachers exist across the MENA region (i.e., Lebanon has 72 percent females versus Djibouti with 20 percent). And the shortage of teachers is more acute in nonurban areas.

When faced with an insufficient cadre of qualified teachers at all levels, MENA governments have generally resorted to the following recruitment options: (i) *unqualified teachers*, who were given permanent civil service positions; (ii) *contract teachers*, who lacked necessary credentials but were typically hired by local schools for a fixed term to offset a temporary teacher shortage; or (iii) *expatriate teachers*, generally qualified teachers imported from other countries.

In sum, then, the challenge of creating a mass education system in the wake of independence in the majority of MENA countries was by no means an insignificant task. It involved massive construction of schools, the development of new curricula, and the creation of a large teaching

capacity. To carry out this ambitious program, it was necessary for the government to take the lead and to rely on a command and control structure. There was too much focus on engineering and too little focus on incentives and public accountability.

Promoting and Managing the Demand for Education

While the preceding discussion was concerned with the supply side of formal education, we now turn to the demand side. Here too, the MENA countries encountered many challenges, which they attempted to address. Chief among these initially was the low demand for education, and subsequently the management of demand once a large number of students were enrolled.

Because of the level and prevalence of poverty in many MENA countries, the opportunity cost of sending children to school was often high for many parents.² Typically, in-kind resources such as free lunches, textbooks, other materials, scholarships, boarding facilities, etc. were provided to students to offset the cost of schooling. During later reform periods, these measures were tailored for specific populations. For example, incentives (e.g., canteens and boarding facilities, targeted programs providing free learning materials and meals to students) were put in place to send girls to school or to reduce the direct and indirect costs of education for poorer families. As it was believed that the opportunity cost for sending girls to school was higher than for boys, these demand-side measures were often couched as strategies to reduce the gender gap.

Also at the early stage of education reform, many MENA governments put in place a number of measures to promote the demand for higher education. These measures were often in response to the belief that newly independent countries lacked the high-level technicians and professionals necessary for rapid development. The measures included government scholarships and other forms of subsidies and, frequently, employment guarantees in public jobs.

Gradually, there was a shift in these policies. After racing to enroll as many students as possible in the mass national education system, MENA countries were later faced with the perceived problem of an overexpansion of higher education. High graduate unemployment rates and the skyrocketing costs of higher education led many MENA authorities to consider ways to dampen demand for this level of instruction. As a consequence, many MENA countries closed the higher education system to working adults and limited the number of times a student could repeat grades at both the secondary and tertiary levels. In addition, many countries rolled back the incentives and benefits put in place during earlier reform phases. More parsimonious distribution of scholarships, study

abroad opportunities, and student assistance were expected to dampen demand and high costs were very common. Thus, mounting budgets and overcrowding led many MENA countries to introduce tighter restrictions on access to government scholarships and other forms of subsidies, and linking family income and geographic distance to eligibility to student support services. Some governments also introduced other conditions—such as academic performance—for maintaining access to these benefits. Overseas scholarships often became more limited to students pursuing fields of study not provided in the home country.

The most common response, however, was to increase the number of students oriented to terminal vocational training at the secondary education levels. Students have generally been tracked into vocational or general education streams, usually on the basis of scores on an exam, following the completion of basic education. The proportion of students tracked into vocational streams varies across countries in the region, but most select about one-third of secondary students. Once in the vocational stream, students largely remain in the path that provides practical skills for a particular career. Very few are given the option of pursuing higher education at the university level. Most have some option for tertiary education in technical and vocational fields, although even those opportunities (i.e., for community colleges) are restricted for some students whose secondary vocational training is very narrow.

The outcome of this set of policies has been mixed. Demand for tertiary education is high and growing very quickly. It contains a promise (not always kept) for social mobility and thus efforts to dampen demand by closing the door through structural or economic means have often led to considerable resistance on the part of students and parents. Many of the protests concerning education policy in the region have been registered in the area of higher education benefits.

