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JORDAN FISCAL REFORM PROJECT II

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Abbreviations

AFDE	Armed Forces Department of Education
ERfKE	Education Reform for Knowledge Economy Project
E-TVET	Employment-Technical and Vocational Education and Training
FDC	Faculty Development Center
GDP	Gross Domestic Product
HEAC	Higher Education Accreditation Commission
KG	Kindergarten
LMI	Lower Middle Income
MDG	Millennium Development Goal
MENA	Middle East and North Africa
MOE	Ministry of Education
MOF	Ministry of Finance
MOHESR	Ministry of Higher Education and Scientific Research
MOPIC	Ministry of Planning and International Cooperation
NAF	National Aid Fund
NER	Net enrollment ratio
OECD	Organization for Economic Cooperation and Development
PER	Public Expenditure Review
PISA	Program for International Student Assessment
TIMMS	Trends in International Mathematics and Science Study
UNESCO	United Nations Educational, Scientific and Cultural Organization
VTC	Vocational Training Corporation.

Introduction

This chapter presents perspectives and makes recommendations for the education sector, from pre-school through the university level. The perspectives are presented in three sections and are derived from a variety of sources including interviews of education officials, the study of past reports, analyses of current situations and trends over time, and comparisons with other countries.

Section 1 presents a general overview of the size and scope of education in Jordan and sets the analytic stage by presenting the results of a regression-based model that predicts "reasonable expectations" for education in Jordan based on worldwide data. It also summarizes key conclusions and recommendations from three important documents: a Public Expenditure Review conducted through the World Bank in 2003; Jordan's National Agenda, issued in 2006; and the Report on Millennium Development Goals, issued in 2010.

Section 2 presents perspectives on Jordan's education system with information about institutions, financing, student enrollments, levels of employment, and results. It describes Jordan's principal educational delivery systems: the Ministry of Education (MOE) and the Ministry of Higher Education and Scientific Research (MOHESR). This section also makes observations about the quality of public spending – its efficiency, responsiveness, and results. The Vocational Training Corporation (VTC), Armed Forces Department of Education (AFDE), and the Higher Education Accreditation Commission (HEAC) also play important roles in Jordan's education system. Finally, the Ministry of Planning and International Cooperation (MOPIC) also has appropriations earmarked for educational purposes.

Classic Perspectives?

- **Close to one-third of Jordan's population is enrolled as students**
- **Three out of four students completing secondary school go on to tertiary education**
- **Education spending is 13% of total government spending**
- **Teacher qualifications and education quality are major policy concerns**
- **Public schools are over-staffed, with 92 percent of the recurrent budget spent on salaries**
- **Student teacher ratios need to be increased to improve efficiency**
- **Resources are needed for education quality investments like classroom materials, teacher training, and school maintenance**
- **Spending on higher education, through the Ministry of Higher Education is very low, equal to .3% of GDP**
- **Community colleges need to focus on vocational and technical education more relevant to the labor market**

The above perspectives, though originally presented in a 1991 World Bank Public Expenditure Review, remain accurate reflections of Jordan's education system twenty years later.

Section 3 presents perspectives on seven critical education sector issues and makes recommendations for specific actions that can improve education spending and results. It concludes with estimates of the cost to continue current policies and services through 2016. These current services estimates can be used as a benchmark for measuring changes in future budgets that will result from implementing recommendations in this chapter.

Section 1: Overview of Jordan's Education System

This first section describes education in Jordan with a broad brush – the big picture. Jordan is one of the world's youngest countries. With two-thirds of its population aged 30 years or younger, education is a very large enterprise. Of Jordan's 2009 population of 6 million people, almost two million or about one-third were enrolled as students in kindergarten through university doctoral studies. In support of these two million students, about 165,000 people were employed in the education sector, both public and private, in 2009.

Over the last ten years, Jordan has witnessed significant changes in its economy and its population, and public expectations for improvements are significant. Table 1 presents some macro-trends since 2001.

Table 1: What changes has Jordan seen in the last 10 years?*

	2001	2011	% Change
Annual government budget as % of GDP	39.1%	30.1%	-9%
Annual Government Budget (JD)	2.5 billion	6.6 billion	+164%
Public education expenditures (JD)	310 million	836.5 million	+170%
Education spending as % GDP	4.9%	3.8%	-1.1%
Education spending as % budget	12.5%	12.7%	+.2%
Higher education enrollment	172,688	294,000	+70%
Population	5 million	6.2 million	+26%
Public education employment	99,218	121,830	+23%
Government employment	247,405	300,507	+21%
School-age population (preprimary-tertiary)	2.2 million	2.6 million	+19%
Kindergarten to Grade 12 enrollment**	1 million	1.2 million	+13%

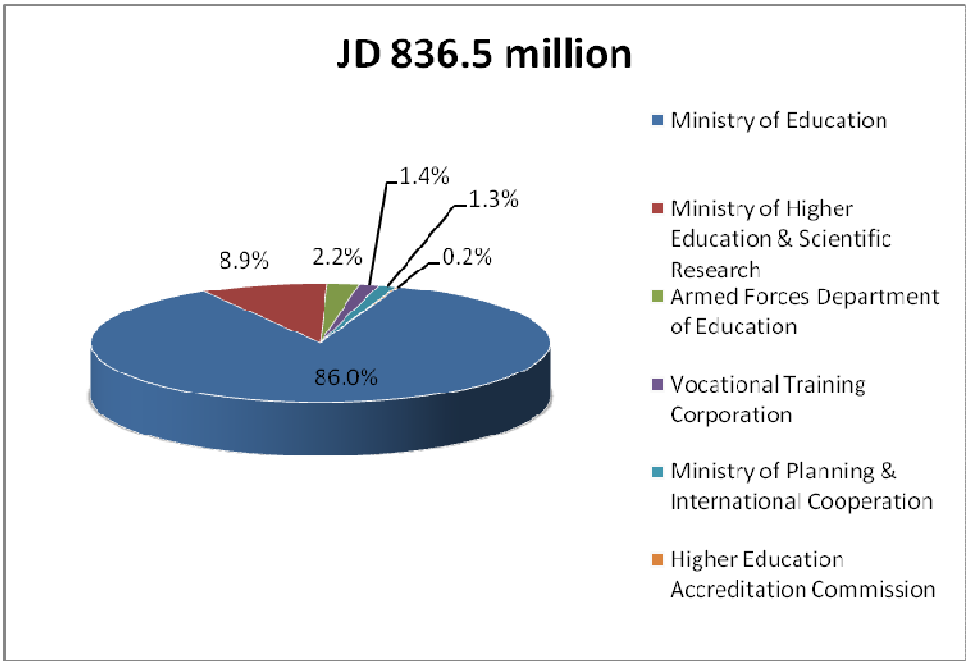
*See "Sources Consulted" entries for Ministry of Education, UNESCO Institute for Statistics, World Bank EdStats, General Budget Laws, Jordan Department of Statistics. ** 2011 estimate is 2010 actual plus 25,000.

Budget appropriations for Jordan's publicly funded education programs total JD 836.5 million in 2011, or 12.7% of the total government budget. This share is low compared to other countries of the Middle East and North African (MENA), which spend between 18 and 20% of their budgets on education.

At 3.8% of gross domestic product (GDP), Jordan's public education spending is less than one-half its level of military spending. This 3.8% figure is also below the worldwide average (4.6%), as well as that of lower middle income (LMI) countries (4%) and Organization for Economic Cooperation and Development (OECD) member countries (5%).

As depicted in Figure 1, appropriations for education programs are spread among six budget entities: the MOE, MOHESR, VTC, AFDE, HEAC, and MOPIC. MOE consumes by far the largest share of the education budget (86%), followed by MOHESR (8.9%); with the remaining 5% appropriated to the AFDE Education Services program (2.2%), VTC (1.4%), MOPIC (1.3%), and HEAC (0.2%).

Figure 1: Jordan's Education Budget for 2011



Source: General Budget Law 2011; proposed Government Units budget 2011

Education expenditures have grown at a slightly higher rate than total government expenditures over the past ten years. As shown in Table 2, growth in education spending grew 170% compared to 164% for the total budget.

Table 2: Trend in Public Education Spending as % of Total Budget

	2001 Expenditure	2011 Budget Appropriations	% change
Public Education Expenditures	310 million	836.5 million	+170%
Total Budget Expenditures	2.5 billion	6.6 billion	+164%
Education as % of Total Budget	12.5%	12.7%	+.2%

Source: General Budget Laws 2003 and 2011

During the 2001 to 2009 period, public education employment from preschool through university followed the overall trend in government employment. While total public employment grew about 21%, public education employment grew 23%, as shown in Table 3. Education sector employees have represented a stable 40% of total public sector employment over time.

