

Report No. 32450-TU

Turkey—Education Sector Study

**Sustainable Pathways to an Effective, Equitable,
and Efficient Education System for
*Preschool through Secondary School Education***

December 31, 2005

**Human Development Sector Unit
Europe and Central Asia Region**

**In Association with
Education Reform Initiative/ Istanbul Policy Center**



Document of the World Bank



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ACRONYMS AND CURRENCY EQUIVALENTS

ECD/ECE	Early Childhood Development/Education
EC	European Commission
ERI	Education Reform Initiative
ESS	Education Sector Study
EU	European Union
GDP	Gross Domestic Product
HICES	Household Income and Consumption Expenditure Survey
HLFS	Household Labor Force Survey
MONE	Ministry of National Education
MYO	Post-secondary Vocational School
NGO	Nongovernmental Organization
NUTS	EU Nomenclature of Territorial Units for Statistics
OSS	University Entrance Examination
OSYM	Student Selection and Placement Center
OBBS	Student Achievement Determination Examination
OKS	Selection Examination for Secondary Education Institutions
PEIR	Public Expenditure and Institutional Review
PIO	Primary Schools with Pension Housing
PIRLS	Progress in International Reading Literacy Study
PISA	International Student Assessment Program (OECD)
SIS	State Institute of Statistics
SPO	State Planning Organization
TIMSS	Trends in International Mathematics and Science
YIBO	Regional Boarding Primary School

LEVELS OF THE TURKISH EDUCATION SYSTEM

Lower Primary Education:	Grades 1-5
Lower Secondary Education:	Grades 6-8
Basic Education:	Grades 1-8 (Compulsory Education)
Secondary Education:	Grades 9-11 or 9-12, including vocational and technical secondary education

CURRENCY EQUIVALENTS

Exchange rate effective as of December 31, 2005

Currency Unit: New Turkish Lira (YTL)

1.35 YTL = US\$1

YTL 1.61 = 1 Euro

US \$ 1.19 = 1 Euro

FISCAL YEAR OF THE GOVERNMENT OF TURKEY

January 1 - December 31

ABSTRACT

The start of membership negotiations with the European Union on October 3, 2005 validated the astonishing economic and social reforms that Turkey made over the last few years. Negotiations for EU accession and compliance with the *acquis* will further strengthen these reforms and help assure their sustainability. Nonetheless, achievement of the *acquis communautaire* will not be sufficient to assure Turkey's convergence with EU standards of living. To fully attain economic and social integration with Europe, and moreover to attain European living standards, Turkey will need to systematically raise the educational qualifications of its population up to international norms. The problems and challenges of Turkey's education system, and the reforms needed to transform it into one that helps all of the country's citizens develop advanced workforce competencies and a solid grasp of global knowledge, are the principal subjects of this report.

This Education Sector Study (ESS) seeks to contribute to the current dialogue among researchers, policymakers and other stakeholders regarding the creation of a coherent, sector-wide strategy for improving Turkey's pre-university education system. To this end, the ESS Team commissioned more than a dozen studies of key components of the system. These studies address a range of educational challenges, from access to pre-school to the equity implications of the existing high school entrance examination (see Annex 1 for summaries of these studies). The ESS was guided by three policy aims: to define desired the educational outcomes of the pre-university education system, the policies needed to achieve those outcomes, and the systems and structures that will enable all students to attain them.

In Turkey, only 27 percent of the adult population has a complete secondary school education, compared with 65 percent in the EU, 74 percent in Korea, 82 percent in Poland, and 87 percent in the US. Unemployment rates for recent graduates are quite high: more than half of eighth-grade graduates and nearly a quarter of secondary school graduates are still looking for work in their early twenties. The Government of Turkey recognizes an inefficient education sector is constraining economic growth, competitiveness and social cohesion. In response to these challenges, the government's Eighth Five Year Plan outlines an ambitious collection of national education objectives. Yet as this report makes clear, the current array of laws, programs and actions do not add up to a strategy to educate a more informed, open-minded and competent citizenry.

The ESS endeavors to provide accurate, candid and comprehensive knowledge about the education system's resources, outcomes, and impact. The report combines primary research methods with in-depth dialogue and consultation with stakeholders of the education system in Turkey (in the form of more than 25 seminars and workshops) to reach six major conclusions. The first of these conclusions highlights the degree to which the current policy framework is based on an old paradigm. The development and introduction of a modern, new curriculum for basic and secondary education, along with a variety of other programs, projects, and initiatives implemented in recent years to increase enrollments, results, and outcomes, represent the core elements of an emerging Education Sector Strategy in Turkey. ***Government should build on the success of its 1997 basic education reform by deepening and strengthening its emerging education sector strategy to better concentrate the sector's financial, human, and material resources on the achievement of Turkey's education objectives and its broader economic and social development goals.*** Such a comprehensive and fully developed education sector strategy should balance the imperatives of accountability and autonomy.

All children and youth must be provided adequate learning opportunities. Despite the extension of the Basic Education Law in 1997, empirical evidence indicates that significant disparities in access and inputs to education continue to exist between genders, social economic classes and geographical locations (see

Annex 1). Tens of thousands of children, especially girls and children from extremely poor households, are not enrolled in basic education; access to secondary and pre-school education is even more unequal. The current distribution of resources also leaves rural schools at a considerable disadvantage to their urban counterparts.

Most schools fail to assure that their students develop basic competencies. The solution this problem lies within the education system itself. As the report indicates, Turkey knows how to make schools succeed: its top schools are among the world's best, as results from PISA and other international examinations demonstrate. The challenge is not, however, restricted to academic schooling: vocational graduates are also disadvantaged by a lack of foundational skills and competencies. The inability of the system to provide knowledge and competencies to all students appears to derive in part from the structure of the system, which is driven by selection exams, not results-based accountability. Rather than evaluate the skills of all students, the school system measures success by the number of students who gain access to the country's university system.

An integrated policy for teacher education and professional development must be created. First and foremost, the process of teacher pre-service training needs to be rationalized, and should feature greater communication between the Ministry of Education, universities and the teacher selection exam service. Efficient distribution of teachers nationwide and their continuous professional development are presently impeded by the gap between what exists on paper and what happens in practice. Complementary resources, including new assessment tools and instructional technologies, have great potential for transforming traditional instruction into more effective, student-engaged learning.

The support, accountability, and governance of schools must be improved. Currently, Turkey's education system is highly centralized, even more so than the famously centralized French system. Nevertheless, disparities still exist between regions, provinces, sub-provinces and schools in terms of access, inputs and outcomes. These disparities are a direct result of the current structure of the educational system, which relies on political rather than technical criteria to determine school upgrades and needs.

Financing policies need to be aligned with the key objectives of the education system. The considerable resources devoted to education in Turkey (7 percent of GDP in 2002, according to ESS research) are not being used to advance the goals of an equitable system; more than one-third of all recurrent expenditures are funded by private sources, which virtually guarantees university access will be restricted to those who can afford to pay for expensive cram courses.

Using critical and technical analysis, and a careful review of international experience and practices, the ESS outlines five strategic objectives of Turkey's emerging education sector strategy, and then describes a number of policy options designed to help Government to consolidate and strengthen its education sector strategy. ***The ESS report concludes with recommendations to Government on continuing its participatory policy development process so as to draw on the knowledge, experience, and commitment of all stakeholders and practitioners in formulating the strategy, promote a broad based ownership of this strategy, and help assure its successful implementation.***

SECTION 1. BACKGROUND AND OBJECTIVES

Overview

The driving force behind this Education Sector Study (ESS) is to promote reform that will enable Turkey to improve the effectiveness, equity, and efficiency of its education system and, ultimately, the competitiveness of its workforce. The report offers the Turkish government policy options for the development of a medium-term sector-wide strategy for education. An improved education system will better prepare future generations of Turkish citizens to take advantage of emerging opportunities in both Europe and the larger global economy.

The ESS Team commissioned a series of research studies on the principal components of the education system, and then promoted dialogue among researchers, government policymakers and other stakeholders in the education system on the issues raised by these studies. Three policy questions emerged from these discussions that are central to a comprehensive sector-wide strategy:

1. What fundamental educational outcomes (i.e., competencies, knowledge, attitudes, and values) should the education system in Turkey foster in young citizens to help them successfully compete in the global economy, integrate with Europe, and assure sustainable social and economic development at home?
2. What policies can the government introduce to ensure that every student has adequate opportunities to develop these fundamental educational outcomes, regardless of individual social, economic or geographic factors?
3. What organizational structures can the government develop or strengthen at central, provincial, and local levels to enable all educational institutions in the country to provide these opportunities?

This Education Sector Study, prepared by the World Bank with the support of partner institutions, has three volumes. Volume I provides a summary of the report, highlighting the key challenges for reform and briefly summarizing potential policy options. Volume II provides a complete description of program challenges, conclusions and policy options for reform for preschool, primary and secondary education. Volume III summarizes the research studies commissioned for the report.

Context

Each year, Turkey's developmental prospects grow more reliant on the economies of its European neighbors and other countries in the region. Opportunities for youth and young families in Turkey have thus become more dependent on the global labor market, which requires ever-higher levels of schooling and abilities from entry-level workers. Turkey faces two challenges to compete successfully in this new environment. The first is to

raise the educational qualifications of its population to the levels of other middle-income countries and the nations of Europe. Educational attainment alone, however, will not be sufficient. The second challenge is to substantially upgrade the kinds of competencies that students develop during schooling so as to prepare them for the changing requirements of national and global labor markets.

Recent estimates show that only 27 percent of Turkey's adult population has a complete secondary school education, compared with 65 percent in the EU, 74 percent in Korea, 82 percent in Poland, and 87 percent in the US (UNESCO, 2005). This limitation undermines opportunities for Turkish workers, as well as the nation's competitiveness as a whole. In addition, domestic and global markets alike increasingly demand workers who can think creatively, adapt quickly to change, and apply knowledge. Labor market data point to problems in the transition from school to work in Turkey. Even considering low labor force participation rates in the country (49 percent for men and 25 percent for women), actual reported unemployment rates for recent graduates are quite high (53 percent for eighth-grade graduates among young people aged 20–24, and 23 percent among upper secondary school graduates aged 25–29). Only after a number of years of seeking employment, job turnover, and labor market experience do employment levels for young people begin to improve.

These data indicate a mismatch between what the labor market requires in terms of years of learning and educational competencies, and what graduates of general secondary, vocational, and post-secondary schools have learned. The gap in learning achievement between students in Turkey and Europe, as well as the knowledge component of that gap, will continue to widen if highly industrialized countries continue to invest heavily in improving their education systems. The fact that people in Turkey with better educations enjoy a large and growing earnings advantage has created increasingly powerful demand for quality secondary and higher education. The government's success in providing opportunities for all young people to develop both basic skills and more advanced competencies, as well as to continue with further education and training, will be a key determinant of its ability to improve living standards. Ultimately, success in educational reform will advance Turkey's social and economic development.

The government recognizes that unresolved challenges in the education sector are constraining economic growth, competitiveness and social cohesion. It has responded by putting forward an ambitious collection of national objectives and targets to improve education and training in Turkey. These objectives, outlined in the Eighth Five-Year Plan, together with the objectives of the government's "Urgent Action Plan," include, *inter alia*, increasing educational equity to eliminate regional, gender, and other demographic disparities; increasing access to pre-school education and improving the quality of basic education; modernizing secondary school programs to improve quality, increase efficiency and streamline the curriculum; and upgrading learning standards and outcomes for all students.

Policy experts from government, the private sector, and civil society recognize that any attempt to improve the education system must be based on accurate, candid, and

comprehensive knowledge about the education system's resource utilization, outcomes, and impact. Development of this knowledge base, a task to which this Education Sector Study will hopefully contribute, is not an end in itself. Rather, it is one of the principal building blocks of a comprehensive strategy.

Objectives of the Education Sector Study

The principal goal of this study is to assist Turkey in its formulation of a medium-term, sector-wide strategy for the education sector. This strategy will enable the country's leaders to transform the country's education system into a more effective, equitable, and efficient system than it is at present. Such a strategy would assist the Ministry of National Education to integrate various existing nationally and externally funded priority projects that address system bottlenecks into a more coherent, financially sustainable program.

The ESS fulfills several specific analytic objectives. First, it assesses the performance of the education system in terms of quantitative outputs, historical trends, student learning achievement, school quality, external efficiency, the school-to-work transition, and educational costs and expenditures. The studies commissioned for this report reviewed existing educational research in Turkey, ensuring that their findings are based on the latest data available. Second, by reviewing world trends and state-of-the-art practices on topics of interest to Turkish authorities, the study offers useful international comparative analysis on selected issues. (Separate policy notes were produced on the basis of these reviews.) Third, the ESS integrates the findings of these analytic inputs into a comprehensive set of conclusions. Fourth, the ESS proposes policy options for the development of a more coherent sector-wide strategy for education in Turkey.

Methodology of the Education Sector Study

Research

The ESS Team first examined existing literature on the education system in Turkey and identified gaps in the field that needed further attention. It then commissioned more than a dozen studies to address these research needs. These studies, which are the primary source of information for this report, establish a baseline for future studies. They cover a broad range of topics, from pre-primary enrollments to opportunities for graduates in the labor market and provide a comprehensive overview of the current state of basic education in Turkey. They also provide insights into historical trends and implications for future policy directions. (See Annex 1 for a summary of each paper.)

Dialogue and Consultation

The World Bank education team recognized that research alone would be insufficient to engage government policymakers in education. A second element of the ESS methodology has thus been to support government officials in working with civil society to identify problems and solutions to educational challenges. As in most countries, there is relatively little communication between policymakers and academic researchers. Those in government tend to view academic research as neither timely, useful, nor relevant to

their needs, and may disregard research that does not support their institutional convictions. Finally, government policymakers are often legitimately dissatisfied with research that does not provide clear recommendations for areas of immediate need.

The organizing methodology of the ESS was to promote policy dialogue between researchers, on the one hand, and government officials and other stakeholders, on the other, at every step of the process. This methodology sought to enable the two groups to better understand existing problems, accept the need for change, and consider new, non-traditional options for bringing about that change. The ESS was also designed to help government policymakers to collaborate with external specialists and thus consider challenges and lessons learned from comparative cases in Europe and elsewhere.

To better facilitate public consultation and dialogue, and to help break down philosophical barriers between government officials and other stakeholders, the ESS sponsored numerous workshops for government, academic, and civil society representatives (i.e., NGOs), as well as other stakeholders, to promote discussions on a financially viable strategy for the education sector (see Annex 2 for a list of ESS workshops).

Final Workshop

The final workshop for the Education Sector Study, which dealt with education from the pre-school through secondary school level, was held May 8–10, 2005, in Durusu, Turkey. The World Bank sponsored the workshop, which was also supported by the European Commission Delegation to Turkey and the Education Reform Initiative of the Istanbul Policy Center. The main purpose of the workshop was to bring together selected experts and policy specialists from government, academia, and civil society to share the findings of the ESS, develop a consensus on the main conclusions of the study, and outline policy options for improving Turkey's education system.

The conclusions and options developed at the workshop were incorporated into the present report. Over 70 people participated in the meeting, including senior officials and experts from the Ministry of National Education (MONE), the Undersecretariat of the Treasury, the State Planning Organization (SPO), the Ministry of Finance, the State Institute of Statistics (SIS), Parliament, the European Union, UNICEF, and universities in Turkey, along with representatives from private-sector associations, NGOs, and Turkish schools (see Annex 2 for a participant list).

SECTION 2. MAIN CONCLUSIONS AND CHALLENGES

Turkey's vision for the education system is forward-looking and focused on results. It defines the kind of citizens that the education system seeks to develop:

“To raise individuals of the information age who are devoted to the principles and reforms of Atatürk, whose thinking, perception, and problem-solving capabilities have been developed, who are democratic, devoted to freedom, faithful to moral values, open-minded, and aware of their personal duties and responsibilities...”¹

Research papers and policy notes commissioned for this study document the strides that have been made over the last decade—from expanding compulsory education from five to eight years, to improving learning outcomes for all students. Following the European Union's decision to invite Turkey to open negotiations for membership, a reexamination of the education system takes on even greater significance. Much remains to be done if Turkey is to become competitive in the new global economy and a fully integrated member of the EU. The following subsections synthesize the main conclusions of the research conducted for this report.

1. Enhancing the Mission of the 1997 Basic Education Reform

As is well known in Turkey, the country has made remarkable progress in increasing access to basic education in recent years. Following the adoption of the Basic Education Law (Law No. 4306) in August 1997, which mandated eight years of compulsory education, Turkey launched an unprecedented expansion of public primary schooling. The eight-year Basic Education Program involved a broad range of actions that were financed largely by government revenues, although private enterprise and international development organizations also made significant contributions.

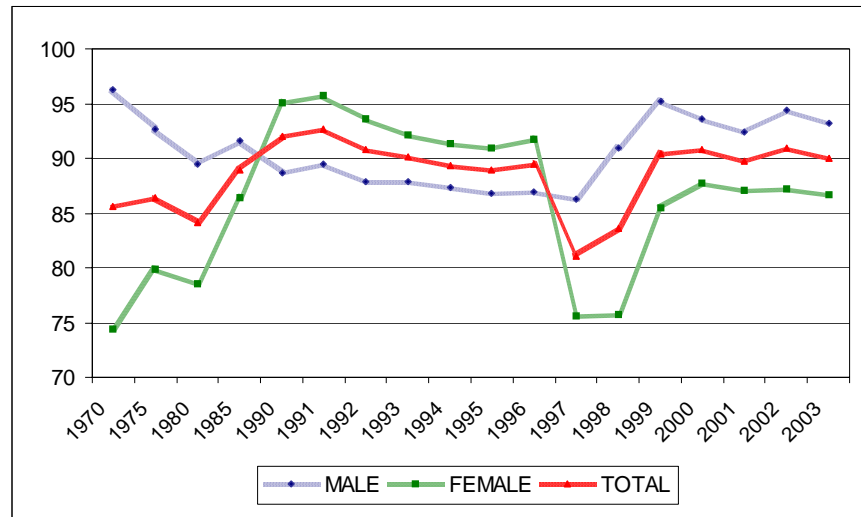
Total annual expenditures for the Basic Education Program have been on the order of US\$3 billion. These outlays included investments in the construction of new schools; the renovation or expansion of existing schools; a massive provision of computers, educational equipment, and educational materials; recurrent spending on the remuneration of teachers and other educational staff, as well as new recruitment and additional staff training. Using a combination of government and private contributions, the Ministry of National Education built 81,500 new primary-education classrooms during the five-year period 1997–2002, increasing classroom supply by 30 percent.

These investments have yielded a dramatic increase in educational coverage. Whereas the net enrollment rate of primary-school-aged children had actually declined somewhat in the six years prior to the Basic Education Law, from 93 percent in 1991 to 89 percent in 1996 (Dulger 2004, Hosgor 2004), enrollment increased by over one million students in the six years following the law's enactment. Net enrollment in grades 1 through 8

¹ 8th Five Year Development Plan, paragraph 675.

accordingly rose from 81 to 90 percent (See Figure 1).² *Few cases in the history of any national education system have produced such striking improvement so quickly; Turkey's leadership has earned the right to be proud of its accomplishment.*

Figure 1: Net Enrollment Rates in Primary Education, 1970–2003



Hosgor (2004), estimated from SIS and MONE Statistical Data

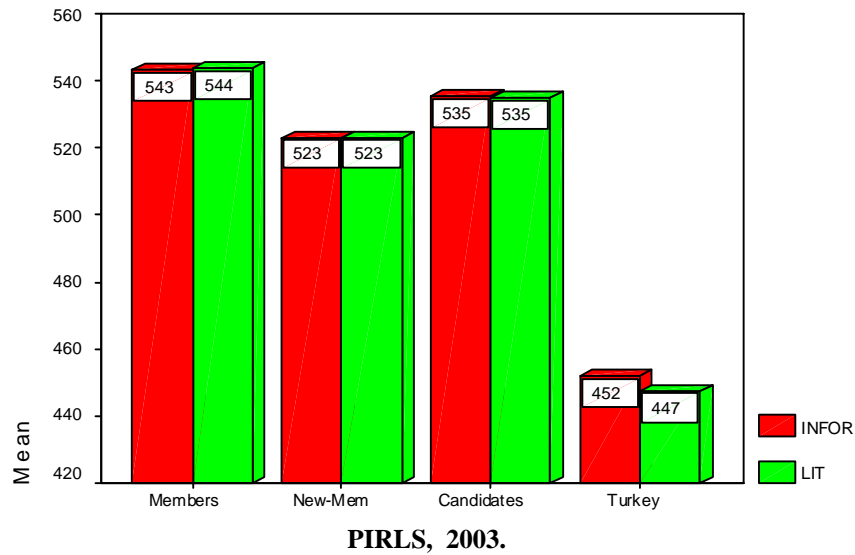
The government was eager to implement an expansion of the basic education system as quickly as possible in order to capitalize on political momentum for growth. Consequently, rapid enrollment growth took precedence over other educational goals that could enhance the achievements of the 1997 reforms. These goals include updating the curriculum, teacher preparation, and school quality standards, as well as educating the public about the goals of the education system.

Today, improvements in learning achievement, equity, secondary school entrance, and school-to-work transition are needed to reinforce the significant gains in enrollment. Recent international assessments³ have ranked Turkey well behind most of its counterparts in student learning achievement (See Figure 2). Compared to its European neighbors, Turkey's education system performs less well overall and admits fewer students to secondary school. This results in an adult population with an appreciably smaller proportion of secondary-school graduates than the rest of Europe, particularly women graduates.

² The gross enrollment rate increased from 85 to 96 percent between 1997 and 2002. During the same time period, the government raised enrollments in preschool with concentrated investments that increased the number of preschools by tenfold (Kaytaz 2004).

³ For example, Trends in International Mathematics and Science (TIMSS), Progress in International Reading Literacy Study (PIRLS) and, more recently, the International Student Assessment Program (PISA).

Figure 2: Comparisons of PIRLS Standard Scores: Turkey and EU Countries, 2003



Supporting a Paradigm Shift

The overall objective of Turkey's eight-year Basic Education Program was to: (a) expand opportunities for all children to attend grades 1 through 8, (b) increase the quality of education so as to increase regular attendance, and (c) help children to complete the eighth grade. An education paradigm that dates back to the previous government has, however, limited Turkey's ability to achieve broader-based educational reform. This paradigm has defined education sector policy in Turkey for well over two decades and is built on two major principles. The first principle is that to increase educational outcomes, it is sufficient to deliver more inputs. The second principle is that to raise educational quality, the government must exercise additional authority and control.

Both of these principles are necessary to achieve increased enrollments and establish adequate learning conditions for all. In order to meet the educational challenges of European integration and EU accession, however, a paradigm shift is needed to focus the education system on creating high-quality educational opportunities and outcomes for all students.

It is clear that Turkey's educational community is already shifting to this new paradigm, which recognizes the central importance of processes, incentives, and organizational factors that guide schools to provide quality teaching, engaging learning experiences, a rich and modern curriculum, and to establish partnerships with parents and the community. The developing new curriculum exemplifies the new paradigm not only by emphasizing student engagement and learning by discovery, but by the open and consultative process used by the government to develop and test this curriculum.

Development of a Comprehensive Education Sector Strategy

The development of the new curriculum, along with a variety of other programs, projects, and initiatives designed to increase enrollments, results, and outcomes, represent the core

elements of an emerging Education Sector Strategy in Turkey, described further in Section 3, below. To make significant progress on educational outcomes, Turkey can use the new paradigm to further develop and deepen this emerging strategy to better concentrate the education sector's financial, human, and material resources on achieving the country's educational and broader economic and social development goals. With a fully developed strategy in place, owned by both Government and the public, the Ministry of National Education, along with its social partners, could enable all stakeholders to: (a) focus their energy and efforts on the same shared goals; (b) evaluate existing programs, projects, and initiatives in the sector against these goals to ensuring that they are clearly aligned with the strategy and that they show evidence of achieving the stated targets; and (c) continually adjust activities and programs in response to changing conditions, while keeping the goals and targets of the strategy in sight.

In summary, the basic education reforms introduced by the 1997 law need to be enhanced by additional, qualitative reforms in the framework of a comprehensive education sector strategy. The government has already moved to address present imbalances in the system. A significant step was taken in 2003, when the Board of Education embarked on an ambitious program to modernize the basic education curriculum. It has pursued this process with an unprecedented level of public consultation and discussion. To be successful, the new curriculum must become part of a fully developed and broadly accepted comprehensive education sector strategy that focuses on creating better opportunities and outcomes for all students.

Other policy reforms would need to be included in such a strategy to support these goals. These would include linking the curriculum reforms to the Secondary School Student Selection and Placement Examination;⁴ assuring a more integrated system for teacher training and support; and introducing governance and accountability mechanisms at the national and sub-national levels to support curriculum reform. These mechanisms will motivate schools and communities to ensure that all students succeed in learning. New monitoring and evaluation tools will also be required so that the Ministry of National Education can monitor the performance of each and every basic education school in the country. These reforms, along with other suggested policy options, are provided in more depth in Section 3 of this report.

2. Ensuring Adequate Learning Opportunities for All

The compulsory basic education law of 1997 recognizes the government's obligation to guarantee that all children complete eight years of basic education. A tremendous effort has been made to provide good-quality schools for poor children in recent years. For example, the government launched a massive increase in new boarding schools for children in rural areas (the number of Primary Schools with Pension Housing, or PIOs, and Regional Boarding Primary Schools, or YIBOS, increased from 141 and 21 to 285 and 253, respectively, during the period 1997–2002). It also introduced bussing for over 600,000 students. The equity of public spending has also improved since the introduction of the compulsory basic education law, as is evident in the table below.

⁴ In Turkish, this is the *Orta Ogretim Kurumlari Ogrenci Secme ve Yerlestirme Sinavi*.

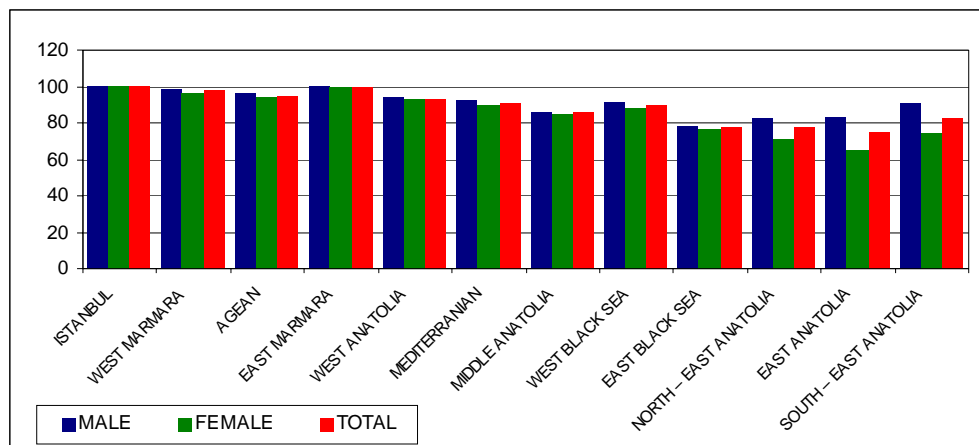
Incidence of Public Spending on Education: Improvements between 1994 and 2001

	Household Income Quintiles				
	1 (poorest)	2	3	4	5 (richest)
1994					
Basic education (8 years, primary + middle)	15.8%	21.1%	22.2%	20.6%	20.3%
Secondary education	8.7%	16.2%	22.3%	25.4%	27.5%
Total public expenditures	13.5%	19.5%	22.2%	22.2%	22.7%
2001					
Basic education (8 years)	21.7%	21.4%	21.0%	22.0%	13.9%
Secondary education	13.0%	14.6%	25.4%	22.8%	24.2%
Total public expenditures	19.2%	19.4%	22.3%	22.2%	16.9%

Mete (2004) Estimated from 1994 Household Expenditures Survey and 2001 Consumption and Income Survey.

Nevertheless, empirical evidence confirms that significant disparities in educational access and inputs remain between genders, social and economic classes, and geographic locations (Mete 2004, Hosgor 2004, and Berberoglu, 2004, among others). Tens of thousands of children, especially girls and children of extremely poor households, are not enrolled in basic education. A far greater number of children living in poor villages spread across the east and southeast of the country, the *gecekondus* of the larger cities, and marginalized urban peripheries nationwide have little choice but to enroll in schools that lack resources available to children in other parts of Turkey. Such children are equally unable to enroll in better-endowed schools within their own sub-provinces or municipalities (See Figure 3).

Figure 3. Regional Differences in Net Primary Enrollments, 2000–2001



Hosgor (2004), estimated from SIS and MONE Statistical Data

Gender and poverty gaps are even greater at the level of secondary education level because schools tend to reflect residential patterns of economic differentiation. That is, the schools that are not performing well are often located in villages or neighborhoods where poorer families live. In practice, this means that teachers in schools attended by

poor children are less experienced and/or trained, or have low morale and expectations. It also means that their classrooms have inadequate reading and reference books and other learning materials; and that school buildings are in unsafe environments or lack adequate lighting or functioning toilets. Differences in school quality also occur across provinces. Moreover, poor children with additional disadvantages, such as those with physical or emotional handicaps, are especially at risk because their educational opportunities are circumscribed by poverty (their parents have no means to locate schools that could address their special needs).

These disparities have resulted in unequal opportunities for learning, which have important economic and social implications for the country. Most significant, large shares of Turkish youth do not presently have the opportunity to achieve their potential in life. Repeated deprivation of adequate-quality learning compounds educational deficits year after year, so that poor children grow to adolescence with lower levels of learning achievement. Such children are usually unable to afford expensive tutoring for examination preparation. *With less learning achievement and no access to a dersane or private tutoring, poor children have a much lower likelihood of passing the Secondary School Student Selection and Placement Examination, and very little chance of passing the University Entrance Examination* (Tansel and Bircan 2004a, Tansel and Bircan 2004b).