In addition, parents and students have viewed secondary vocational education with suspicion and reluctance: for example, facilities have tended to be underenrolled in Algeria, the Islamic Republic of Iran, Morocco, Tunisia, the Arab Republic of Egypt, and the Syrian Arab Republic. More a sign of failure than opportunity, vocational secondary education in most MENA countries has registered high levels of unemployment and little relationship between the training received and the employment obtained by those lucky enough to find jobs. The fact that few countries allow vocational education students to continue their education or transfer to other parts of the education system has certainly served as a further disincentive (Luinstra and Yamasaki 2006).

Fundamentally, this problem, like so many others, has been addressed as an engineering problem. Here, however, we see the evident limitation of such an approach. “Exit” (i.e., parents and students “voting with their

feet” and avoiding secondary VET) and protest are, in effect, less institutionalized vehicles of public accountability; however, they usually have serious unintended consequences.

Thus, MENA countries went through a cycle of initially taking measures to encourage enrollment in primary education and to democratize enrollment in tertiary education. The first objective was achieved for the most part, but the second proved elusive in light of the low level of job creation for university graduates. Governments had to roll back some of the benefits to enrolling in higher education, but this is not a viable solution going forward. The next phase of education reform will need to address the challenges highlighted in chapter 3, namely the increasing importance of the knowledge economy in economic development, the region’s enormous youth bulge, and the growing resource constraints to financing the demand for quality education.

Creating National Literacy Campaigns

Realizing that formal mass national education systems could not address all educational requirements, most MENA countries initiated ambitious nonformal adult educational programs targeting those who had not benefited from formal instruction. Unlike formal education, these programs were by their very nature a discrete and remedial endeavor that had a beginning (many illiterate adults and unschooled overage youth) and an end (a fully educated population). Of course, this depends in part on the success of formal education systems to provide all eligible children with compulsory education opportunities. In this regard, these campaigns usually held one or both of two objectives: reintegration of those who never benefited from compulsory schooling and those who left prematurely.

The MENA authorities would typically launch an official high-profile and intensive *campaign* managed through a specialized unit or agency to coordinate efforts to provide youth and adult literacy classes. National councils and commissions and regional committees would be established to draw up strategies and action plans; to oversee, supervise, and coordinate implementation; and to monitor activities and evaluate results. In most MENA countries, literacy campaigns have usually been launched within two types of contexts. First, some international gatherings have adopted adult literacy as one of its principal planks and MENA participants have used this to energize and motivate renewed literacy efforts (e.g., Dakar Education for All conference of 1990; Hamburg conference of 1997). Second, many countries have initiated literacy campaigns as part of a wider political program, usually following a change of regime (e.g., Algeria 1963, Iraq 1980, Iran 1979, and Syrian Arab Republic 1965). It is usually under this second context that we find military con-

scripts and recent graduates (sometimes recruited under the banner of “volunteers”) working as literacy instructors.

Although education ministries figured prominently among providers in most countries, coordinating agencies usually worked across many line ministries (labor, agricultural, industry, health, etc.) to conduct literacy classes with different groups of adults. Furthermore, a common characteristic of these campaigns has been the use of a temporary corps of instructors, often made up of recent university or secondary school graduates or military conscripts. Finally, and of particular importance for this analysis, most programs also relied on nongovernmental institutions for the provision of literacy classes: NGOs, local associations, and mosques.

The use of religious organizations, particularly local mosques and local religious institutions (e.g., Koranic schools), for the provision of ancillary educational services is a trend of particular note in the MENA region (Kijima and Vollmer 2006). In the case of Saudi Arabia, for example, the success of this approach helps explain why adult literacy rates are relatively high, considering the continued low level of primary enrollment.

Reliance on service providers to implement nonformal education increased as many countries focused their literacy campaigns on specific segments (e.g., rural, women) of the illiterate adult population. Programs in Algeria, Egypt, Iran, Morocco, and Yemen that targeted women all used NGOs, local mosques, and local associations as conduits to provide these services.