Table 3: Trend in Public Education Employment as % of Total Public Employment

	2001 Employment	2009 Employment	% increase 2001-11
Public Education Employment	99,218	121,830	23%
Total Public Employment	247,405	300,507	21%
Education as % of Public Employment	40.1%	40.5%	

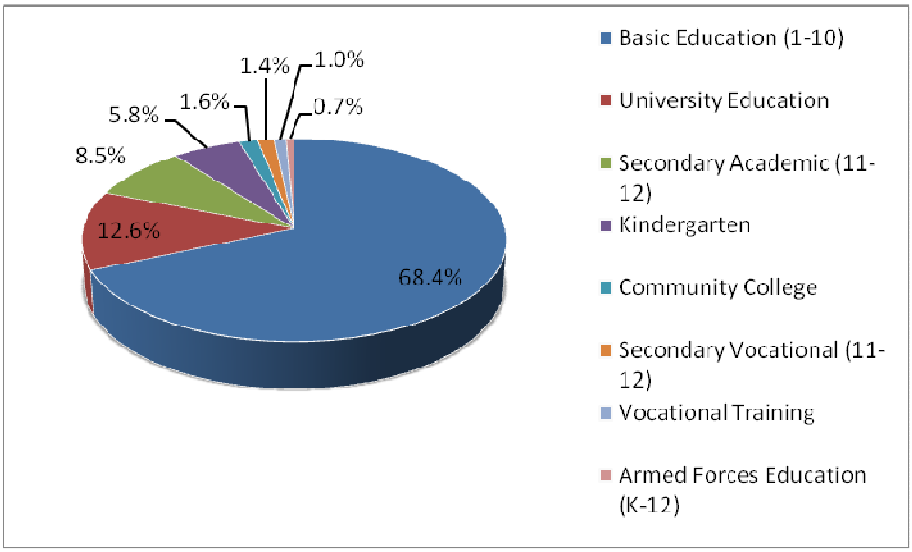
Sources: * Department of Statistics Annual Bulletin of Employment, 2009

About 2 million students or about one-third of Jordan's population was enrolled in Jordan's education system in 2009. They were enrolled in:

- 5,853 schools (3,600 public; 2,253 private) providing kindergarten through grade 12 education (K-12);
- 42 public Vocational Training Centers;
- 49 Community Colleges (25 of which receive support from Jordan's annual budget); and
- 31 universities (10 public; 21 private).

Figure 2 shows the percent distribution of the 2 million students in each of the eight principal areas of the system.

Figure 2: Two million students enrolled in 2009



System enrollment divided between public and private enrollment is presented in Table 4. Over 70% of total enrollment is supported through the national budget. the lowest public support is for kindergarten, with only 12% of kindergarten students at public schools.

Table 4: Enrollment in 2009 – Public and Private

	Public	Private	Total	% Public
Basic Education (1-10)	1,084,988	250,589	1,335,577	81%
University Education	63,391	181,905	245,296	26%
Secondary Academic (11-12)	144,593	21,199	165,792	87%
Kindergarten	13,956	99,668	113,624	12%
Community College	18,120	12,843	30,963	59%
Secondary Vocational (11-12)	27,450	302	27,752	99%
Vocational Training	19,000	unknown	19,000	unknown
Armed Forces Education (K-12)	13,361	0	13,361	100%
TOTAL	1,384,859	566,506	1,951,365	71%

Sources: Dept of Statistics Annual Statistical Report 2009; MOHESR Statistical Report 2010

1. Comparing Jordan's education performance to expectations

What results in education can be reasonably expected from Jordan? Typically, expectations for Jordan are governed by comparisons to the world's 56 LMI countries, 22 Arab countries, and 13 developing MENA countries.

In addition to such traditional comparisons, this analysis compared Jordan's education sector to other countries by using World Development Indicators data maintained by the World Bank and regression analysis to forecast expected values for those data. Regression analysis of the cross-country data provided estimates of expectations that demonstrate how Jordan is performing relative to what can reasonably be expected. In modeling demands for education spending, education services delivered, and education outcomes and in comparing Jordan's results to what would normally be expected, the results are generally positive.

Based on predictions from the worldwide regression model Jordan's public education spending as a share of GDP is less in Jordan than the expected amounts. For instance, the model predicts that Jordan public education spending would come to about 5.4% of GDP, given its per capita income level and the size of its government. Instead, Jordan's public education spending only averaged about 4% of GDP over the past few years.

Other findings from the regression model suggest how Jordan is performing compared to expectations. In primary education, Jordan's spending is less than expected. But after considering the presence of private schools, primary education spending is more than what would be expected.

The expectation model, using quality-weighted variables (net enrollment, student-teacher ratios, and school completion rates) suggests that the quality of Jordan's primary education is above the expected value. Similarly, when using an efficiency index as part of the model (student persistence to the fifth year, elementary completion, progression to secondary school, primary repetition, secondary repetition), Jordan is found to be very efficient relative to the expected value. Finally, and perhaps the most comprehensive proof of positive outcomes from primary education, Jordan claims a young adult literacy rate of 99%, significantly exceeding the expected value of 95%.

For secondary education, Jordan's spending is roughly what can be expected from the worldwide data, but after considering the level of private secondary education, Jordan's secondary education spending exceeds expectations. Net secondary school enrollment, spending, and progress rates also outperform the expected values.

2. Previous Reports and Recommendations

This section presents three significant perspectives on Jordan's education system over time, from 2003 through 2010. It begins with a review of the results of a Public Expenditure Review conducted in 2003 under the sponsorship of the World Bank. Second, it presents Jordan's education related policies and initiatives as articulated in the 2006 National Agenda. Finally, it presents conclusions and recommendations concerning education in Jordan, under the United Nations-sponsored 2010 Report on Millennium Development Goals.

2003: Recommendations of the Public Expenditure Review

A World Bank Public Expenditure Review (PER) titled Public Expenditure of Education and Training Sector was conducted in 2003. That review cited impressive results in Jordan's education and training sectors and it made a number of recommendations in five policy areas set out below. The first two policy areas suggested efficiencies that would ease financial burdens on government funding and establish credibility in support of increased spending for policy areas 3 through 5.

1. Increase Resource Efficiency. The 2003 PER recommended that increased resource efficiency pave the way for higher expenditure levels needed to universalize quality basic education enrollments in the short term and to expand quality enrollments at the secondary level in the medium term. Specific recommendations included:
    - increasing school class sizes;
    - reducing, retraining and reassigning surplus administrative staff;
    - instituting a hiring freeze (especially for non-teaching positions);
    - new hiring to be carried out under a reformed civil service recruitment process, with MOE and schools having a larger say in the selection of new teachers;
    - use of school mapping to ensure efficient placement of new schools; and
    - consolidation of existing schools.

2. Expand Role of the Private Sector in Provision and Finance. The 2003 PER recommended expanding the role of the private sector in the financing and provision of vocational training and continuing to encourage private participation in higher education. Recommendations included:
    - developing a new strategy for the training sector as a whole;
    - activating the new employer's Training Fund (financed through a 1% tax on firm profits);
    - increasing participation of employers in governing bodies of the public training system, such as the TVET Council; and
    - Giving greater autonomy to VTC Centers.

3. Increase Share of Basic Education. Basic education was cited as the most immediate priority in the 2003 PER. The PER made an aggressive recommendation that basic education's share of public education expenditures be increased above the then current level of 62% by reducing the 22% share of the education and training budget allocated to higher education and by reducing the 5% allocated to the Vocational Training Corporation.

4. Fight Exclusion and Improve Equity. At the basic education level, the 2003 PER recommended implementing a strategy to bring in the 7% of children who never start primary school and, at the higher education level, that subsidies be targeted to bright students who complete secondary schooling, but have no means to continue their education. It also recommended that private universities be mandated to waive tuition fees to poor students by offering 10% of their university places to poor and able students.

5. Significantly Upgrade Quality. Finally, to address the education quality issue, the 2003 PER recommended that more funds be allocated to quality-enhancing inputs, like teaching and learning materials, in-service training, and maintenance, than the then current 5% of the recurrent budget. It also recommended changes to ensure that new recruits to the teaching workforce are chosen from among the most qualified for the job; that teachers are supported by the right types of in-service training; and that more autonomy be considered for the directorate and school levels.

2006: Leadership from the National Agenda

Jordan's National Agenda 2006-2015 was an historic milestone in efforts to build a modern Jordan. In the National Agenda, the education area represents the center of effort to transform Jordan into a "knowledge economy."

Public Education. The National Agenda cited centralized education governance and bureaucracy as deterrents to progress. Despite improvements, low enrollment in pre-school education remained an issue and the curricula and teaching quality across all levels of public education needed improvement. Furthermore, vocational education suffered from decreasing enrollment, inadequate funding, and several narrow occupational specializations that did not match labor market requirements. The following six initiatives were agreed to overcome these problems. They are followed by planned levels of performance through 2017 Table 5.

- Establish a Public Education Accreditation and Quality Assurance Council under the National Commission for Accreditation and Quality Assurance of Education Institutions.
- Decentralize decision-making authority and improve monitoring and evaluation.
- Expand public kindergartens particularly in poor and rural areas.
- Expand access to basic and secondary education while enhancing expenditure efficiency.
- Improve the quality of basic and secondary education.
- Increase private sector involvement in the management of vocational education and reform programs and curricula to meet market needs.