The entire nation loses when these youth enter the labor force. Unequipped with the skills needed in a knowledge economy, they have low productivity, contribute less to Turkey's economic development and growth, and even provide a diminished tax base. Lower educational attainment for girls translates into under-representation of women in the labor market (Tansel 2004), with even greater negative consequences for economic development, growth, and tax revenue. *Indeed, one of the critical lessons learned from the East Asian "tigers" is that the combination of steady investment in human capital and policies to promote women's participation in the labor force drives sustained economic growth.*

Disparities in Access

Aggregate education statistics indicate that roughly 10 percent of Turkish children aged 6 to 14 (the compulsory age group) are currently not enrolled in basic education.⁵ Large shares of these would-be students are concentrated among two populations: girls and the poor (Hosgor 2004, Mete 2004). The age distribution of children who are not enrolled rules out the possibility that they are simply late enrollers. Children aged nine or older make up more than 90 percent of primary-school-age children who are not enrolled in the education system. *More than 70 percent of the children who are not enrolled in primary school are female, and more than 55 percent have illiterate mothers. These children tend to reside in rural areas (67 percent) and to be poor (53 percent).*

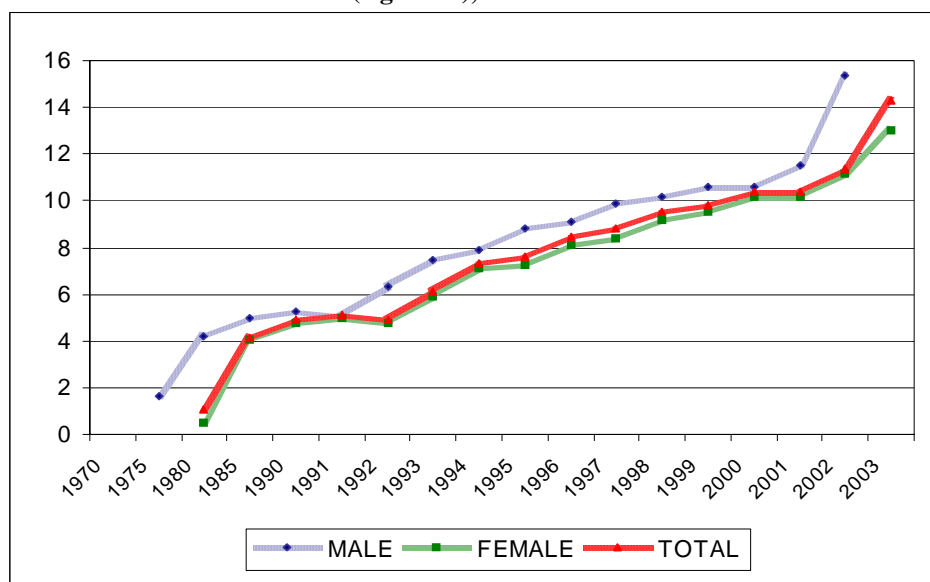
⁵ The net enrollment rate for primary education, that is, the percentage of 6- to 14-year old children (the compulsory education age group) enrolled in 1st through 8th grades, is estimated at 90 percent. The gross enrollment rate, or the percentage of children enrolled in 1st through 8th grades, regardless of their age, is estimated at 98 percent. (Hosgor 2004.) Most reporting of enrollment rates in Turkey refer to the gross enrollment rate, which includes children both younger and older than the compulsory education age group.

Other poor children who do not attend school are generally the truly poor, located in difficult-to-access mountainous or isolated villages. Distance to school is one explanation given by parents for not enrolling their daughters, especially in rural areas, even when a busing program provides transport to the nearest school. Parents may decline to send daughters to school for reasons of perceived safety, or because they depend on their assistance in the home. A second indicator of non-enrollment is the parents' level of education. Nearly 10 percent of non-enrolled children have fathers without an education, and 13 percent of girls who are not enrolled have mothers who did not complete fifth grade.

A systematic intervention that reaches all mothers and fathers without primary schooling would identify roughly 70 percent of children who should attend primary school, but do not. If these children were enrolled in school, the net enrollment rate would increase from approximately 90 to nearly 94 percent, and the gross enrollment rate would increase from 97 to 99 percent (Mete 2004).

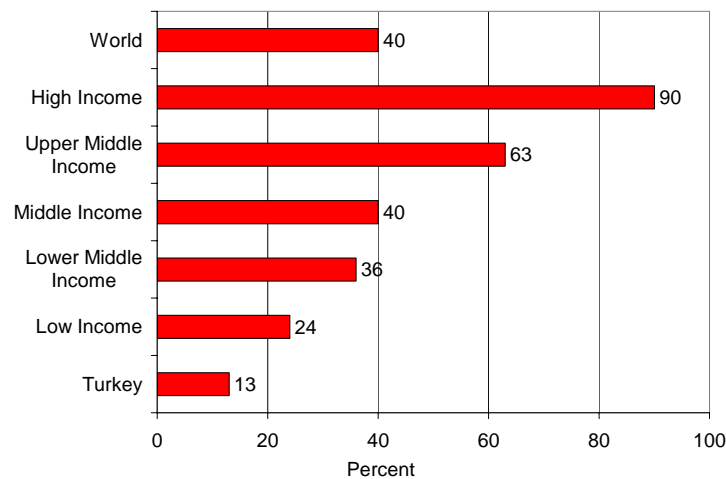
With regard to non-compulsory schooling, excluded groups are again those most in need of educational opportunities. For example, enrollments in pre-primary education are low for a country of Turkey's income level, although the country has made significant progress in the last decade (Hosgor 2004, See Figure 4). In the 2003–2004 school year, about 14 percent of children aged 4 to 6 were enrolled in pre-schools. Three-quarters of children in this age group were enrolled in formal kindergartens attached to public primary schools run by the Ministry of National Education (MONE), which accept children at the age of six (Kaytaz 2004). Expanding pre-school enrollments to 25 percent of children aged 4 to 6 is one of the government's key education objectives. Nonetheless, even if Government could achieve this target, Turkey's preschool enrollment rate would still fall below the global average, as well as that of middle income countries (Kaytaz 2004, See Figure 5)

Figure 4. Net Enrollment Rates in Pre-Primary Education, (Ages 4–5), 1980–2003



Hosgor (2004), estimated from SIS and MONE Statistical Data

Figure 5. Gross Pre-school Enrollment by Country Groups, 2003



Kaytaz (2004)

In areas where demand exceeds supply, MONE policy mandates that children from poor families be given priority. How this policy will work in practice (for example, the requirement of waiting lists and means testing) is not made clear in official reports. *Currently, the debate over pre-primary schooling concerns whether or not to continue the gradual expansion of pre-school enrollments by targeting disadvantaged children or moving towards a more universal, or compulsory, program.* MONE has not yet determined the best approach to increase pre-school enrollment rates, nor has the government determined how to finance such an expansion.

Access to secondary school is limited both by availability of school places and economic status. Gender differences in enrollment at the secondary level are extremely high. *One in three high-school-aged girls does not attend secondary school, compared with only about one in ten boys.* This is by far the largest gender gap among EU members and candidate members. In some parts of Turkey, female enrollment in secondary school is far worse.⁶ It should be noted that among the total number of illiterate people in Turkey, four out of five are women. The reasons for the under-investment in girls' schooling are numerous and complicated and will not be repeated here (for additional information, see Mete 2004, World Bank 2005b).

Disparities in Educational Resources

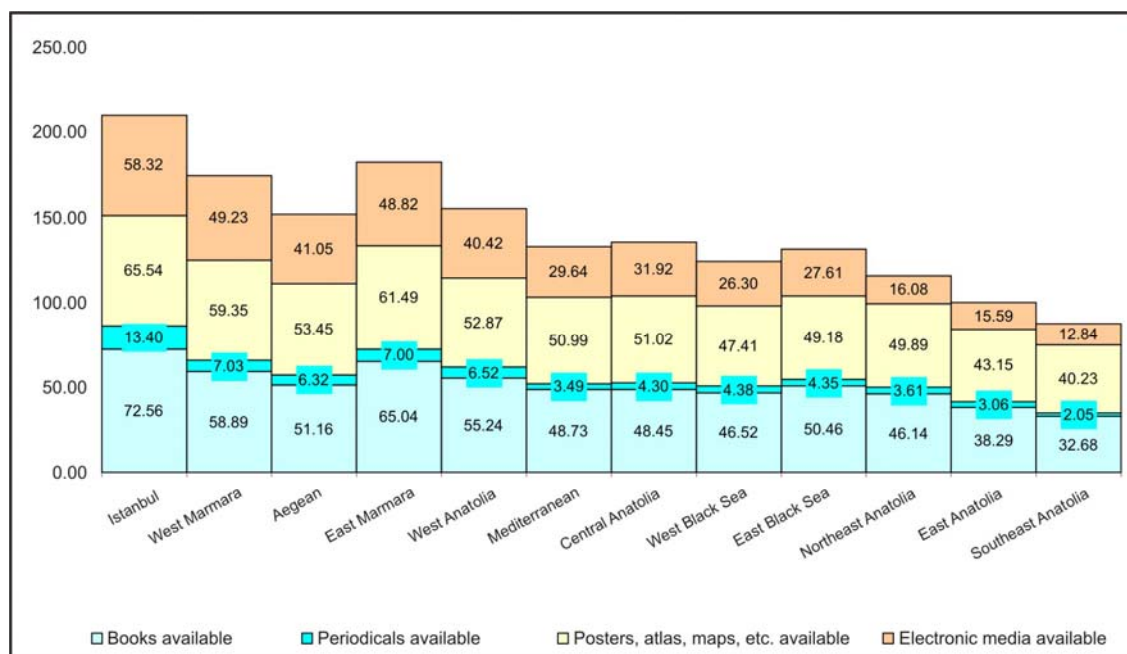
Despite decades of intense effort, extensive policy reform and considerable investment by a centralized education authority, inequities continue to exist in the distribution of resources and inputs across regions and schools. What appear to be missing are quality standards for school inputs and targeted investments for those segments of the population most in need of high-quality educational opportunities.

⁶ For example, in the Southeast Anatolian region, only 14 percent of girls in 2001 were enrolled in secondary school (Hosgor 2004).

Sizable differences in inputs among primary schools were recorded in the reports commissioned for this study (Kuitunen 2004, Sahin 2004, Mete 2004). Differences in resources for secondary schools are also widely apparent. In addition, teacher experience varies considerably across regions of Turkey. To cite one example, teachers assigned to schools in the poorest regions in the east and southeast of the country were found to have less than 7 years of teaching experience, on average, than their colleagues teaching in other regions of the country, who have an average of 14 to 21 years of experience (Berberoglu 2004).

Inequities in the distribution of human resources (teachers) and physical inputs are even more visible in rural-urban comparisons and comparisons of student background. At the primary and lower-secondary levels, parents complain about differences in resources and inputs (e.g., teacher and principal experience, school equipment, facilities) between rural and urban schools (Sahin 2004, Mete 2004). This gap in service delivery is captured by the fact that 55 percent of rural parents reported problems with their schools, compared to only 32 percent of urban parents. Differences coalesce not only around the rural-urban dichotomy, but also around income levels. Poorer households report more concerns about the quality of their children’s schools than wealthier ones, with such problems as deteriorating educational facilities, lack of books, and shortages of teachers.

Figure 6: “Distribution of Educational Materials in Basic Education Schools: Across NUTS 1 Regions, 2004-2005”



Hosgor (2005) estimated from MONE Statistical Data published on MONE Website

The fact that schools serving wealthier families tend to benefit more from informal financial and in-kind contributions than schools serving poorer families exacerbates these inequities. Even simple matters, such as the presence of sufficient teachers, can depend

on family income. There are also considerable variations in teaching processes (a product of teacher inputs and training), discussed later in this report.

Differences in primary school quality have direct implications for students' access to secondary, and ultimately, tertiary education. Enrollment in well-resourced, high-quality academic schooling is strictly controlled through the highly competitive Secondary School Student Selection and Placement Examination (Turkish acronym, OKS), administered at the end of eighth grade. In fact, primary schools are presently evaluated by parents based on the share of students that perform well on this exam (Sahin 2004). While examination-based selection is frequently the subject of criticism, at least the exam asks the same questions of all students and the evaluation is undertaken in a consistent and centralized manner.

Despite these features, the examination has serious deficiencies. First, it includes only a limited number of multiple-choice items, which means that it cannot cover all aspects of the primary school curriculum—each discipline is measured only by a few items. Second, ***the OKS exam is a single, high-stakes measure which alone determines who benefits from the best secondary education that Turkey has to offer.*** Third, research in other countries, including middle-income countries, indicates that selective educational systems significantly increase inequalities in the system. Families in Turkey with economic means enroll their children in private tutoring courses to assist them to score well and thus obtain one of the scarce places in prestigious Anatolian, Science, Military, or other top high schools.

Those who do not take the OKS exam, or who fail to achieve high marks, go on to attend general public secondary schools or lower-prestige vocational schools and have far less opportunity to continue their schooling. For years it has been the implicit policy of the Ministry of National Education to have more and more students go to vocational education and to expand vocational education through the provision of additional vocational schools and teachers (Metek 2004).

However, an ever-growing share of Turkish youth each year take the selection exams at the end of basic education. The percentage of students enrolling in vocational education has also not increased, despite the expansion of vocational schools. The surplus of vocational school places, coupled with the preference of young people for general secondary school, has resulted in a significant decrease in the number of students per teacher in vocational schools compared to general secondary schools, and a corresponding increase in the per-student cost of a vocational education.

At the secondary level, school quality and learning outcomes vary significantly between different types of schools in Turkey's education system. Students who study at the Anatolian and Science High Schools, for example, perform much better on all educational indicators than those who study in general secondary schools. Moreover, rather than making a greater effort to improve the quality and desirability of general and vocational schools, government policy has inadvertently aggravated the differences between them. When, from time to time, demand for quality general secondary education

increases, the government responds by creating a new type of secondary school.⁷ The addition of new types of secondary schools creates another layer of management, which absorbs additional administrative resources and directs effort and financial resources away from improving the bulk of secondary schools.

At the end of secondary school, college-bound students sit for the most important, high-stakes test they will ever take: the university entrance exam (the OSS). This examination is designed to control access to the next level of education in the system. Again, parents pay considerable sums for cram schools and test preparation, with highly coveted, fully paid university vacancies going to the best-prepared (and most advantaged) students, some 30 percent of test-takers. *Household income thus seems to play a large role in determining access to all levels of post-compulsory education* (Tansel and Bircan, 2004a, Mete 2004).

3. Developing the Basic Competencies of All Students

Scattered across Turkey, there are students who have the good fortune to attend primary and secondary schools that are easily among the world's best. By definition, students enrolled in these schools have demonstrated high levels of learning achievement. Compared to typical general high schools, students in these remarkable schools are more likely to be actively engaged in, and actually enjoy, their learning experiences. These students learn not only from their teachers, but from their peers, and in a variety of ways—both collectively and in groups. They are more likely to pay attention in class on a regular basis, observe what is going on, participate in activities, and show respect for others. In other words, they are developing academically, socially, and emotionally.

Parents are also more likely to be involved in these schools in various ways, participating in school events and school planning, helping teachers with classroom or extra-curricular activities, and providing support to their children as they do their homework (Sahin 2004, Kuitunen 2004). The ESS research shows that it is not necessary to have wealthier students or more resources to attain excellent results. Even some schools with average levels of resources in Turkey can perform at these high standards (Sahin 2004).

It is an unfortunate fact that most children in Turkey are not enrolled in such world-class secondary schools. Research indicates that the majority of Turkey's youth are not even developing the basic core competencies and foundational skills that would enable them to continue successfully with academic or vocational schooling, or to contribute to the social and economic development of their country. Results of international and national assessments, confirmed by ESS research, show that most Turkish students fail to develop basic language, math, science, and problem-solving skills during their first eight years of schooling. Table 1, below, shows that only 26 percent of 15-year-old students in Turkey are able to apply even simple problem solving techniques in mathematics (Proficiency Level 3 on OECD's 6 level proficiency scale). The comparable percentage of students attaining Level 3 or above among European Union members is 60 percent.

⁷ For example, the "Super-Lyceum" or the "Multi-Program High School."

Table 1: Student Proficiency Levels in Mathematics from PISA 2003, and Distribution of the Proficiency Attainment of Turkish Students

Proficiency Level (Percentage of Turkish Students Attaining this Level)	What students can typically do?
Level 6 (2%)	Students can conceptualize, generalize, and utilize information based on their investigations and modeling of complex problem situations. They can link different information sources and representations and flexibly translate among them. Students at this level are capable of advanced mathematical thinking and reasoning. These students can apply insight and understanding along with a mastery of symbolic and formal mathematical operations and relationships to develop new approaches and strategies for dealing with novel situations. Students at this level can formulate and precisely communicate their actions and reflections regarding their findings, interpretations, arguments and the appropriateness of these to the original situations.
Level 5 (3%)	Students can develop and work with models for complex situations, identifying constraints and specifying assumptions. They can select, compare, and evaluate appropriate problem-solving strategies for dealing with complex problems related to these models. Students at this level can work strategically using board, well developed thinking and reasoning skills, appropriately linked representations, symbolic and formal characterizations, and insight pertaining to these situations. They can reflect on their actions and communicate their interpretations and reasoning.
Level 4 (7%)	Students can work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions. They can select and integrate different representations, including symbolic ones, linking them directly to aspects of real-world situations. Students at this level can utilize well-developed skills and reasons flexibly, with some insight, in these contexts. They can construct and communicate explanations and arguments based on their interpretations, arguments and actions.
Level 3 (14%)	Students can execute clearly described procedures, including those that require sequential decisions. They can select and apply simple problem-solving strategies. Students at this level can interpret and use representations based on different information sources and reason directly from them. They can develop short communications reporting their interpretations, results and reasoning.
Level 2 (22%)	Students can interpret and recognize situations in contexts that require no more than direct inference. They can extract relevant information from a single source and make use of a single representational mode. Students at this level can employ basic algorithms, formulae, procedures, or conventions. They are capable of direct reasoning and making literal interpretations of the results.
Level 1 (25%)	Students can answer questions involving familiar contexts where all relevant information is present and the questions are clearly defined. They are able to identify information and carry out routine procedures according to direct instructions in explicit situations. They can perform actions that are obvious and follow immediately from the given stimuli.
Below Level 1 (28%)	Students below the minimum proficiency level (Level 1).

Berberoglu (2005), based on 2003 OECD PISA report (OECD 2004)

There are several reasons why so many general secondary schools lack the qualities of the leading secondary schools described above. First, many schools do not meet minimum standards for basic infrastructure, equipment, and educational materials. Second, teachers in most schools do not have the knowledge and know-how to engage students' interest and enthusiasm, teach interactively, or offer stimulating learning experiences that help students construct their own knowledge and skills. Third, management arrangements and practices, including site management (principals) and

local management (inspectors), are not designed to support and promote improvements in educational quality. Fourth, the relationship between schools and their communities is not well developed in much of Turkey, and governance of the system does not hold schools accountable to parents and communities. Finally, financing policies are not designed to motivate schools and their staffs to improve the performance of all students.

The challenge for education policymakers in Turkey is to better align resources with a strategy to improve the quality of all schools, so that students everywhere in Turkey can, at a minimum, learn basic numeracy and literacy skills, as well as develop broader competencies (e.g., critical thinking and problem-solving skills) needed for global competitiveness and the knowledge economy.

A Comparative View

The 2003 results of the OECD Program for International Student Assessment (PISA) provide a benchmark for student achievement in Turkey. PISA is one of the key measures used in the educational monitoring in Europe. Created by the Lisbon European Council and endorsed by the Barcelona European Council in 2002, the program evaluates the ability of 15-year-olds to use the knowledge and skills acquired during compulsory education in real-life applications, practical functions, or for further education. It also measures the productive potential and competitiveness of the labor force. On average, Turkey's 15-year-olds performed below their counterparts in every OECD country that participated in PISA in 2003. Thirty-four countries scored above Turkey in mathematics, thirty-three in reading, and thirty-five in science. It is particularly important to note that PISA uses a six-level scale of mathematics-quantitative proficiency, where "1" represents the absolute minimal level of proficiency and "6" represents high-level, complex problem-solving and mathematical reasoning ability. Over half (55 percent) of Turkey's 15-year-old students were unable to perform above level "1," whereas in OECD countries (including Turkey), this proportion was, on average, less than 21.3 percent.

Similar results were found in all mathematics skill areas, from geometry and algebra to statistics and computation, as well as in reading and science (Berberoglu 2005). ESS research documents very similar ratings from other international assessments in which Turkey has participated, namely, Trends in International Mathematics and Science Study (TIMSS), Progress in International Reading Literacy Study (PIRLS), and Turkey's own national Student Achievement Determination Study (OBBS) (Berberoglu 2004 and 2005, Sahin 2004).

Turkey Knows How to Make Schools Succeed

One of the interesting conclusions from the PISA study was that, among participating countries, Turkey showed the greatest variation in performance among types of secondary schools. That is, there was much greater variation between than within school types (OECD 2004). The average performance of students enrolled in Anatolian Science Schools, Anatolian Schools, Police Schools, and other selective secondary schools, for example, far exceeded the performance of students in regular general secondary schools or vocational schools (where performance disparities were even more pronounced).

In fact, a relatively large share of students in Turkey performed at the very highest competency level (level “6”) in mathematics on the PISA evaluation. The proportion of students at this level was higher in Turkey than in many EU and OECD countries, and was even above the share of such students in the US—2.4 percent versus 2.2 percent. These results indicate that enough knowledge exists in the education system regarding how to produce high-quality learning outcomes.

Given that most students who participated in the PISA were still in ninth grade, the skills and knowledge that PISA measured in 15-year-old students were mostly learned in primary school. Certain primary schools thus have the know-how to successfully develop student competencies. The education system then identifies the best of these students and awards them places in the Science, Anatolian, Military, and other selective secondary schools. It is these students who performed so well on the PISA.

Turkey’s challenge is to transform a school system that succeeds in educating a small number of students to the highest international standards into one that does a good job at educating all students. If the education system does not move in this direction, the vast majority of students will develop few skills and inadequate competencies, a result that is neither equitable nor sustainable.⁸

Improving Vocational Education, and Integrating it Further with General Education

Foundational skills and core competencies are not only important qualifications for higher levels of schooling, they are also requirements of initial employment and career growth, both in Turkey and the broader global labor market. Foundational skills are also prerequisites for on-the-job training and life-long learning. Yet ESS research indicates that vocational graduates in Turkey are not prepared for employment. In fact, such graduates are no more likely to be employed after high school than general secondary graduates who enter the labor market after completing high school (Tansel 2004).

Research shows that fewer than half of employed vocational high school graduates report having jobs that utilize the skills they learned in school (Ogawa and Tansel 2004). In addition, while average hourly wages for high school graduates and vocational school graduates are about the same, wages for university graduates are double this level (2002 data, Tansel 2004, see Table 2). ***In other words, it appears that the labor market does not differentiate much between vocational and general secondary school graduates in terms of productivity, paying them the same wages, on average. The labor market does, however, pay a huge premium to university graduates—twice that of secondary graduates.***

⁸ Providing more preschool education could also help raise the learning outcomes of children from disadvantaged families. According to the international literature, children who participate in a good quality preschool program, especially those from poor families, show improved cognitive performance in primary school compared with children without preschool education (Kaytaz 2004).

Table 2: Distribution of Average Hourly Real Earnings (in TL) by Age, Education and Gender for the Urban Wage-Employed, 2002⁹

Male				
Education:	15-24	25-44	45-65	Total
Illiterate	239.98	498.14	430.46	435.06
Non Grad	205.90	389.30	480.99	366.05
Primary	415.99	594.63	662.41	578.56
Middle	308.40	724.40	894.29	628.71
High School	537.41	946.29	990.07	854.31
Voc. High	469.38	962.01	1166.02	869.29
University	752.94	1568.67	2027.63	1626.56
Total	426.53	818.68	971.05	771.11

Female				
Education:	15-24	25-44	45-65	Total
Illiterate	148.98	306.39	265.21	272.21
Non Grad	516.35	383.36	470.34	443.60
Primary	301.84	441.99	374.21	382.29
Middle	296.81	539.27	674.21	387.99
High School	397.84	817.23	1520.88	645.66
Voc. High	357.60	840.10	995.15	631.34
University	754.19	1341.31	1689.39	1273.64
Total	380.51	816.42	772.33	651.28

Tansel (2004) estimated from SIS Household Income and Consumption Expenditure Survey, 2002.

Vocational education is narrower than that provided by general secondary schools; it does currently focus on developing general language, writing, quantitative, or scientific competencies. This means that vocational graduates have a considerably weaker foundation for developing additional analytic skills, pursuing on-the-job training, or cultivating lifelong learning (Berberoglu 2004). Because their schooling provides little in the way of general knowledge and competencies, vocational graduates are less prepared for the university entrance examination than are general secondary graduates (Berberoglu 2004). The formula for university admissions also assigns a low weight to their grade point average. The low-weighted secondary school achievement score, added to a typically lower university entrance exam score, means that vocational school graduates have a negligible chance of entering university. *Despite these disadvantages, the number of vocational graduates taking the university entrance exam continues to rise each year, driven by students' desire to access the rewards of a university degree* (and also, possibly, because they have been ill-advised during their school years).

⁹ The wages are expressed in 1987 Turkish Liras to make them comparable across time.

Despite these constraints, Turkey has continued to seek a sizeable increase in the proportion of secondary students attending vocational schools. Because the Government has been promoting this objective for decades, it has become firmly established in the rhetoric of politicians, business associations, non-governmental organizations, and academics alike.

Instead of looking for alternative ways to develop a variety of opportunities for Turkish students to pursue further education and training after high school, policymakers and educators in Turkey prefer to have students choose a program of study when they are very young and direct them towards less challenging educational paths. Although many policymakers in Turkey worry about the growing number of secondary school students seeking university entrance in an environment of constrained opportunities, attention should be more focused on the skills and competencies learned by all young people in order to be prepared for employment, career development, and lifelong learning. The Turkish education system is thus one in which students are systematically tracked into different types of education from an early age. This tracking system reduces learning opportunities through a series of selection examinations that separate students by achievement and places them into schools that then exacerbate their learning differences. Currently, each step of the education selection process in Turkey leaves fewer and fewer students to benefit from high-quality education or further learning opportunities. Not coincidentally, these are the very students who began their educations with the most favorable socioeconomic backgrounds and conditions (OSYM 2003).

Turkey should assure that all secondary school students have the opportunity and the support to learn both academic as well as applied competencies that could help them prepare both for tertiary education studies and high-skill employment. For example, students enrolled in vocational schools should have access to classes that help them develop the core competencies and skills such as those offered in general secondary schools. Likewise, students enrolled in general secondary schools should have access to applied and technical skills, since the vast majority of them will not enter a four-year university program. Furthermore, to fully develop the potential of its youth, policymakers in Turkey should consider more diversification, rather than limitation, of educational opportunities for young people. Every educational option should be accompanied by back-up second and third options, so that students who mature later in life or change their interests can pursue new opportunities, develop new directions, and achieve their potential in life.

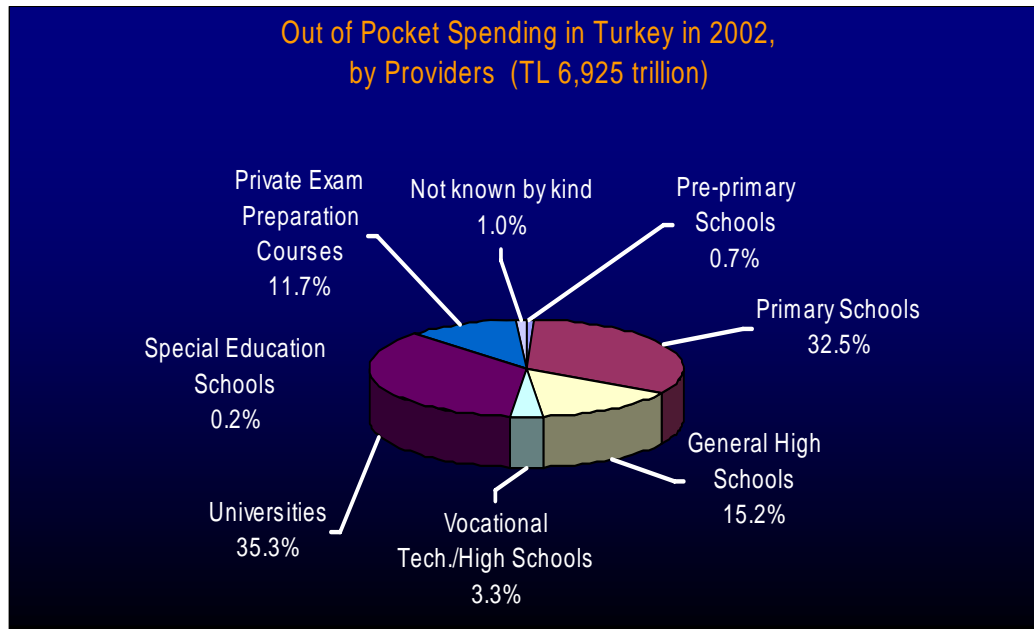
Moving towards Accountability based on Curriculum Achievement

One important challenge for Turkey is to improve student learning at all school levels without exacerbating the system's focus on the two major selection examinations. This is no small matter, given the pervasive influence of selection exams in Turkey's schools. Even the better primary schools, which ascribe to such noble visions as "to see every one of our graduates as a happy and successful member of the society" or to successfully develop "self-sufficient, productive and modern individuals," have as their common objective "to be at the top in the Secondary School Student Selection and Placement Exam" (Sahin 2004).

Many educators in Turkey do not consider the selection examinations appropriate drivers of educational quality or improvement. First, the exams exert far too much influence on the lives of those who take them (TED 2005). Second, families that can afford to, and even many of those who cannot, spend exorbitant amounts on preparation courses for their children. According to a recent study, the average cost of such a preparation program for the OSS exam is US\$4,711 (TED 2005). In addition, while of the highest integrity and transparency, the OSS is not well suited to develop the kinds of competencies needed by Turkey's future workforce. All indications are that the exam drives down the quality of teaching and learning because it tests an extremely narrow range and depth of the curriculum, tests only the kind of learning that can be measured with multiple-choice items, and tests quickly in a one-sitting, short exam.¹⁰ Given that this single exam is the key determinant of students' future opportunities, it has generated the exam preparation industry, which absorbs vast amounts of out-of-pocket educational expenditures. Total private expenditure on examination preparation in 2002 were estimated at approximately US\$650 million (11.7 percent of total out-of-pocket expenditures), or about one-fifth of what Turkey spends annually on all 81 public universities (Chawla 2004, see Figure 7, below). Despite these vast sums of money, exam preparation expenditures provide little value in terms of raising human capital and the educational qualifications of the population.

¹⁰ Starting in 2006, the OSS has been revised to have two sections. All test-takers will be given the same items in the first section, which is designed to cover the entire academic curriculum. Different items (booklets) will be given to students in the second section depending on their selected area of concentration in high school. Moreover, the items will cover all of the academic subjects taught in all of the years of high school.

Figure 7: Out-of-Pocket Expenditures on Education in 2002



Chawla (2004) estimated from SIS's 2003 survey of educational expenditures

Third, students who fail to enter the university feel “insufficient” or “useless” after investing 11 or 12 years of their lives in school because they either do not hold the qualifications for better-paying jobs or lack the status that they had hoped to achieve (TED 2005). Finally, educators question whether it is worthwhile to “teach to” these tests. Many faculties report that university entrants spend their first years in remedial classes to develop the thinking and problem-solving skills that are not assessed by entrance examinations (TED 2005).

A great deal of research supports the principle that good learning outcomes start with the establishment of learning standards and high expectations for all students. These standards are measured and publicly reported to determine whether students in all schools are attaining desired educational outcomes (as well as to diagnose learning gaps that help teachers better serve their students). Schools are then held accountable for assuring that all students achieve these standards.

Turkey is well on the way to establishing common educational standards. It has just introduced a new curriculum designed to set common, consistent standards for what every student should know and be able to do. The new curriculum is also intended to shift teaching away from a presentation-recitation methodology towards teaching for conceptual understanding, problem solving, and shared intelligence, and other outcomes—all essential requirements for successful participation in a knowledge society and economy.

Where Turkey will need to concentrate its effort in coming years is in measuring and reporting the achievement of these standards. Turkey’s contemporary examination system

is ill-suited to achieve such objectives as reducing achievement gaps between students, raising learning standards for all students, and increasing the conceptual and knowledge aspects of student learning. ***Indeed, selection examinations in Turkey are not linked to curriculum standards and test only a very narrow range of curricular content.*** These exams are also limited technically, in that they use only a multiple-choice format and do not include open-ended, essay-type items or other modern instruments for measuring educational achievement.