Compared to formal educational provision, *incentives* have been more common for adult literacy and other nonformal educational endeavors. We speculate that two factors may have contributed to governments’ decision to delegate implementation to outside providers. First, unlike with formal education, the target population is not clearly delineated: their numbers, location, and specific training needs are not particularly easy to discern. Thus, it would appear that in such cases, a more nimble, demand-driven institution (which is also capable of creating demand) would be more effective. Second, nonformal education in general and literacy training in particular is often considered a discrete activity that would be undertaken for a set number of students over a given period of time. Such an activity is much more amenable to contracting because there is no need to establish a permanent relationship with the service provider.

Facing the challenge of large adult illiteracy rates, MENA countries devised programs to address this challenge. These programs aimed at reintegrating those who never benefited from compulsory schooling and those who left permanently. They were pursued through a combination of government and NGOs, with the latter proving to be of particular use

as adult illiteracy programs are discrete acts that require closeness to clients. Most countries in the region made significant progress in reducing illiteracy, but the problem is still significant in some countries like Yemen, Morocco, and Egypt.

The Path Taken So Far: A Quantitative Story

The above qualitative analysis is informative, but does not provide concrete answers to some of the questions posed at the outset of this chapter. For example, even if it is clear by now that MENA countries have relied on engineering measures to meet the challenges they faced, especially at the early stage of establishing a mass education system, it is not clear whether their approach has evolved over time, whether this approach was applied equally across different levels of education, or whether it was modified to meet different education objectives. This section attempts to answer these questions quantitatively. As it turns out, our findings do not contradict the broad conclusions of the qualitative analysis and actually add a few more insights.

The methodology we used to trace reform measures, along with the limitations of the data, is explained in annex 5.A at the end of this chapter. Suffice it to note here that:

- In compiling the information, we attempted to account for all reform programs in all countries of the region from 1960 to the present. We drew on all documents and analyses we could find at both the national and international levels.
- As a result of this massive search, we found 34 education reform programs in 14 countries: Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Saudi Arabia, Syrian Arab Republic, Tunisia, Yemen, and West Bank and Gaza.³ The number of reform measures we identified for all 14 countries exceeded 900, averaging 65 measures per country. The reform programs (or waves of reforms) were typically initiated in the 1950s and 1960s, followed by one or more subsequent reform waves.
- We also coded all reform measures by the components of the conceptual framework (engineering, incentives, and public accountability) as well as by education objectives (equitable access, educational outcomes, and national identity), levels of education (from preprimary to tertiary), and phases of reform (roughly covering the 1950s through the 1970s, then the 1980s through the mid-1990s, and mid-1990s until now).

The data set we compiled has a number of limitations. For example, although we have attempted to collect as much information as possible about reform in every country in the region, we recognize that individual measures and even whole chapters of reform may have escaped us. Another example is that not all measures are equally important from the point of view of their impact on educational outcomes. Thus looking at the trend in the number of reform measures can be misleading. Notwithstanding these limitations, we are confident that we have assembled one of the most complete depictions of education reform in the MENA region to date.

So what does the data set reveal? The analysis provides a number of insights about the reform path taken by the MENA region thus far. The most salient features of this path are highlighted under a number of observations below.

Observation 1. Reforms in the MENA Region Were Dominated by the Engineering Perspective across All Levels of Education

Of the total number of reform measures, 82 percent on average were of the engineering variety, while the average number of measures for incentives and public accountability was only 9 percent each (see table 5.1). Countries focused their attention on building schools, training teachers, and providing textbooks without paying enough attention to motivations and public accountability. This observation lends support to one of the predictions of this report, namely, that the region may not have achieved the desired level of educational outcomes in part because the approach the MENA countries followed did not combine the full range of reform measures to achieve this objective.