Table 5: National Agenda - Planned Performance in Public Education

	2006	2012	2017
Gross Enrollment Ratio (GER) in Pre-School Education	35%	50%	60%
Gross Enrollment Ratio in Primary Education	99%	100%	100%
Gross Enrollment Ratio in Secondary Education	86%	90%	95%
Employment Rate of Secondary Vocational Educ Grads	55%	65%	80%
National Student Scores in TIMSS* (Math)	424	Exceed int'l avg (500)	
National Student Scores in TIMSS* (Science)	475	Exceed int'l avg (500)	
Percentage of Schools with Intranet Access	72%	100%	100%
Internal Efficiency Index**	89%	93%	96%

* Trends in International Mathematics and Science Study. ** Proportion of initially entering students who successfully complete basic and secondary education, taking into account student attrition and pass rates on the General Secondary (Tawjihi) Exam

Higher Education. The 2006 National Agenda was especially critical in asserting that the Higher Education sector lacked a unified and comprehensive strategy to strengthen governance and drive sector development. The sector structure was skewed toward academic learning at the expense of technical education, placing increasing pressure on public universities as demand for higher education was soaring. The Ministry of Higher Education was not well-equipped to address the sector's needs as it lacked required capacity to conduct effective policy-making. Furthermore, rising demand and funding shortages led to lax admission policies and a decline in teaching quality. To improve the sector's efficiency, the National Agenda prescribed the objectives below and set the performance objectives presented in Table 6:

1. Establish a Higher Education Accreditation and Quality Assurance Council under the National Commission for Accreditation and Quality Assurance of Education Institutions.
2. Approve a comprehensive strategy for higher education.
3. Develop alternative funding strategies for universities.
4. Revise universities' admission policies.
5. Reform university curricula in line with requirements of the knowledge economy.
6. Upgrade skills of faculty and administration at universities.
7. Improve the governance and funding of community colleges.
8. Reform community colleges curricula in line with market requirements.

Table 6: National Agenda – Planned Performance in Higher Education

	2006	2012	2017
Tertiary Education Gross Enrollment Ratio	35%	44%	50%
% of University Grads employed within 12 months of graduation	N/A	85%	95%
% of Students admitted under the Parallel Teaching Scheme	21%	0%	0%
% of Universities where faculty trained by FDCs* exceeds 60%	0%	100%	100%
% Community College grads employed in specialization in 12 mos.	N/A	85%	95%

* FDC = Faculty Development Center

2010: Conclusions and Recommendations of the Report on Millennium Development Goals

At the United Nations Millennium Summit in September 2000, leaders of 189 states, including Jordan, adopted the Millennium Declaration -- a common vision for the future, consisting of eight Millennium Development Goals (MDGs), including education, to be achieved by 2015.

The MDG goal for education is to achieve universal basic education and its target is to ensure that by 2015, children everywhere, boys and girls alike, will be able to complete a full course of basic education. Indicators for these purposes include:

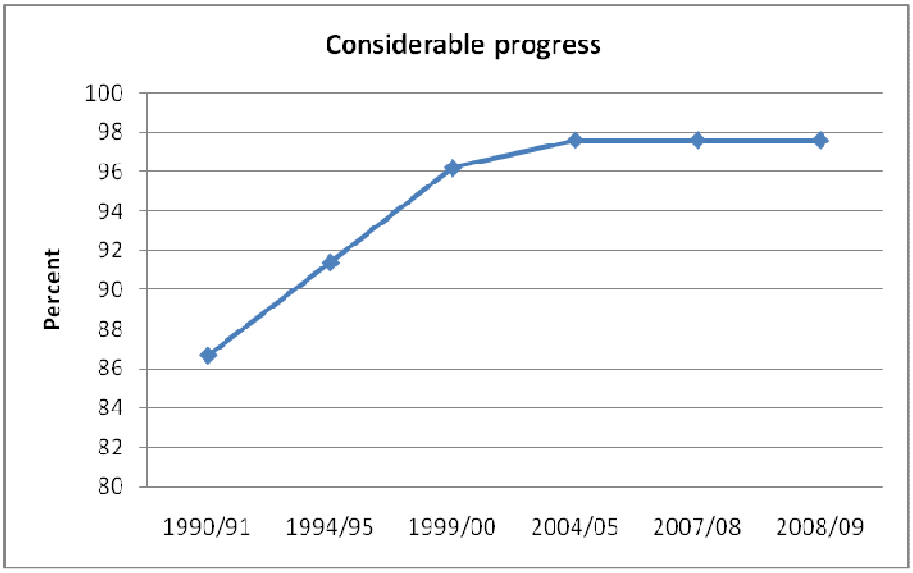
1. Net enrollment ratio in basic education;
2. Proportion of pupils starting grade 1 who reach the last grade of basic education; and
3. Literacy rate of 15-24 year-olds.

Subsequently, Jordan took action to achieve the MDGs by incorporating them into national development plans and programs. In 2010, Jordan's *Second Millennium Development Goals Report: Keeping the Promise and Achieving Aspirations*, demonstrated progress towards achieving the indicators and highlighted Jordan's future education challenges.

Of the eight MDG goals, education is the only one achieved by Jordan to date. Almost all pupils, who enroll in grade 1 complete grade 5. Illiteracy among the 15-24 year old age group has been almost eradicated with equal gender enrollment, retention, and literacy rates.

Indicator 1: Net enrollment ratio (NER) in basic education. NER is the number of children of official age (6-15 years) enrolled in basic education, as a percent of the number of children of official basic school age. Basic school NERs in Figure 3 indicate substantial increases since 1990, from 86.7% to 97.6%. This demonstrates that Jordan made considerable progress in providing universal basic schooling and ensuring completion of a full course of basic education.

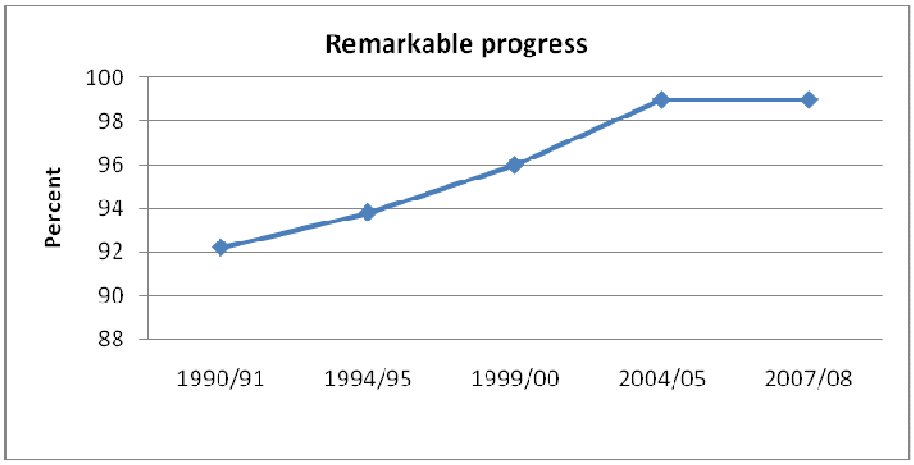
Figure 3: Basic education net enrollment ratio (NER)



Source: Ministry of Education Annual Statistical Reports 1990-2009

Indicator 2: Proportion of pupils starting grade 1 who reach last grade of basic education. This "persistence rate" refers to the percent of students who enroll in grade 1 and successfully complete grade 5. Figure 4 shows remarkable improvement, from 92.2% in 1990/91 to 99% during 2007/08.

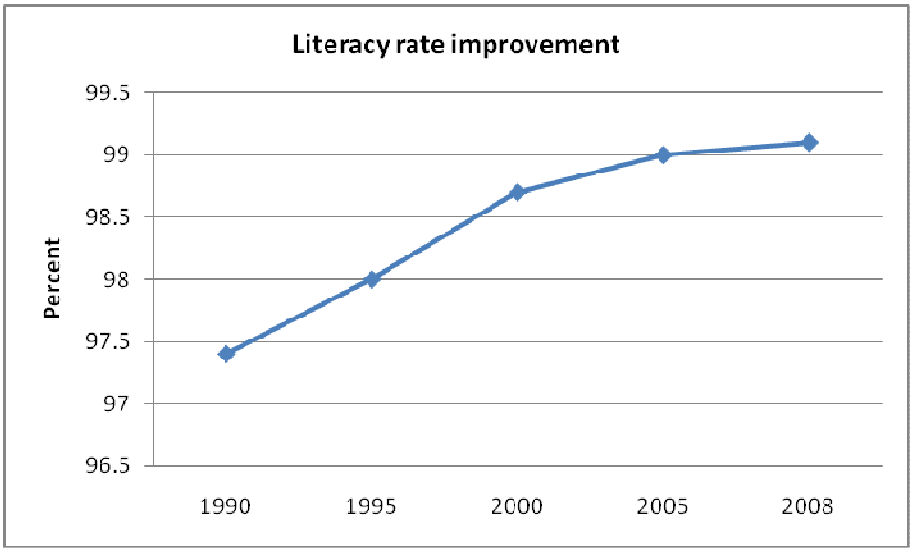
Figure 4: Persistence rate to grade 5



Source: Ministry of Education Annual Statistical Reports 1990-2009

Indicator 3: Literacy rate among (15-24) year-olds. Figure 5 shows that Jordan reduced illiteracy with well-defined policies and effective literacy education, as well as enforcing compulsory education and reducing school dropouts. Despite its overall decline, overall illiteracy is more prevalent among females than males and more common in rural than urban areas.