In general, entrance exams are not designed to assess the performance of schools against curriculum requirements or to identify students who need additional assistance from their teachers, so that a school may better meet its performance targets. In addition, these selective examinations are optional: only those students who choose to take the examinations do so. Finally, to achieve better student learning outcomes in all schools, Turkey needs to establish learning achievement targets for each school, village, sub-province, and province, as well as mechanisms that give schools the incentive to achieve these targets.

4. Updating Teacher Education and Professional Development

In recent years, students in Turkey participated in a large variety of national and international assessments of student learning achievement (including TIMSS, PISA, PIRLS, OBBS, OKS, and OSS) discussed earlier in this report. All of these assessments come to quite similar conclusions: student achievement in the country is generally low to very low for most students, although a minority of students perform very well. These assessments link educational achievement to a variety of factors, chief among them, the quality of teaching and learning. School-related factors are easier to improve in the short term than are factors rooted in family background or external social and economic conditions. ***Turkey has ample opportunity to institute policy improvements that could generate learning gains across a number of areas, the most important of which is teacher quality.***

Research in Europe, the United States, and across the globe demonstrates unequivocally that teacher quality, along with teaching practices, are the most significant determinants of student educational achievement, apart from family background and community factors. Studies in the United States find that teacher quality accounts for as much 40 percent of differences in student achievement. According to this research, the key components of teacher quality are verbal ability, subject matter knowledge, knowledge of teaching and learning, and the ability to use a wide range of teaching strategies adapted to student needs.¹¹

Similar conclusions are found in research conducted in other countries. In fact, studies in middle-income countries such as Brazil and Chile indicate that teacher quality has an even higher impact on student success. Effective teachers stimulate their students with

¹¹ Linda Darling-Hammond, Executive Director of the National Commission on Teaching for America's Future (1999).

challenging educational content, regularly evaluate student learning in the classroom and integrate the results of this evaluation into their teaching, group students or organize the classroom so as to keep all students engaged and motivated, and teach in an interactive manner.¹² The interactive teacher positively affects students' self-perception of success across subject areas, one of the most important predictors of achievement (Berberoglu 2004).

Teachers in Turkey are now experimenting with elements of an instructional model that is more student-centered. However, ESS studies show that attempts by teachers in Turkey to use interactive teaching methods or modern didactic equipment have not generally improved student educational outcomes (Berberoglu 2004, Sahin 2004, and Kuitunen 2004). The research clearly shows that the cognitive achievements of students who report that their teachers employ group work, long-term student-managed projects, and student-led presentations and discussions in their classrooms are lower than those of students whose teachers employ traditional instructional methodologies. Students who report that they use computers in basic education schools also have lower cognitive performance, on average, than those who report having no access to computers at their schools. Similar findings were determined for other facilities, such as libraries. The frequency of library use cannot explain school success by itself; rather, it is how students and teachers use the library as an effective tool for learning that influences student outcomes.

Evidence from qualitative research in Turkey indicates that many teachers do not have the know-how to effectively use student-centered methodologies. First, most do not have access to the kinds of above-mentioned resources. Second, teachers are not offered appropriate development opportunities to improve the quality of their interactive teaching skills. Another explanation is that, due to their economic and socio-cultural backgrounds, new teachers cannot readily understand or adapt to new approaches (Gurkaynak et al. 2003).

Teachers in Turkey may understand that learning-centered teaching leads to improved outcomes, such as critical thinking, but because they themselves were not educated this way and have not been taught to value such teaching, they are unprepared to implement it. Teachers also do not have access to in-service training that would provide them with such skills and methodologies. Teaching models offered in pre-service training are typically based on rigid didactic instruction ("chalk and talk"), a method that teachers are now being encouraged to phase out.

In theory, aspiring teachers should be able to acquire new know-how in pre-service teacher education programs at universities. Practicing teachers should also be able to learn new methodologies through targeted, in-service professional development (Sahin

¹² According to the literature, effective teachers are interactive when they explain the learning objectives and principles of a lesson to their students, lead class and group exercises, ensure that all students are actively engaged, employ supplementary reading and other pedagogical materials, conduct demonstrations or experiments as appropriate, use overhead or data projectors to present prepared lessons, and encourage students to use such didactic equipment (Porter et. al. 2004).

2004, Berberoglu 2004). *Unfortunately, pre-service teacher education is an area over which the Ministry of National Education (MONE) has only a relatively limited influence. One of the contradictory aspects of the Turkish education system is that while MONE has comprehensive authority over most of the determinants of teaching and learning (i.e., curriculum, educational materials, teacher assignment, school facilities, equipment, and oversight), it does not have adequate control the most critical input in the system: the recruitment of teachers.* Specifically, MONE does not control the selection of individuals for teaching programs at university, their academic preparation, or their entrance into the profession.

As with all secondary-school students, teacher candidates for university are principally selected via the high-stakes OSS university entrance exam. After selection for university, future teachers are educated by education faculties according to a curriculum established by the autonomous Higher Education Council (YOK). This pre-service education is dominated largely by theoretical concepts of cognitive development, with little connection to the objectives of MONE or to the curriculum and instructional objectives of the Board of Education.

MONE has no influence over the motivation of students who take the university entrance exams. The most sought-after exams—medicine, engineering, and law—are those with the smallest number of vacancies in the universities, leaving pedagogy to those students who score below them in the exam rankings. YOK and OSYM are the key players in the university acceptance process, even determining the number of vacancies for each university specialty. Recruitment of teacher candidates does not take into account knowledge of MONE’s new curricular objectives nor can not measure candidate teaching aptitudes, both of which would be valuable in preparing successful teachers (Sahin 2005).¹³

Very few university education faculties offer active programs designed to develop the kind of skills that teachers need to work with students in an engaging, transformative fashion. In some instances, the pre-service curriculum is known to focus too much on test preparation for the teacher civil service examination, the next step in the ladder to becoming a teacher (Sahin, 2005).

At present, no mechanism exists to integrate the objectives of MONE, the Board of Education, and YOK into the curriculum for initial teacher education. Upon graduation from a university program, candidates are eligible to enter the profession after passing the civil service exam (KPSS). The KPSS, however, does not measure what teachers should be able to do in the classroom (i.e., it does not include teaching aptitudes). The distribution of topics on this examination, their relative weight, the multiple choice format, and the assessment of results are all the responsibility of OSYM.

¹³ The civil service exam (KPSS) for teacher recruitment, as for all professions, has two components, the second of which comprises items relevant to teaching. Unfortunately, the competencies and aptitudes required to be a good teacher, and the skills associated with MONE's new curriculum, cannot be adequately measured by this type of examination.

The score that students receive on the KPSS determines whether or not they are assigned to their preferred location. In addition, tests conducted for teacher promotions are also administered by OSYM. MONE, the employer of the overwhelming majority of teachers in the country, has neither authority nor influence over any of these critical gateways into the profession. In addition, there are few linkages and little structured dialogue and planning related to teacher recruitment and development among the three organizations (YOK, OSYM and MONE).¹⁴

This lack of coherence in aligning teacher training with national education goals places a great deal of responsibility on MONE to provide incentives to recruit, retain, and motivate teaching staff (e.g., salary, benefits, and promotion opportunities); in-service training and continuous professional support; effective school leadership and management; and sufficient facilities and equipment to facilitate teacher performance. Unfortunately, MONE has historically been unsuccessful at these tasks mainly because of poor interagency coordination, communication, and collaboration.¹⁵

In conclusion, complementary instruments, such as new assessment tools, evaluation methodologies, and instructional technologies, could effectively transform traditional instruction into more effective student-engaged learning. ***An important step toward the transformation of teaching methods in Turkey is to realign pre-service education to reflect changed instruction requirements.*** Additional resources are also needed to address the shortage of tools, resources, and in-service training opportunities for existing teachers. Given that research has confirmed the value of didactic aids (e.g., reading materials, overhead projectors, etc.) for student achievement, the government should assure that teachers have adequate supplies of such teaching aids (Berberoglu 2004).

Another requirement for changing pedagogical methods is the creation of a supportive institutional environment in schools. Currently, administrative staff discourage animated debates in the classroom in which students challenge and even disagree with teachers. This attitude stems from concern over a perceived lack of control or lack of time to cover a very detailed curriculum.¹⁶ Similarly, many parents (and students) tend to have more traditional, even rigid, expectations as to how teachers should teach and students should behave in the classroom. Many consider good teaching to be drill and practice, especially with respect to materials tested by the OKS and OSS exams. These expectations, combined with the memorization and rote learning required for these exams, leave teachers little room to use innovative, student-centered teaching methods (Sahin 2004).

¹⁴ Although OSYM is an organization within YOK, it operates with a high degree of autonomy and independence.

¹⁵ A recent amendment to the Civil Service Law instituted a career ladder for the teaching profession with the introduction of three teaching levels with differential expectations and salary scales for "teachers," "master teachers", and "expert teachers." Promotion criteria, based on education, achievements, seniority, and other factors, will be established by regulations.

¹⁶ Although MONE's new curriculum is designed to promote more student participation and dialogue, it will take much more training and time before these ideas are put into practice in classrooms throughout the Country.

5. Improving the Support, Accountability and Governance of Schools

Turkey has one of the most highly centralized education systems among middle-income countries. The system is centralized for legitimate historical reasons, including issues of culture, nation building, and social unity. Turkey's pre-university education system is even more centrally controlled than the famously centralized French system, with nearly 100 percent of public educational expenditures provided by the central government (Gershberg 2005, Chawla 2004). According to OECD data, 94 percent of all education decisions in Turkey are made at the central level (Gershberg 2005, see Table 3).

Table 3: Percentage of Decisions Taken at Each Level of Government in Public Education (for Schools Offering Grades 5-8)

	Central	State	Provincial/ regional	Sub- regional	Local	School
Austria	35	18			22	25
Belgium (French Community)		10	2	61		26
Czech Republic	17			21	10	52
Denmark	26				43	31
Finland					64	36
France	32		11	27		29
Germany	4	28	15		16	37
Greece	56		22			23
Hungary					35	65
Ireland	47					53
Italy	39		25		3	33
Korea	37		31	7		25
Netherlands	24				3	73
New Zealand	34					66
Norway	35				55	9
Portugal	69		7			24
Spain	3	46	10			41
Sweden	13				22	66
Turkey	94					6
UK (England)	20				18	62
UK (Scotland)	9				51	40
United States				2	69	29
WEI Participants						
Argentina	3	68				29
Chile	7		3		54	36
China	21		3		30	46
India			91			9
Indonesia	63		7			30
Jordan	65				19	16
Malaysia	82					18
Paraguay	67					33
Philippines	37		24			39
Thailand	55					45
Uruguay	100					

Note: Blanks indicate that the level of government does not have primary responsibility for the types of decisions covered in this domain.

Source: OECD, 1998. Education at a Glance: OECD Indicators.

In such a centralized policy environment, one would expect all schools in Turkey to look similar, at least in the characteristics over which MONE has control. As documented earlier, however, disparities continue to exist across regions, provinces, sub-provinces, and individual schools. Nevertheless, Turkey's centralized system has the capacity to deliver equitable distribution of school inputs and human resources across a large territory. For example, the experience of many socialist countries, including Romania, Hungary, and Poland, shows that a centralized bureaucracy can play a positive role in assuring equitable distribution of resources across schools (Gershberg 2005). The

disparities in Turkish education appear to result from the lack of clear technical criteria for determining resource distribution. This means that disadvantaged groups with the least possibility of having a voice have the least influence in decisions of how resources are distributed. This in turn results in fewer or lower quality educational inputs for the children from these populations.

Currently, the Ministry of National Education manages the operations of about 40,000 schools across 81 provinces. Provincial and sub-provincial education authorities have only limited authority and are themselves appointed to their positions by the ministry. MONE makes decisions on (a) the hiring and firing of principals and teachers, (b) the selection and distribution of textbooks and other educational materials, and (c) school renovation and construction. MONE also determines the salary and profile of the teaching and administrative staff of each school in the system, as well as the term of each teacher's contract.¹⁷ Nearly all in-service training for teachers and principals is centrally determined and implemented by MONE.¹⁸ Unfortunately, central control over decisions about teacher management (including recruitment, evaluation, transfer, salary, and bonuses) deprives families from having a voice in matters most important to their children's learning.

The education system in Turkey is also characterized by a less-than-effective infrastructure for providing regular support and technical assistance to local schools. The most common interlocutor between a school and MONE is the School Inspectorate, which, at least in most provinces, is responsible for monitoring schools, giving more emphasis to administrative issues rather than teaching and learning. By and large, recommendations related to school improvement or classroom pedagogy are not conveyed by inspectorates to schools in any formal, documented form (Sahin 2004). ***The current system is not structured to respond to the needs of individual schools, nor does it support teachers to improve the learning of all children in their classrooms.***

The support of schools, including the professional development of teachers and principals, is not systematically organized and is thus not linked to other core systems designed to assure the delivery of high-quality teaching and learning (e.g., systems responsible for curriculum and instruction requirements, evaluation and assessment, as well as teacher incentives and assignment). Professional teacher development tends to be organized by the In-Service Training Department of MONE and delivered in the form of

¹⁷ MONE assigns teachers to its schools in accordance with subject-areas norms for schools. Moreover, new teachers are also assigned to a specific developmentally classified region. Such teachers are required to stay for two to four years in that region. At the end of the two years, upon their request, teachers may be reassigned to a different school within the same region. After four years, teachers may request reassignment to a different region. Teachers may not exchange places of assignment with one another.

¹⁸ MONE has a Department of In-Service Training that is responsible for the training needs of all of Turkey's public school teachers, principals, and other education staff. The inservice training programs are designed centrally and implemented both centrally and locally, with the involvement of university academics, and provide training to over 200,000 teachers and staff annually. Although needs assessments are used in this process as part of the determination of training requirements, MONE's program is essentially designed and managed centrally by the experts in the Ministry of National Education.

large seminars or convocations managed centrally or provincially, with insufficient attention given to evaluation of outcomes or impact.

Research in many countries consistently finds that traditional seminars and training conferences are relatively ineffective because they do not provide opportunity for practice, follow-up, and reflection. Teachers consider traditional teacher training programs as boring, unrelated to their needs, and poorly implemented (OECD 2005). In contrast, ministries of education and local governments in advanced countries in Europe and North America have re-conceptualized teacher training as continuous professional learning (Fullan 1995). Within this framework, a training seminar becomes one of a coherent series of events designed to reinforce and support teacher learning and development.

The characteristics of a good professional development system are well known among international education professionals. Such a system is based on research and best practice; focuses on both content knowledge and content-specific pedagogy; uses instructional strategies that model the methodologies that teachers are expected to use (i.e., instruction involves teachers themselves in active problem solving); and offers opportunities for teachers to practice new methodologies. A large body of international research demonstrates that activities which engage teachers in the learning process (e.g., discussion groups, peer observation and feedback, collaborative planning, cooperative work on curriculum development and school improvement, coaching, mentoring, and networking) is central to effective teacher professional development (Darling-Hammond and Sykes 2003, Fullan 1995, and Little 1993). To the degree that teachers become involved and connected to one another through such developmental activities at their schools and in their communities and districts, they become active members of a network of education professionals and learn collectively from one another.¹⁹

Schools and local administrations in the provinces of Turkey presently have no incentive to improve school quality or outcomes on their own. In addition, the system does not hold a specific agent accountable for poor student educational achievement. Many parts of Turkey appear to lack initiative, with school staff waiting for the ministry to take care of such issues. This is particularly common in rural areas where community resources are scarce (Kuitunen 2004). In contrast, schools in wealthier communities rely on parent contributions to augment resources provided by the ministry. In some cases, these voluntary contributions become expected, yet schools do not report back to parents on their use of these funds.

The education system is unable to respond to individual schools in an equitable manner across the country for two reasons. First, school inspectorates are not structured as agents of school support, improvement, and change. In many other

¹⁹ MONE's Department of In-Service Training has plans to increase the quality of its in-service training programs by carrying out more extensive needs assessments of personnel and institutional educational needs, by specifying the appropriate teacher training model before and during in-service training, and by developing modular training programs. It also has plans to expand a distance teacher inservice training program based on a web-platform that has been under limited implementation since mid-2005.

countries, inspectorates act as clearinghouses for school improvement, aggregating the training and pedagogical support needs of multiple schools. ***Second, individual schools are given no resources to manage and have no budgetary or spending authority.*** Nor does MONE regularly solicit their opinion on their pedagogical and technical needs. In short, bureaucracies and schools are not presently held accountable for using inputs in an effective manner (Gershberg 2005).

6. Aligning Financing Policies with Educational Objectives

Turkey's pattern of educational expenditures differs significantly from those of other countries. Total education spending (public plus private) as a proportion of GDP was approximately 7 percent in 2002, or about US\$13 billion (Chawla 2002),²⁰ making the country an outlier among European and OECD countries. Among OECD members, who spend an average of 5.2 percent of GDP, only Denmark and the United States spent more on education than Turkey in 2002.²¹

However, compared to the countries of Europe and the OECD, Turkey allocates a smaller share of public spending to education: 4.3 percent of GDP in 2002. In other words, Turkey's total spending on education is high due to exceptionally high private expenditures, which represent 36 percent all recurrent spending.²² Only Korea—where private sources of funding account for 41 percent of total spending on education—has a similarly high share of private financing of education expenditures.²³

Public sources account for only 64 percent of total spending on education in Turkey, much lower than in OECD countries, including Finland (98 percent), France (93 percent), Germany (81 percent) and the United States (70 percent).

Almost 90 percent of total (public and private) education spending went to public schools and universities, totaling 17,320 trillion TL. The remaining 2,033 trillion TL, equivalent to a little over 10 percent of the total, was spent on private schools and foundation universities. A little over 40 percent of total spending on education went to primary education schools, with public primary schools absorbing 95 percent of this amount. Public universities accounted for the next largest share of total spending (30 percent), followed by general secondary schools (10 percent) and vocational and/or technical schools (8 percent). Pre-primary and special needs schools combined received less than 1 percent of total spending on education.

²⁰ This amount accounts for recurrent expenditures only. Spending on investments, such as school construction and rehabilitation, represent at most no more than 2.0 percent of total recurrent spending per year and are not included in this analysis.

²¹ Germany, Finland, France, Greece, and Hungary spent 5.3, 5.8, 6.0, 4.1, and 5.2 percent of GDP on education, respectively. The three highest spenders in OECD in 2002 were Turkey (7.0 percent), Denmark (7.1 percent) and the United States (7.3 percent).

²² In addition to central government and out-of-pocket contributions, which together account for 95 percent of total education funding in Turkey, funding sources include charities, foundations, and businesses (2 percent), local government revenues (1 percent) and international agencies (0.1 percent).

²³ In comparison, total private out-of-pocket spending as a share of total educational spending is 18 percent in the United States, 13 percent in the UK, 6.8 percent in Germany, and 6.2 percent in France.

Public schools, regardless of the level of education they provide, allocated a higher share of their budgets to personnel expenses than private schools that deliver the same level of education. Thus, public primary schools spent 64 percent of their funds on personnel salaries, while private primary schools spent less than half of their budgets on this item. The difference is even greater in vocational and technical schools, where public schools spent 80 percent of their budget on salaries, compared to 59 percent in private schools. The only exception was secondary high schools, where both public and private schools spent 50 percent of their budgets on wages and salaries of teachers and staff.

Table 4: Education Expenditure (% of GDP) for all levels of education (2001) from public and out-of-pocket sources

Country	Public Finance ¹	Private Finance ²	Total
Malaysia ³	7.2	-	-
Korea	4.8	3.4	8.2
United States	5.1	2.3	7.3
Turkey ⁶	4.34	2.46	6.97
France	5.6	0.4	6.0
Poland ³	5.6	-	-
Mexico	5.1	0.8	5.9
Finland	5.7	0.1	5.8
United Kingdom	4.7	0.8	5.5
Germany	4.3	1.0	5.3
Spain	4.3	0.6	4.9
Czech Republic	4.2	0.4	4.6
Brazil ^{3,5}	4.1	-	-
India ⁵	4.0	0.2	4.2
Slovak Republic ^{3,4}	4.0	0.1	4.1

OECD 2003: Education at a Glance; and Chawla 2004.

1. Including public subsidies to households attributable for educational institutions. Including direct expenditure on educational institutions from international sources.
2. Net of public subsidies attributable for educational institutions.
3. Public subsidies to households not included in public expenditure, but in private expenditure.
4. Direct expenditure on educational institutions from international sources exceeds 1.5% of all public expenditure.
5. Year of reference 2000.
6. Year of reference 2002

A little over 49 percent of public spending is devoted to public primary schools, followed by public universities (29 percent), public vocational and technical schools (11 percent)

and public general high schools (9 percent). On the other hand, almost 31 percent of private out-of-pocket spending on education is directed towards public universities, followed by public primary schools (27.5 percent) and public general high schools (13.3 percent). Overall, three-fourths of all private, out-of-pocket spending on education is directed towards public schools and universities, with private schools and universities receiving the remaining one-quarter.

National Education Accounts results show that private preparatory training programs (such as the *Dershane*), at various levels of education (from primary to university level), accounted for 813 trillion TL, equivalent to 4.2 percent of total spending on education. *Dershanes*—including *Dershanes* that prepare students for university exams, as well as private tuition to students enrolled in primary or secondary education—are entirely financed by private expenditures, absorbing almost 12 percent of private, out-of-pocket spending on education.

Turkey also spends more than most OECD countries on teacher salaries when salaries are measured as a proportion of per capita GDP (OECD 2004). The average OECD primary and secondary teacher salaries were 1.33 and 1.37 of per capita GDP, respectively, in 2002.²⁴ In Turkey, however, the respective ratios were 1.98 and 1.84. In general, the salary-to-GDP per capita ratio is about 40 percent higher in Turkey than in OECD countries (OECD 2004).²⁵ This salary level is adequate to attract new applicants, given that the national civil service test rations teaching positions to fewer than 1 in 4 graduates of pre-service training programs (Sahin 2005).

These findings raise several very important questions. Given the relatively huge share of GDP devoted to education (public and private), is Turkey getting the results it deserves from this investment? How does the government use educational financing to fulfill the social mission of improving both equity of opportunity and educational outcomes? Given that such a large share of educational spending comes from private sources, is Turkey satisfied with the way in which the government leverages private financing to obtain desired educational outcomes?

Research certainly suggests that Turkey is not getting the results it seeks from spending 7 percent of GDP on education. The majority of Turkish students perform at the very bottom of PISA's six-point proficiency scale and, according to ESS research findings, national assessment results have improved very little over time. Outcomes of secondary vocational education are also unsatisfactory. Vocational enrollments have not increased significantly (in fact, they appear to be decreasing) and unemployment rates for vocational graduates have remained at about 10 percent over the last decade—more or less the same unemployment rate for general secondary education graduates who do not complete a university education.

²⁴ Figures are based on salaries received after 15 years of teaching.

²⁵ Teacher wages are adjusted in accordance with reported hours of work in the OECD study. In part because of this, wages are higher for teachers in Turkey since they report working fewer hours per week than their counterparts in other OECD countries.

Turkey has made significant progress in raising educational outcomes since the enactment of the law on eight-year compulsory education, especially in the last decade. As mentioned above, *the share of public resources currently devoted to primary school is relatively high—49 percent of all educational expenditures* (Chawla 2004). The proportion of these expenditures devoted to the poorest 20 percent of the population has, moreover, increased from 13.5 percent in 1994 to 19 percent in 2004, while that devoted to the wealthiest fell from 23 to 17 percent, respectively (Metz 2004).

Improved equity of primary educational spending was a direct consequence of the government's campaign to universalize this level of education. By extending the provision of public primary education to much greater numbers of children—especially to out-of-school children in the 11–14 age group, almost all of whom are from the lowest income groups—the government assured a more equitable distribution of public expenditures. *Nonetheless, a significant equity gap persists in secondary school spending.* In 1994, the poorest 40 percent of the population captured only 25 percent of the resources spent on secondary education. This percentage had barely changed by 2001, when it reached 28 percent (Metz 2004). Assuring universal secondary school coverage would all but eliminate the largest part of this secondary education spending gap.

ESS research finds that financial resources do not appear to be allocated with the aim of reducing inter-regional, inter-provincial, or urban-rural educational disparities. For example, average expenditure per student was approximately YTL 1,250 (US\$925) in 2004, but in some provinces, principally in the southeastern and eastern regions of the country,²⁶ per-student expenditure was only about half that amount.²⁷ Given that students in these regions are the worst-performing students in the country (Berberoglu 2004), the government should consider targeting financial resources to these provinces.

Overcrowded classrooms also have a detrimental affect on the quality of teaching and learning. Istanbul, for example, suffers more from overcrowded classrooms than almost any other province. The research studies commissioned by this ESS point out, however, that the overcrowding problem in Istanbul is concentrated in a small number of sub-districts. In fact, seven of the country's ten worst sub-districts for overcrowding (out of a total of 850) are in Istanbul.²⁸ By directing resources to eliminate overcrowding in just these sub-districts, the government would resolve the overcrowding problem in Istanbul, while significantly increasing average per-student spending in the province (Hosgor 2005).

²⁶ The 10 provinces with the lowest per-student expenditure were Agri, Batman, Diyarbakir, Gaziantep, Istanbul, Mardin, Sanliurfa, Siirt, Sirnak, and Van, where average expenditure ranged from YTL 614 to YTL 813 per student.

²⁷ These estimates are based on ESS computations from Government's final accounts, which report on MONE's educational expenditures by province. MONE's expenditures represent 65 percent of total public educational expenditures (i.e., they do not include higher education expenditures, credit and dormitory expenditures, and non-budgetary expenditures).

²⁸ These sub-districts are Gaziosmanpasa, Esenler, Bagcilar, Kucukcekmece, Zeytinburnu, Gungoren, Sultanbeyli (all in Istanbul), Pervari in Siirt, Cizre in Sirnak, and Patnos in Agri.

Evidence developed in the ESS studies suggest that Turkey ties its own hands in pursuit of educational objectives due to excessive reliance on the government's own five-year development plans, annual programs, and yearly investment budgets. Adherence to such plans and budgets leaves officials little room to strategically deploy the country's huge, annual recurrent budget (YTL 20 billion) to achieve specific equity and quality targets.

The government could also make more efficient use of the massive funding provided by private sources. This funding could contribute enormously to Turkey's ability to provide educational services to all citizens. When wealthier families are willing to finance their children's private education (a trend that is common in countries such as Korea and the United States), their spending reduces the burden on the public budget, allowing the government to redeploy scarce public resources towards children from less well-off families. In other words, wealthier families who finance their children's education at private schools could permit the government to concentrate public resources on a smaller number of children, providing them better services.²⁹ This pattern of expenditure would offset the tendency of private education to exacerbate differences in equity.

With respect to equity of education, private spending in Turkey is more a challenge than a benefit. The largest share of private education spending is directed towards universities (35 percent of total private expenditures, a sum mostly spent on private universities.³⁰) After universities, the largest share of out-of-pocket private spending is on public primary (32 percent) and public secondary (15 percent) schools. The data suggest that public schools serving children from better-off families receive significant additional subsidies for educational materials, equipment, and activities. ***One of the largest categories of private expenditure (11.4 percent) is spending on private tutoring schools (Dersane) and courses for the OKS and OSS exams*** (Chawla 2004).³¹ Families pay considerable sums—more than 13 percent of total public sector spending on higher education in Turkey—to these institutions (the number of which almost equals the number of high schools in Turkey) to improve students' chances on the two major entrance examinations.

The limited number of higher education opportunities is one of the main reasons why such a large share of private resources are devoted to education in Turkey. As described earlier in this report, access to the tertiary level of education is controlled by the OKS and OSS examinations. Success on these exams determines a student's future career, salary, status, and even lifestyle. The huge earnings advantage for university graduates (in 2002, university graduates earned about twice as much per hour as

²⁹ MONE is preparing a program designed to provide incentives for families to send their children to private schools, and has plans to promote a 400 percent increase private school enrollment.

³⁰ Private universities are called "foundation" universities in Turkey because they are non-profit institutions set up under laws for social foundations.

³¹ Data from the SIS 2002 household education expenditure survey showed that families in Turkey reported spending approximately YTL 790 million on private tutoring programs and courses. A more recent report prepared by the Turkish Education Association (TED 2005) estimated that total spending on tutoring for the OSS alone was over ten times this amount: YTL 11.7 billion. The TED estimate is based on the assumption that each student preparing for the OSS spends, on average, about YTL 4,700 on preparation and that approximately 1,786,000 students take the exam each year.

secondary-school graduates) means that parents who can afford to, will pay for private primary and secondary schooling in the interest of improving their children's chances on the university entrance exam (Tansel 2004).

Given the significant advantages of a university degree, more and more students who might otherwise enroll in vocational secondary schools are now attending general secondary schools because it affords them a greater chance of being admitted to university. Even primary-school quality is measured on how well students succeed on the OKS exam, with schools reorienting their missions to prepare students for selection exams, rather than pursuing broader primary education objectives (Sahin 2004).

These prevailing conditions have serious equity implications. Access to private tutoring is clearly income driven, with 61 percent of families in the highest income quartile reporting that they pay for private tutoring, compared to just 10 percent of households in the lowest income quartile (Tansel and Bircam 2004). Young people who can afford private tutoring are thus most likely to gain entrance to publicly funded universities and reap the various economic and social benefits associated with this level of education. The poverty linkage is clear. Young people who do not receive private tutoring either lack economic resources or access to high-quality, secondary schools (which are generally less available to poor children).

In sum, current policies reinforce existing inequities in the system of higher education. The limited number of places in publicly financed universities are largely awarded to students who can afford expensive tutoring, a pattern that ensures continued inequitable access to university education.

SECTION 3. RECOMMENDATIONS AND OPTIONS FOR REFORM

The Emergence of an Education Sector Strategy in Turkey

In recent years, Turkey has set a number of ambitious goals to improve its education system. In particular, the Ministry of National Education (MONE) has developed a variety of programs, projects, and initiatives designed to improve the education results of its graduates and contribute to their intellectual development, employability, and productivity. In order to integrate these programs, projects, and initiatives into a coherent whole, a larger, guiding strategy is needed. Such a strategy would ensure that policymakers do not work at cross purposes and prevent ad-hoc implementation. A coherent national strategy for the education system would also focus the objectives of all existing government programs and initiatives on well-defined outcomes and targets. Finally, a broadly understood and shared strategy would help Turkey allocate resources and evaluate their effectiveness more efficiently.

As mentioned in Section 1, the guiding vision for a broader national strategy of educational development has already been clearly stated in the government's eighth Five Year Development Plan. An analysis of existing programs makes clear that MONE is working within the framework of an emerging education sector strategy. The overall goal of this strategy is to ensure that all children and youth in Turkey have the opportunity to attend a school that offers challenging, good-quality teaching and learning, can attain an educational qualification commensurate with their interests and efforts, and, ultimately, will contribute to a participatory, democratic society. The government's emerging strategy appears to encompass five strategic objectives, which are described in the subsections that follow.

Strategic Objective A: *Guarantee an eight-year compulsory education to all children, extend secondary education to four years, and systematically provide secondary education to all children.* Ongoing programs consistent with this objective include: (i) building new basic education schools, (ii) continuing the "100 Percent Support for Basic Education" program, which provides a 100 percent tax credit to businesses that build primary schools, (iii) rehabilitating and retrofitting basic education schools, and (iv) providing free textbooks for basic education students.