This observation applies to all levels of education, from preschool to

TABLE 5.1

Distribution of Reform Measures by Levels of Education, Percent

Level of education	Engineering	Incentives	Public accountability	Total
Early childhood/preprimary ed.	93	7	0	100
Basic education	76	11	14	100
Secondary ed. (upper secondary)	81	8	11	100
Higher ed.	69	15	16	100
Voc./tech. ed.	94	2	5	100
Nonformal learning	93	7	0	100
Literacy	67	15	18	100
Average	82	9	9	100
Standard deviation	12	5	8	

Source: MENA Education Reform Database.

higher education. It also applies to formal and nonformal education. In all cases, the majority of reform measures fall under the engineering column (as can be seen in table 5.1). The two minor exceptions relate to higher education and literacy programs. In these two cases, the number of measures under the incentives and public accountability columns is somewhat higher than the average for other levels of education. Even then, however, the deviation is quite modest and does not reverse the main observation made above.

Observation 2. Reforms in the MENA Region Were Dominated by the Engineering Perspective, No Matter What the Objective Pursued

The pattern observed above persists when the reform measures are depicted against different education objectives (i.e., equitable access, efficiency, and national identity). On average, the number of measures under the engineering approach is above 75 percent, while the incentive-type measures average only 9 percent and the public accountability measures 13 percent (table 5.2).

Notwithstanding the low level of variability in the number of measures under different reform components and the obvious domination of engineering measures, table 5.2 also points out that certain types of reforms seem to correlate more with certain objectives than with others. For example, quality seems to correlate more with incentives than other objectives. This finding suggests that achieving better quality requires more motivation than access, for example. Similarly, public accountability measures seem to correlate more with the objectives of equity and national identity. This points to the close link between, say, allocation of resources and voice.

TABLE 5.2

Distribution of Reform Measures by Objectives of Education, Percent

Broad objectives	Engineering	Incentives	Public accountability	Total
Access	76	10	15	100
Equity	73	9	18	100
Efficiency	88	9	4	100
Quality	75	15	10	100
National identity	79	2	19	100
Average	78	9	13	100
Standard deviation	6	5	6	

Source: MENA Education Reform Database.

Observation 3. Over Time, MENA Reform Programs Exhibit a Modest Shift in Focus from Engineering toward Incentives and Public Accountability

Notwithstanding the difficulties in identifying specific phases of reform, counting the reform measures over time reveals a consistent pattern. As shown in table 5.3, the proportion of engineering measures is on the decline, going down from 82 percent in the early phase of reform to 72 percent in the most recent period. At the same time, the percent of the measures under incentives is going up, from 6 percent in the early phase of reform to 15 percent more recently. No discernible change is observed with respect to public accountability measures, which remained fairly stagnant over time.

These trends also hold across different levels and types of education (table 5.4). The notable exceptions concern early childhood education and vocational training. In the first case, the region began to pay more attention to early childhood education in the second phase of reform, while paying less attention to vocational training over time. Otherwise,

TABLE 5.3

Distribution of Reform Measures by Type of Reform over Time, Percent

Types of measures	Phase one	Phase two	Phase three	Average	Standard deviation
Engineering	82	79	72	79	5
Incentives	6	11	15	10	5
Public accountability	12	10	13	11	2
Total	100	100	100		

Source: MENA Education Reform Database.

TABLE 5.4

Distribution of Reform Measures by Sector over Time, Percent

Level of education	Phase one	Phase two	Phase three	Average	Standard deviation
Early childhood/ preprimary ed.	0	1	3	1	2
Basic education	39	38	33	37	3
Secondary ed. (upper secondary)	29	30	34	31	3
Higher ed.	20	17	21	19	2
Voc./tech. ed	9	9	5	8	3
Nonformal learning	1	1	1	1	0
Literacy	2	4	2	2	1
Total	100	100	100		

Source: MENA Education Reform Database.

the bulk of the reform effort has consistently gone to basic and secondary education.

The additional point to make with respect to the evolution of objectives over time is that the reform programs tended to place considerably more emphasis on equitable access (50 percent) than educational outcomes (33 percent) in the earlier phase of reforms (see table 5.5). Subsequently, the reform programs tended to reverse these proportions. National identity measures were considerably more important in earlier reform phases than in later periods, given that, once achieved, no major new effort was necessary.