Figure 5: Literacy rate for 15-24 year-olds



Source: Department of Statistics (Various Surveys 1990-2008)

While Jordan's Second Millennium Development Goals Report concluded that in ensuring that children are enrolled in school and focusing on the quality and diversity of education, Jordan enjoys education policies and programs that rank it well on the regional and international education map. It has made significant progress on all education indicators. Going forward, the next step is to move towards an advanced developmental level where the focus will be on providing universal quality education in line with the needs of a modern knowledge-based economy.

Section 2: Public Spending and Policies for Education Programs

This section presents financial and performance information about Jordan's education system. It describes the education programs funded in Jordan's annual budget and examines levels of spending, services provided, and results accomplished, where data are available. Trends are examined and comparisons are made to averages for comparison groups including:

- Worldwide, all countries for which data are available;
- MENA (developing), 13 countries;
- Arab, 22 countries;
- OECD, 33 countries; and
- LMI, 56 countries.

Table 7 summarizes Jordan's education system by budget entity and program, including the approved 2011 appropriation for each program in the General Budget Law and estimates of appropriation for the Government Units budget, which had not been approved by June 2011.

Collectively, six budget entities are responsible for 18 programs funded in the 2011 annual budget, which includes the General Budget Law and Government Units Budget Law.

Table 7: Education Programs Funded in the 2011 Budget

	2011 Budget Law (JD)	% of Education Budget
Ministry of Education		
1 Administration and Support Services	49.1 million	5.9%
2 Kindergarten Education	9.8 million	1.2%
3 Basic Education	535 million	63.9%
4 Secondary Education	93 million	11.1%
5 Special Education	3.6 million	0.4%
6 Illiteracy and Elderly Education	601,000	0.1%
7 Social, Sport, Educational Activities	6 million	0.7%
8 Vocational Education	23 million	2.8%
Dept of Defense Education Services		
9 Educational and Social Services	18.6 million	2.2%
Vocational Training Corporation		
10 Administration & Support Services	2.1 million	0.3%
11 Training and Habilitation	9.6 million	1.2%
Ministry of Higher Education		
12 Administration & Support Services	4.1 million	0.5%
13 Government Colleges, Universities	70.7 million	8.5%
Ministry of Planning & International Coop		
14 Basic Education	10.5 million	1.3%
15 Government Colleges, Universities	108,000	<.1%
Higher Educ Accreditation Comm (3 progs)	1.3 million	0.2%
Total Education	836.5 million	100.0%

Source: General Budget Law and Proposed Government Units Budget Law for 2011

1. Ministry of Education

With a 2011 budget of JD 719 million (Table 8), the Ministry of Education consumes, by far, the largest share of funds dedicated to the education system (86%). For 2011, the Ministry's total appropriation for capital projects is 71.4 million, or 10% of its total appropriation.

In recent years, the Ministry has registered numerous accomplishments, including enhanced decentralization to the directorate and school levels, adopting Results-Oriented Budgeting methodologies, developing the Education Management Information System, and providing the International "Computer Driving License" credential to all teachers. In quality assurance, MOE participated in international studies, such as the Program for International Student Assessment (PISA) and Trends in International Mathematics and Science Study (TIMSS). In pre-school education, MOE conducted workshops and courses to enhance parental awareness and participation in pre-school education and to provide kindergarten teachers with pre-school education courses. The Ministry also made strides in connecting all schools to the internet and enactment of new legislation to strengthen compulsory education and increase basic education enrollment rates. In basic and secondary education, the main accomplishments are within the framework the Education Reform for Knowledge Economy Projects (ERfKE I and ERfKE II). These accomplishments have been in the

areas of education and education governance reforms, transforming programs and practices to meet the needs of the knowledge economy, providing safe school buildings and improved learning environment, and early childhood education. MOE also strengthened Vocational Education by improving administration, curricula, employment after graduation, and enhancing teacher and trainer capabilities.

Table 8: Ministry of Education (MOE) Budget (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
243.6 million	719.3 million	195%

Source: General Budget Laws 2003 and 2011

The following describe Ministry of Education spending by program.

Administration and Support Services. Seven percent of Ministry spending supports all activities to improve administrative capacities and the Ministry center and the Education Directorates, and to enhance the efficiency of programs and project management (Table 9).

Table 9: MOE Administration and Support Services (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
16.6 million	49.1 million	7%	196%

Source: General Budget Laws 2003 and 2011

Kindergarten Education. Representing 1% of the MOE budget, the kindergarten program objective is to increase overall enrollment in kindergarten, especially in the rural and poor areas that are less developed and have higher concentrations of needy children (Table 10). The Ministry's program performance indicators for 2011 include achieving an overall pre-school enrollment rate of 37% in rural and poor areas. In 2009, the average annual program cost for a public kindergarten student was JD 265.

Table 10: MOE Kindergarten Education (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
0	9.8 million	1%	n/a

Source: General Budget Laws 2003 and 2011

The benefits of pre-primary education are significant, especially for disadvantaged children, whose kindergarten participation is associated with future higher verbal and mathematics achievement, less grade repetition, and higher graduation rates. Although Jordan outperforms MENA countries, its pre-primary gross enrollment rate is only 36%, which underperforms the average of the 56 lower middle income countries and is less than half the OECD rate.

Kindergarten Education includes Kindergarten (KG) I (ages 4 & 5), which is almost exclusively private sector, and KG II (ages 5 & 6). The private sector dominates the provision of kindergarten education. In 2007/08, it accounted for 90 percent of kindergarten enrollment. Public kindergarten enrollment in KG II has been an important priority in recent years. To its credit, enrollment in MOE-funded KG II programs more than doubled between 2003/04 and 2007/08. Despite recent improvements, low enrollment in pre-school education remains both an education and an equity issue, particularly for poor and rural areas.

Basic Education. The Ministry's largest program (Table 11) consumes 74% of its annual budget. It provides education for grades 1 through 10 and its objective is to expand overall enrollment opportunities in basic education and eliminate inequities in education opportunities. The Ministry's program performance indicators for 2011 include keeping the basic education dropout rate at 0.6% and reducing the percentage of students attending the two shift schools to 7.6%.

Table 11: MOE Basic Education (grades 1-10) (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
188.7 million	534.5 million	74%	183%

Source: Estimated expenditures for 2001 and General Budget Law 2011

Following are some comparisons between Jordan and comparator groups on key basic education indicators.

Spending. Jordan currently spends an amount equal to 13% of per capita income for each primary school student. This is significantly less than the OECD rate of 20% and represents a modest decline from Jordan's 13.7% level in 1999. For 2009, the average annual program cost for a basic school student was JD 394.

Enrollment. Jordan is not a strong performer in basic school enrollment. According to the UNESCO Institute of Statistics, Jordan has over 50,000 primary school age children who either never entered or have dropped out of school.

Jordan's 2009 gross enrollment rate in primary school (gross enrollment may be above 100% as it includes children who are younger or older than normal) was 101%, lower than both LMI and MENA countries, that average 107%. Nevertheless, Jordan's primary enrollment outperforms MENA and LMI countries in male/female equity.

Jordan's gross intake rate in grade 1 is 99% (including grade repeaters). This is above Arab countries but less than MENA and the LMI country rate of 112%.

Completion. Jordan outperforms the world average and the MENA and LMI countries with a primary completion rate of 100%. This was a strong increase from only 95% in 1991. Jordan also outperforms MENA and LMI countries in its percentage of girls (98%) and boys (99%) who progress from primary to secondary school.

Student-teacher ratios. Jordan and the relatively wealthy OECD countries have primary school pupil-teacher ratios of 16 to 18 students for each teacher. LMI and MENA countries have student teacher ratios of about 25 to 1.

Youth literacy. Perhaps the most comprehensive indicator of the effectiveness of Jordan's basic education program is its youth (age 15-24) literacy rate, which stands at 99% compared to the MENA rate of 89%.

Secondary Education. Secondary education in Jordan covers students in grades 11 and 12 consumes about 13% of the Ministry's budget (Table 12). Its objective is to expand enrollment opportunities in secondary education that enable students to expand their life and professional choices and to effectively participate in social changes and development. The Ministry's program performance indicators for 2011 include increasing the percentage of formal students who pass the Secondary General Examination from a 2009 level of 59.5% to 59.8%. The annual program cost per academic secondary student in 2009 was JD 365.