Strategic Objective B: *Provide targeted support to children of disadvantaged families and girls to ensure their enrollment in and completion of a quality education program.* Programs that fit within the framework of this strategic objective include: (i) increasing the number and quality of YIBOs and PIOs, expanding the use of busing arrangements to give children in rural areas access to schooling, (ii) implementing advocacy campaigns to enroll girls in basic education (such the MONE/UNICEF project), (iii) maintaining conditional cash transfers to help very poor children attend school, (iv) implementing programs to eradicate child labor, and (v) conducting literacy campaigns for uneducated parents to encourage them to send their sons and daughters to school. .

Strategic Objective C: *Continue to modernize the curriculum and upgrade teaching and learning to provide children and youth with challenging and engaging learning experiences that enable them to develop the competencies needed to find skilled employment, pursue postsecondary education, benefit from lifelong learning, and help Turkey compete in Europe and the global economy.* There are two important initiatives under this objective. One is the Board of Education's curriculum reform and modernization program for basic, general secondary and vocational secondary education. This initiative is being supported by the introduction of new textbooks, procedures, and the provision of intensive in-service training (which will introduce the new curriculum to the nation's teachers). The second important initiative is the enactment and implementation of Law 4702, which is designed to facilitate further vocational education for secondary vocational education students by streamlining their admission to higher vocational institutions (MYOs) in the same field of vocational study as their secondary vocational education program, and without having to take the OSS.

Other programs related to this strategic objective include: (i) the provision of computers and ICT classrooms to basic education schools, along with new incentives for private-sector contributions, (ii) the expansion of the "child-friendly schools" program, (iii) the expansion of pre-school education to improve the learning readiness of first-graders, (iv) the extension of secondary school to four years to provide broader competencies to secondary-school graduates, and (v) the introduction of a common curriculum for the 9th grade in both vocational and general secondary schools.

Strategic Objective D: *Provide teachers, principals, counselors, other school staff, as well as central and local education officials and managers with the appropriate preparation, career ladder, tools, and support to improve their commitment and effectiveness as guides to Turkey's future citizens.* The programs encompassed under this objective include: (i) introduction of a new teacher career and promotion system, (ii) initiating a computers-for-teachers campaign, and (iii) conducting a television-based distance education program for teachers at the start of the school year.

Strategic Objective E: *Establish effective and modern governance arrangements and incentive structures to assure that all human and financial resources in the sector, both at the central and local level, and from both the public and private sectors, are used efficiently and effectively to achieve the objectives of Turkey's education sector strategy.* Programs that serve this objective include (i) restructuring the organization and management of the Ministry of National Education to improve its efficiency, (ii) operationalizing the education management information systems at both the provincial (ILSIS) and school level (OKULSIS) to provide reliable and timely data to policymakers and practitioners at all levels, and (iii) promoting democracy education, human rights education, and student government activities to increase the social responsibility of the students.

World Bank Recommendations

As summarized above pages, the ESS reviewed the performance of Turkey's education system in depth and identified a number of critical challenges. In addition, the ESS team examined the Ministry of National Education's education policies, programs and projects, and in doing so, highlighted a set of policies that the team considers as the Government's emerging "***education sector strategy***." The World Bank recommends that the Ministry of National Education to continue consolidating and deepening this emerging strategy by incorporating, as appropriate, lessons learned from the analysis of policy options presented in the main report of the Education Sector Study and other ongoing analytic work. In addition to deepening the existing strategy and seeking to extend public understanding and ownership of the strategy, the Ministry could develop it further by: (i) including specific targets and schedules, (ii) delineating financial requirements to implement it over a specific time period, including through the development of a medium-term expenditure framework; (iii) assigning clear responsibilities to managers and staff, and authorizing them to take the related decisions on policy and implementation; (iv) delegating greater decision making authority and accountability to local actors and practitioners, as appropriate; and (v) instituting a process of adaptive, collective learning and feedback during implementation.

To further assist the Government in meeting these challenges and further developing its emerging ***education sector strategy***, the ESS recommends that Turkey undertake a program of reforms based on the policy options presented in the main report.

In this context, the World Bank makes the following specific recommendations:

1. Increase Student Educational Qualifications, Especially Secondary Education, to Converge with the EU.

To do this, Turkey should move quickly to dramatically increase pre-school enrollment, especially for the poor, to help assure that all children successfully complete the 8-year basic education program. This will surely require an increased use of targeted programs and incentives designed to get the out-of-school population into and through the basic education system. Parallel to this, Turkey will have to launch a major strategic initiative, along the lines of the successful 1997 Basic Education Reform, to achieve at least 80% net secondary school enrollment by 2015. One step to help achieve this is to raise the student/teacher ratio in all secondary schools to within the 20-30 students-per-teacher range, which will contribute to an increased enrollment capacity. In addition, Turkey will need to follow through on its plans to make secondary education universal and compulsory, step by step in a fiscally, institutionally, and physically manageable way.

2. Systematically Raise the Quality of All Schools.

To assure that increased enrollments result in increased learning outcomes, Turkey needs to do more than provide inputs, such as classrooms, teachers, books, and curriculum

guides. It needs to put in place an indicator system to establish, monitor, and support improved educational quality and outcomes in all of its schools. Several of the basic elements of an indicator system that sets targets for the quality of education in every school, measures quality in all of the schools against these targets, and provides mechanisms to help schools meet the targets, is already under preparation in the Ministry of National Education. But these central elements need to be developed fully, integrated with the other components of Turkey's education strategy as recommended in the ESS, and developed in consultation with the Ministry's institutional and social partners, other stakeholders and beneficiaries, and made broadly known and understood. Once in place, MONE will need to put in place a strategy to raise every school up to the target that involves not only central government authorities but also local authorities, the school staff and parents, the local community, and other partners.

3. Align the Curriculum, Examinations, and Teaching on Student Learning

The only viable way to assure that the Government can simultaneously increase access, raise quality, and improve educational outcomes, given resource and time constraints, is to make sure that the principal components and incentives of the education system are aligned with the core objective of student learning. First this means that the examinations need to be designed so as to measure the competencies, behaviors, and know-how that the new curriculum is seeking to develop. Today, Turkey's high stakes tests have one main purpose--to create a ranking of students so that selection into private schools, Anatolian schools, Science schools, etc., and universities can be readily conducted. Given its pivotal role in Turkey's entire educational system, the **university entrance examination (OSS)** in particular should be redesigned into cluster of modern assessments aligned with the objectives of the revised curriculum, that comprehensively assess what students know, what they are able to do, how they reason, and how they apply their learning in various contexts. In order to support and reinforce what teachers are trying to accomplish in their classrooms, these assessments would need to employ more sophisticated diagnostic measures than multiple-choice items. At the same time, a redesign of the university entrance examination system would have to be done in such a way as to guarantee that the integrity and transparency of the current OSS is fully maintained. Finally, to emphasize the new mission of the OSS, MONE should make passing it a requirement for all students seeking a secondary school diploma, and not just for university-bound hopefuls. Once these changes are made, then efforts by students, parents, and teachers for good test performance will be the same efforts needed to make sure that students are developing competencies consistent with the new curriculum and needed to be successful in the world. Everyone will be on the same page, and "teaching to the test" will mean teaching to develop the competencies that all students would need.

Likewise, teacher preparation and support need to be aligned with the new curriculum and examination systems. To assure that this can be done, the Ministry of National Education and the education faculties, along with the Higher Education Council, will need to agree on the definition of the professional skills, knowledge, qualifications, and values that should characterize good teachers, and work jointly to develop quality assurance, accreditation, and program assessment mechanisms to guarantee that the

universities are preparing teachers with these characteristics, and that inservice training programs are helping practicing teachers adapt to these expectations. Furthermore, they will have to cooperate with the OSYM to make sure that the civil service examination supports the recruitment of teachers with these characteristics.

4. Provide Opportunities for all Secondary Students to Prepare both for Tertiary Education and Skilled Employment.

Turkey needs to stop worrying about how to end the high social demand for tertiary education and tackle the more important problem of how to assure that all secondary school students have the opportunity, support, and motivation to work hard in school, keep up high expectations for their future, and develop the full range of competencies (academic, analytic, and applied) that they will need both for further education and high-skilled employment. MONE should make sure that students enrolled in vocational programs will have access to courses that enable them to develop the core competencies and skills that all graduates will need to be successful in an increasingly competitive labor market. Likewise, students enrolled in general secondary schools should have the opportunity and motivation to learn the applied and technical competencies needed for future employment since that the vast majority of them will never enter a four-year university program. Over time, MONE will need to reduce the separate tracking of vocational and general secondary students, while offering applied and technical skills, and apprenticeships, to all students. This also means that no student should be cut off from preparing for, and competing for entrance to tertiary education. Furthermore, it means that an increase in the number of tertiary education institutions is required and high quality alternatives to four-year universities need to be created. In fact, increasing access to tertiary education (and not only 4-year university programs) should become a major objective of the Government. A related but very important reform is that students should not be required to choose their life-long career in 9th or 10th grades, but should have greater flexibility to select or change subject matter in secondary school and in post secondary institutions in response to their changing interest and differentially evolving talents, as well as changes in the labor market.

5. Give School Autonomy and Funding, and Hold them Accountable for Results

Given the sheer quantity and widespread geographic distribution of schools across Turkey, it is obvious that officials in the Ministry of National Education in Ankara alone would not be able guarantee that each and every school could provide challenging, high quality educational experiences and deliver good results for all of its students. Schools need to be given responsibility for their performance and outcomes. International research suggests that education systems with central management of the curriculum framework but school-based control over schedules, material resources, and personnel utilization perform well. The research also shows that students in schools with greater autonomy learn better than in schools with less decision-making space. The evidence in Turkey suggests that Government cannot count on circulars, mandates, punishment, or other mechanisms of central authority to address all of the myriad and individual factors

that constrain school quality. Moreover, excessive use of such authority may interfere with efforts to engage the creativity and enthusiasm of the teachers and staff at the schools themselves in the quality improvement efforts. Turkey has had a positive experience with its “School Development Model,” which shows that schools with the proper degree of external support have the capacity and incentive to do their own strategic planning and develop viable improvement projects. The model would need to be updated to align it with the new school quality indicators, improved curriculum standards, and revised examinations recommended above so as to achieve improved student learning outcomes. Moreover, schools would also need to receive and manage funds for self-managed school improvement projects, and be held accountable for achieving the quality targets by the use of such grants.

6. Use Public and Private Funding Strategically to Increase Access, Reduce Disparity, and Raise Quality

The Government's stated goals of expanding access, improving equity, raising quality, and increasing the number of years of compulsory schooling, and the objectives of the emerging strategy that is described above, can only be attained if the actions needed to achieve the reforms are carefully costed-out at the margin, budgeted, and made fiscally viable. In particular, the Ministry of National Education will have to make sure that there is an explicit correspondence that connects the costs, strategic objectives, and implementation targets of the reforms with the Government's financing capacity. The first step in this process would be for MONE to prepare a detailed multi-year expenditure framework that links its implementation targets with annual budgets, and given the inevitable fiscal constraints, will also need to scale back on activities and programs that are not directly tied to achieving the targets. Once the expenditure framework is in place, MONE will also need to make it, along with the implementation targets public, and be held accountable for spending and outcomes. One of the most important benefits of this process is that it would automatically provide detailed information on financing gaps that external agents such as the private sector and the European Union would be able to fund.

Further Options to Support the Government's Emerging Sector Strategy

The government's education strategy has grown in coherence over the last few years. In order to assist the government to continue to deepen the design and assure the effective implementation of this strategy, ESS research has identified a number of additional policy options. These supporting policy options are based on research on the educational context in Turkey, an examination of global knowledge and experience, and numerous exchanges between the ESS Team, the Turkish government, and non-governmental and private-sector stakeholders in Turkey. As listed in the table below, the policy options offered by this ESS are organized in accordance with five strategic objectives of the emerging education sector strategy. Each of the policy options is explored in some detail in the subsections that follow.

Prior to assessing their relevance and viability for Turkey, the Ministry of National Education may want to further develop these policy options by conducting an analysis of the financial implications and implementation of each option. To assist the government in its examination of these alternatives, Annex 3 provides an initial analysis of the options in matrix form that evaluates each possible option against a broad range of evaluative criteria.

Table of Policy Options
<p>Strategic Objective A. <i>Guarantee an eight-year compulsory education to all children, extend secondary education to four years, and systematically provide secondary education to all children.</i></p> <p>Option A(1): Expand access to early childhood education. Option A(2): Stimulate the private sector to provide early childhood education services.</p>
<p>Strategic Objective B. <i>Provide targeted support to children of disadvantaged families and girls to ensure their enrollment in and completion of a quality education program.</i></p> <p>Option B(1): Extend conditional cash transfers further for girls and the poor Option B(2): Provide scholarships for disadvantaged youth to attend university.</p>
<p>Strategic Objective C. <i>Continue to modernize the curriculum and upgrade teaching and learning to provide children and youth with challenging and engaging learning experiences that enable them to develop the competencies needed to find skilled employment, pursue postsecondary education, benefit from lifelong learning, and help Turkey compete in Europe and the global economy.</i></p> <p>Option C(1): Assure all schools attain minimum quality standards, then raise these standards. Option C(2): Improve the coherence between curriculum and assessment to focus on learning. Option C(3): Guarantee that all students develop basic skills as a prerequisite to lifelong learning. Option C(4): Use ICTs to integrate the new curriculum into classroom practices. Option C(5): Design, test, and disseminate effective school development models. Option C(6): Integrate general and vocational education into diversified secondary schools. Option C(7): Provide more apprenticeship opportunities for secondary school students.</p>
<p>Strategic Objective D. <i>Provide teachers, principals, counselors, other school staff, as well as central and local education officials and managers with the appropriate preparation, career ladder, tools, and support to improve their commitment and effectiveness as guides to Turkey's future citizens.</i></p> <p>Option D(1): Develop an integrated program for teacher education and professional development. Option D(2): Formulate an effective policy for teacher selection, assignment and support.</p>
<p>Strategic Objective E. <i>Establish effective and modern governance arrangements and incentive structures to assure that all human and financial resources in the sector, both at the central and local level, and from both the public and private sectors, are used efficiently and effectively to achieve the objectives of Turkey's education sector strategy.</i></p> <p>Option E(1): Equalize funding across regions and provinces. Option E(2): Provide transparent information to parents. Option E(3): Improve school management by certifying and mentoring principals and inspectors. Option E(4): Develop provincial inspectorates into local knowledge network centers. Option E(5): Introduce gradual steps towards deconcentration of the educational system. Option E(6): Create transparency of education financing through national education accounts Option E(7): Prepare a Medium-Term Expenditure Framework (MTEF) for the education sector.</p>

Policy Options to Support Strategic Objective A

Strategic Objective A: Universalize the provision of 8-year compulsory education so that all children can obtain an adequate educational foundation.

A(1) Expand Early Childhood Education

Providing targeted early child development (ECD) programs to the poor is one of the first steps towards creating an education system that guarantees equal opportunities for educational achievement and contributes to poverty reduction. The benefits of expanding pre-primary education in Turkey are currently estimated to be three times the cost of expansion (Kaytaz 2004). The experience of a diverse array of countries, including Sweden, Finland, and the United States (see Box 1) demonstrates that guaranteeing young children a safe and healthy educational environment has significant positive results for child development and learning capacity, among other social goals.

Recent World Bank research on this sector has shown that “children who participate in well-conceived ECD programs tend to be more successful in later school, are more competent socially and emotionally, and show higher verbal and intellectual development during early childhood than children who are not enrolled in high-quality programs.³² Ensuring healthy child development, therefore, is an investment in a country's future workforce and capacity to thrive economically and as a society” (World Bank, 2005a).

Research in the United States has demonstrated that high-quality pre-school programs can have long-term positive effects on student achievement, such as high school completion, college attendance, and eventual earnings. Such programs can also help reduce crime rates and reliance on welfare subsidies. A well-known study of one high-quality program in the state of Michigan found that the positive impacts of pre-school attendance were still measurable when participants reached the age of 27. Available evidence indicates, moreover, that economically disadvantaged children benefit more from pre-schools than do children from wealthier families (Currie 2001).

While targeted pre-school programs are certainly an appropriate place to start, a 2005 study by the RAND Corporation suggests that *universal* access to pre-school can produce enormous economic and social rewards. According to the RAND study, every dollar invested in policies that would make pre-school available for all 4-year-old children in the state of California would generate a return of between two and four dollars—a net benefit of 100 to 300 percent. These returns would come from a variety of reduced costs and increased social benefits, such as decreased expenditures on special education, a lower rate of grade repetition in later years, reduced crime, and a more productive workforce. Due to the significant impact of pre-schooling on economic productivity, the authors of the study argue that providing universal pre-school education could be viewed as both an educational improvement strategy and economic development strategy (Karoly and Bigelow 2005).

³² See www.worldbank.org/children for research and information on a broad array of ECD programs.

To provide children in Turkey with equal opportunities for success, Turkey should immediately expand access to early childhood education. (As noted earlier, only 13 percent of children aged 4–6 currently attend pre-primary school.) To achieve this objective, MONE should, wherever possible, attempt to recover costs from wealthier families. Diversification of the supply of pre-school education is also important. This supply should include subsidized private providers, home-based services, and community pre-schools. Private-public partnerships can be used to provide additional pre-school spaces in the short term, at least until government revenues increase sufficiently to fund a universal pre-school system. In the interim, targeted funding to groups most in need will be critically important to promote equity.

Box 1. The Head Start program in the United States

The Head Start pre-school program is a public program created in 1965 as part of President Lyndon B. Johnson's "War on Poverty." The program's objective is to prepare economically disadvantaged children for school by providing communities the resources to develop local pre-school programs. Although Head Start centers are run by local operators, they must follow federal quality guidelines. In addition to education, children in Head Start programs receive medical, nutritional, dental, and mental health services. Most children in the program are three or four years old and participate on a part-day, part-year schedule. The program has served as a model for both targeted and universal pre-school programs in several U.S. states, including California, New York, and Georgia. Although no definitive, national-level research study has assessed the effectiveness of Head Start, the best available evidence suggests that the program is associated with short-term improvements in cognitive skills and long-term gains in school completion rates. These gains are strengthened when children receive follow-up services in the early grades of elementary school.

Source: Currie 2001.

A(2) Stimulate the Private Sector to Provide Early Childhood Services

This policy option complements the expansion of early childhood education and is equally important for increasing access to and equity of education in Turkey. The provision of pre-schooling to needy children is clearly an investment that can generate economic and social rewards. Unfortunately, the public sector in Turkey does not have the resources to offer pre-school to all children who need it. Consequently, the government should consider creating incentives for private providers to open pre-schools in areas with large concentrations of economically disadvantaged students. At the same time, the government must ensure that private and public pre-schools follow a specific set of standards for educational quality and safety.

In the United States, the central government allocates funds to both public and private local, non-profit agencies to run Head Start pre-schools (see Box 1). These schools are required to meet federal program performance standards. Schools that fail to meet the standards can lose federal funding. Several individual states of the USA have increasingly come to rely on private providers of pre-school services. For example, the state of Florida has developed a voluntary universal pre-school program that allocates

funds to public and private schools, non-profit and for-profit early childhood providers, and Head Start centers. To be eligible to participate in the program, private providers—who will eventually run the majority of centers—can either be licensed by the state or receive accreditation from an approved accrediting agency (National Association for Education 2005).

In addition to the United States, several other countries rely at least partially on private pre-schools to serve needy children. In Australia, parents receive a childcare benefit to send children to approved public or private early childhood education or care programs. Families with lower incomes receive a higher benefit that covers the total cost of services. In Sweden, municipalities often pay private providers, such as parent cooperatives, churches, and corporations, to provide pre-school services. Although these private pre-schools must meet basic government standards, they are not required to follow the government's pre-school curriculum (OECD 2001).

One danger of relying on both public and private providers is the potential to develop a two-tiered system in which regulated public pre-schools provide better and more consistent services while private providers seek to cut costs and offer inferior services. To avoid this problem, a comparative study conducted by the OECD suggests that governments should allocate funding to private providers only if they meet or exceed public standards. At the same time, governments must devote adequate resources to conduct quality assurance of public and private providers. According to the OECD, a quality assurance program must include inspection and monitoring, as well as mechanisms to provide pedagogical and programmatic support to struggling sites (OECD 2001).

Studies of private pre-school programs in the United States have found that even a small amount of federal oversight can make a large difference in the quality of services. According to recent research, the existence of federal standards has helped to ensure that Head Start centers are, on average, better than private pre-schools in the United States. Specifically, the most important aspect of childcare quality was found to be the nature of interaction between teachers and students. Observable aspects of this interaction, such as class size and teacher training, can serve as the basis for measurable quality guidelines (Currie 2000). As for incentives to stimulate private provision of pre-school services, these can include government grants, tax breaks or tax-exempt status, and/or vouchers that poor families can use to pay providers directly.

Policy Options to Support Strategic Objective B

Strategic Objective B: Provide targeted support to children of disadvantaged families to ensure their enrollment in and completion of the 8-year basic education program, at a minimum.

B(1) Extend Conditional Cash Transfers to Promote the Enrollment of Girls and the Poor

The Turkish Government has increased compliance with the compulsory schooling law by providing financial support to the poorest households. This support is offered through ad-hoc social assistance and conditional cash transfers (part of the World Bank-supported Social Risk Mitigation Project). ***Maintain the existing cash transfer program to provide incentives for children who do not attend primary school to do so.***

ESS research finds that, in parts of Eastern Anatolia, girls enroll in secondary school at half the rate of boys (see Section 2). For this reason, it is recommended that the government maintain the targeting of conditional cash transfers to secondary-school-age girls and consider strengthening the incentives for girls to graduate from this level of schooling.³³ Research in Bangladesh comparing different types of incentive programs has shown that scholarships have been quite successful in increasing high school completion rates for girls (Arends-Kuenning and Amin 2004). Such scholarships allow parents to see an economic benefit of their daughters attending secondary school and might even prevent them from encouraging their daughters to marry upon completion of compulsory schooling.

Research from several countries suggests that conditional cash transfers and/or targeted scholarships raise school attendance and improves other educational outcomes. In Bangladesh, a program that provided rice to families for sending their children to school resulted in higher school enrollment. This program was also deemed to be cost-effective in comparison to other interventions aimed at the same goal. Following a severe economic crisis, Indonesia introduced a scholarship program that helped keep secondary-school students from dropping out of school (World Bank 2003). The PROGRESA program in Mexico has been credited with raising school enrollments and reducing the incidence of child labor in the country's poorest areas, particularly among girls at the secondary education level (see Box 2).

³³ Careful attention should be given to the design of the program in order to avoid unintended consequences, such as promotion of birth rates or ratcheting up the expectations of those who are not covered by the programs.

Box 2. The PROGRESA program in Mexico

In 1998, the Mexican government began to provide cash grants to mothers of poor children in grades 3 to 9, on the condition that the children attend at least 85 percent of school days. The amount of the grant was substantial—the average monthly transfer in 2003 was \$35 per family—and included a bonus for families of girls enrolled in grades 7 through 9. Transfers were adjusted for inflation every six months. Evaluations of the PROGRESA program have found that the program has had a positive impact on school enrollment rates, reducing the gap in enrollment rates between poor and more advantaged children in grades 4 to 6. The program has also been successful in reducing dropouts between primary and secondary school, as well as reducing the incidence of child labor among participating boys and girls.

The largest impact of the program, however, was among secondary-level girls, whose enrollments increased from 67 to 75 percent between 1998 and 2000. Finally, the program succeeded in reaching Mexico's poorest families: more than 80 percent of transfers went to the poorest 40 percent of citizens. The success of the program ensured its continuation, despite a change in government in 2000. Due to the random nature by which PROGRESA benefits are administered, researchers have greater confidence in program results than those of programs where benefits are distributed according to political or other factors.

Sources: International Food Policy Research Institute 2002; World Bank 2003.

Other potential policy solutions to low enrollment rates among girls include social mobilization campaigns and enforcement of existing laws. ***Social awareness campaigns advising parents of the benefits of educating girls have been successful in other countries that faced similar enrollment obstacles.*** In addition, enacting and enforcing gender parity laws for wages in government and private-sector positions would ensure that women view education as worthwhile. At the local level, schools in rural areas must often overcome cultural barriers that prevent girls from attending school. Schools that overcome such barriers work closely with their communities, earning the trust of respected elders and demonstrating that schools are a safe, clean and positive environment for girls. Results of the beneficiary study conducted for this ESS report also suggest that providing resources for chaperones or parents to accompany daughters to distant schools may increase the chances of rural girls attending high school. Many girls also indicated that were secondary schooling compulsory, their parents would allow them to attend.

B(2) Provide Scholarships for Disadvantaged Youth to Attend University

Although it is described as a merit-based system, the structure of the education system in Turkey favors students of higher-income families with more resources. How can such persistent inequities be corrected? ***Even if it is politically unpopular, Turkey needs to start charging tuition for university education on a sliding scale (i.e., in accordance with students' financial means) to students who can afford to pay.*** Some countries have been successful in creating loan and scholarship programs for students, including Chile (which continues to provide free university schooling to the top 20,000 students on the national university entrance examination). Turkey should also use its centralized system to distribute resources to support students both at the university level and lower levels of

schooling through scholarship and other need-based programs. ***One easy way to identify students who can pay for university education is to identify those who attended private high school.*** If the families of these students can afford to pay for private secondary schooling, would it be so strange to charge them tuition for a university education?

According to a report published in 2000 by a World Bank task force on higher education, “using public funds for scholarships, fellowships, or loan schemes, thereby lowering cost barriers for talented students who would otherwise be excluded, is economically sound and a time-honored function of public funds” (Task Force on Higher Education and Society 2000, 41). Yet for many students from disadvantaged backgrounds, inability to gain admission to high-quality universities stops them from qualifying for scholarships in the first place.

One approach to ensure access of students to higher education in Turkey, regardless of their socioeconomic background, is to establish “percentage plans” to admit a certain proportion of the highest-performing students from all secondary schools. Such plans currently operate in the states of Florida, Texas, and California in the USA. In each of these states, students who graduate at the top of their high school classes are guaranteed access to public universities in that state. The percentage of students eligible and the range of university options made available to them differ by state. For example, students in the top 10 percent in Texas can choose *any* public university in the state, while students in the top 4 percent in California are ensured access to *one of* the universities in the state system (Horn and Flores 2003).

The objective of all three U.S. states is to increase diversity in public universities and to base university admissions on merit rather than student access to high-quality secondary schools or teachers. This type of policy insures that, even if disadvantaged students are concentrated in schools with few resources and low-quality teachers, their good performance can still be rewarded with the dream of university enrollment. To ensure that this dream becomes a reality for all economically disadvantaged students, however, such admission policies must be combined with scholarships and/or low-cost loans.

Policy Options to Support Strategic Objective C

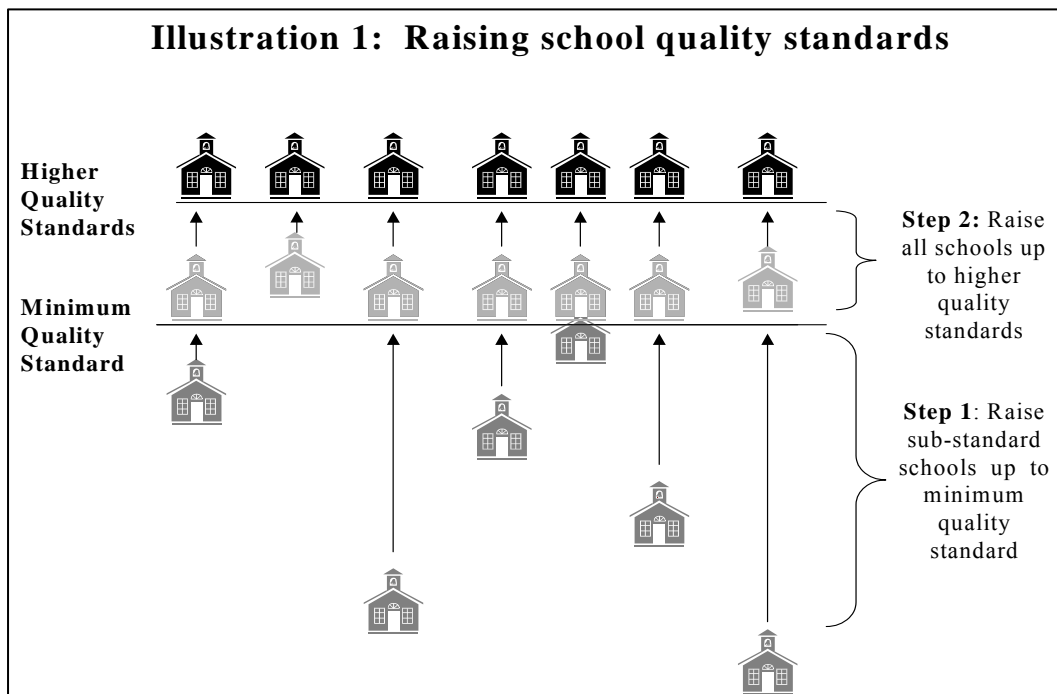
Strategic Objective C: Modernize both the curriculum and teaching methodologies, from pre-school through secondary schooling, to provide all students with challenging, engaging learning experiences that enable them to develop the relevant competencies and skills to lead successful lives.

C(1) Assure that All Schools Attain Minimum Quality Standards, Then Raise these Standards

This policy option emerges from extensive consultation with Turkish educators, who see a need for stronger learning standards for all children. During social assessments and stakeholder interviews conducted for the Project Implementation Completion Report of the first phase of the World Bank-financed Basic Education Project (BEP 1), as well as in qualitative assessments conducted for the ESS (Sahin 2004, Kuitunen 2004), teachers, principals and students in beneficiary high schools indicated that teacher training for the use of computers was neither adequate nor appropriate to their needs. They also reported that schools were not consulted regarding their training and resource needs. In some cases, the distribution of inputs was not adequately considered: some schools were provided computers and other equipment when they did not have the infrastructure (e.g. secure classrooms, adequate power supply) to guarantee their appropriate use.

The government can reduce educational disparities by defining minimum school quality standards and then using these standards to evaluate and improve learning conditions across schools in the system. The benchmark could consist of a set of essential infrastructure conditions, books, and other teaching inputs; classroom instructional conditions; minimally acceptable staff qualifications; and other basic resources needed for a school to provide adequate learning opportunities to all students.

When such criteria are provided in the form of a checklist or other standardized instrument, the provincial or sub-provincial education offices, could, with the participation of school staff and parents, measure schools against the standard, identify what is needed to close the gap, and prepare an investment program that prioritizes schools falling farthest from the standard benchmark. In this way, the government could target investments to eliminate disparities among schools until all education institutions met the benchmark. As additional investment resources become available in future years, the government would be able to elevate the standards and raise the quality of all schools, while continuing to assure that differences in quality remain a problem of the past (see Illustration 1).



International experience in the area of setting and enforcing school standards is limited, but growing. In 2003, an international coalition of 20 European school inspectorates, the Standing International Conference of Inspectorates (SICI),³⁴ issued a report based on a two-year study of effective school evaluations in Europe. One of the report's central conclusions was that schools must take responsibility for quality assurance by evaluating their own performance, making appropriate plans for improvement, and implementing these plans effectively. The center of the process is the individual child; the goal of self-evaluation must be to ensure that all students can access a high-quality education.