What these observations collectively suggest is that the MENA countries have relied heavily on the engineering perspective to improve equitable and efficient access to education and to build national identity. This emphasis may have been justified at the early stage of educational development: at that time, the state probably needed to take the leading role in establishing a mass education system to serve the interest of a newly independent state. This massive project required “engineering” everything from a new education structure and administration to new curricula and textbooks to a new professional teacher corps and administrative staff. All of these tasks were to have a distinctive national “mark” that would reflect political priorities at the time. A command and control system may have also been the best way to manage the entire process.

The problem is that the world has changed since then, with the advancement in technology, demographic transitions, and increasing emphasis on competitiveness of individuals and nations, but the approach to education reform in MENA has not changed as much as needed. What the data show is that most MENA countries have yet to rely more systematically on injecting strong elements of incentives into their education

TABLE 5.5

Distribution of Reform Measures by Objective and Reform Phases, Percent

Broad objectives	Phase one	Phase two	Phase three	Average	Standard deviation
Access	45	23	11	28	17
Equity	5	11	6	8	3
Efficiency	17	21	29	21	6
Quality	16	35	52	32	18
National identity	17	10	1	11	8
Total	100	100	100	100	0
Average	20	20	20	20	10
Standard deviation	15	10	21	10	5

Source: MENA Education Reform Database.

reforms as well as giving parents/students mechanisms to participate in the formulation of education objectives, policies, and resource allocations.

Summing Up

In some sense, there is nothing particularly surprising about the objectives or sequencing of MENA reform programs. As with most post-independence countries, attention gradually shifted from equitable access to quality and efficiency over time, reflecting new challenges that have emerged as a consequence of previous successes. The relatively high importance given to national identity formation during earlier reform programs, or subsequent to major regime changes, would not appear to be inordinate. Moreover, the apparent shift of emphasis from basic education to secondary is also predictable, considering that most countries have reached or are close to reaching universal access.

Also, there is nothing surprising about the fact that MENA countries tended to rely heavily on the *engineering* perspective at the early stage of developing their education systems. What is surprising is that they have not as yet gone far enough in the direction of relying more systematically and coherently on measures of incentives and public accountability. The engineering approach probably served the region reasonably well earlier, when it was necessary for the government to take the lead on establishing a new education system, with a new structure and administration, new curricula and textbooks, a new professional teacher corps and administrative staff, and a command and control apparatus. However, the expectations from education have changed over time, for both internal and external reasons. The strong preference for the engineering perspective is starting to show its limits and strains. The path taken so far is no longer what is needed going forward. Thus a shift in orientation is needed. Exactly what that means requires looking at the successful and less successful cases with a view to learning from experience. This is the subject of the next chapter.

Annex 5.A

Education Reform Data in MENA: 1960–present

To track the evolution of reforms in the MENA region quantitatively over time, one needs a framework to guide and organize the collection of information. In addition, one needs a consistent set of data about reforms, which is not readily available as, for example, information about educational inputs and outcomes.

In regard to the first requirement, the conceptual framework presented in chapter 4 provides one way of guiding and organizing the information. For the second requirement, it was necessary to mount a major effort to compile and code information about the reform programs in the region on the basis of various documents and analyses. The result of this effort is a massive data set that is considered one of the most important contributions of this report. This data set is referred to in the rest of the report as the “MENA Education Reform Database.” The way this information was collected and coded, along with its possible limitations, is explained below.

Data Collection and Categorization

In compiling information about reform programs and reform measures in the MENA region, we attempted to account for all reform programs in all countries of the region from 1960–present. We drew on all documents and analysis we could find at both the national and international levels. As a result of this massive search, we found 34 education reform programs in 14 countries. The list of the countries in our sample, in alphabetical order, is as follows: Algeria, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Morocco, Saudi Arabia, the Syrian Arab Republic, Tunisia, Yemen, and the West Bank and Gaza.⁴ The reform programs, identified by country, by year, and by number of reform measures, are shown in table A.1.