Table 12: MOE Secondary Education (grades 11-12) (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
24.6 million	92.6 million	13%	276%

Source: Estimated expenditures for 2001 and General Budget Law 2011

Jordan currently spends at an amount equal to 17% of per capita income per secondary student (up from 15.8% in 1999), while OECD countries spend roughly 24% of their significantly higher GDP per capita.

Jordan's public academic secondary school enrollment is about 145,000 students, with a total gross enrollment rate of 88%, outperforming the world average as well as MENA and LMI countries. Jordan also outperforms MENA and LMI countries in the ratio of female to male secondary school enrollment. Jordan's transition rate of high school graduates to tertiary education is about 75%, a very high rate.

Vocational Education. This program is responsible for preparing secondary students to pursue vocational education and training relevant to the requirements of the Jordanian labor market. It represents 3.2% of the Ministry's budget for 2011 (Table 13) and 20% of the combined secondary and vocational education budgets. The Ministry's program performance indicators for 2011 include increasing the number of workshops with modern equipment to 160 and ensuring that 50% of vocational students enroll voluntarily.

Table 13: MOE Secondary Vocational Education (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
3.4 million	23 million	3.2%	578%

Source: General Budget Laws 2003 and 2011

Enrollment in secondary vocational education as a share of total secondary enrollment declined from 18 percent in 2000 to 14 percent in 2009, with an annual cost per student of JD 813. The program currently enrolls about 25,000 students.

Education, Social, and Sports Activities. This program is aimed at enhancing participation of student in programs and activities that strengthen their national affiliations. These efforts claim 0.8% of the Ministries total budget (Table 14). The Ministry's program performance indicators for 2011 include maintaining 12 teachers clubs, six scout camps, and four sports festivals.

Table 14: MOE Social, Sport, and Educational Activities (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
633,570	6 million	.8%	854%

Source: General Budget Laws 2003 and 2011

Special Education. Representing 0.5% of Ministry spending, Special Education increases opportunities available for students with learning disabilities and for gifted students (Table 15). The Ministry's program performance indicators for 2011 include maintaining seven source rooms for students with learning disabilities and seven excellence schools for the gifted.

Table 15: MOE Special Education (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
183,940	3.6 million	0.5%	1835%

Source: General Budget Laws 2003 and 2011

Illiteracy and Elderly Education. This small program (Table 16) represents only 0.1% of the MOE budget. Its objective is to develop programs, curricula, and human resources to help eliminate illiteracy. Jordan's adult literacy rate improved significantly over the past 10 years and at 92.8% (89.2% for females), it is well above both MENA and LMI country rates. The Ministry's program performance indicators for 2011 include enrolling 6,800 individuals at 491 literacy centers.

Table 16: MOE Illiteracy and Elderly Education (JD)

2001 Expenditures	2011 Budget Appropriations	% of MOE Budget 2011	% Increase 2001 - 2011
120,929	601,000	0.1%	397%

Source: General Budget Laws 2003 and 2011

2. Armed Forces Department of Education

Educational and Social Services. The Armed Forces Department of Education's 2011 budget is JD 18.6 million (Table 17), 2.2% of total education spending in Jordan. It provides educational and social services for the children of active and retired military personnel and children in secluded and poor areas like the Badia region. It is also responsible for six community colleges and plays a role in enhancing the cultural and educational level of the Jordanian Armed Forces.

Table 17: Armed Forces Education and Social Services (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
6.6 million	18.6 million	182%

Source: Annual Budget Laws 2003 and 2011

3. Vocational Training Corporation

The Vocational Training Corporation (VTC) has a proposed 2011 budget of JD 11.8 million (the Government Units budget law was not approved through June 2011), 1.4% of the total education budget (Table 18). It is an independent institution governed by a Board of Directors chaired by the Minister of Labor. The VTC produces a professional labor force through training, habilitation and rehabilitation. Its activities are organized under two programs. Administration and Support Services (18% of VTC budget) aims to reinforce the management of programs and training, as well as support the computerization of all work procedures in the Corporation. The Training and Habilitation program (82% of VTC budget) aims to enhance enrollment in vocational training programs at its 42 Vocational Training Centers, nine of which are equipped for special needs students, and to improve employment after graduation. VTC maintains a stable enrollment level of about 10,000 students, who enroll in its core courses and about 9,000 additional students who enroll in short training courses. The annual cost to maintain each VTC student is about JD 1,300. In 2011, about 19,000 different students are expected to be enrolled.

Recent efforts to restructure the Vocational Training Corporation are intended to enhance the efficiency of Employment-Oriented Training. This has led to an amended VTC By-law and establishing academies for training for jobs in pharmacy, food industry, tourism, environment, energy, engineering and electronics.

Table 18: VTC Administration and Support Services and Training and Habilitation (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
9.5 million	11.8 million	24%

Source: Annual Budget Laws 2003; proposed Government Units Budget 2011

4. Ministry of Higher Education and Scientific Research

The Ministry of Higher Education and Scientific Research (MOHESR) has a 2011 budget of JD 74.9 million, about 9% of total education spending. For 2011, the Ministry's capital projects appropriations total JD 28.1 million, or 37.5% of its total appropriation.

The most prominent accomplishments of the Ministry have been in new legislation, improved governance, strategic planning, and development of higher education infrastructure. Accomplishments also include developing the Management Information System to support University decision-making; establishing Faculty Development Centers for continuous learning and training; amendments to Higher Education and Scientific Research Laws to reinforce university autonomy and reinforce the role of boards of trustees in finding more sources of university funding. The Ministry also set new mechanisms to support needy students through the student aid fund,

financed by both the government and the private sector. In addition, the Higher Education Accreditation Commission (HEAC) for both public and private universities is now independent.

In the area of community colleges, the Council of Ministers approved a 2011 proposal to Parliament for legislation to provide for all technical education programs offered by Universities and Community Colleges to be coordinated through a new department to be created in the Ministry of Higher Education and Scientific Research. This new initiative, after approval by Parliament, is expected to have a three year transition period for implementation.

Administration and Support Services. This program represents 5.5% of the Ministry's budget (Table 19). Its objective is to enhance administrative capabilities in all administrative units of the Ministry and to reinforce the management of programs and projects.

Table 19: MOHESR Administration & Support Services (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
1.9 million	4.1 million	116%

Source: Annual Budget Laws 2003 and 2011

Public Colleges and Universities. This program represents 94.5% of the Ministry's budget and includes all government budget support for public institutions of higher education (Table 20). It provides for academic environment and research capacities. It also help to ensure the academic institutions under its purview keep pace with developments in information technology, deploys those developments on behalf of administration and academic programs, and supports universities' infrastructure. The Ministry's program performance indicators for 2011 include reaching 75% of students with grants or loans and increasing the ratio of community college students to total higher education students, which was 11.2% in 2009, to 14%.

Table 20: MOHESR Government Colleges and Universities (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
51.1 million	70.7 million	38%

Source: Annual Budget Laws 2003 and 2011

The following describes Jordan's tertiary education performance against several common indicators.

Spending. Although Jordan's institutions of higher education have seen declining government support in recent years, the cost of higher education to students at the 10 universities and 14 public community colleges remains below that of private institutions and below the actual costs of that education, due to the annual government subsidies.

Of the JD 71 million currently appropriated, JD 17 million (24%) is designated for student financial aid and JD 53.7 million is distributed to the ten public universities. In addition, higher education institutions are carrying previously incurred debts estimated in the area of JD 100 million. In addition to the amounts appropriated, in 2011, an off-budget trust fund administered by the Ministry of Finance will contribute JD 12 million to reduce higher education debt.

Higher education budget appropriations are 10.4% of total education expenditures and .4 percent of GDP, while OECD countries average 1.2% of GDP. Transfers to universities increased from JD 38 million in 2001 to JD 53.7 million in 2011. While this amount appears to be an increase, the 2011 amount is distributed among ten universities compared to four universities in 2001.

Enrollment. Jordan's tertiary education gross enrollment rate is about 40%, which means that 4 of 10 Jordanians of higher education age are enrolled. This is well above the worldwide and MENA averages of 26% and double the rate of the 56 LMI countries. These high rates reflect a strong preference for higher education. Jordanian females enroll in tertiary higher education at a higher rate than males.

Support for subsidized higher education is reflected in the fact that the Ministry of Higher Education grants admission to significantly more students annually than are recommended by the Higher Education Accreditation Commission, whose main concern is the quality of education. This emphasis on quantity allows the institutions to enjoy the benefits of additional student fees, but has negative implications for education quality.

Admissions. Admission to Jordan's institutions of higher education is largely governed by the results of the annual Tawjihi examination. Basically, Tawjihi scores determine the universities and academic programs to which applicants can gain admission. The highest scoring students are generally admitted to the 10 government subsidized universities; students falling into the second tier of Tawjihi scores tend to attend private universities; the third tier of scorers tends to attend community colleges. An exception to this is permitted through parallel enrollments, whereby students with lower scores, but with the ability to pay, can be admitted to competitive programs and institutions and pay additional fees.