The role of external actors (e.g., school inspectorates) in the quality assurance process ensures that schools receive adequate support and pressure to change. The report cites several case studies of how school self-evaluations have been effectively supported by inspectorates, including the work of the Education and Training Inspectorate (ETI) in Northern Ireland. ETI provides schools with student data to use for benchmarking purposes, as well as material to help schools evaluate and implement improvement strategies. For example, the agency offers schools an improvement pack that includes case studies, effective school development procedures, and advice on how to set improvement targets. ETI also provides schools with quality indicators to use for measuring achievement improvements in specific subjects (SICI 2003).

Another example of a successful needs-assessment program in a different context is the World Bank-financed Education Quality Improvement Project in Cambodia, which served almost a one-quarter of the country's primary school population. Local school communities met and identified their needs, then made proposals to the Ministry of

³⁴ For additional information about the organization, see <http://www.sici.org.uk>.

Education for necessary funds. Once proposals were approved, the Ministry delivered the funds directly to local school clusters, which then distributed them to individual schools. The project involved district-based “animators” who monitored the quality improvement grants and advised the government on ways to improve educational policies. According to a World Bank assessment, the project increased dialogue about school reform at the school, cluster, and central administrative level. As a result, teaching and learning practices began to change and school and local administrators became increasingly responsible for improving their own schools (World Bank 2003).

Once individual schools have identified their own needs, the results of a needs assessment can be used to establish a minimum set of criteria for adequate human and physical inputs against which all schools can be measured. One approach to assessing whether schools meet minimum criteria is to use “opportunity to learn” (OTL) standards. The concept of OTL was originally developed by the International Association for the Evaluation of Educational Achievement to quantify student learning experiences and measure the impact of these experiences on cross-national differences in mathematics achievement. OTL standards have since been adopted by various countries to measure the adequacy and equity of their own schools. In the United States, for example, OTL standards are used to determine whether schools receiving federal funds have adequate resources, use them well, and provide equal access to all students. Using OTS standards (which can include indicators such as access to courses, time use, physical resources, and school environment) allow government officials to identify and focus resources on schools in which students are not receiving an adequate education (Schwartz 1995).

C(2) Improve the Coherence between Curriculum and Assessment to Focus on Learning

Currently, there is little connection between the Turkish national curriculum and the exams that determine a student’s place in secondary schools and universities. This policy option addresses this lack of coherence and underscores the need to reexamine both the curriculum and exams to guarantee that the objectives of each reflect the core competencies and foundation skills that Turkey wishes its graduates to obtain.

To correct the disconnect between the curriculum, exams, and the skill sets needed for success in the new economy, MONE should go further with the consultative workshops it is holding regarding primary and secondary curriculum reform. Specifically, it should ensure that all participants and stakeholders (including students, teachers, parents, curriculum specialists, and future employers) come to an agreement regarding the linkage of a unified curriculum with Turkey’s testing regime. Part of this process would include reflection on the general skills and competencies students need to have for the new economy, as well as greater consensus on topics such as citizen formation through civics education.

The misalignment of national standards, curriculum, and assessment can send confusing messages to young people concerning the skills and knowledge they need to succeed in future education and the workplace. A recent study of secondary-to-university transitions in the United States found that when universities ask for one type of knowledge and

secondary schools demand another, students often leave secondary school poorly prepared for university studies. By failing to provide students with consistent, appropriate standards, “fractured” educational systems undermine the university aspirations of young people. The resolution of this disconnect is to make standards and curriculum more compatible across different levels of education, as well as to provide all students, parents, and teachers with appropriate information about courses that prepare students to succeed at the university level (Kirst and Venezia 2004).

Problems resulting from the misalignment of educational goals and practice at different levels of the education system have generated an international movement toward standards-based reform. The idea of standards-based accountability is to develop a comprehensive set of well-defined standards based on broad societal consensus, then to align curriculums and assessments to these standards. This type of reform is often coupled with accountability programs that assess schools on how well they teach core skills and knowledge to their students. Success is generally measured by student performance on standardized tests. While there is evidence that accountability systems lead to higher student test scores, there is concern that they get teachers to “teach to the test,” rather than deliver a broader and perhaps deeper curriculum (World Bank 2003). Whenever stakes are attached to specific tests, teachers are likely to feel pressure to prepare students to take them. For that reason, it is important that such tests measure the actual skills and knowledge that a nation demands of its young people.

Recent research demonstrates that the most effective approach to aligning curriculum and educational assessment is to use curriculum-based exit examinations. For example, a study of several international assessments found that, controlling for a country’s wealth, students in countries with curriculum-based exit examinations performed better than students without such exams. Such examinations can motivate students to work harder in academic subjects and encourage schools and teachers to improve curriculum and instruction (Bishop 2001).

One promising example of the use of curriculum-based examinations is the International Baccalaureate (IB) program. Founded in 1968 and currently in operation in 1,485 schools in 119 countries, the IB secondary diploma program features a rigorous course of study ending in examinations that measure a well-defined set of skills and knowledge. Because student assessment is aligned with the curriculum, such exams promote high levels of instruction and achievement. Students graduating with an IB diploma have access to the world’s leading universities. Although it would be difficult to replicate the success of this program at a national level, the IB example demonstrates the possibility that there are tests worth teaching to (Rothman 2002).

C(3) Guarantee that All Students Develop Basic Skills as a Prerequisite to Lifelong Learning

To ensure sustained economic growth, Turkey needs to provide opportunities for all youth to achieve their potential. ***To date, Turkey has sought to reduce young people’s expectations and demand for higher education by encouraging a larger portion of students to enroll in vocational programs, which offer them limited opportunity to***

continue their education. Unfortunately, the idea of leveling the playing field in education often creates an expectation that quality at the selective schools (such as the Anatolian and Science High Schools) may be diluted. Improving opportunities for the least advantaged, however, does not require a quality at the upper end of the schooling spectrum to drop. Countries that have been successful in reducing the barrier between vocational and academic learning without detriment to school quality (e.g., Malaysia, Singapore, the United Kingdom) have found that both systems can learn from one another.

Providing quality general skills to vocational students and core technical skills to general secondary students means developing a solid foundation for lifelong learning. Decades of inaccurate “manpower planning” studies, and the inability of such research to forecast the needs of the information technology revolution, are evidence that Turkey cannot determine the training needs of vocational graduates a decade hence. In other words, the 65/35 goal of vocational-academic enrollments should be dropped. Instead, ***every secondary school student should acquire the same set of new skills, regardless of whether they are enrolled in a vocational or Anatolian high school.*** One way to fulfill this goal would be to expand the current system to include a final year of schooling in both general and vocational schools. This year could even include test preparation course for the higher education entrance exam.

Adding a final year of schooling would require diversifying opportunities at the tertiary educational level beyond the selective public and lower-quality private institutions. Diversification could, for example, create an intermediate junior or community college system. (See the forthcoming World Bank Tertiary Education Discussion Report). Another possibility is to develop elective courses in specific subjects in general academic schools, so that students could gain certification in job-related skills. One highly relevant example is software training or computer courses that eventually earn students a certificate of completion recognized by future employers. The content of these courses should be developed together with employers and special care should be taken to ensure parity of course delivery across schools.

Additional diversification of the traditional academic curriculum can also be achieved by means of specialized courses, using a “2+2” plan. This means a system in which all students complete a general academic high school curriculum focused on core competencies in grades 9 and 10, followed by more specialized courses on advanced competencies (either academic, vocational, or mixed) in grades 11 and 12. Finally, the weight of the university entrance exam as a determinant of entrance to the tertiary level of education should be reduced. Primarily, the exam should be balanced by high school achievement (grade point average), based on required academic subjects offered to all students and the success of the student beyond the purely academic sphere. Such an approach to secondary-school education and university entrance requirements would allow Turkey to make great strides in ensuring equality of opportunity for all citizens.

Analysis of student performance on international assessments suggests a positive relationship between equity of educational opportunity and student performance. For

example, the 2001 PISA showed that student performance in reading literacy was significantly below the OECD average in 11 of 13 countries that had inequitable educational opportunities among schools, as measured by variations in student background. ***Another important conclusion of the OECD report was that the composition of a school's student body explains much more of the variation in student performance than school resources or policies.*** In other words, if less advantaged students are concentrated in certain schools, they have little chance of performing well and entering high-quality universities.

The OECD report concluded that heterogeneous contexts are important for disadvantaged students, as are selection policies that control school composition (e.g., quotas for students of various backgrounds). Additionally, the strong effect of school climate on student performance indicates the importance of policies that improve discipline and foster a strong sense of belonging among students (OECD 2005). The OECD also found that countries which separate students according to background tend to be less equal and perform more poorly in reading literacy. For example, countries that implement early selection policies (before age 15) to place students in different academic tracks have lower student performance than countries that do not track 15-year-olds. The study also showed evidence of a negative correlation between the prevalence of vocational programs—where less advantaged students are often funneled—and student performance. Students enrolled in vocational programs performed significantly worse than did students in general programs.

According to the OECD, the PISA 2000 results provide evidence that ***integrated, comprehensive school systems are the best model to increase both equity of educational opportunity and student performance.*** Although opponents of single academic programs often argue that one program does not offer adequate opportunities for high- and low-performing students, the OECD report argues that such programs offer many educational choices and sometimes even allow students to take examinations at different levels. In fact, the organization and flexibility of single-program systems often allow for the possibility of highly individualized programs for students (OECD 2005).

Perhaps the best example of the connection between equity of opportunity and excellence is Finland. Scoring highest in reading literacy among 32 participating countries on the 2000 PISA evaluation, Finland also ranked among the five lowest countries in school inequality, as measured by both student background and performance. Additionally, Finland is one of 14 countries not to apply tracking criteria to students 15 years old and less. The country's education system emphasizes general academic programs and has one of the lowest percentages of students in vocational education programs (OECD 2005).

Analysis of Finland's performance on the 2000 PISA suggested that its success was due to a combination of several factors, including the structure of the education system, the system of teacher education, school practices, and a comprehensive pedagogy. One of the most important factors contributing to both equity and excellence is the Finnish tradition of non-selective schools in which all students have access to the same comprehensive schooling, regardless of background. Knowing that no child can be sent to a different

school or be tracked into a program with lower expectations, Finnish teachers must learn to work with heterogeneous groups. This approach also encourages flexibility in the curriculum and recognition of children's individual needs (Valijarvi et al. 2002).

C(4) Using ICTs to Integrate the New Curriculum into Classroom Practice

We live and work in a digital society where information and communication technology (ICT) has an ubiquitous impact on the way we live and, in particular, how we organize teaching and learning. It is interesting to recognize that, throughout the world, the pressure to introduce ICTs into schools has come as strongly from outside the school system as within, and is always accompanied by an unshakable belief that all students need to have computer competency in today's world.

The OECD (2001) has identified three main reasons for the integration of ICT into education systems: economic, social, and pedagogical. The economic argument focuses on the perceived needs of the economy, now and in the future. The social rationale focuses on ensuring that students gain an essential "life skill" equivalent to literacy and numeracy.

The pedagogical rationale concentrates on the role of ICT in teaching and learning. This potential has developed rapidly in recent years from the use of "drill-and-practice" programs to using ICT to develop higher-order thinking skills, including analysis and synthesis. There is a growing convergence between the economic, social, and pedagogical rationales, as modern society increasingly looks to schools to foster independent and creative thinkers who can confidently solve problems and manage their own learning throughout their lives, the very qualities promoted by ICT.

Turkey realizes that ICTs must be introduced into the education system to begin developing a knowledge society. To date, however, there is little evidence that ICTs are being embedded in school culture in the country. In many cases, they are merely seen as curricular add-ons. Major organizational changes will be required within schools—changes that may even involve a redefinition of the role of the teacher—in order to properly take advantage of ICTs in primary and secondary schools. In particular, effective use of ICTs in education requires a move away from rote learning and the delivery of a body of knowledge.

The second requirement of effective ICT introduction is an education system that focuses on individual students. In many schools, standardized textbooks and teaching methods are still used to educate students who have different aptitudes and learning styles. ***Creative and self-directed education methods are needed for ICT-based learning.*** ICTs can provide both a resource-rich environment and a learner-centered approach that together alter the teaching-learning relationship. These technologies support different ways of learning, thinking, and working across a curriculum that enable diverse, creative and engaging learning.

Australia, the United States, and members of the EU have come to embrace this change in learning methodology in recent years. In Australia, for example, familiarity and

competence with ICT is identified as a central goal of education in the 21st century. The U.S. government has established a range of policies for ICT use, based on the belief that ICT enables students to learn problem-solving skills better than traditional methods and become more competent in organizing complex information, recognizing patterns, drawing inferences, and communicating findings. In its Europe 2002 plan, the EU likewise seeks to ensure that all students are digitally literate so as to have the skills needed to live and work in the new information society.

There is wide acceptance among educators that individual learners construct their own understanding by building on previous experiences and applying their knowledge in practical situations. Such a constructivist model implies that working with concrete problems develops the capacity for deciding how and when to use existing skills. Such a learning environment is likely to include projects, group work, problem solving, reflective writing and other tasks that stimulate meaningful thinking (OECD 2001). This learning model is highly relevant to an ICT-based environment.

It has been observed that primary and secondary schools have deeply rooted structures and values—the “grammar of schools” (Tyack and Cuban 1995)—that arise from received notions of the purpose of education. Typically, schools are expected to safeguard and transmit national culture and identity. These expectations generally cause schools to resist changes in learning and the school environment introduced by ICTs. Despite the strength of traditional values, many forces are driving ICT into schools, where it is being enthusiastically embraced. In fact, many education specialists anticipate that the adoption of ICT will serve as the catalyst for a more learner-centered teaching approach. From this perspective, technology in schools is not so much the driver of change as its enabler. Put in other words, ICT may be a “Trojan Horse” (Papert 1997)—the means by which educational change is delivered (ICT) may itself become the mechanism that wins acceptance of the change. At this juncture, Turkey has the opportunity to bring about fundamental educational change if it uses ICT as a tool to modernize its education system. Such a transformation will not take place over night and, to be successful, requires a vision and direction that involves all education stakeholders.

C(5) Design, Test, and Disseminate Effective School Development Models

One of the key conclusions described in Section 2 is that schools do not receive adequate support to improve the quality of education that they provide. In fact, many do not know where to begin. In Turkey, MONE and its inspectorates may not be the most appropriate source of providing innovative approaches for school improvement. A potential source of new school models may be found in private-public partnerships. One such program that has been successful in promoting school improvement in the United States is the New American Schools (NAS), established in 1991. According to the NAS website (www.naschools.org), the program aims to identify and replicate effective, evidence-based school improvement strategies. With support from the federal government and the private sector, NAS selected 11 “designs” from among close to 700 proposals and

provided start-up grants to each “design team” to offer their services to local schools and districts.³⁵

As a result of the New American Schools program, public schools gained access to proven research in best practices of teaching and learning, and private industry moved beyond charitable giving toward genuine, long-term investment in U.S. students. A recent evaluation of NAS by the RAND Corporation found that one of the program’s key strengths is its explicit emphasis on educating consumers about school reform. NAS has embraced external evaluation of its efforts and has promoted quality assurance by creating an Education Quality Institute. RAND also concluded that the NAS approach of providing venture capital for specific goals can be used as a future policy instrument to promote innovative approaches to school reform (Berends et al. 2002).

Another example of private-public collaboration in school reform is the Business Roundtable of the United States (www.businessroundtable.org), an association of chief executive officers of leading corporations in the country. Since 1989, the Roundtable has focused attention on state governments (where most education policy is made) to disseminate information on effective school reform and promote best practices among states, districts, and schools. The organization also disseminates information to local business leaders to assist local school reform efforts. For example, it publishes a “No Child Left Behind Business Leaders Tool Kit” to inform business leaders how they can develop partnerships with educators and policymakers in their communities to help implement the federal No Child Left Behind Act (Business Roundtable 2003).

C(6) Integrate General and Vocational Education into Diversified Secondary Education Schools

In Turkey, as in many countries, students from disadvantaged backgrounds are directed towards a vocational track at a young age, making it difficult for them to pursue higher education and professional careers. Early vocational tracking not only affects students who are filtered out of educational opportunities, it can also weaken the overall learning of a nation’s young people. According to research by the OECD (2005), countries with greater participation of students in vocational programs also tend to have more unequal and lower educational outcomes than countries with more comprehensive schooling opportunities for all children. Although recent reforms being introduced in Turkey, including the common ninth grade, will permit students to transfer “horizontally” between vocational and academic programs, in practice the physical separation between vocational and general secondary programs into separate school buildings will make this transfer difficult for youth and their families. After the ninth grade, the administrative separation between different programs would still inhibit the transfer between programs because of different requirements and expectations.

³⁵ These programs include the Accelerated Schools Project, ATLAS Communities, Con-nect Schools, Different Ways of Knowing, Expeditionary Learning Outward Bound, The Leonard Bernstein Center for Learning, Modern Red Schoolhouse, The National Institute for Direct Instruction, Turning Points, and Urban Learning Centers. Further information on each of these programs can be found at the NAS website, www.naschools.org.

The challenge for Turkey is to integrate academic and vocational programs in diversified secondary education schools that serve all children. One promising option is the “diversification” of secondary schools to include common academic and vocational classes within a single school. Diversified secondary education schools would be different from multi-program schools³⁶ in that they would permit students studying vocational subjects to take academic courses with their general secondary program peers, and vice versa. In contrast, the multi-program school tends to have more rigid boundaries between academic and vocational streams, and, in some countries, have relied on aptitude tests or teacher recommendations to screen and track students. Many of these schools—both multi-program and diversified—originated as academic schools that added vocational components in order to respond to labor market needs or to serve a more diverse population of students (Holsinger and Cowell 2000).

In a well-known study of diversified secondary schools in Colombia and Tanzania, the authors found that although diversified schools were often more costly than academic or vocational schools, their graduates had higher achievement test scores in academic subjects than both types of schools. In the Colombian case, industrial, social service, and agricultural streams not only had higher achievement scores, these programs were actually less expensive than academic and vocational schools. While the academic and commercial streams also boosted test scores, they were found to be more expensive than the control schools. In Tanzania, students in diversified schools generally scored higher on achievement tests, but unit costs for the schools were higher than for academic schools. In both countries, diversified schools recruited more students from low-income backgrounds than the control schools (Psacharopoulos and Loxley 1985).

In addition to the Colombian and Tanzanian cases, many other countries have replaced academic or vocational secondary schools with more comprehensive models. In fact, between the 1930s and the 1980s, comprehensive secondary schools replaced “classical” academic secondary schools as the model most frequently used in most countries (Holsinger and Cowell 2000). In Great Britain, three types of programs exist at the secondary level: academic, general vocational, and vocational. Outside of the university-oriented “A-level” program, the British system has invested in modular approaches to integrate academic and vocational streams. In Japan, specialized vocational courses emphasize both general subjects and hands-on skills. Additionally, the Ministry of Education has attempted to make its vocational schools equal in quality to general secondary schools. Finally, the United States has traditionally relied on comprehensive high schools that offer a full range of both academic and vocational classes (Keating et al. 2002).

Once students from various backgrounds are united in a comprehensive or diversified secondary school, policies must ensure that all students have access to the same curriculum and are held to the same high standards. ***One possible approach is to require that all students, both vocational and general, to complete a core curriculum of academic subjects.*** Students’ performance on exams of this curriculum can be used as a graduation requirement to ensure that graduating students have completed a high-quality

³⁶ *Cok Amacli Lise.*

program of study. Such a system could follow the model of curriculum-based exit examinations required by many countries for graduation from secondary schools. Examples include France's Baccalaureate and Great Britain's A-levels. In the United States, many states have required that students take "end of course" exams that measure how well they have mastered key concepts and skills. For example, the state of New York requires that students pass five Regents exams (based on New York state content standards) in order to graduate (Bishop 2001).

If all students participate in the same sequence of core courses, their performance in these courses can be used both as a challenge for all students and as a criterion for admission into universities, thereby increasing the probability that students from less advantaged backgrounds can compete for places in the university. In the present Turkish system, the highly selective university entrance examination acts as a barrier to university education for students who do not have the means to pay for test preparation programs. In contrast, curriculum-based exit examinations reward mastery of the curriculum already taught to students in secondary school.

Replacing Turkey's university entrance exams with curriculum-based secondary exit examinations would likely reduce the chances of certain students gaining admission to public universities. At the same time, by basing university admission on the secondary curriculum, rather than facts memorized in cram schools, a system of curriculum-based exams would ensure that students who worked hard and learned the material in secondary school would at least have a chance of going to a high-quality university, regardless of their economic background. In addition to rewarding merit and hard work, such a system would create an incentive for all students to learn the core curriculum in secondary school.

C(7) Provide more Apprenticeship Opportunities for Secondary School Students

Regardless of the type of secondary education that students receive, access to training opportunities in real-world settings can ease the transition of adolescents into the world of work. To make the school-to-work transition more productive for both students and industry, Turkish policymakers must collaborate with business leaders to develop supervised internships for students nearing completion of upper-secondary schools. Such apprenticeship systems are commonly used in many European countries to develop skills critical to future careers. While this is a low-cost and high-yield option to enhance the training of young people for future careers, ***the challenge will be to convince the private sector to support students interested in serving in apprenticeships.***

The best-known secondary-level apprenticeship program is probably Germany's "Dual System," which offers work-based training in approximately 350 occupations to between 60–70 percent of upper-secondary students. Participating students receive wages equal to about one-third of the wages of fully qualified workers in the same occupation. Apprentices typically serve three and a half years under the supervision of a qualified *Meister*, while attending school two days a week to study general and theoretical subjects. Completion rates for students participating in the Dual System have generally

exceeded 90 percent. Many attribute the high level of occupational skills in Germany to this system. Despite its success, however, the program has periodically experienced difficulty finding sufficient training places for youth apprentices (Keating et al. 2002).

Both the German program and a similar program in Austria have served as models for apprenticeship programs in France and the United Kingdom. Similar systems operate on a smaller scale in the Netherlands and Belgium. Under France's three-year "professional baccalaureate" program (*baccalauréat professionnelle*), for example, which was established in the late 1980s, students participate in 16-week internships. Graduates can then either move directly into industry or pursue a higher education. The United Kingdom's Modern Apprenticeships program, established in 1994, provides similar opportunities to youth aged 16 to 24. Participant surveys find that young people are satisfied with the program and plan to continue working with their employers upon completing school (Keating et al. 2002).

For Turkey to develop an apprenticeship program, it must enlist the cooperation and support of the private sector. As Germany's Dual System has demonstrated, apprenticeship programs can only succeed when qualified supervisors are willing and able not only to welcome students, but to supervise them closely.

Policy Options to Support Strategic Objective D

Strategic Objective D: Provide teachers and school managers with the appropriate preparation, incentives and support to improve their commitment and effectiveness as guides to future citizens.

D(1) Develop an Integrated Program for Teacher Education and Professional Development

Many of the skills that teachers carry with them throughout their professional careers are developed during pre-service formation. It is widely acknowledged that in Turkey, as in many countries, pre-service education for teachers provides a strong grounding in education theory, but few practical tools on how to actually teach in front of a class. ***Although it is unlikely that MONE can change teacher education programs without considerable effort, it should cooperate with the Higher Education Council to provide all pre-service teacher certification programs with the new curriculum. In particular, it should provide these programs with the textbooks used in public schools.***

The use of school textbooks during pre-service teacher training is surprisingly rare in university and normal schools. At the very least, delivery of national textbooks, together with teacher curriculum guides, would provide interested teachers-in-training access to materials for developing demonstration lessons in their areas of interest. In order to promote the use of these textbooks, MONE should work with OSYM to develop an oral demonstration lesson component of the teacher certification exam.

Turkey must also make every effort to develop practical connections between what teachers learn in school and how they teach in their own classrooms. Most of all, this goal requires strengthening linkages between teacher preparation programs and the national curriculum (including the use of current textbooks during the practicum period, as is the case in Cuba). ***The lack of a teacher preparation curriculum, including a set of obligatory competencies that all teachers should possess, severely curtails the flexibility of teachers to respond to the needs of a diverse education system.*** Strategies for multi-grade and diversified instruction for rural areas, for example, are virtually non-existent in teacher preparation programs. In the absence of standards at the pre-service level, the quality of new teachers is completely reliant on the OSYM teacher career entrance exam. Teacher preparation programs are well aware of the importance of the exam, as evidenced by the fact that many teacher preparation schools are known to help their students “cram” in order to pass (Sahin, 2005). The underlying question the education community and greater civil society must consider is: does Turkey want to continue to rely on a single civil exam to determine the quality of teachers who will shape the education of future generations?

Turkey is not alone in the challenges that it faces in reforming pre-service education: a common complaint among teachers in many countries is that their pre-service training relies too heavily on theory, failing to prepare them for the realities of the classroom. As

noted above, a change as simple as providing student textbooks to teachers-in-training can help teachers develop knowledge of the curriculum and the best ways to teach it. The key is to base teacher pre-service training on the realities of the schools and students that future teachers will serve. For example, in Cuba, which outperformed other Latin American countries in student performance on the 1997 OREALC/LLECE examination, both pre- and in-service training are based in local schools and rely heavily on the national curriculum, which makes training more relevant to the needs of schools and students and builds relationships between schools and teacher training institutes. Additionally, school directors are trained at the same time as teachers, so that they, too, become familiar with the process of developing teachers (Gasperini, 2000).

Another promising approach to making teacher pre-service programs more real to teachers is to give teachers-in-training the opportunity to teach lessons in real classrooms under the supervision of experienced mentor teachers. A comprehensive review of literature on teacher preparation programs found that teachers often identify their student teaching experiences as the most powerful element of their teacher preparation programs (Wilson et al. 2002). Such training allows teachers to develop and test the effectiveness of demonstration lessons with actual students.

One promising approach in the United States is the professional development school, which involves partnerships between schools and teacher preparation colleges. Generally housed at education schools within universities, professional development schools are modeled after teaching hospitals in their methods and objectives. Teacher candidates trained at such schools receive a combination of academic preparation and clinical training in real-world settings under the supervision of experienced teachers. After teachers complete their training and are hired as teachers, an experienced mentor supervises them closely during their first year of teaching (Darling-Hammond and Sykes 2003).

Recommended Components of an Integrated Professional Teacher Development and Support Program.

The purpose of this section is to suggest how to bring coherence and an overarching vision to Turkey's system of preparing and supporting teachers. While it may be one of the most difficult strategies to implement, development of an integrated program for teacher education and support is one of the most important measures the government can take to improve educational quality.

The training, licensure, and support of new teachers are treated as discrete functions in Turkey, rather than links in a continuous chain of professional development. The institutions most involved in the teacher preparation (YOK, OSYM, MONE, and schools) often communicate different goals and provide different levels of support to new and prospective teachers. For example, the exam that prospective teachers must take to enter the teaching profession is not based on needed classroom skills and knowledge. Similarly, teachers-in-training do not gain significant experience in real classrooms until they begin their careers.

The lack of coherent links in teacher development can result in a mismatch between the pool of teacher candidates, the skills they acquire in training, and the educational needs of schools and students. Failure to support teachers throughout this process also results in the loss of many qualified teachers before they acquire the skills necessary to be successful in the classroom. Many studies have found that a large proportion of new teachers leave the profession after three to five years of teaching. Studies have also found that those who leave early tend to have stronger educational backgrounds and higher test scores than those who remain (Murnane et al. 1991, OECD 2004).

While the preparation of successful teachers differs by country, there are three central components of teacher development: initial training and licensure, induction and support, and continuous professional development.

Initial Training and Licensure. The first step in training teachers is to identify and develop intelligent, motivated young people to pursue teaching careers. At present, high-ability Turkish youth tend to opt for training in medicine, engineering, or law, leaving pedagogy programs to students who perform less well in secondary school or the OSS. While there is no easy solution to attract more able young people into teaching, research indicates that relative salaries (salaries of teachers in comparison to those of other professions), working conditions, and job stability affect the attractiveness of the profession (OECD 2004). This suggests the need for a multi-faceted approach to recruit young people to become teachers.

Once prospective teachers have entered teacher preparation programs, they must receive training that prepares them for the realities of Turkish classrooms. This includes ensuring that they master the curriculum. There is considerable evidence that the students of teachers who know their subject matter well learn more than students of teachers with less knowledge of a given subject. For this reason, many countries emphasize acquisition of subject-matter knowledge in teacher training programs. In Korea, for example, prospective teachers must take at least 42 credits in a selected subject area, along with 14 credits in general education, 4 credits in subject-related pedagogy, and 90 credits of electives, including teaching methods. While individual teacher education institutes usually design their own curriculums, many countries—including England, Japan, the Netherlands, and Korea—have a national government agency that reviews and approves this curriculum. In the United States and Australia, accreditation is performed by independent national organizations or boards (Wang et al. 2003).

It is also important for candidate teachers to student teach, which should include the design, execution, and evaluation of lessons under the supervision of experienced mentor-teachers. The length of student teaching varies from country to country. For example, prospective teachers in Japan spend three to four weeks as student teachers, while in the Netherlands; student teaching can last longer than a year. One essential feature of student teaching is that candidate teachers receive consistent support and evaluation from experienced professionals. In Korea, for example, student teachers receive evaluation and support from an experienced teacher, a principal, and a university

advisor. In the Netherlands, university staff observe student teachers while school staff evaluate them. Student teachers also have the opportunity to observe and be observed by other teachers (Wang et al. 2003).

Upon completion of their education, teachers in many countries must earn a license or credential to teach in public schools. In the United States, teachers must pass a licensing exam administered by the relevant state government. However, many other countries require only successful completion of a teaching preparation program. In the Netherlands, for example, the university diploma earned by a prospective teacher serves as his or her teaching certificate (Wang et al. 2003).

Induction and Support. Once candidates become practicing teachers, it is important to ensure that they have the necessary support to become satisfied, successful professionals. Many countries have systematic induction policies to ease the transition from the supportive environment of student teaching to the often harsh realities of being the sole teacher in a classroom of needy children. Such programs generally consist of tutoring and mentoring within the school and out-of-school, in-service seminars, and workshops.

Germany follows an apprenticeship model in which new teachers participate in classroom observations and assistant teach, as well as professional development activities. Japan requires new teachers to participate in a year-long induction program that consists of mentored school-based training, seminars, practical training sessions, and training retreats at regional professional development centers. In France, new teachers are paired with senior supervising teachers for two years (Stoel and Thant 2002). New teachers that participate in such programs are generally compensated by increased salaries or a reduced teaching load. In England, for example, the workload of first-year teachers is ten percent lighter than that of experienced teachers. In Japan, new teachers have a free day every week for 30 weeks (Wang et al. 2003).

Continuous Professional Development. While initial teacher training is extremely important, it is clearly insufficient to ensure high-quality teachers. Educational policymakers around the world have begun to see teaching careers in terms of lifelong learning, in which experienced teachers attend ongoing professional development programs. There is no clear consensus on what sorts of professional development activities are most effective, but evidence indicates that ongoing training can be very effective when linked to school development and undertaken in a collegial environment (OECD 2004).

Countries approach continuing professional development in many different ways. In Korea, teachers in their third year must complete a formal four-week training program. In Japan, teachers participate in professional development activities throughout the year, both during and after school. In the Japanese prefecture of Shizuoka, teachers must participate in six-day workshops after their fifth and tenth years of teaching. Other countries, such as England, Singapore, and the Netherlands, grant teachers paid leave to have them participate in professional development activities (Wang et al. 2003).