The principal unit of analysis in this exercise is the *reform measure*, which is typically part of a larger reform program. The number of reform measures that we identified for all 14 countries exceeded 900, averaging 65 measures per country.

The reform programs (or waves of reforms) were scattered over the period, typically starting in the 1950s and 1960s, followed by one or more subsequent reform waves.

To organize the data in a way that helps conduct subsequent analysis, all reform measures were coded under: reform objectives, reform phases, reforms by sector, and by the components of the conceptual framework.

Coding the data by objectives involved listing them under three headings: increasing *equitable access*, improving *educational outcomes*, and shaping *national identity*. These three subheadings turned out to capture most of the objectives pursued by the countries in the region.

Coding the data by phases of reform was trickier. Not all countries initiated their education reform programs at the same time, nor did they move into subsequent phases in a synchronized manner. Thus, it was difficult to decide on exact dates for these phases. Nevertheless, further scrutiny of the data suggested that most countries have had two to three reform episodes. The first episode began immediately after independence and was driven by the need to establish a national system of education. This episode took place mostly in the 1950s and 1960s. The second phase of reform started around the early 1980s, with increasing concerns for efficiency and growth. More recently, starting in the mid-1990s, some countries embarked on a third wave of reform, in which the emphasis was increasingly being placed on the quality of education and the integration of elements of incentives and public accountability into the reform efforts.

Finally, the reform measures were coded under the three components of the analytical framework: *engineering*, *industrial organization*, or *public accountability*. Under each of these components, the reforms were further classified under a number of headings. Under engineering, the subcategories were: pedagogy, teaching capacity, structure and flow of education, expansion of capacity, and promotion of the demand for education. Table A.2 provides an illustration of these subcategories by actual examples from a sample of countries. Similarly, the reform measures under *industrial organization* were further classified under the following subcategories: monitoring, staff performance, school performance, and competition. Actual examples of measures under these subcategories are illustrated in table A.3 by actual examples. Finally, the measures under public accountability were further categorized under the following subheadings: information, binding laws, voice mechanisms, and advocacy. These measures are also illustrated by actual examples in table A.4. The choice of all subheading/subcategories was the result of an interactive process between the concepts advanced in the analytical framework and the reform measures observed by looking at the data.

Limitations of the Data Set

Although much effort has been devoted to the data-collection exercise, the data suffer from a number of limitations. The main ones are the following:

- Although we have attempted to collect as much information as possible on reforms in the individual countries in the region, we recognize that individual measures and even whole chapters of reform may have escaped us: this is particularly the case for reform programs that were initiated without international involvement or where little documentation was made public by the authorities.
- Even when we found the data, it was not always easy to determine the category under which a particular measure should fall. For example, when the government makes information about school performance or resource allocation available to the public, is this action intended to give parents a choice (part of the industrial organization) or a measure to enhance public accountability (thus public accountability)? Whenever we encountered something like this, the measure was placed under the category indicated in the reform program itself.
- Clearly, not all measures are equally important from the point of view of their impact on educational outcomes. Thus, looking at the trend in the number of reform measures can be misleading. To reduce this bias, we have tried to concentrate on the most significant policy changes (e.g., a complete curriculum reform rather than the replacement of a single textbook).

Notwithstanding these limitations, we are confident that we have assembled one of the most complete depictions of education reform in the MENA region to date. We believe that careful use of the data can provide valuable insights for a better understanding of the reform effort in the region. Furthermore, we hope that this data set will spur further research and policy analysis by others.⁵