Community Colleges. Jordan has a total of 51 community colleges, of which 26 are publicly supported. These include 14 community colleges under the auspices of Al Balqaa' University, six sponsored by the Armed Forces Department of Education, and six other governmental community colleges. While the preference for university education is strong in Jordan, a weak preference is evident for vocational, applied, and technical specialties, as reflected in low rates of community college enrollment. While national policies have emphasized the importance of community colleges playing a more important role in technical and applied fields of education in order to increase the efficiency and productivity of the labor market, progress has been slow and responsiveness to labor market needs and demands remains weak. Thirteen of the fourteen public community colleges offer bachelor's degrees and a high proportion of students bridge from community colleges to public universities.

Employment. Institutions of higher education have consistently been regarded as employment programs and as having an excess of non-teaching administrative and support staff. Ratios of administrative to teaching faculty at the public universities range from 1.2 to 2.2 non-academic staff for each teaching position. A 2009 report of the Jordan Center for Policy Research concluded there are ample opportunities to reduce the number of non-teaching employees at universities.

5. Higher Education Accreditation Commission

HEAC is an independent organization responsible for assuring the quality of higher education. Claiming only JD 1.3 million or 0.2% of the total education budget in 2011 (Table 21), its objectives include increasing the number of academic specializations subject to accreditation and ensuring that all public and private universities implement accreditation standards. The HEAC's budget is

organized into three programs, including Administration and Support Services, Higher Education Institutions Accreditation, and the National Examination Center.

Table 21 : Higher Education Accreditation Commission (JD)

2001 Expenditures	2011 Budget Appropriations	% Increase 2001 - 2011
0	1.3 million	n/a

Source: Annual Budget Law 2011

6. Other education-related appropriations

In addition to the appropriations on behalf of education-related programs presented above, the 2011 Annual Budget includes additional amounts designated to accomplish education objectives, but which are appropriated to the Ministry of Planning and International Cooperation (MOPIC) in support of basic and higher education (Table 22). In addition, the Ministry of Finance (MOF) administers and off-budget trust fund that will provide JD 12 million to reduce higher education debt in 2011.

Table 22: Other 2011 Appropriations

Appropriation	JD
MOPIC (Basic education)	10.5 million
MOPIC (Government colleges, universities)	108,000

Section 3: Sector Issues, Findings, and Recommendations

The previous sections of this Chapter accomplished several objectives. Section 1 provided the macro perspective on education in Jordan and reviewed the conclusions and recommendations of three important education reports issued in 2003, 2006, and 2010. Section 2 presented the micro perspective, describing budgets, levels of education services provided, and results accomplished at the program level of six educational organizations.

The four documents prominently cited earlier in this chapter represent a unified and consistent body of policy and program perspectives. First, the 1991 Public Expenditure Review referred to in the introduction illuminated critical education needs, problems, and opportunities, too many of which remain with us today. Second, the 2003 Public Expenditure Review presented a number of reasonable and practical solutions that remain relevant to the needs and problems of today. Too many of those solutions have yet to be implemented.

Third, the 2006 National Agenda for education demonstrated a full understanding of the education needs and problems and the importance of appropriate solutions. It presented a constructive and meaningful policy framework. It also raised Jordan's aspirations from the status of a normally low performing lower middle income country to the status of vibrant and productive knowledge-based economy and member of the upper middle income category.

Finally, the 2010 Millennium Development Goals report signaled a major transition. It celebrated Jordan's education successes above and beyond the typical lower middle income country and it pointed to the future – evolution to a more advanced "knowledge-based" developmental level.

This chapter of *Public Expenditure Perspectives* adds a fifth document to the twenty years of unified and consistent reports on education in Jordan. It also contributes another critical perspective -- that the principal challenges in 2011 and the future are not related to the need to better understand our problems or the need to develop more appropriate policies and objectives. Our problems center on the implementation of change and on the need for government officials who are willing and able to be accountable for successful implementation.

The following findings and recommendations are organized in line with seven critical issues that deserve special attention. The recommendations associated with these issues promise to contribute to Jordan's success in achieving the status of a knowledge-based economy to which Jordanians can contribute and be rewarded for their productivity.

1. Teacher staffing, recruitment, and selection

This issue has three dimensions, the first two of which are necessary pre-conditions to accomplish the third dimension -- improved student performance.

a. Teacher staffing levels;

b. Teacher recruitment and selection; and

c. Improved results in student performance.

a. Teacher Staffing Levels: Teachers are by far, the largest education expense. Teacher employment growth exceeded student growth between 2001 and 2011 and all analyses of teacher utilization since 1991 have concluded that there are significant inefficiencies in the utilization of teacher resources.

A Teacher Utilization Study, sponsored by the Education Reform for Knowledge Economy Project (ERfKE), was issued in September 2008. The study recommended that Jordan's student-teacher ratio of 17.7 to 1 be increased to improve both efficiency and education results. Since then, the situation has deteriorated. Jordan's student teacher ratio has dropped further, to 16.2 to 1. This includes a kindergarten and basic education (through grade 10) ratio of 18 to 1 and a secondary education (grades 11 and 12) of 13 to 1. As a result of the 16.2 student-teacher ratio, teacher salaries represent an overwhelming 92% of the recurrent budget. Jordan's relatively high number of teachers is accompanied by relatively low levels of teacher salaries. The most recent teacher salary data available through the UNESCO Institute of Statistics, shows that Jordan's teachers earn salaries that, on a purchasing power parity basis, are 25% of the level of OECD countries. At the same time, the 92% of the recurrent budget spent on salaries has squeezed out spending for non-salary items necessary for quality education, e.g.:

- Educational materials for classrooms;
- Teacher in-service training;
- Incentives for teaching in remote areas; and
- School maintenance, renovation, and construction.

The same 2008 teacher utilization study analyzed three alternatives as to levels of teacher employment: a stringent policy; a moderate policy; and the existing liberal policy. The moderate policy was recommended and called for student teacher ratios of:

- 29 to 1 in kindergarten;
- 25 to 1 in basic education; and
- 20 to 1 in secondary education.

Recommendations:

- School staffing level decisions should be determined based on the number of students per teacher, consistent with the recommended "moderate policy" recommended in 2008. With adequate organization and teacher training, a program of multi-grade teaching could be an efficient alternative for some schools.
- Moving from the current staffing approach to effective implementation of the recommended moderate policy, was estimated in 2008, to accomplish within five years, a reduction of 16,000 teaching positions from the current policy trajectory. This, in turn, would yield an annual savings of about JD 85 million, which could better be invested in areas that can improve education quality.

b. Teacher recruitment and selection: Centralized recruitment and selection of teachers through the Civil Service Bureau has resulted in less qualified teachers, than if recruitment and selection were more decentralized. Most education analyses over time have recommended that authority to recruit and select teachers be decentralized to the Ministry of Education from the current centralized system through the Civil Service Bureau.

Recommendations:

- Implement the recently approved proposal to provide for MOE to be involved in the final selection of candidates, beginning in late 2012.
- Adopt an effective system of incentives to attract teachers to remote areas.
- Assess teacher performance annually according to professional performance criteria, with those rated unsatisfactory being relieved of teaching duties.

c. Education Results: The OECD conducts a triennial survey titled the Program for International Student Assessment (PISA). The survey examines what 15 year old students know and can do in reading, mathematics, and science. In 2009, 65 countries participated in the survey of knowledge and skills.

Jordan's PISA scores and ranks cannot be compared to a world average, because only 65 countries participated in the survey. Similarly, comparisons cannot be made with Arab or MENA countries since only three of the other Arab and MENA countries (Dubai, Tunisia, and Qatar) participated in PISA. It is notable, however, that on all three scales -- reading, mathematics, and science -- Jordan scored significantly below the average of the 33 OECD countries and did not rank well against the other 32 PISA participants. Jordan's ranking among the 65 countries on each of scales ranged from 51 to 65 countries on each of the scales ranged from 51 to 56 as listed in Table 23 below. Given that

Jordan's policy priorities are to achieve the status of a knowledge-based economy, it is more appropriate to compare Jordan with countries, like OECD members, who have largely knowledge-based economies.

Table 23 clearly illustrates that in Jordan, the most compelling challenge at hand is the quality of education.

Table 23: Performance - Program for International Student Assessment (PISA)

	OECD Average	Jordan	Jordan's rank out of 65 countries
Reading	493	405	55
Mathematics	496	387	56
Science	501	415	51

Source: OECD Programme for International Student Assessment, 2009

Other factors that contribute to low academic performance are discussed in other sections of this report. These include non- or late enrollment of age appropriate children in school; lack of resources for educational materials and teacher training; overcrowded classrooms; and teachers with lower than appropriate qualifications. An additional factor that may contribute to Jordan students' relatively low performance may be its very low rate of repeating grades. While 4% of students worldwide repeat grades, Jordan students only repeat at a rate of 1 percent, meaning that low performing students may be pushed on to the next grade and perform poorly at the higher level.