Another promising approach to continuous professional development is the establishment of advanced certification programs that encourage experienced teachers to continue learning new subject matter and hone their skills. For example, in the United States, teachers can receive national certification from the National Board for Professional Teaching Standards, an independent nonprofit organization. The voluntary program requires teachers to prepare portfolios of their teaching practice, as well as to take tests in their specialized subject matter. Teachers who complete the national certification can earn salary bonuses and often take on instructional leadership positions within their schools and/or districts.

In England, an experienced teacher can qualify as an Advanced Skills Teacher by participating in training and an external assessment. Advanced Skills Teachers continue working in their own classes, but also spend 20 percent of their time working with teachers from other schools to develop their teaching skills. Other countries offering advanced certification to experienced teachers include Japan, Korea, and Singapore (Wang et al. 2003).

Creating Links. A successful teacher preparation and training system integrates each step of a teacher's development. Such a system requires collaboration between the institutions involved in developing teachers, such as universities, schools, and licensing agencies. One model of collaboration is the professional development school in the United States discussed earlier. Following a clinical model based on teaching hospitals, this type of school uses strong links between teacher colleges and local schools. While in training, prospective teachers work in local schools under the supervision of mentor teachers. After taking jobs in local schools, these teachers work for a year under the supervision of experienced mentor-teachers (Darling-Hammond and Sykes 2003).

In Turkey, MONE must take the lead in establishing the curriculum requirements of teacher accreditation. One accreditation requirement should be completion of a well-supervised student teaching program in a local school, supervised by experienced teachers. Once new teachers are hired in schools, these mentor teachers can assist with their induction and support. Finally, experienced teachers must have opportunities to participate in ongoing training that meets their needs for professional growth and provides incentives for them to become master, and in some cases, mentor teachers.

D(2) Formulate an Effective Policy for Teacher Selection, Assignment and Support

It is clear from much of the research presented in this report that improving teacher performance is crucial to improving student outcomes. Turkey, like most countries, suffers from lack of consensus, collaboration and communication among the trinity of institutions that help shape a teacher's initial development (YOK and the higher education institutions responsible for preservice teacher education), selection (OSYM) and career (the Ministry of National Education). ***A consensus-based teacher development plan should be developed that lays out a strategy for supporting teachers throughout their teaching careers: from initial training to selection to career***

development. How to best support teachers has been the subject of great controversy and generally requires considerable debate and compromise among the relevant parties: teachers, parents, students, and the trinity of actors mentioned above.

Sample components of a career development policy for teachers are listed below, together with the countries that have introduced them:

- increase the role of school principals in selecting teachers (United Kingdom)
- assign more experienced teachers to early grades and disadvantaged groups (Cuba)
- develop mentor-teacher and peer-coaching programs (USA)
- increase teacher support during the induction period (California, USA)
- encourage teacher involvement in decisions that directly affect the classroom, such as the national curriculum and selection of textbooks (Brazil)
- strengthen teacher professionalism by creating a professional teaching society as a complementary institution to teacher unions (Peru)
- encourage teacher input concerning in-service training needs, including giving schools the right to “purchase” their own training programs (Brazil)

A recent report by the OECD concludes that, of all policies available to schools, raising teacher quality is the intervention most likely to improve student performance (OECD 2004). Additionally, recent research has found that access to effective teachers can help raise the achievement of disadvantaged students and close the persistent gap between less and more advantaged students (Hanushek 2002). Yet studies have also found that teacher quality varies tremendously across and within schools, often at the expense of disadvantaged students who need good teachers the most. For example, research in the United States has found that the highest-quality teachers tend to sort into schools with the most advantaged and highest-achieving students, leaving disadvantaged students with lower-quality teachers (Lankford et al. 2002).

The 2004 OECD report, which was developed in collaboration with 25 countries with varying educational contexts, offers several recommendations for developing a comprehensive approach to teacher development:

- Countries should emphasize quality over quantity of teachers by upgrading selection criteria for training institutes and schools, ensuring ongoing evaluation of teachers throughout their careers, and providing resources and support that teachers need to meet increased expectations.
- Educational policymakers should develop “teacher profiles” that define what teachers should know and be able to do, as well as provide a vision of effective teaching. Such a profile would help policymakers assess whether teacher development programs are delivering the types of teachers that Turkey needs.

- Teacher development should be viewed as a continuum, with clear links between initial teacher education, induction, and professional development. Additionally, greater attention should be placed on supporting teachers during the initial phases of their careers, particularly through improved induction programs.
- ***Teacher education should be more flexible: options should be available for non-education tertiary students to enter teaching preparation programs, as well as for people from other careers to enter the teaching profession.*** Greater flexibility would provide more routes into teaching, identify people with a strong commitment to teaching, and increase the overall pool of qualified professionals willing to enter the profession.
- Teachers should actively analyze their own practice and engage in ongoing professional development, based on effective teaching practices and teachers' own understanding of what works in their classrooms.
- ***Schools should be given greater responsibility for the selection, working conditions, and development of teachers.*** To avoid inequalities in the ability of schools to manage these responsibilities, schools themselves should be measured against externally determined performance standards (OECD 2004).

Policy Options to Support Strategic Objective E

Strategic Objective E: Establish effective and modern governance arrangements to assure that all human and financial resources in the sector, both at the central and local level, are used efficiently to achieve the objectives of Turkey's education sector strategy.

E(1) Equalize Funding across Regions and Provinces

This policy option addresses regional inequities in the distribution of public funds to regions, communities, and schools. It is thus relevant to ensuring greater equity in children's access to educational resources. The research commissioned for this ESS study makes clear that Turkey's school financing system does not distribute resources equally to all students and schools (Kuitunen 2004, Mete 2004). Yet even should resources be distributed uniformly, economically disadvantaged students would still likely lag behind other students. Many studies have found that family background, as measured by socioeconomic status and parental education, is the single largest factor affecting student success in school. The effects of poverty range from decreased learning opportunities in the home to insufficient diets that cannot sustain student attention throughout an entire day of learning (Rothstein 2004). Poverty can also affect students in more subtle ways, such as instilling in children the belief that they cannot succeed in school because their parents did not.

To address the disadvantages of students living in poverty, Turkey must develop a compensatory system of financing that allocates resources according to the economic and educational needs of students, schools, and communities. At the student level, Turkey's Social Risk Mitigation Project presently uses means testing to distribute conditional cash transfers to students identified as economically disadvantaged. These conditional cash transfers are a good starting point for larger-scale equalization of resources because they identify students with the greatest need and establish criteria for allotting compensatory funds to schools. The next step would be to target additional funds to schools or provinces with large populations of students that qualify for conditional cash transfers.

Many countries use compensatory financing to ensure that schools in greatest need receive extra funding. For example, in the United States, the federal government devotes a large share of its educational funding to the Title I program, which distributes resources to schools according to the percentage of students who qualify for the school lunch program subsidized by the federal government. Schools receiving Title I funds use these monies to, among other things, lower class sizes, hire instructional aides, and purchase instructional materials (U.S. Department of Education 2002). In addition to Title I funds from the federal government, U.S. schools also receive equalization aid from state governments. Using formulae based on local revenues and student population, this aid is designed to provide resources to the schools and school districts that most need it.

In many European countries, central governments allocate compensatory funds to regions or local communities. In Germany, for example, the central government allocates general block grants to poorer regions in order to shift resources from wealthier to poorer regions. While these grants are not targeted uniquely for education, they bolster the provision of social services in regions with fewer economic resources. In the United Kingdom, the central government allocates large block grants to local education authorities using a formula based on, among other things, the higher cost of educating students from disadvantaged backgrounds. These costs are based such factors as the percentage of residents receiving income-support benefits, the percentage of the population belonging to ethnic minority groups, and the number of families with only one parent (Barro 1996). In France, the central government targets additional funds and resources to schools in “priority education zones,” as described in Box 4 below.

Box 4. Priority Education Zones in France

The French government instituted a policy in 1981 to target additional educational resources to areas with greater concentrations of needy children. These areas are known as priority education zones (in French as *zones d'éducation prioritaire*, or ZEPs). ZEPs, which tend to be located in the urban periphery of large cities, are defined as areas with high percentages of working-class families, unemployed and poorly educated parents, and residents on public assistance. The zones generally include a lower secondary school, together with its feeder and elementary schools—a structure designed to promote continuity for students and the collaboration of teachers at different levels. In contrast to the Title I program in the United States, which targets resources to the neediest students or schools, all students in a ZEP—which can include large populations of middle-class and more advantaged students—benefit from compensatory funding. Much of the additional funding directed to ZEPs is used to lower class size and hire specialists, such as speech therapists and special education teachers.

Source: Neuman and Peer 2002.

In Turkey, the central government could allocate compensatory funds based on the percentage of students who qualify for conditional cash transfers. While compensatory programs vary in how they direct such funding—to regions, local communities, or directly to schools—the key is to direct extra resources to the level with the greatest capacity to use them. If schools were to receive compensatory funds directly, school personnel would need training in procurement and accounting to make sure funds are invested in educationally appropriate interventions for disadvantaged students.

E(2) Provide Transparency of Information to Parents

As discussed earlier, one of the great challenges in the Turkish education system is unequal distribution of both inputs and outputs at the primary education level. ***A potential way to improve accountability for the equitable distribution of inputs is to guarantee parents access to information about their childrens' schools, for example, through yearly progress reports on school objectives.*** On the output side, these report cards would include such key indicators as student progress on learning objectives; passing, drop-out, and repetition rates; parent satisfaction; and student absenteeism.

On the input side, report cards would assess progress on a series of objectives identified in a school needs assessment (e.g., upgrading physical inputs and/or improving school facilities). Goals could include the replacement of windows or installation of a new telephone line for Internet access for existing computers. ***Transparent information enables parents both to assist and pressure schools to achieve objectives.*** Schools report cards would also create an additional layer of transparency regarding school inspectorate operations. Despite existing requirements, inspectorates do not currently respond adequately, promptly or equitably to the needs of schools.

If implemented broadly, transparent information on schools' objectives would have secondary, or “spin-off,” effects, including increased civil society dialogue on what a “good school” should look like. Currently, much of the discussion regarding the goals of primary schools in Turkey centers on passing rates on the Anatolian High School

examination (Sahin 2004). Further reflection on school climate, community-school partnerships, greater social accountability, governance, values, and the development of core competencies should also be an integral part of a school report card and subsequent stakeholder dialogue. These processes are evident in the operations of the autonomous schools of Nicaragua and school development plans instituted in Chile and Brazil.

Creation of a school report card is a fundamental step towards increasing the voice of parents in their children's education. Report cards also increase accountability in the education system. As the World Bank's *World Development Report 2004* observes, educational accountability consists of four elements: (a) the voice of citizens, (b) compacts between educational service providers and the public, (c) institutional management, and (d) the client power of citizens to increase system accountability. An important component of a coherent, accountable system is the provision of high-quality information. If parents do not have access to timely and accurate information about their children's schools, for example, increasing their power will not necessarily lead to increased accountability or educational performance (World Bank 2003).

Sharing of school information with parents can take many forms. In the United States, schools receiving federal funds must provide parents with annual school report cards. Report cards contain information such as teacher qualifications, student graduation rates, and student performance on standardized tests. Additionally, schools should also report the performance of students from various subgroups according to racial, ethnic, and language background. Schools in many countries also include information about school climate and safety; in the state of California, for example, such reports provide information about the availability of textbooks and the condition of school facilities (Fox 2004, Sack 2004).

In addition to demanding school report cards, parents can make schools more accountable by participating in school development plans. In the Brazilian state of Minas Gerais, parents collaborate with teachers and principals to define goals for local schools, create school development projects, and manage financial resources to achieve these goals. In Chile, schools undergo a similar process, then submit their school development plans to the Ministry of Education, which rewards funds on a competitive basis (Winkler and Gershberg 2000). As discussed below, ***increasing the participation of communities in school reform not only strengthens school accountability and parent access to information, it may also improve student achievement and attendance.***

E(3) Improve School Management by Certifying and Mentoring Principals and Inspectors

School principals play a paramount role in the functioning and improvement of schools. Studies on school effectiveness have found a strong relationship between high student achievement and strong administrative leadership. Effective principals can also have strongly affect student attitudes and social behavior (Cotton 2003). A recent study by the OECD found that principals in most OECD countries had greater responsibility for personnel and financial resources management than school boards, department heads, or teachers (OECD 2005). In Turkey, another level of educational administration—school

inspectorates—also merits attention. This policy option is designed to support the government’s strategy to improve capacity at both the school and inspectorate level.

Despite the importance of high-quality principals, principal training programs often do not fully serve the needs of either principals or schools. In a 2005 report, the president of Columbia University’s Teacher College described principal certification programs in the United States as irrelevant, lacking in focus, and of very low quality. Unable to find an exemplary program in the United States, he identified a model program in England: the National College for School Leadership. Established in 1998 by Prime Minister Tony Blair, the college serves as a state-of-the-art center for the preparation and certification of school leaders. The college, which serves administrators throughout their careers, uses a research-based training strategy that examines the relationship between school leadership and student learning. Although the college offers no salary credits or degrees, it provides a coherent curriculum and rigorous graduation standards. Other important features include a mixture of coursework and on-the-job instruction, use of both academic and practitioner faculty, and evaluation (Levine 2005).

To gain and hone their leadership skills, prospective and practicing principals in other countries have increasingly turned to principal training centers. In the United States, a network of 150 principal training centers—many modeled after the Principal Training Center at Harvard University—offer support, mentoring, and collaborative opportunities for prospective and current principals to improve leadership skills and knowledge. Principals in these centers share best practices across national borders through an international network (Fenwick and Pierce 2002).

Available evidence indicates that there is a significant need to improve the ability of school principals in Turkey to obtain additional resources on behalf of their schools. ***Turkey can professionalize the role of principals by establishing a principal certification program, complete with examinations and real-life demonstrations to develop leadership, management, human resource management, and problem-solving skills.*** A designated share of existing school principals, as well as new principals, could be required to pass the certification exam.

MONE could also help principals by working with higher educational institutions to develop certification training programs. Another potential way to improve principal management skills is through mentoring. Similar to the teacher-mentor program described earlier, school principals could be paired to exchange experiences, challenges and solutions. In reward for sharing their time and experience with one another, they could receive funding for a school-based project or other requirements identified in their respective school needs assessments.

School inspectorates should be similarly reoriented to deliver services based on the demands of schools. Inspectorates are the long-neglected meso-level of education administration. By first developing the capacity of educational inspectorates through a certification and training program, and then giving them the chance to respond to school

needs, MONE can better determine how these agencies can contribute much more to teacher and school improvement.

School inspectorates can find best practice examples through the Standing International Conference of Inspectorates (SICI), discussed in Section 2. SICI's report on effective school self-evaluation stresses the importance of highly trained inspectorates in responding to needs that schools identify via self-evaluations. The SICI report contends that one of the keys to successful school evaluation is strong external support for self-evaluation. The report concludes that the role of school inspectorates should include not only quality control, but also quality assurance (SICI 2003).

E(4) Develop Provincial Inspectorates into Local Knowledge Network Centers

Currently, school inspectorates in Turkey serve mainly as an arm of the Ministry of National Education, responsible for managing physical school improvements and distributing materials such as textbooks. *To better serve schools, inspectorate offices should be reinvented as centers for knowledge exchange that can identify good practices and communicate them to others, as successfully implemented in the United Kingdom.* The budgetary support that inspectorates provide schools should be reoriented to reflect this new role.

School inspectorate offices can best achieve this role by offering teachers opportunities for mentoring and knowledge exchange. Rather than organize in-service teacher training exclusively in large provincial cities or even the national capital, demand-driven module courses and information-exchange opportunities should occur at the inspectorate level. Under this scenario, inspectorates would aggregate training needs and mentors in their coverage area. Teachers (and their principals) who are especially competent in delivering engaging and dynamic science lessons, for example, could offer model lessons to other teachers of science interested in gaining new insight and methods. A mentor teacher would receive a small bonus for teaching such a class, while participants would be compensated with a transportation stipend. In this way the school inspectorate office would become a dynamic center for knowledge exchange, responding to the local needs of its schools.

A recent report by the Standing International Conference of Inspectorates concludes that each country must develop school monitoring and support structures that build on its own distinctive culture, history, and traditions. At the same time, inspectorates must reflect their role in the national education system. International research clearly indicates that external monitoring is one key to school success. For example, the German Ministry of Education commissioned a survey of six countries that focused on the factors that contributed to their performance on the 2001 PISA. All of the countries emphasized educational monitoring and evaluation, including school inspections. Other important factors included nationwide support for education, high esteem for teachers and the teaching profession, school autonomy, and the use and existence of school networks (Doebert et al. 2004). These conclusions underscore a needed function that inspectorates in Turkey can and should take on: acting as a support system and venue for teachers

from different schools to share ideas and best instructional practices.

One promising example of school inspectorates that support professional teacher development is that of the Local Education Authorities (LEAs) in England. In addition to their role of assuring educational quality in England's public schools, LEAs also work with the General Teaching Council for England (GTC) to support continuing professional development and inter-school collaboration among teachers. Among other things, LEA advisors help schools to acknowledge and increase their capacity to provide continuous professional development to their own teachers and to teachers in other schools (GTC 2005).

E(5) Introduce Gradual Steps towards Deconcentration of the Education System

Deconcentration should not be viewed as a goal in of itself, but as part of an overall strategy to improve the ability of the education system to respond to local needs, thereby achieving greater agility and more efficient achievement of education outcomes. Deconcentration (or decentralization) is, of course, a very complex process involving decisions about hundreds, if not thousands, of activities, each of which could potentially be given to several different government stakeholders, communities or schools. International experience suggests that *a few key indicators are most critical to decentralization or deconcentration*. Expressed as questions, these indicators are:

- Who determines marginal changes in teacher compensation?
- Who decides to recruit or transfer teachers to specific schools?
- Who selects the principal?
- Does the school community or local government partly finance the school?
- Who decides how the school's annual budget will be allocated?

What does this mean for Turkey? *First and foremost, MONE should work closely with all levels of education to initiate gradual and closely monitored decentralization*. One of the biggest historical mistakes in decentralization experiments has been to eliminate or marginalize the middle education level (in the case of Turkey, the Provincial Education Department School Inspectorates). In fact, as described above, this middle level should become more important in a decentralized school system, in which it would provide support to individual schools based on their self-defined needs. If Turkey is to transfer finances to the local level, it must establish a per-student expenditure floor. Regions that do not presently collect sufficient resources to meet this floor would receive funding to guarantee this minimum. Finally, the role of MONE should be reexamined, with greater emphasis on setting and disseminating standards, developing a culture of evaluation and assessment, and ensuring equity across regions.

Countries that successfully implement decentralization of certain key decisions reap significant rewards in terms of student outcomes. For example, recent analysis of 2000 PISA data found that schools with higher-than-average school autonomy performed significantly better on reading literacy than schools with lower levels of autonomy.

Schools with more responsibility for personnel management had better performance, although autonomy in other domains of decision-making did not show as strong an association with school performance.

Studies based on Trends in International Mathematics and Science (TIMSS) evaluations indicate that while autonomy is more effective in certain domains of decision-making, greater centralization may be important in others. In particular, systems that combine relatively strong centralization of curriculum and assessment with less centralized management processes tend to outperform other types of systems (Wößmann 2000). France, often said to have a highly centralized system, in fact delegates many decisions to the school level, such as current expenditures and resource use (Gershberg 2005). According to the World Bank's *World Development Report 2004*, "discretion and decision-making power need to be delegated to those with the relevant information and professional skills. Centralized control of teacher assignment and assessment can cause bureaucratic paralysis. But making schools autonomous in curriculum design, examinations, assessment, and finance can lead to excessive variability across schools" (World Bank 2003, 122).

Of course, *one of the great advantages of decentralization is the greater involvement of local school communities*. Growing evidence indicates that communities which become involved in their schools can significantly impact school improvement. In Argentina, for example, parental participation, combined with greater school autonomy, resulted in increased student performance. In El Salvador, communities participating in a program called *EDUCO* actually run local schools: parents select, hire, and monitor teachers, who receive one-year renewable contracts. Studies have shown that the *EDUCO* schools have performed as well in student achievement and dropout rates as schools operated by the ministry of education, which serve, on average, wealthier children. The high level of community involvement in *EDUCO* schools—both formally, through school management and school visits, and informally, through meetings with teachers—have paid off. For example, each classroom visit made by parents was associated with higher scores in math and language. Of note, both teachers and students were more likely to attend *EDUCO* schools than schools run by the ministry (World Bank 2003).

E(6) Create Transparency of Education Financing through National Education Accounts

National education accounts employ a sources-to-uses framework. They disaggregate funds according to financing agent (public or private), provider (levels and types of schools and universities), and inputs (personnel, school supplies, etc.). Such accounts allow senior policymakers to systematically collect and analyze allocation and expenditure data in a way that links this data to the goals of the education system.

National education accounts focus primarily on recurrent expenditures, since policy and strategy are principally influenced by recurrent expenditures, as opposed to investment allocations. Such accounts collect information from all stakeholders in education financing, both public and private (including expenditures by private corporations, foundations, and individual families and individuals). Ideally, such accounts should draw

on a variety of data sources (e.g., final government budgets, as well as provider, institutional, and household surveys) to provide a comprehensive picture of education expenditures.

A National Education Accounts framework is a consummate policy instrument, as these accounts enhance monitoring and policymaking in the education sector. The value of national education accounts is further enhanced if they disaggregate expenditure data by provincial and district level, as well as by socioeconomic and demographic group. This type of specific data would allow the Turkish government to monitor spending versus performance and permit more efficient geographic and provider-level targeting of resources to achieve educational objectives.

National education accounts also allow the government to monitor the extent to which financial resources are used to achieve national educational objectives. Such accounts also require official stakeholders to determine which funding sources and uses are important and then measure their policy impact on a comprehensive, rather than anecdotal, basis. Finally, since national education accounts use a standard classification of data, they contribute to benchmarking educational performance and meaningful information sharing, both within the country and with other countries.

E(7) Preparing a Medium-Term Expenditure Framework (MTEF) for the Education Sector

Although Turkey spends a comparatively large share of its GDP on education, its educational outcomes rank far below countries that spend less. This paradox suggests that resources spent on education are not put to their best use. Turkey must thus develop mechanisms to ensure efficient educational investments, as well as fiscal discipline in the allocation and use of education resources. One promising approach to achieve this goal is a medium-term expenditure framework (MTEF). Increasingly used in various sectors of public policy, an MTEF integrates yearly budgeting with multiyear planning by providing a framework to reconcile top-down estimates of public resources with bottom-up estimates of the costs of implementing desired policies over several years.

An MTEF features a rolling process that is repeated every year, forcing decision-makers to balance aggregate resources with short- and medium-term policy priorities. According to a report prepared by the United Nations Development Program and Vietnam's Ministry of Education, a well-implemented MTEF should:

- link government priorities to a budget with sustainable spending;
- highlight tradeoffs between competing government objectives;
- link budgets to policy choices; and
- improve outcomes by increasing transparency, accountability, and predictability of funding (Ministry of Education 2000).

MTEF differs from traditional top-down budgeting in several ways. First, rather than concentrate exclusively on short-term macroeconomic concerns, an MTEF places short-

term concerns in the context of a medium-term (generally three- to five-year) macroeconomic perspective. It thus requires governments to their build capacity in economic modeling. Second, instead of making decisions independently of resource realities, an MTEF links policy and planning with budgeting, so that spending reflects a government's stated priorities. Third, an MTEF shifts emphasis from the control of inputs to desired outputs and outcomes, structuring incentives to obtain better performance on the part of sector managers. Finally, by emphasizing budget constraints and outcome-based accountability, an MTEF gives more autonomy to credit managers to determine the best way to achieve outputs and outcomes (Ministry of Education 2000).

One widely cited application of an MTEF occurred in South Africa, which introduced the framework in 1998 as part of a package of budget reforms. The reform package sought to address the social and economic consequences of apartheid, a rising deficit, poor delivery of services, and limited transparency and accountability (van Zyl 2003). According to South Africa's then Minister of Finance, the objectives of the three-year MTEF were to strengthen political decision-making in the budget process and cooperative governance and decision-making, as well as to improve efficient service delivery in the public sector and create a more predictable environment for public service planning (Ministry of Education 2000).

While the incorporation of more people into the tax system has made it difficult to accurately project revenue collection in South Africa, a recent evaluation concluded that the three-year expenditure and policy priorities of the MTEF established an environment of certainty that allowed departments to prepare strategic plans and budgets. Additionally, the quality of department budget estimates and spending have improved significantly since 1997, when spending deviations exceeded total national budget expenditures by 13 percent. In both 1999 and 2000, spending deviations decreased to less than five percent, evidence of more realistic projections and spending that was more in line with these projections (van Zyl 2003).

SECTION 4. NEXT STEPS

Throughout the last several years, the Government of Turkey has adopted a more open process for planning and implementing education policy. Increasingly, the government is listening to and working with nongovernmental organizations and other stakeholders to facilitate broader participation in education policy formulation and more successful implementation of government programs. Moreover, it has been encouraging closer collaboration with international organizations that work in the sector, including the World Bank, the European Union, UNICEF, and the European Investment Bank, among others.

This gradual change towards a more open dialogue and collaboration with all stakeholders is part of an evolving process of education policymaking in Turkey. Indeed, since the late 1990s, policy development has included more actors than it did previously; emphasized non-traditional and more transparent processes, partnerships and institutional arrangements; and generated flows of information and analysis among institutions that both critique and support policy reform. As a result, education policy is increasingly being formulated by a process of organizational learning within and among institutions, especially through dialogue between policymakers and practitioners.

Turkey should continue to sustain and improve these open processes in the development and implementation of education policy. Much of the policy work that has been formulated so far, including the policy options outlined in this report, still requires successful implementation. In addition, the leadership of the Ministry of National Education should mandate more open dialogue and effective communication processes across the educational system, processes that should include senior MONE officials, general directorate managers and staff, provincial managers and staff, and school principals and teachers. Such open communication is needed to enhance the entire implementation process and itself constitutes a critical success factor for achieving change.

Given the new context for policy formulation and participatory implementation, it is expected that MONE will continue to develop new institutional practices, internally as well as externally, with its collaborating partners. These practices, which will continue the paradigm shift discussed in Section 1, need to address leadership and a willingness to accept change on the part of decision-makers, capacity development, and support for changes in the knowledge, attitudes and practices of staff across the Ministry, allowing staff to focus on implementing the overall education strategy. It is expected that these efforts will generate a flexible and dynamic environment necessary for change.

In conclusion, the World Bank recommends that MONE consolidate and deepen the emerging education sector strategy by incorporating, as appropriate, lessons learned from the analysis of policy options presented in this Education Sector Study and initiatives taken in other countries and in other sectors. In addition to deepening the existing strategy and seeking to extend public understanding and ownership of the strategy, the Ministry could develop it further by: (i) including specific targets and schedules, (ii)

delineating financial requirements to implement it over a specific time period, including through the development of a medium-term expenditure framework; (iii) assigning clear responsibilities to managers and staff, and authorizing them to take the related decisions on policy and implementation; (iv) delegating greater decision making authority and accountability to local actors and practitioners, as appropriate; and (v) instituting a process of adaptive, collective learning and feedback during implementation.

The steps described above will ensure that the government can successfully call upon stakeholders and other partners to contribute, both technically and financially (and in a more efficient way), to achieving the goals of an education system that will serve Turkey in its pursuit of European integration and global competitiveness.

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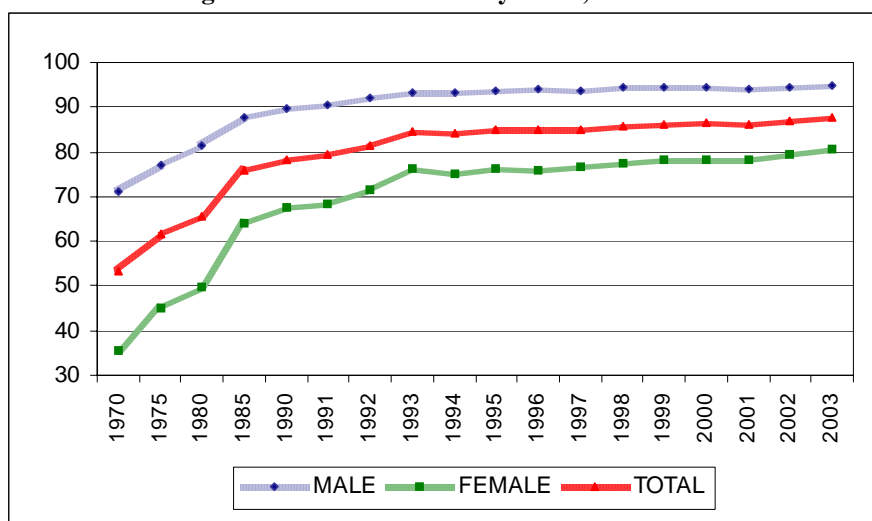
ANNEX 1. SUMMARIES OF COMMISSIONED PAPERS

Status and Trends in Education by Seref Hosgor

Turkey's most recent demographic transition started in 1980.³⁷ The annual population growth rate was 2.49 percent between 1980 and 1985, 2.17 percent between 1985 and 1990, 2.0 percent in 1990 and 1.5 percent in 2003. Importantly, Turkey's population reached the "aging stage" after 2000, a fact that should be incorporated into educational plans for 2005 and after. If sufficient school and teacher investment can be completed through 2005, the population of pre-primary and primary education will be stable for 10 more years, then start to decline. Turkey will not need to invest in additional infrastructure after 2005 for these two educational levels.

Between 1970 and 2003, the illiteracy ratio in the country decreased from 29.69 to 4.63 percent for males and from 58.20 to 16.76 percent for females. The gender gap ratio (males/females) increased from 1.96 to 3.62 in same period, showing that female literacy increased at a slower pace. The adult literacy rate increased from 71.0 to 94.9 percent for males and from 35.6 to 80.5 percent for females. The gender gap in adult literacy closed from 0.50 to 0.85 during the 1970–2003 period. Figure A1-1 shows the increase in adult literacy over time.