TABLE A.1

The MENA Education Reform Database

Country	Reform name	Year	Number of measures
Algeria	Basic Education Reform		41
	Higher Education Reform (independence)	1962	
	Executive order No. 76–35 of April 16, 1976	1976	34
Djibouti	La Commission de Nationale de Réforme du Système Éducatif a été installée le 13 mai 2000	2000	11
	Education Reform (postindependence)	1978	23
	Loi d'Orientation du système éducatif	1999	30
Egypt, Arab Rep. of	National Education Reform (independence)	1952	33
	National Education Reform	1978	38
	Secondary and Higher Education Reform	1997	31
Iran, Islamic Rep. of	National Education Reform	1960	23
	Islamic Revolution: Education Reform	1979	78
	2nd Education Reform	1999	31
Iraq	Education Reform (independence)	1958	10
	Education Reform	1970	29
	Education Reform	1980	8
Jordan	Education Reform (independence)	1960	18
	Education Reform (post-6-day War)	1970	45
	Education Reform for the Knowledge Economy	2000	25
Kuwait	Education Reform (postindependence)	1960	26
	New Reform (post–Gulf War)	1991	13
Lebanon	Education Reform (postindependence)	1941	14
	Education Reform (post–civil war)	1990	24
Morocco	Education Reform (postindependence)	1956	33
	National Education Reform	1985	47
	The National Education and Training Charter	2000	29
Palestine	UNRWA period	1950	9
	Education Reform of the Palestinian Authority	1994	31
Saudi Arabia	Education Reform	1953	11
	Education Reform	1985	9
Syrian Arab Rep.	Education Reform (postindependence)	1958	13
	Education Reform	1990	12
Tunisia	Education Reform Act of November 9, 1958	1958	25
	Education Reform Act of July 29, 1991	1991	19
	Education Reform Act of 2000	2000	27
Yemen, Rep. of	Preunification reforms in Yemen Arab	1970	28
	Basic Education Development Strategy (BEDS)	1991	34
Total			918

Source: MENA Education Reform Database.

TABLE A.2

Examples of Engineering Measures

Engineering measures	Examples
<p>Pedagogy:</p> <ul style="list-style-type: none"> • Curriculum • Textbooks • Teaching methods and tools • Examination <p>Teaching capacity:</p> <ul style="list-style-type: none"> • Recruitment • Deployment • Qualifications (including training) <p>Structure of education and student flow:</p> <ul style="list-style-type: none"> • School planning • Flow of students (e.g., years of completion, prerequisites for entry, and rules of continuation) <p>Expansions of capacity:</p> <ul style="list-style-type: none"> • Construction • Equipment <p>Management:</p> <ul style="list-style-type: none"> • Managerial autonomy • Information systems • Training of administrators <p>Finance:</p> <ul style="list-style-type: none"> • Reallocation of resources • Mobilizing additional resources <p>Promoting Demand:</p> <ul style="list-style-type: none"> • Incentives for disadvantageded students to access school or advance to higher levels of education 	<p>Tunisia introduced competence-based approach in school curriculum in 2000, and revised textbook accordingly.</p> <p>Yemen introduced the annual comprehensive achievement tests in grades 9–12 in the 1990s.</p> <p>In Algeria, Arab teachers replaced French teachers between 1962 and 1967.</p> <p>In 2000, Djibouti launched in-service training on competence-based pedagogy.</p> <p>Since 2003–04, Algeria shifted from the 6+3 primary and lower secondary cycles to 5+4 cycles.</p> <p>In 1998, the Arab Republic of Egypt reduced the number of years from four to three years in Al-Azhar secondary schools to align with the public secondary school system.</p> <p>Yemen constructed five new public universities in the 1990s to add to the existing two.</p> <p>In the 1980s, Jordan constructed science labs and libraries in rented and government-owned facilities to improve the teaching of science.</p> <p>In the late 1990s, the Arab Republic of Egypt adopted legislation to increase autonomy at universities.</p> <p>In the late 1980s, Jordan introduced information system to improve decision making at the central and governorate levels.</p> <p>Since 1990, the Arab Republic of Egypt shifted resources from higher education to basic and secondary to meet EFA commitments.</p> <p>In Djibouti, high school students contributed to school cooperatives for the purchase of textbooks and teaching materials in the 1980s.</p> <p>In 2001, West Bank and Gaza created the Student Revolving Loan Fund (SRLF).</p> <p>Since 2000, food subsidies were provided to encourage Djiboutian families to enroll girls in school.</p>

Source: MENA Education Reform Database.