Recommendation:

- Analyze the extent to which Jordan's very low 1% rate of repeating grades contributes to low academic achievement on international tests of student knowledge and skill and determine whether a change to have more low performing students repeat grades can increase positive education results and student scores on standardized tests.

2. Utilization of school facilities

This issue deals with the efficient utilization of school facilities, including overcrowding and underutilization. In the 2010-2011 school year, almost 60% of Jordan's 3,400 schools were classified as small (300 students and less) and they enroll 25% of the students. These schools cost per student (Table 24) demonstrates the inefficiency of these small schools – between double and triple the cost per student of large schools.

Table 24: Small schools cost more than twice as much per student

Size (# of students)	# Schools	% Schools	% Students	St-Tch Ratio	Cost/Student
Large (801+)	332	9.7%	29%	23.6	307
Medium (301-800)	1082	31.6%	47%	17.1	442
Small (1-300)	2009	58.7%	24%	10.8	770

Source: Ministry of Education

In a separate MOE analysis of data from the 2010 – 2011 school year, almost 70% of Jordan's 3400 public schools we classified as small (400 students or less). By this classification, 70% of the schools enrolled 36% of the students and employed 48% of the teachers (Table 25) again, demonstrating the inefficiency of small schools.

Table 25: Small schools have too few students and too many teachers

Size (# of Students)	Number of schools	% of Schools	% of Students	% of Teachers
Large (800+)	332	9.7%	29.0%	19.8
Medium (401-800)	711	20.78%	35.5%	31.7
Small (201-400)	923	26.97%	23.3%	26.7
Small (101-200)	661	19.32%	8.5%	12.7
Small (1-100)	795	23.23%	3.9%	9.1

Source: Ministry of Education

The most recent comprehensive report on Ministry of Education's school facilities, issued in December 2008, included an evaluation of the status and future needs with respect to school capacity and utilization. It provided a blueprint for school construction, extensions, and renovations for the ERfKE II Project engaged in school construction through 2013. The report, completed during the 2008/2009 school year, noted that overall, Jordan's 1.1 million public school students from kindergarten through grade 12 were attending 3400 schools and that enrollment through 2019 was estimated to grow by about 25,000 students annually. In addition to developing a blueprint for future construction, the report documented overcrowding, excess capacity, safety issues, and maintenance problems within current facilities. Deferred maintenance is a major problem because it results in deterioration that is far more expensive to correct than the cost of preventive maintenance.

Analysis of these problems demonstrated significant opportunities to improve the efficiency in the utilization of current and future school facilities. These opportunities included:

- Almost 60% of MOE schools were underutilized, with 173,000 surplus seats available, while 10% of Jordan's students (101,000) were studying at overcrowded schools;
- Most schools with excess capacity were located within one kilometer of an overcrowded school;
- Many of the schools built between 2003 and 2008 were in the same area as other schools with excess capacity;
- The number of schools with less than 100 students had increased between 2003 and 2008; and
- MOE did not have a modern maintenance management system, including technical software, that applies objective criteria and standards and routine analysis of condition assessments to identify problems and prevent building failures before they become critical.

Recommendations:

- Reduce the number of small schools to lower total education costs. As part of this recommendation, it is critical that objective and efficient criteria used to locate schools be strengthened and that the use of non-objective political influence in school location decision-making be reduced;
- Improve utilization of space. Even a 25% better utilization of the existing excess seats (173,000) in existing schools was estimated, in 2008, to generate a savings of JD 30 million in the capital costs of school construction, in addition to economies of scale in operating costs;
- Establish a transportation system to provide for student transportation that results in shifting students from overcrowded to underutilized schools; and
- Implement a modern maintenance management system, including technical software. A maintenance survey documented unsafe buildings and critical needs for comprehensive maintenance, the results of which will save more costly repairs and replacement costs over time.

3. Kindergarten and primary enrollment

A great deal of education research demonstrates the importance of early childhood education as an investment that increases the future benefits of education, especially for low income and disadvantaged children. As articulated in the National Education Strategy, kindergarten education is an important part of Jordan's reform efforts.

Most kindergarten education is provided by Jordan's private sector. In the 2003-2004 school year, 95% of kindergarten enrollment was in private sector schools. By 2007-2008, this was reduced to 90% with the MOE significantly increasing its emphasis on early childhood education. Public kindergartens are virtually all for KG2 (age 5).

Under-enrollment has been the most persistent problem for Jordan's kindergarten and primary levels. Jordan's primary school gross enrollment rate has steadily declined from 1985 through 2008 and currently falls below those of other LMI and MENA countries. The problem is especially critical for kindergarten, both KG1 (age 4) and KG2 (age 5), with Jordan's pre-school enrollment rate at 36%. Although this exceeds the low performing MENA countries, it falls below the average LMI country and is only half the OECD average.

Gross enrollment in KG2, which was 47 percent in 2000, moved up to 51% in 2008 following major investments involving the MOE, the ERfKE I program, and 15 other partner organizations. This successful collaboration, widely regarded as a model for reform achievement, raises the question of why Jordan still has under-enrollment problems and why about half of Jordan's 5-year old children are not enrolled in private or public sector KG2 classes.

Recommendations:

- Additional classrooms are needed to increase kindergarten and primary grade enrollment rates. Current initiatives to construct and equip additional classrooms and to expand current facilities will provide needed capacity to increase kindergarten and primary grade enrollments;

- Establish a transportation system to provide student transportation between home and school on behalf of kindergarten and basic school students. Some students live too far from their schools to walk and parents often have concerns about the safety of their children who must walk to school. A system of student transportation would increase enrollment; and
- Make cash transfers conditional on school attendance. Currently, 74,000 families receive cash benefit payments through the National Aid Fund (NAF). These payments could be made on the condition that age-appropriate family members be enrolled in kindergarten and basic education. Jordan had such a requirement in the past, but compliance with the conditions was not effectively monitored or enforced and the school enrollment results are not known. Conditional cash transfers have been successfully implemented in numerous countries, including Turkey and Yemen, and provide opportunities for Jordan to study successes in designing an effective conditional cash transfer program.

4. Vocational education and training

The complexity of Jordan's labor market issues is illustrated by the fact that its unemployed labor force participants (13.1%) are outnumbered by 250,000 guest workers who hold Jordanian work permits, not to mention an even larger number of illegal foreign workers. Jordan's unemployment problem is especially severe for its young labor force participants. Job seekers aged 15-19 are unemployed at a rate of 36% while those aged 20-24 are 28% unemployed.

Multiple entities are responsible for providing the vocational and technical education and training essential for Jordan's evolution into a knowledge-based economy. The Ministry of Education provides secondary vocational education. Both the Vocational Training Corporation and public and private community colleges (under the Ministry of Higher Education) provide vocational and technical training and education. The overlapping mandates have naturally provided challenges for management and oversight of this sub-sector.

To overcome these challenges, an Employment-Technical and Vocational Education and Training (E-TVET) Council was created in 2008. The scope of its oversight responsibilities include VTC, Al Balqaa' University, the ETVET Fund, Private Sector Training Centers, MOE's Vocational Secondary Education program, and the Employment Directorate of the Ministry of Labor. It also created an Accreditation and Quality Assurance Center. Yet, there is little evidence that this initiative has raised quality or performance in vocational education and training.

From the Government's perspective, several factors contribute to a disproportionate number of non-Jordanians occupying vocational-technical jobs in the country. First, is a perceived shortage of vocational and technical training programs and the incompatibility of existing programs with labor market demands. Second, is the cultural stigma associated with vocational-technical type jobs. Even if training programs were available, Jordanians tend to prefer academic over vocational education. As a result, secondary vocational education enrollment as a share of total secondary enrollment has declined over the years, despite an increasing demand for vocational and technical skills.

Of those who do enroll in MOE-administered secondary vocational education, students tend to be those who under-perform in the academic stream. The majority of students who enroll at the Ministry of Labor's Vocational Training Centers tend to be from the lower ranks of secondary education graduates or have dropped out of secondary education.

Meanwhile, community colleges, while offering diplomas in subjects from languages to business administration, have been no more successful in cultivating talent or responding to the technical and vocational knowledge and skill needs of a modern economy.

Unfortunately, the private sector has traditionally played little if any substantive role in vocational education and training governance or in setting professional standards; nor has it been authorized to award certifications. This represents a missed opportunity to garner more policy and financial support from private sources.

Recommendations:

- Evaluate the effectiveness of the 2008 E-TVET initiative in leading the development of the Kingdom's technical and vocational education structure;
- Increase private sector provision of vocational and technical education, and authorize private centers to certify graduates. At the same time, involve the private sector in setting professional standards, examination mechanisms, and awarding certifications;
- Grant more independence for MOE and the VTCs in the selection and hiring of appropriate staff; and
- Provide more awareness and guidance related to vocational education and training, to provide higher rates of enrollment in this sector and to enhance the image of vocational education and training within Jordanian society.