Figure A-1-1. Adult Literacy Rates, 1970–2003



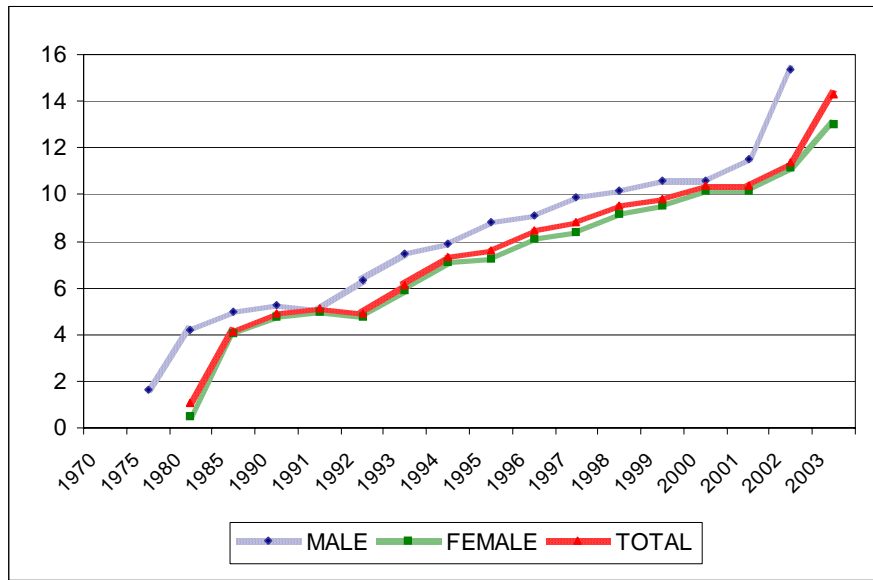
Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

In a great deal of education literature, net enrollment ratios for pre-primary education are calculated for 3- to 5-year-olds, but in Turkey, these ratios are calculated for 4- to 5-year-

³⁷ In the first demographic transition, from 1923 to 1955, fertility increased significantly from an average of 5.5 to 7.0 children per woman, rather than decreasing as mortality declined, a trend characteristic of many countries. The second period of Turkey's demographic transition took place between 1955 and 1985 and started with a population growth rate of 2.8 percent per year. Fertility began to decline during this period, but did not initially overtake falling mortality rates. This period was also characterized by rapid urbanization, which reinforced the decline in the fertility rate.

olds (see Figure A1-2). Among 3- to 5-year-olds, the net enrollment rate in pre-primary education increased from 1.0 to 8.27 percent for males and from 0.30 to 6.98 percent for females from 1970 to 2003. A similar increase was recorded among 4- to 5-year-olds, from 1.62 to 15.39 percent for male children and from 0.48 to 12.99 percent for female children (1980 to 2003). In comparison with the European Union, the Turkish level of pre-primary education is quite low for both age groups. *This implies that the future educational plans of Turkey must include serious investments in teachers and schools for pre-primary education, with special attention to regional differences.*

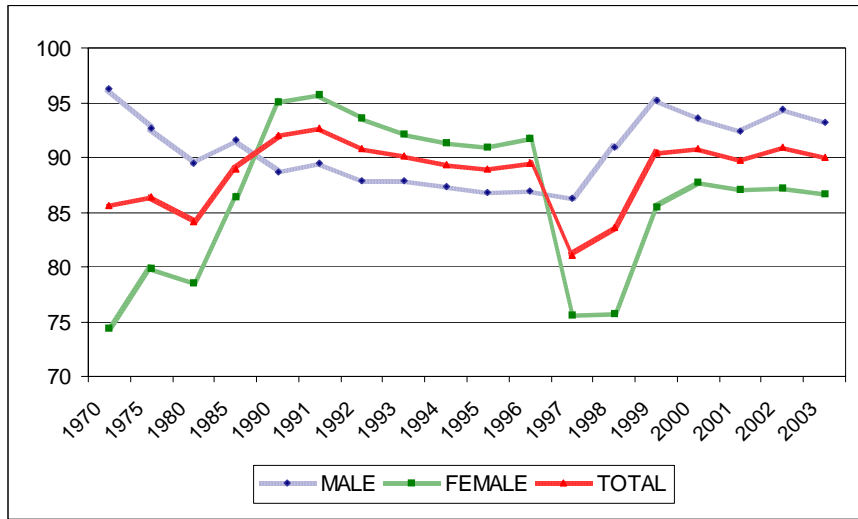
Figure A1--2. Net Enrollment Rates in Pre-Primary Education, (Ages 4–5), 1980–2003



Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

In the period 1970–2003, net enrollment in primary education for male pupils decreased (from 96.38 to 93.24 percent) and increased for female pupils (from 74.38 to 86.71 percent). In this period, the policy for primary education changed twice, once in 1973 and again in 1996, shifting from formal request to a compulsory requirement. Compulsory education was also increased from 5 to 8 years. Figure A1-3 shows net enrollment rates for primary education from 1970 to 2003.

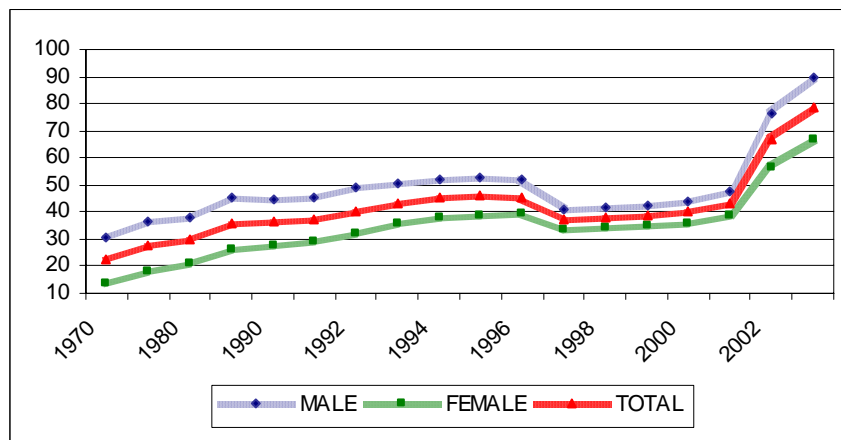
Figure A1-3. Net Enrollment Rates in Primary Education, 1970–2003



Source: SIS, MONE Statistical Reports

Gross enrollment rates in secondary education increased from 35.04 to 95.98 percent for male students and from 15.32 to 71.19 percent for female students from 1970 to 2003. Similarly, net enrollment rates in secondary education increased from 30.98 to 89.78 percent for males and from 13.54 to 67.13 percent for females during the same period. Both enrollment rates showed very sharp increases after 2001, due to the effect of compulsory education graduates (see Figure A1-4).

Figure A1-4. Net Enrollment Rates in Secondary Education, 1970–2003

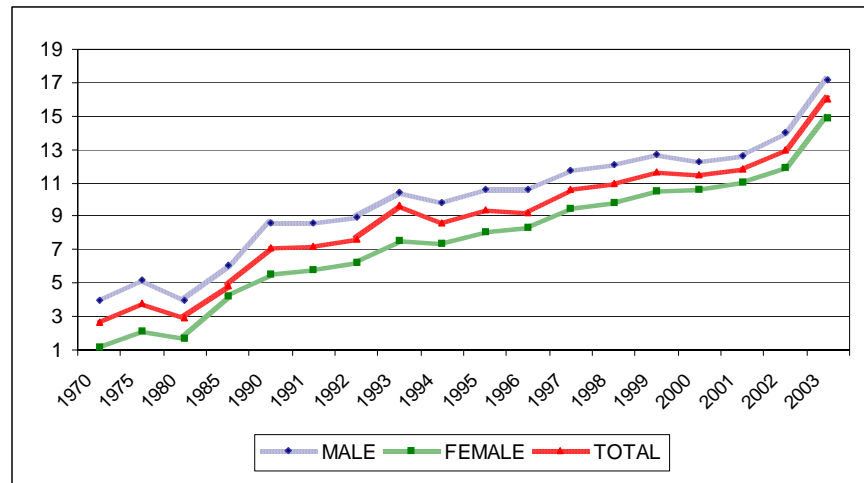


Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

The gross enrollment rate in tertiary education was 7.29 percent for males and 1.81 percent for females in 1970. By 2003, the respective rates had increased to 33.8 and 25.36 percent. Net enrollment rates in tertiary education also increased, from 3.93 to 17.15 percent for males and from 1.16 to 14.89 percent for females. Between 1970 and 2003, gross enrollment rates in tertiary education (excluding distance education) increased from 7.29 to 22.83 percent for males and from 1.81 to 16.49 percent for

females (see Figure A1-5). Distance-learning tertiary education began to produce graduates in the 1980s.

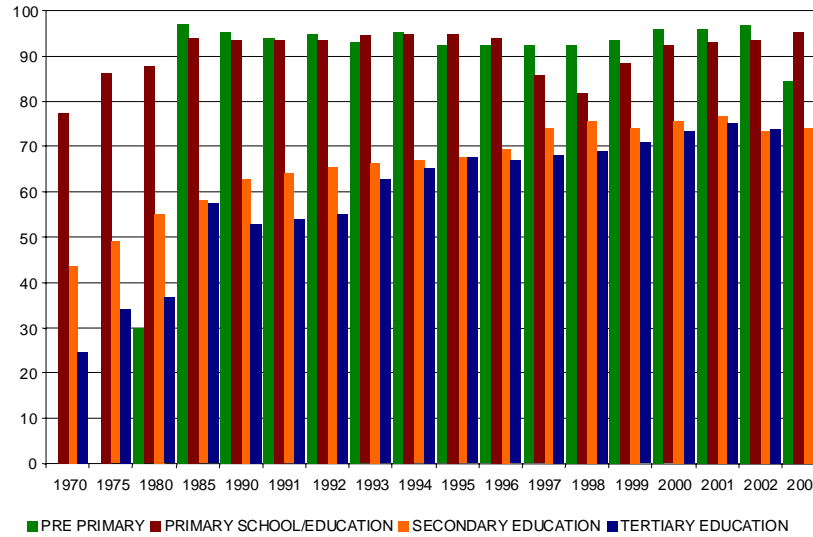
Figure A1-5. Net Enrollment Rates in Tertiary Education, 1970–2003



Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

Female-to-male gender ratios in 2003 were 84.4 percent for pre-primary education, 95.2 percent for primary school, 74.17 percent for secondary school and 75.03 percent for tertiary education. That is, for every male enrolled in pre-primary education, there are 0.84 females enrolled. These ratios represent increases over the 1980 rates of 30 percent for pre-primary education, 77.21 percent for primary school, 43.72 percent for secondary school, and 24.83 percent (1970 figure) for tertiary education. Figure A1-6 presents the gender ratios for each education level over time, demonstrating dramatic increases in the rates of both male and female enrollment, which attain near parity (above 80 percent) in all but secondary and tertiary education. One area of concern is the reversal of the gender ratio improvement in pre-primary education, which reached a high of about 95 percent in 2000, but regressed to 85 percent in 2003.

Figure A1-6. Gender Ratios (All Educational Levels), 1970–2003

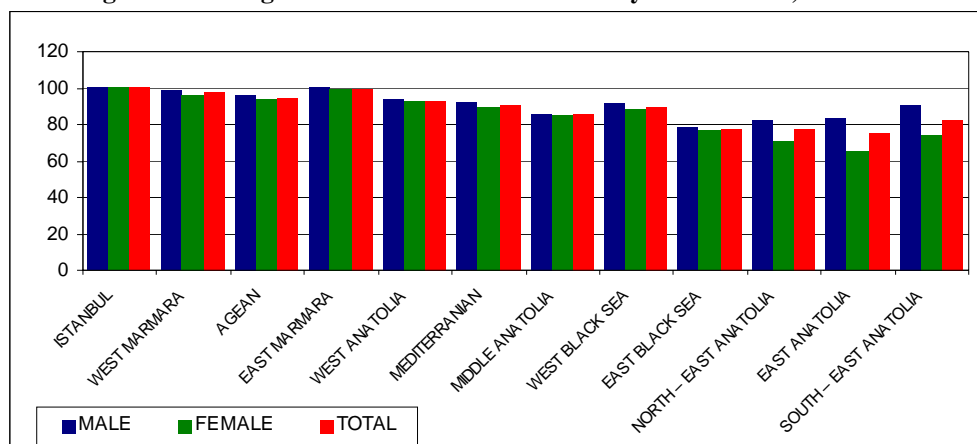


Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

During the 2000–2001 school year, four NUTs regions³⁸ had less than 90 percent net enrollment in primary school for male students; seven regions had similar net enrollment for females. The Middle Anatolia, East Black Sea, North-East Anatolia and East Anatolia regions had the same differences for both sexes. North-East Anatolia, East Anatolia and South-East Anatolia are the most problematic regions vis-à-vis gender differences in primary education enrollment rates (see Figure A1-7).

³⁸ NUTS is the EU nomenclature for territorial units used for statistics.

Figure A1-7. Regional Differences in Net Primary Enrollments, 2000–2001



Source: Hosgor (2004), estimated from SIS and MONE Statistical Data

The highest gross enrollment rates for secondary education were recorded in the East Marmara region for males (80.34 percent) and the West Marmara region for females (68.51 percent). The lowest gross enrollment rates were recorded in the South-East Anatolia region: 43.72 percent for males and 20.70 percent for females. In general, excluding the Istanbul region, all regions of Turkey displayed gender differences in secondary education enrollment levels in the 2000–2001 school year.

In that same school year, the number of regions that enjoyed net enrollment in secondary school greater than 50 percent fell to 5 regions for boys and 2 regions for girls, compared to 12 regions for both in the preceding (2000-2001) school year. Istanbul had a 103.21 percent gender ratio in favor of females in the 2001–2002 school year. This may be due to the fact that males do not attend secondary school to obtain additional income for their family after completing their compulsory education. Excluding the regions of Istanbul, Marmara and West Anatolia, gender differences in net enrollment for secondary education are below 90 percent.

In 2003, aside from primary education, all levels of education had an acceptable number of students per teacher at the national level. In primary education, the number of students per teacher was 27.29 in 2003, just over the accepted interval of 20–25. ***Primary and secondary education levels need significant investment in classrooms and/or schools, as the average number of students per classroom were 27.19 for primary school and 31.74 for secondary school in 2003.***

Excluding the Central Anatolia, West Black Sea, East Black Sea, and North-East Anatolia regions, Turkey had more than 25 students per classroom in primary schools in the 2000–2001 school year. No regions had optimal number of students per classroom in secondary schools. With respect to teacher-student ratios, there is a serious need for pre-primary teachers in all regions. Sufficient teacher-student ratios were found in the Western Marmara, West Black Sea, and East Black Sea regions at the primary education level. All regions showed a sufficient teacher-student ratio at the secondary level during

the 2000–2001 school year. The following school year showed similar conditions at all educational levels.

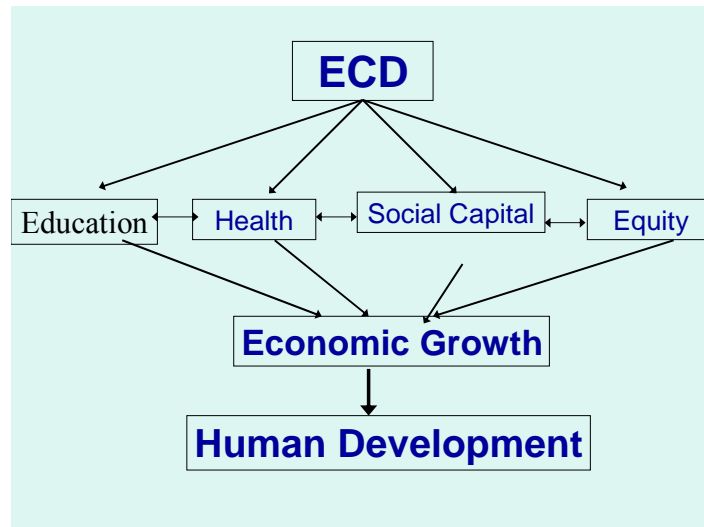
In general, Turkey has increased its educational achievements over the last 33 years, as measured by all indicators, in spite of political and economic instability. The country has both the potential and ability to adapt new policies and promote education. In order to rapidly develop education to meet European averages, targeted strategies to increase enrollment should be initiated at all educational levels in four important NUTS-2 regions: East Black Sea, North-East Anatolia, South-East Anatolia and East Anatolia. In addition, pre-primary education and secondary education must be included in compulsory education. A preparatory class should also be added to secondary education, increasing compulsory secondary education to four years. At the same time, the education system should be reviewed according to the needs of the country and its prospects for European Union membership.

A Cost Benefit Analysis of Pre-school Education in Turkey by Mehmet Kaytaz

Early child development (ECD) and early child education (ECE) are interventions designed to promote the physical and intellectual growth of children in their early years. The importance of the first few years of life in the development of a child is well documented by medical and educational research. The development of intelligence, personality, and social behavior (i.e., mental growth) occurs most rapidly in humans during their earliest years. Research has established that the brain responds most deeply to very early experiences, and that the environment has an important effect on its development. It is estimated, for example, that half of all intellectual development potential is established by age four.

International research shows that quality interventions in early childhood services (including day care, pre-school, home visits by trained professionals, health and nutrition services, and parental education) are small investments that yield very high returns for children, families, society, and the economy. Such types of investment bring particularly high returns if children at risk are targeted. Children who participate in quality interventions tend to be more successful in later school years, are more competent socially and emotionally, and show higher verbal and intellectual development during early childhood than children who do not benefit from such services. Investment in early child development is also an investment in a country's future workforce because human development is closely linked to early child development (ECD). It includes the same dimensions—education, health, social development, and growth—but on a larger scale. Investing in ECD is thus the starting point for investing in human development (see Figure A1-8).

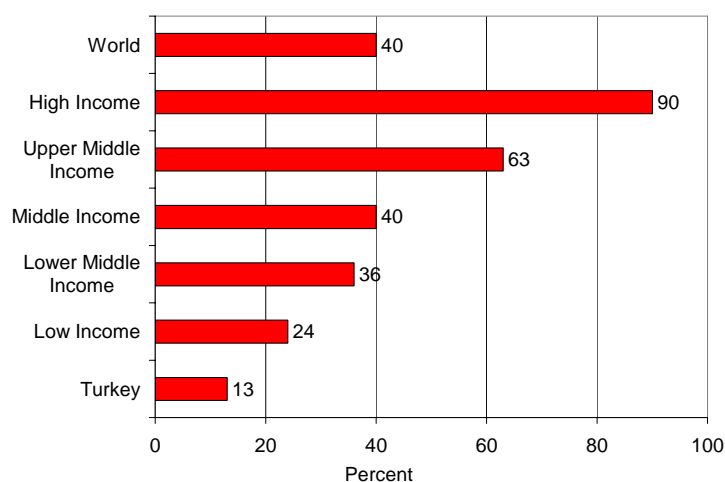
Figure A1-8. Conceptual Framework for ECD Investment



Turkey has one of the lowest levels of pre-school education coverage among all lower-middle income countries. In 2003, only approximately 360,000 children were enrolled in

ECE services. The government, aware of the importance of ECD, has tried to increase enrollment in these services over the last ten years. The 2005 target is a 25 percent enrollment rate, which would mean almost doubling the 2003 rate of 13 percent. Even when Turkey reaches this target, it will still be lower than those of most lower-middle income countries, where the average enrollment rate in pre-school education is 36 percent (see Figure A1-9).

Figure A1-9. Gross Pre-school Enrollment by Country Groups, 2003



This study uses cost-benefit analysis of pre-school education to demonstrate the importance of expanding ECE services. The benefits expected from these services are restricted to an increased level of student schooling and hence, an increase in eventual student productivity and earnings. Simulations are based on modest increases in enrollment rates for each level of schooling: pre-school attendees are assumed to increase completion rates for primary, secondary and higher education by 1 percentage point compared to non-attendees. The cost-benefit analysis indicates that expansion of ECE services in Turkey is highly desirable from an economic point of view. Even given limited benefit assumptions regarding benefits, the calculated cost-benefit ratio ranges from 1.12–3.43, meaning that total benefits exceed total costs by more than three to one. The scenarios and results of this analysis are found in Table A1-1, below.

Table A1-1. Scenarios and Results of Cost-Benefit Analysis of ECE Services in Turkey

	<i>Enrollment Rates and Scenarios (%)</i>			<i>Benefit-Cost Ratios</i>		
	<i>Existing</i>	<i>Scenario I</i>	<i>Scenario II</i>	<i>Discount Rate</i>	<i>Scenario I</i>	<i>Scenario II</i>
Primary	94.2	95.0	95.0	6% 10%	2.18 1.12	3.43 1.69
Secondary	66.0	67.0	67.0			
Higher	23.3	24.0	25.0			

Although the assumptions about the impact of pre-school education on further schooling are very conservative, the cost-benefit ratios are relatively high. If other benefits of ECE were included, such as those indicated in Table A1-2, they would be even higher. Potential benefits are widespread and accrue at both the individual and social level (see Table A1-2 below). Children who receive ECE services are healthier, more successful in

school, and more productive later in life. The benefits of ECE also spill over to the rest of society. Workers with higher productivity make those working with them more productive. Since their incomes are higher, they pay more taxes, which are necessary for an efficient social and economic infrastructure. More tax revenues also mean more expenditure on social infrastructure, providing more equal opportunities to all children. The benefits of better health also spill over to all of society, since many cost components of poor health are covered by public expenditures.

Table A1-2. Potential Costs and Benefits of Early Childhood Development Programs

<i>Type of Effect</i>	<i>Potential Benefits</i>	<i>Potential Costs</i>
Effects on Children		
Stimulates the development of children in the important early years	Improved brain and social development of children in early years can improve school readiness and have long-term payoffs in terms of abilities, income, productivity and economic growth; reduced delinquency and criminal activity; improved health; higher tax revenues; and better citizenship	The cost of resources necessary to provide good-quality early childhood education. Also, the excess burden costs of higher taxation
Ensures high-quality, non-parental childcare for children	Good-quality licensed childcare provided by trained and dedicated childcare professionals is better for children than many current informal arrangements. There is evidence that, either because of inadequate incomes or inability to judge accurately the quality of childcare, too many parents choose inadequate care	The extra resources needed to provide higher-quality childcare
Provides a more equal start in life for children	Promotes equality of opportunity, a fundamental value in most advanced societies. All children can benefit from some amount of early childhood education. Children from low-income families accrue especially large benefits.	
Effects on Mothers and Families		
Ends tax discrimination against employed mothers	Failure to permit deductibility of childcare costs from taxable income creates a tax inequality that reduces the employment of mothers. Increased public funding will reduce this effect. Society shares in improved productivity through higher government tax revenue from the newly employed	Deductibility will reduce tax revenue from currently employed mothers. Employed mothers will reduce household production.
Providing assistance to young families when expenditures are high and incomes are low	Government funding of ECE when parents are young and higher taxation when older acts like a long-term loan program to allow parents to make better lifetime decisions about work and family	Assistance to young families, plus more family-friendly leave and benefit policies at work, may encourage higher fertility, raising public costs
Encourage mothers to maintain labor-force attachment, continue to have job experience, take job promotions, work full-time rather than part-time	Mothers are encouraged to make work decisions within a long-term framework to permit reasonable financial independence and avoid poverty if divorced or in old age, etc.	Mothers may suffer tension from “super-mom” work and family activities unless gender roles continue to change and family policies are supportive
Change young women's assumptions about future job paths and prospects. Promote gender equity throughout society	Young women make education and other human capital decisions based on opportunities available to their mothers. Public financing of early childcare expands mothers' opportunities, allowing their daughters to make long-lasting early human capital investments based on ability rather than gender	It will be necessary to work on changing young men's assumptions about gender roles
Reduce job disincentive effects of social assistance and childcare costs	Reduced immediate and longer-term social assistance costs, effective reduction of child poverty, end the poverty cycle. Increased future education, productivity, self-esteem of children and tax revenue for governments	Costs of good-quality ECE and care, perhaps home-visit programs, training programs, changes in social assistance policy
Effects on Society		
Common social and educational experiences when children are young	Promotes social cohesion, good citizenship, social integration of immigrant families, early screening of children with behavioral, social or cognitive difficulties. Provides early foundation for integration of children with disabilities	Increased taxes. Possible sense of decreased parental choice

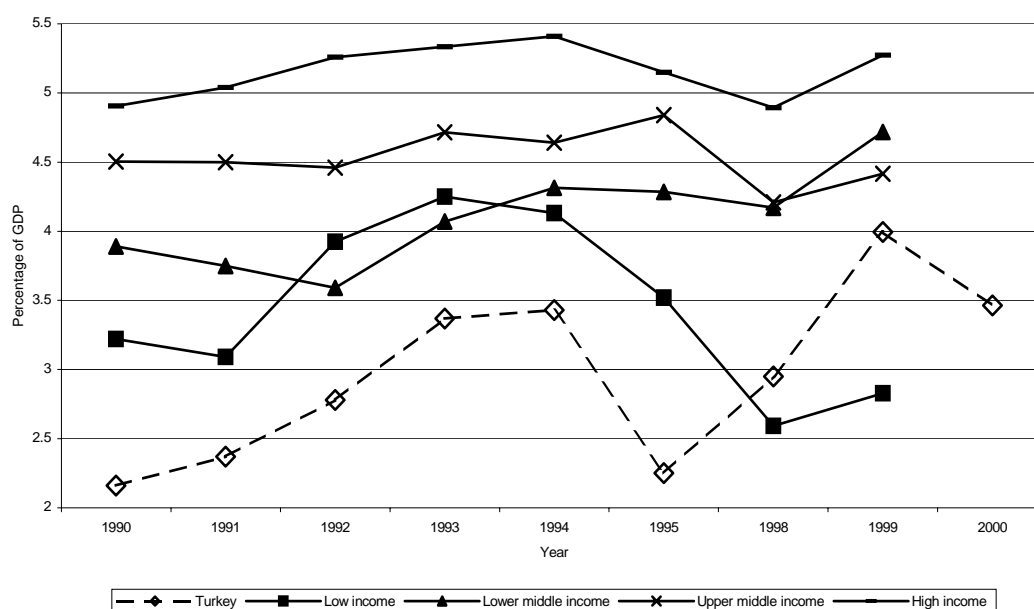
Source: Cleveland and Krashinsky 2003, adapted from Verry 1992.

December 31, 2005

Education Finance and Equity in Turkey by Cem Mete

From humble beginnings, the Turkish education system has developed rapidly, expanding to include a system of some 16.3 million students by 2002, from the pre-primary to university level. A small private sector (1.6 percent of primary and 3 percent of secondary enrollments) serves wealthier students and others who are supported by private scholarships. The most dramatic change in enrollments followed the enactment of Law 4306, which expanded compulsory education from 5 to 8 years, triggering a 5 percentage point increase in secondary enrollments. Throughout this expansion period, education spending in Turkey as a share of GDP has been particularly subject to economic cycles, as shown in Figure A1-10.

Figure A1-10. Public Spending on Education as Percentage of Gross Domestic Product, Selected Country Groupings, 1990–2000

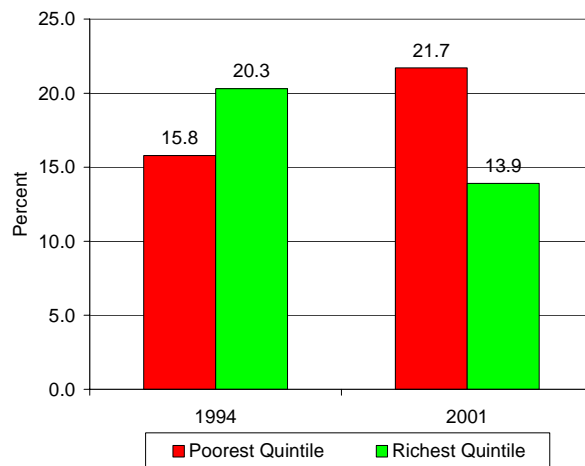


Source: World Bank, *World Development Indicators* (WDI), 2003. Years 1996 and 1997 are not included, since the WDI data set does not provide spending figures for those two years.

The Turkish educational system expanded in an equitable manner for all, especially for the least-advantaged groups, namely, girls and the poor. To answer this question, the distribution of public education resources across schooling levels (primary, secondary and tertiary) is examined. Half of public resources go to primary schooling, with the remaining funds divided between secondary (20 percent) and tertiary (30 percent) education. This relatively favorable distribution of funds to primary schooling—where returns are high and the poor are most likely to benefit—is nonetheless tarnished by the low overall share of resources that the country dedicates to education. As a percentage of GDP, Turkey’s public finance allotment is lower than that of the average lower middle-income country.

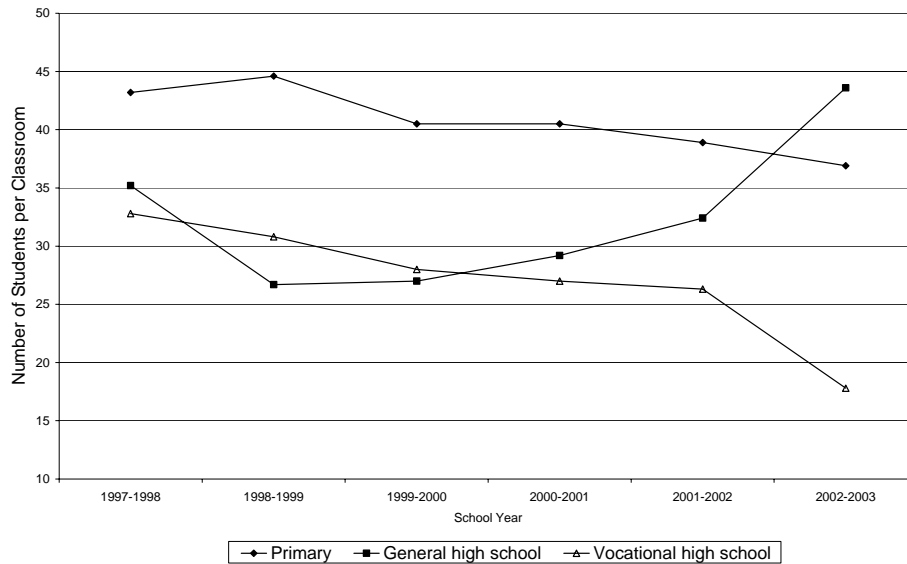
The expansion of compulsory schooling to eight years had the immediate effect of improving the distribution of public education spending across poor and rich households, at least at the primary level, where the share of expenditures for the lowest quintile of households increased from 15.8 percent in 1994 to 21.7 percent in 2001 (see Figure A1-11). Nonetheless, secondary schooling continues to pose an equity challenge: only 13 percent of secondary school expenditures reached the poorest 20 percent of the population in 2001 (an improvement from 8.7 percent in 1994), while the richest quintile captured the highest share, 24.2 percent (see Figure A1-11).

Figure A1-11. Share of Public Spending in Turkey on Primary Education, by Quintile, 1994 and 2001



Student-teacher ratios and classroom expansion rates are also important indicators of education financing, demonstrating the ability of the system to keep up with demand. ***In response to an increase in total primary enrollments, the government expanded both the number of classrooms and the number of teachers, resulting in a decline in the student-teacher ratio from about 45 students per class in 1998 to 37 in 2002.*** While total secondary enrollments have also increased in recent years, the government has not responded fully to this increased demand, as demonstrated by a sharp increase in the number of students per classroom, from 27 in 1998 to 44 in 2002. Conversely, with vocational enrollments remaining stagnant, the government has allocated more classrooms and more teachers to this level, reducing the student-classroom ratio to 15 (see Figure A1-12).

Figure A1-12. Number of Students per Classroom by School Type, 1997–2003



Source: Ministry of National Education, *Statistical Yearbooks*, 1997–2003.

Breaking down these macro-system numbers, both females and poor children suffer the most from inadequate public education funding. With 97 percent of the relevant age group (ages 6–14) enrolled in school, the remaining 3 percent who are not in school require the most attention. Recent government strategies have included a conditional cash transfer program and strengthened enforcement of the law that fines parents for not sending their children to school. To achieve universal primary education and break the cycle of inter-generational illiteracy and poverty, Turkey needs to develop a new paradigm to attract the non-attending population, characterized as follows: 72 percent female, 67 percent rural, 53 percent poor and 56 percent with illiterate mothers.