TABLE A.3

Examples of Incentives

Incentives	Examples
<p>Monitoring:</p> <ul style="list-style-type: none"> • Local community participation in school • Inspection <p>Evaluation:</p> <ul style="list-style-type: none"> • Evaluation <ul style="list-style-type: none"> – Schools – Teachers – School directors – Administrators • Accreditation <p>Rewards:</p> <ul style="list-style-type: none"> • Pecuniary • Nonpecuniary • Resource allocation (e.g., cash or non-cash transfers to schools) <p>Competition:</p> <ul style="list-style-type: none"> • Private provision of education • Choice of school • Contracting out of services 	<p>Since 1990, Yemeni communities participate in school activities through the fathers' and mothers' councils and school management committees.</p> <p>In 2001, Tunisia increased the number of inspectors to monitor and supervise teaching staff.</p> <p>In 2000, Tunisia implemented the School Performance Indicator System to evaluate the performance of individual schools to better target educational interventions.</p> <p>In 2000, the Jordanian Higher Education Accreditation Council was established along with methods to conduct internal and external evaluation of university programs.</p> <p>Djibouti established a rewards system to schools based on performance indicators since 2000. Rewards include donation of equipment.</p> <p>In the 1970s, the Arab Republic of Egypt promoted teachers based on seniority and on the inspector's report on the teacher's performance.</p> <p>The Islamic Republic of Iran has allowed establishment of private schools since 1990.</p> <p>In Jordan, services were contracted out to the private sector since 2000 (e.g., development of curricula and pedagogical tools, teacher trainings, and installation of ICT equipment).</p>

Source: MENA Education Reform Database.

TABLE A.4

Public Accountability Measures and Examples

Public accountability	Examples
<p>Voice mechanisms:</p> <ul style="list-style-type: none"> • At the local level <ul style="list-style-type: none"> – Decentralization – Local elections – Participation in local councils • At the national level <ul style="list-style-type: none"> – Consultation – Democratic reform <p>Information:</p> <ul style="list-style-type: none"> • Information about test scores • Information about school performance • Information about resource allocation <p>Binding commitments by the government:</p> <ul style="list-style-type: none"> • Free education for all • Promotion of girls' education • Minority education 	<p>Since 2000, educational reforms in Yemen are developed through a consultative process (including teachers, community leaders, members of parliament and the Shoura Council, the private sector, and academics).</p> <p>In 1979, strikes were organized by Algerian students to speed up Arabization.</p> <p>In the 1990s, Yemen developed annual school surveys and disseminated the results to stakeholders.</p> <p>Moroccan universities are evaluated since 2000, with the intention of making the results public to all stakeholders, including the parents and students.</p> <p>In 1963, the Algerian constitution declared free education as a right for all citizens.</p> <p>In 1981, Kuwait passed a law to eradicate illiteracy and allow illiterate adults to enroll in literacy programs.</p>

Source: MENA Education Reform Database.

Endnotes

1. This is lower than the proportion of female teachers in industrialized countries, where females represent 62 percent of the teaching force (UNESCO 1996).
2. The demand for education is a more complex phenomenon than what has just been mentioned. Indeed, education policies and household behavior interact in a variety of ways to determine educational outcomes (Behrman and King 2001). Moreover, cognitive and noncognitive skills that are formed early account for gaps in subsequent school performance (Carneiro and Heckman 2003). Thus, any reform of the education system ought to take this vast literature into account, although the topic is not explored in any detail in this report.
3. For the rest of the MENA countries, we could not find sufficiently detailed information about reform programs over a long enough period.
4. For the rest of the MENA countries, we could not find sufficiently detailed information about reform programs over a sufficiently long period.
5. Our plan is to make this data set available for others to use in pursuing further research on reform in the MENA region.

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