5. Revenue opportunities for public education

Currently, MOE has successful investment programs generating over JD 325,000 annually from leases for commercial and office spaces in Amman, Aqaba, and Irbid. These successful initiatives are small relative to the potential opportunities to convert unused and surplus assets into education benefits.

The Ministry of Education has responsibility for an extensive system of schools, buildings, facilities, land, and other fixed assets. An unknown portion of those assets are not fully utilized. These surplus assets include buildings, properties, land and other capital assets that could generate additional revenues for the Government through sale, lease, or other business arrangements. The proceeds in turn, could be put to productive use in providing direct educational benefits or invested in increased capacity to generate future revenue for direct educational benefits.

Examples of revenue generating opportunities include receiving donations from the developers of housing projects to support schools that will be needed for children residing in project areas; using surplus school land to lease or to construct commercial complexes; investing in commercial production capacities at vocational education facilities that can sell products with revenues reinvested in vocational education; creating a printing house to operate on behalf of the Ministry of Education and sell to the private sector; renting out school stadiums, meeting rooms, and gymnasiums to private groups; leasing surplus land for agricultural production; and leasing out Scout Camps for tourism groups.

Recommendations:

- Create a comprehensive initiative through an amendment to Education Law Number 3 of 1994, that provides for a special fund with all revenues to be deposited in a designated subaccount of the Treasury Single Account under the name of the Ministry of Education. It would also create an investment committee responsible for maximizing education-related revenue generating opportunities and for recommending policies and procedures to meet specific education needs. All such special expenditure proposals should be identified and included as part of the annual General Budget Law; and
- Develop a system of incentives for generating revenues to ensure the success of this initiative. This should be accomplished by a governance structure and policies that provide for the engagement of decision makers at all three levels of education governance to take actions to generate revenues and to benefit from the resulting revenues at their respective levels:
    - The national level through the Ministry of Education;
    - The Field directorate level for initiatives within the respective directorates; and
    - The individual school level.

Bylaws for these purposes should be developed by the Ministry of Education and shall be approved by the Minister of Finance, before final approval by the Ministry of Education.

6. Financing Higher Education

Almost 5% of Jordan's population is enrolled in higher education, a higher level than the United States. Enrollments have grown an average of 7% each year since 2001. With 40% of the age appropriate university students enrolled and over 75% of high school graduates entering institutions of higher education, the quantity of higher education opportunities appears to be ample, thanks in large part to the growth of private sector institutions.

Jordan has made significant progress in strengthening its governance and oversight of higher education. Since 2009 it has restructured its Higher Education Council to function with a more representative membership. In addition, university autonomy was significantly strengthened and the Higher Education Accreditation Commission was made fully independent in pursuing quality assurance mechanisms for both public and private institutions. But the system itself is having difficulty balancing tradeoffs between high demands for increasing the quantity of higher education opportunities and demands for improving education quality.

Public sector financial support for Jordan's 10 universities and 14 public community colleges parallels global trends, with government support for public institutions declining. Higher education expenditures as a percent of Jordan's total budget dropped from 2.5% in 1991 to 1.3% in 2011. At the same time, enrollment growth at private universities has exceeded that of public institutions, putting Jordan among the countries with very high private financing of higher education.

The public budget trend is to reduce direct support that subsidizes Jordan's institutions of higher education. The public policy trend is to plan for tuition and fees to recover the total cost of higher education and, at the same time, that government will increase the availability of financial assistance for financially disadvantaged students. About 28,000 grants and loans are planned for 2011.

MOHESR is creating a Jordan Student Aid Bank to replace the loan component of its student aid fund that reaches approximately 25% of financially eligible students. This new program, scheduled to begin in 2012, has been designed to be attractive to private banks that will lend manageable amounts to student borrowers, and to be fiscally sustainable for the government to guarantee those loans. A major barrier to implementation of the program, however, is Jordan's current level of debt, which is very close to the official 60% ceiling set for debt-to-GDP ratio. This means there is limited debt capacity available for the government to subsidize or guarantee student loans.

Recommendations:

- Explore opportunities for the participation of international donors, a Development Credit Authority, or other agencies, in addition to private banks, in subsidizing or guaranteeing student loans for higher education; and
- Hold the Ministry of Higher Education accountable for monitoring the restructuring of higher education support from institutions to students by tracking amounts and the percentage of total higher education spending dedicated to student grants and loans.

7. Community colleges

Alignment between higher education outcomes and the labor market has consistently been an important policy objective in Jordan, with the National Agenda citing improvements in the governance and funding of community colleges among its highest education sector priorities.

Community colleges are essential for economic diversification and the growth of Jordan's economy. However, they have struggled to restructure their traditional academic programs in a way that contributes more positively to labor market productivity. The policy priority in this area is to produce a skill mix more relevant to the labor market and capture increased economic and employment benefits from the Community College System. Currently, Jordan's 14 public community colleges are organized as part of Al-Balqaa' Applied University.

Past reports have pointed to a wide range of community college problems, including:

- Frequent changes in leadership;
- Absence of clear policy objectives;
- Lack of commitment to building required institutional infrastructure;
- Weak linkages with the employer community;
- Academically oriented faculty with low levels of practical experience;
- High numbers of students transferring to traditional academic university programs; and
- Large and growing numbers of redundant administrative staff.

Given these problems, the Council of Ministers recently approved actions to create a separate department within MOHESR, specifically for community college governance, management and operation. This new arrangement, expected to be implemented over a three year transition period, will bring Jordan into conformance with community college governance practices typical in

developed economies. It is expected to nurture the institutional culture necessary to provide graduates with employment linked knowledge, skills and abilities based on continuous and close institutional relationships with the employer community.

With an exclusive mandate to develop human capital at the intermediate, technical, and paraprofessional levels and to keep up to date with the needs of a changing economy, the new department will be accountable for results -- that community college graduates will have the competencies articulated as needed by employers in the respective fields, including academic knowledge, professional/occupational competencies, employability skills, and entrepreneurial competencies.

Recommendation:

- The results of the solution currently being implemented – a new and separate MOHESR department exclusively dedicated to technical education -- will not be clear for several years. Nevertheless, key performance indicators should be monitored to confirm whether expected results are accomplished. These should include:
    - Percent of community college graduates that find employment related to their technical education within one year of completion;
    - Percent of employers expressing satisfaction with community college graduates; and
    - Percent of community college graduates indicating their technical education was effective.

8. Current Policies and Levels of Service Estimates through 2016

The Public Expenditure Perspectives project sets out "current policy and current levels of service" estimates. These budget estimates are the amounts estimated as needed to maintain the policies and levels of services that were approved and in effect during 2011. It does this by starting with the 2011 levels of appropriations and estimating the cost increases and cost decreases over the following five years, 2012 through 2016.

In order to develop these estimates, the General Budget Department asked the six Education agencies to estimate the changed budget amounts (+ or -) they will need to continue 2011 policies and services through 2016, but not to include (1) inflation, (2) salary and benefit increases, and (3) energy costs, since these factors can be uniformly calculated by the General Budget Department.

Examples of appropriate increases through 2016, include previously approved increases in service levels and numbers of employees; estimated increases or decreases in student enrollment; the full-annual cost of previous partial-year initiatives; service increases required by law; additional costs necessary to open new facilities; and previously approved capital projects or capital asset acquisition. As for decreases, these include previously approved reductions or terminations in services; savings by opening new facilities or closing old facilities; reductions based on previous year one-time or emergency costs; and capital projects completed during the previous or current year.

Following submission of agency estimates, the General Budget Department reviewed and refined the estimates for 2012 through 2016. They are intended to serve as benchmarks from which to estimate future budgets, and to measure the results of decisions to improve program efficiency, effectiveness, and responsiveness. The results of this effort are presented in Table 26.

Table 26: Current Policies and Services Estimates: Education Programs

	Budget	Current Policies and Services Projections (JD in millions)				
	2011*	2012	2013	2014	2015	2016
Ministry of Education						
1 Administration and Support Services	49.1 million					
2 Kindergarten Education	9.8 million					
3 Basic Education	535 million					
4 Secondary Education	93 million					
5 Special Education	3.6 million					
6 Illiteracy and Elderly Education	601,000					
7 Social, Sport, Educational Activities	6 million					
8 Vocational Education	23 million					
Armed Forces Department of Education						
9 Educational and Social Services	18.6 million	18.6	18.6	18.6	18.6	18.6
Vocational Training Corporation						
10 Administration & Support Services	2.1 million					
11 Training and Habilitation	9.6 million					
Ministry of Higher Education						
12 Administration & Support Services	4.1 million					
13 Government Colleges, Universities	70.7 million					
Ministry of Planning & Int'l Coop						
14 Basic Education	10.5 million					
15 Government Colleges, Universities	108,000					
Higher Educ Accred Comm (3 progs)	1.3 million	1.3	1.3	1.3	1.3	1.3
Total Education	836.5 million					

* Approved General Budget for 2011 and proposed Government Units Budget 2011

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