Table A1-3 shows that if one focuses on fathers with no schooling, a child aged 6 to 14 who does not attend school will be identified in almost 1 out of 10 cases. A systematic intervention that reaches all mothers and fathers without primary schooling would identify roughly 70 percent of children who should attend primary education, but do not. If these children attended school, the primary enrollment rate would increase from 97 to 99 percent. Barriers to schooling for this population include access (some 12 percent of households indicated they did not have a primary school in their area), as well as child labor issues and family norms (reluctance to send girls to school).

Table A1-13. Primary-School Attendance by Parental Schooling, 2002 (%s)

*Percentage of children aged 6–14, who do not attend school
(and who have not already completed primary school)*

	<i>Both Genders</i>	<i>Male</i>	<i>Female</i>
Father did not complete primary (illiterate or literate without diploma)	9.1%	5%	12.5%
Mother did not complete primary (illiterate or literate without diploma)	6.1%	2.7%	9.7%

Source: SIS, Household Income and Consumption Expenditures Survey (HICES), 2002.

With primary enrollment at near-universal levels, the next obvious challenge is to increase equity of access for secondary schooling. Examining the marginal effect on enrollment, as estimated by a probit model, Mete finds the likelihood of attending secondary school increases by:

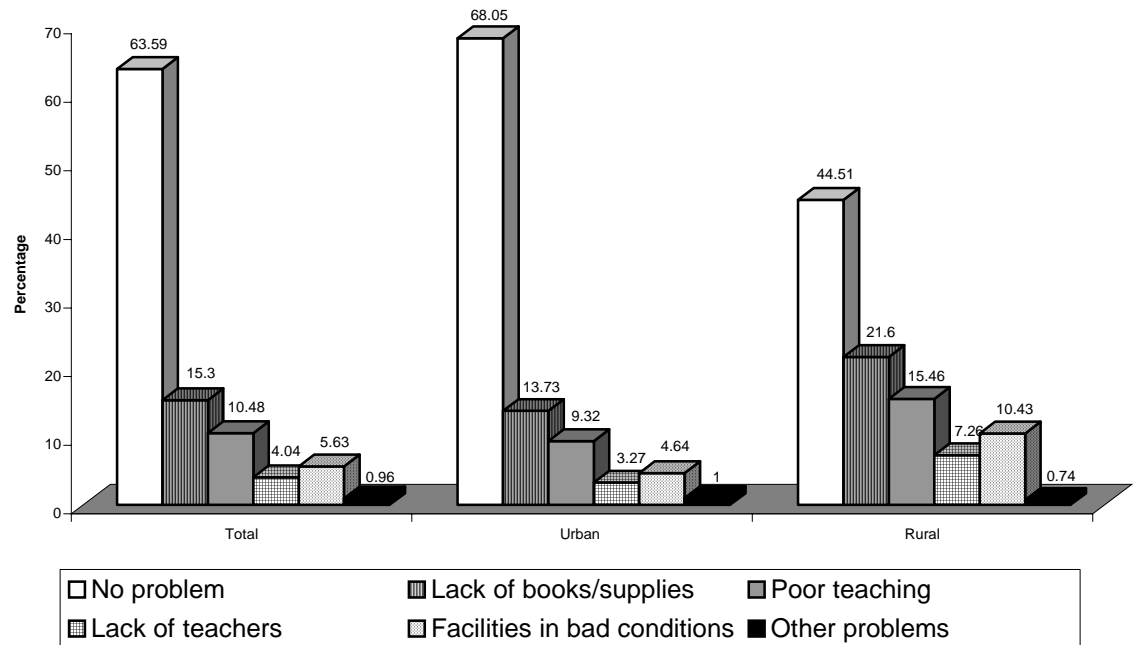
- 8 percentage points for males versus females
- 11 percentage points for the most wealthy compared to the least wealthy households
- 20 percentage points for students whose parents have completed more than primary schooling
- 10 percentage points for those with a secondary school in the area, with another 5 percent for those who reside in an urban area

These determinants offer mixed options to policymakers: in the short run, increasing availability of secondary schools is a policy response that can make an impact, as only 64 percent of households reported that a secondary school was available in their area. In the long run, educating girls seems a way to ensure education for the next generation.

In the case of tertiary education, the challenges of expanding access to the least-advantaged university students has less to do with the rigorous entrance examination and more to do with access of poor children to quality primary and secondary basic (academic) education. Private tutoring also plays a role in limiting access to university to the more advantaged—some 89 percent of undergraduates view costly private tutoring (similar to “cram schools”) necessary for success on the university entrance exam.

Indicators of access alone, however, fail to tell the full story of educational inequities. Households with students in public rural schools are more likely to report problems with a school, lack of books and/or supplies, and poor teaching (or lack of teachers). These complaints decline with wealth (and access to private schooling), as shown in Figure A1-13. Underinvestment in quality schooling is not just a problem for those enrolled in low-quality schools. It also represents underinvestment in Turkey's future labor force.

Figure A1-13. Problems with Schools, Urban, and Rural



Source: Household Income and Consumption Expenditures (HICES), 2001. Based on a sample of 2,200 children enrolled in urban schools and 537 children enrolled in rural schools at the time of the survey.

Mincerian estimations using 2002 household survey data show that private returns on schooling are very high in Turkey. Table A1-4 presents the results of a Mincerian-type semi-log wage equation using data from the 2002 Household Income and Consumption Expenditures Survey (HICES). The dependent variable is the natural log of hourly earnings. Explanatory variables are indicators for gender, potential experience (and its square, divided by 100), educational attainment, urban residence, and region of residence. Individuals aged 25 to 64 who reported non-zero earnings in the reference month formed the sample. The estimates provided in the table highlight key trends in earnings that are of particular interest to this study.

Table A1-4. Ordinary Least Squares Estimates of Log –of Hourly Earnings
(t-statistics are in parentheses; individuals aged 25 to 64 are included in sample)

	<i>Both Genders</i>	<i>Males</i>	<i>Females</i>	<i>Means and Standard Deviations</i>
Gender (1 if male, 0 if female)	.449 (12.3)	-----	-----	.848 [.359]
Potential Experience	.048 (9.14)	.057 (10.1)	.042 (2.95)	24.4 [10.8]
Potential Experience Squared (1/100)	-.081 (8.76)	-.096 (9.54)	-.085 (3.35)	
Schooling Attainment				.080
No diploma	-----	-----	-----	[.271]
Primary	.401 (7.29)	.354 (5.53)	.154 (1.24)	.483 [.499]
Junior Secondary	.682 (10.2)	.625 (8.41)	.398 (1.88)	.113 [.316]
Vocational Junior Secondary	1.05 (5.26)	.929 (4.69)	2.02 (1.54)	.004 [.066]
Secondary	.986 (14.8)	.889 (11.9)	1.11 (6.52)	.134 [.341]
Vocational Secondary	1.07 (13.9)	.967 (11.4)	1.29 (6.23)	.061 [.239]
Higher Education	1.59 (23.5)	1.40 (18.1)	1.86 (11.3)	.125 [.331]
Urban Residence	.192 (6.66)	.144 (4.72)	.368 (4.41)	.703 [.457]
Regions				
Marmara	-----	-----	-----	.261 [.439]
Aegean	-.148 (3.39)	-.166 (3.56)	-.080 (0.69)	.126 [.331]
Mediterranean	-.028 (0.63)	-.005 (0.11)	-.162 (1.28)	.118 [.322]
Central Anatolia	-.209 (5.22)	-.154 (3.65)	-.470 (4.13)	.162 [.369]
Black Sea	-.063 (1.36)	-.019 (0.40)	-.313 (2.37)	.107 [.309]
Eastern Anatolia	-.084 (1.96)	-.070 (1.57)	-.189 (1.39)	.134 [.341]
South Eastern Anatolia	-.212 (4.22)	-.183 (3.57)	-.493 (2.75)	.092 [.290]
R squared	0.15	0.11	0.28	
Sample Size	8226	6976	1250	8226

Source: SIS, HICES, 2002.

As Table A1-4 shows, on average, males earn 45 percent more per hour than females with similar characteristics. Schooling has a robust, positive, and large impact on earnings. Vocational junior secondary school graduates earn more than general junior secondary school graduates; similarly, vocational secondary school graduates earn slightly more than general secondary school graduates. There are a number of selectivity issues that hinder a clear-cut interpretation of these estimates. For example, one could argue that because “more able” general secondary graduates continue their education at the university level, the observed returns to general secondary education are underestimated. On the other hand, one could also claim that vocational school students are disadvantaged in terms of family contacts or other unobserved characteristics that depress the distribution of their earnings.

When separate models are estimated for males and females, we see that the coefficients for secondary and higher education are much larger for females. ***On one hand, females earn less than males with similar characteristics in the labor market. On the other hand, the impact of schooling on earnings is more visible for females.*** A final issue that deserves emphasis is the gender distribution of those who reported non-zero earnings in the reference month: 85 percent of this group was male. These findings are supportive of the argument that the payoff for educating girls is at least as high as educating boys, especially in countries like Turkey, where the schooling gender gap is significant, because social rates of return decline with schooling. Other reasons for emphasizing girls’ schooling include the close linkage between a mother’s schooling and children’s health and education, and the empirical regularity that more educated women are more likely to participate in the labor force, thus broadening the tax base.

National Education Accounts in Turkey by Mukesh Chawla

As a first step towards identifying sustainable pathways for a more equitable, efficient and effective education system in Turkey, a detailed analysis of the flow of funds in the system was carried out and comprehensive National Education Accounts (NEA) were created for the year 2002. National Education Accounts employ a sources-to-uses framework and are disaggregated according to financing agent (public and private), provider (levels and types of schools and universities), and inputs (personnel, school supplies, etc.). These accounts provide senior policymakers with a systematic method to collect and analyze data on actual allocations and expenditures in the education sector and then link those allocations and expenditures to system goals.

National Education Accounts focus on recurrent expenditures, since policy and strategy are principally influenced by recurrent expenditures, as opposed to investment allocations. For Turkey, these accounts include all stakeholders involved in education financing, both public and private (including expenditures by private corporations and foundations, as well as out-of-pocket expenditures by families and individuals). They draw on a variety of data sources (e.g., final accounts of government budgets, as well as provider, institutional, and household surveys) to provide a comprehensive picture of education expenditures in Turkey, that is, a policy-relevant description of the financing flows in the education system.

Main Findings

The results of this analysis show that Turkey spent 19,353 trillion TL (US\$12,735 million at the mid-year exchange rate) on education in 2002, equivalent to 7 percent of GDP. This figure is only slightly lower than education spending in the United States (7.3 percent of GDP), but much higher than in other OECD countries, such as the UK (5.5 percent), Germany (5.3 percent), and Spain (4.9 percent).

Private sources account for 36 percent of total spending on education in Turkey, a proportion that is much higher than most OECD countries (18 percent in the United States, 13 percent in the UK, 6.8 percent in Germany, and 6.2 percent in France). Only Korea, where private sources of funding account for 41 percent of total spending on education, had a similarly high share of private financing of education expenditures. ***On the other hand, public sources account for only 64 percent of total spending on education in Turkey, much lower than in OECD countries***, including Finland (98 percent), France (93 percent), Germany (81 percent) and the United States (70 percent).

Almost 90 percent of total (public and private) education spending went to public schools and universities, totaling 17,320 trillion TL. The remaining 2,033 trillion TL, equivalent to a little over 10 percent of the total, was spent on private schools and (foundation universities). A little over 40 percent of total spending on education went to primary education schools, with public primary schools absorbing 95 percent of this amount. Public universities accounted for the next largest share of total spending (30 percent), followed by general secondary schools (10 percent) and vocational and/or technical

schools (8 percent). Pre-primary and special needs schools combined received less than 1 percent of total spending on education.

Public schools, regardless of the level of education they provide, allocated a higher share of their budgets to personnel expenses than private schools that deliver the same level of education. Thus, public primary schools spent 64 percent of their funds on personnel salaries, while private primary schools spent less than half of their budgets on this item. The difference is even greater in vocational and technical schools, where public schools spent 80 percent of their budget on salaries, compared to 59 percent in private schools. The only exception was secondary high schools, where both public and private schools spent 50 percent of their budgets on wages and salaries of teachers and staff.

A little over 49 percent of public spending is devoted to public primary schools, followed by public universities (29 percent), public vocational and technical schools (11 percent) and public general high schools (9 percent). On the other hand, almost 31 percent of private out-of-pocket spending on education is directed towards public universities, followed by public primary schools (27.5 percent) and public general high schools (13.3 percent). Overall, three-fourths of all private, out-of-pocket spending on education is directed towards public schools and universities, with private schools and universities receiving the remaining one-quarter.

National Education Accounts results show that private preparatory training programs, or *Dersane*, at various levels of education (from primary to university level) accounted for 813 trillion TL, equivalent to 4.2 percent of total spending on education. *Dersane*—including those preparing students for university exams, as well as private tuition to students enrolled in primary or secondary education—are entirely financed by private expenditures, absorbing almost 12 percent of private, out-of-pocket spending on education.

Use of National Education Accounts as a Policy Tool

The contribution of National Education Accounts to policymaking in Turkey can be enhanced by disaggregating use of funds to the provincial and district level, as well as across socioeconomic and demographic groups. Such disaggregation would permit policymakers to monitor spending versus performance, as well as to target resources by geographic and provider level to achieve objectives. Besides providing the most comprehensive picture of the flow of funds in the education sector in Turkey, the actual compilation of National Education Accounts underscored the value of these accounts both for tracking all sources and end-uses of funds and for monitoring the extent to which Turkey directs its financial resources to achieve national educational objectives.

National Education Accounts quantify the salience and identify the direction of funding, which allows uses of funding to be evaluated against policy objectives. Furthermore, such accounts require official stakeholders to determine which sources and uses are important, then to measure their policy impact on a factual and comprehensive, rather than anecdotal, basis. Finally, since National Education Accounts use standard classification

categories for data, they contribute to benchmarking performance and sharing information meaningfully within the country and with other countries.

Qualitative Assessment of Turkish Elementary School Quality by Ali E. Sahin

Using methods drawn from literature on effective schools, this paper examines the construct of a “good school” in urban Turkey, evaluating practices and characteristics of a small sample of elementary schools along five measures: inputs, processes, products, outputs and outcomes. Based on the results of the 2002 Student Achievement Determination Test, which was administered by the Turkish Government to 541 elementary schools, four schools with average clienteles and resources were selected from the top quartile of schools. Each school was assigned a pseudonym (Ankara, Antalya, Samsun and Ordu Central Elementary Schools, or CES) for the purposes of the study. Table A1-5 describes the characteristics of each school and its results on the SADT exam. Average scores on the SADT place these schools among the top 20 in Turkey.

<i>SADT average</i>	<i>Number of students</i>	<i>Ave. class size</i>	<i>Number of administrators</i>	<i>Number of teachers</i>	<i>Other personnel</i>	<i>Type of education</i>
0.5489	856	47	1 Principal 2 Asst.Principals	44 (sufficient)	1 officer 3 cleaners	Double shift
0.6546	450	36	1 Principal	19 (sufficient)	No officer 2 cleaners	Normal
0.6097	1611	35	1 Principal 4 Asst.Principals	66 (sufficient)	1 officer 4 cleaners	Double shift
0.6196	1670	45	1 Principal 4 Asst.Principals	64 (sufficient)	1 officer 4 cleaners	Double shift

Table A1-5. Summary of Sample School Characteristics

Each school was then visited and evaluated (using focus groups, observations and structured interviews) to assess their characteristics along the five key measures described above, with corresponding results for products (micro level), outputs (macro level), and outcomes (mega level). The paper concludes that all of the schools have a macro-level (outputs) focus. That is, each school is primarily concerned with producing graduates who go on to attend one of the prestigious Anatolian or Science High Schools.

Although no school was able to present a formal vision statement, focus group meetings with teachers, parents, students, and administrators revealed the informal (or hidden) shared vision of these schools to be: “There will be no student who fails to graduate and everyone will be accepted into Anatolian High Schools and Science High Schools or other preferable high schools through the OKS.” This shared vision identifies students and parents as the primary clients and beneficiaries of the schools.

The four schools in this study deliver what their students and parents want: to be accepted into Anatolian High Schools or Science High Schools. In 2003, 600,289 eighth-grade students took the OKS, but only 10 percent were placed into these prestigious high schools. However 35 percent of Ankara CES students, 69 percent of Antalya CES students, 46 percent of Samsun CES students, and 51 percent of the Ordu CES students

were placed in such schools, based on their OKS results. Thus, these schools have a very good public reputation for results and parents prefer to send their children to them. As a result of their achievements, client satisfaction is high and the contribution to and participation of parents in these schools is very high.

A mega-level (outcomes) focus was not found in any of the four schools. It is difficult to state that these schools view education as a means to societal ends. Due to a highly competitive environment, the schools ignore mega-level results and focus only on the micro- and macro-levels of educational quality. Passing courses or doing well on the OKS does not, however, assure a desirable society for all people. Research shows that in spite of limited resources, seen in poor physical facilities, overcrowded classes, and poor educational technologies, the participating schools are similarly successful in getting micro-level results (passing courses, daily attendance, zero dropout rates, etc.) and macro-level results (transition to upper-level education, success on the OKS, etc.). How do they achieve these results despite input-related difficulties? To answer this question, processes within these schools must be examined.

At the process level, certain common practices were observed in the four schools that are consistent with their informally shared vision. The learning-teaching process is mainly teacher-centered. In addition, learning and teaching activities are mainly focused on pencil and paper. Considering existing resources, crowded classes, and an informally shared vision that focuses on students pass the OKS, these in-class activities are not surprising. Teachers save time and increase on-task behaviors by using a teacher-centered approach, managing to cover all the objectives of a heavily overloaded curriculum. Extra assignments and homework also prepare students for the OKS.

At present, there are no complaints from students, teachers, principals, or parents because they share the same vision. Furthermore, teachers were found to be very dedicated and to care about their students and were well respected by both students and parents. Students, parents, teachers, and school administrators described the school climate as very positive.

The practices of these schools can be deemed very traditional or old-fashioned, but it is obvious from their results that these practices deliver macro-level quality. However, students sacrifice a great deal to achieve these macro-level results. After a long school day, usually from 9 am to 4:30 pm, they go home and spend 3 to 5 hours doing homework. More assignments are given on weekends. If students follow such a regime, they have a better chance to be successful on the OKS. If they do not follow such a regime, they not only fail the OKS, they jeopardize their chances of continuing to the university level because Anatolian and Science High School graduates are more successful than the other school graduates in gaining university entrance.

Based on the results of the study, the author makes the following recommendations. First, given the broad social objective of guaranteeing literacy for all citizens, schools should focus on the mega-level (outcomes) because this level is related to the social usefulness and consequences of education. Further, the rigid and highly stratified structure of the high school system should be re-examined and the high-stakes OKS should be

eliminated. To move from macro- to mega-level quality of education, class sizes must be reduced and a working curriculum that promotes literacy and flexible competencies for all students developed.

***ICTs in Education: Global Experience and Model Practices,
with Implications for Turkey by Haneeta Bhullar***

The emphasis placed on developing ICT policy in education varies from country to country. Some countries have piloted ICT in schools and trained teachers without integrating ICTs into their respective education policies. Other countries have found it important to establish a policy that serves as a framework and guide for ICT use. However, the enabling environment and restrictive regulations concerning the use of ICT in education need to be considered in detail. A diverse range of policies and strategies has been developed in several countries to better integrate ICTs into schools. Four main conclusions, outlined in the following paragraphs, can be drawn from these experiences.

The critical success factor for the integration of ICTs in schools in Europe, North America and Asia is the creation of a responsive education system. To make education more responsive to the needs of a knowledge-based society, several changes are suggested. The first is a change of direction, based on creating new knowledge and information rather than rote learning. Until recently, the main function of school education has been to deliver knowledge that has been accumulated throughout human history. But in a knowledge-based society, information is increasingly being developed and delivered by all members of society. If schools maintain a learning system based on transmission of information, it will be difficult to develop the kind of intelligence essential for a successful knowledge-based society.

The second change is to orient the education system to focus more on individual students. Currently, standardized textbooks and identical teaching methods are used to educate students who have different aptitudes and learning habits. In a knowledge-based society, the main focus of education is the individual student, which requires a differentiated approach to teaching and learning. The third change is the introduction of more creative, self-directed education methods.³⁹

To optimize the value of new technologies in schools, resources should be given directly to teachers and students so that they may find new ways of using these technologies. As technology advances, unless it prompts a corresponding shift in attitude towards learning, computers cannot be properly used to enhance educational quality. Traditional methods of teaching and learning are not optimized for the integration of ICT into education. To get maximum value from new technologies, there must be a shift in the attitudes that govern education. Educators and teachers must figure out new ways to take advantage of rapidly evolving technology. It is imperative that policymakers give decision-making authority and resources directly to teachers and students to find innovative ways to use such technology, as is the case for the Network of Innovative Schools in Canada.

³⁹ Some of the ICT schemes used worldwide are Project Work (Singapore), Learning Paradigm Shift (South Korea), eLearning Commission (European Union).

A holistic approach that goes well beyond the technological dimension is needed to effectively integrate ICTs into education policy. The development of new multimedia technologies and the growth of the Internet in recent years have given students access to a vast range of informational resources. Successfully exploiting the potential of these new technologies depends far more on pedagogical and organizational issues than on the technologies themselves. *The introduction of ICTs has to be accompanied by a far-reaching reorganization of learning structures.* In addition, it is important that technological innovation be developed to serve diverse learning contexts, while respecting linguistic, cultural, and social differences. Although ICT infrastructure may be a necessary condition for successful ICT integration in education, it is not an end in itself. An ICT-in-education policy should also consider other aspects of integration, such as curriculum assessment, professional development of teachers, research and development, ICT resources and funding.

In the face of intense competition, countries can no longer rely on the accumulation of capital and labor to sustain economic growth. The capacity of the workforce to generate new knowledge must be continuously promoted. Rather than be formulated in isolation, an ICT-in-education policy should be implemented so as to complement and support other development strategies.

Vision, Strategy, and Use of Resources for ICT Integration in Schools

Sometimes integrating ICT into schools means simply distributing computers, learning software, and audio-visual aids. ICT is merely attached to existing teaching and learning activities without any change to the traditional curriculum and learning objectives. Teaching strategies and student learning activities in the classroom remain more or less intact. While the learning medium may change from textbooks to web-based books and/or software, or from class presentations to presentations via the Internet, the learning paradigm remains the same.

For example, the learning paradigm for certain concepts is associated with the transmission of knowledge. The paradigm remains the same, whether the concept is taught from a textbook, software, or the Internet. Although ICT may make independent self-paced learning easy, the potential of ICT is not optimized if there is no shift in the learning paradigm, as ICTs provide possibilities for changing both the way children learn and teachers teach.

Create ICT Vision and Strategy in Schools. Vision and strategy should not be created by a single person or through a top-down process starting with the Ministry of Education. Sometimes schools do not have their own ICT vision and plan, given that infrastructure and training are generally provided by a national ministry. School-level visions and plans (if any) are usually established by individual school principals.

The school board makes decisions on the purchase of ICT tools, a procedure that is usually met with some resistance from teachers, as they do not always share the vision of the principal or the ministry, nor do they feel a sense of ownership of the ICT integration plan. It is crucial to involve those who have a stake in the outcome of this integration

(including teachers, parents, students and the community) in the development of the ICT strategy. An ICT vision that is accepted by all becomes a shared vision, which is critical to successful implementation of ICT in a school setting.

Putting Together an ICT Integration Plan. Once the vision has been successfully created and accepted, the next step is to develop an ICT integration plan that details how teachers are expected to use the technology in lessons. Such a plan provides a detailed blueprint of the steps and methods needed to translate vision into reality. Developing ICT integration plans is no doubt a complex and time-consuming task, but such plans are usually worth the time required. Most schools have ICT integration master plans that have been customized to their own school culture and environment.

To promote use of ICT in schools, the national Ministry of Education should set guidelines, rather than imposing rules or regulations. Rules stifle creativity and lead to a technology-driven approach to ICT integration. School leaders should be given autonomy to decide how to implement guidelines, based on their analysis of the readiness of their schools. Over the last three years, an increasing number of school leaders have realized that ICT should not be integrated into the curriculum for the sake of ICT. Instead, they believe that teachers should focus on integrating ICT into the curriculum to enhance student learning experiences.

To promote ICT usage in schools, school leaders should initially adopt strategies that make ICT a part of the daily routine of teachers. Such methods can include using email as a mode of communication among staff, accessing an intranet to download forms, and using a word processor to complete lesson plans for submission. The aim is to increase teachers' own familiarity with ICT in education. For example, as different technologies mature, there are new ways to integrate appropriate and available technology into the curriculum delivery process, as the Khanya Project in South Africa has demonstrated.

Give schools the autonomy to select ICT resources suitable to the needs of their teachers and students. Schools should be provided with basic technology infrastructure and given the autonomy to decide on the kind of ICT resources and tools that they acquire, based on their vision and analysis of students learning needs. This decision-making power would allow schools to have independence and flexibility in using ICT funds, assuring better ICT integration into the school curriculum.

One major theme that emerged across countries is the need for strong, committed leadership of technology integration. While virtually all administrators voice support for technology integration, it helps to have leaders whose knowledge and commitment goes beyond rhetoric. Informed leadership means a person who has internalized the complexity of effective technology integration and exercises his or her influence to ensure that the various required enabling factors are either in place or being addressed.

Champions are motivated by a sense of satisfaction from enhancing student learning.⁴⁰ They build a culture of innovation and stimulate ICT use in teaching and learning. Champions can be identified at all levels and officially appointed. Their roles and responsibilities should be clearly stated, and they should have the support of their superiors and peers. However, to ensure long-term success of programs, continuity in leadership must be ensured.

⁴⁰ See Neal Strudler and Keath Wetzel, *Lessons from Exemplary Colleges of Education: Towards a Model of Technology Integration* An invited presentation at the Society for Technology in Teacher Education (SITE) in Washington, D.C., March, 1998.

Qualitative Assessment of Rural Schools in Turkey by Hannu Kuitunen

Recent student assessments in Turkey revealed disappointing results, with important implications for Turkey’s primary schools. Turkish students are not as prepared as their counterparts in other countries to start school, a fact later reflected in lower average test scores (see Table A1-6). Given that more than one-third of students tested on the recent Progress in International Reading Literacy Study (PIRLS) came from homes with low literacy levels and low parent-child interaction in literacy promotion, one is prompted to ask: how are some schools achieving positive results in spite of these challenges?

Table A1-6. Distribution of Average Achievement Scores by EHLA Category

	High EHLA (3-2.33)		Medium EHLA (2.33-1.67)		Low EHLA (1.67-1)	
	% of students	Average Achievement	% of students	Average Achievement	% of students	Average Achievement
Turkey	26	474	39	450	35	435
International Avg.	52	520	35	499	13	481

Source: PIRLS 2001

Note: EHLA categories refer to the Index of Early Home Literacy Activities. Parents were asked how often they engaged in the following activities with a child before the child began primary school: reading books, singing songs, playing with alphabet toys (e.g., blocks with letters of the alphabet), telling stories, playing word games, and reading signs and labels aloud.

This study is a small-scale examination of rural and urban Turkish schools with median resources that have shown better success than other schools with similar resources. To answer the above question, 19 good-performing schools with median resources and student populations were visited. Results from the visits were compared with information on “normal” schools obtained from recent evaluation studies in order to develop an effective model for schools.

Both “good” and “normal” schools share similar constraints, including an established curriculum, competition and testing, resources and their allocation, gender issues, and schooling in sparsely populated areas. “Good” schools typically have a strong and democratic leadership, where principals and teachers are goal-oriented, competent, motivated, and committed to their work. Relationships between students, teachers, and the principal are open. Schools cooperate with local society and parents, who donate their time and have high expectations of the school. Students behave and study properly, complete their homework and often take extra courses either privately or from their teachers.

During a visit to a school that recently began to receive students who are bused from rural areas, the principal explained the school’s lower performance by saying, “We would do even better and we would be more effective if we didn’t have the busing students.” This was not the only place where a similar statement was made. According to such principals, the academic results of their respective schools had declined because students being bused from rural schools were not on the same academic level as local students. In the

new situation, teachers and principals were putting in at least the same amount of effort as before, but the fact that average test scores were not as high concerned the principals.

Had such schools lost their efficiency as a result of bused students? Should there be other public criteria besides test results to assess school performance? Or, taking into account the different circumstances in which schools work, should test results between different types of schools be compared at all? This study seeks to develop a new way of examining school efficiency to reflect these changing dynamics.

The basic, common sense definition of an effective school is roughly the same as a “good” school: a school that achieves its goals. If the good result is achieved as cheaply as possible, the school is efficient. In other words, an efficient school is an effective school that does its work at minimum cost. School performance differs in terms of student achievement; schools can be compared by assessing pupil achievement, leading to conclusions that one school is more efficient than another. If the cause for better performance can be identified, it can probably be applied elsewhere.

Potential users of efficiency models are those interested in grassroots school development, such as principals, teachers, and parents. A relevant efficiency model gives these stakeholders a tool for self-assessment. If, however, they use an efficiency model that does not fit their situation, or an inappropriate model is used to evaluate their efficiency, they may become frustrated. To choose and succeed with an appropriate efficiency model means to emancipate and empower school staff. They will then feel that their work really makes a difference. When speaking of school efficiency, we must think of the basic task of a school, which includes community development in a larger sense. For example, if a school succeeds in improving the level of development of a village by encouraging girls to continue their studies or organizing the building of water pipes, such achievements can be evaluated as successful.

A variety of schools in different areas were visited for this study. The schools differed in terms of resources, personnel, student socioeconomic background, type of settlement (homogeneous urban settlement or poor rural village, or both—working in one or two shifts). It became obvious that one efficiency model could not adequately describe the different modalities of school operations. For this reason, three models were developed, as described below.

The Economic Model: The School as a Production Unit. There are three basic elements of a simplistic for the economic effectiveness of schools: inputs, process, and outputs. Inputs include students, with their individual characteristics, plus financial and material aids. Outputs are pupils' educational attainments at the end of schooling. Two kinds of effectiveness can be recognized. Technical effectiveness refers to outcomes that can be seen at the end of schooling (short-term effects), while social effectiveness is observed at the level of society (long-term effects).

A strict interpretation of economic effectiveness raises many questions. What are the desired outputs of a given school? These outputs can include the number of students

obtaining their school-leaving diploma, grades achieved in different subjects, passing rates on the entrance exam for secondary school, the level and/or type of secondary school a student enters, cognitive processes, as well as social skills and attitudes attained. It is difficult to determine the monetary value of inputs and processes. How the production process operates is also unclear. Given that the major cost of schooling is teacher salaries, the time invested in learning is a major factor of efficiency.

The Organic System Model: The School in Symbiosis with its Surroundings. The organic system model is based on an analogy between an organization and a biological system. In order to survive and grow, schools adapt to their environment. Characteristic of this approach is that organizations interact openly with their surroundings and can actively influence it. Rural development and parental involvement can adapt this model to Turkish schools. Principals at schools that adhered to this model spent many days meeting with groups, institutions, and private citizens to garner support and resources for the school. In order to obtain donations or non-material support, principals must have a good relationship with their surroundings.

In another school, teachers worked extra hours every day in order to adapt themselves to parental requirements. A small village school helped farmers to find new plants to grow and in turn received assistance for renovating the school building. When a village leader is the first to send a daughter to secondary school, his decision changes attitudes among villagers. Such a change in attitude can be achieved only if the school has adapted to its environment and villagers trust the principal. Schools with an organic approach thus have a better chance of making an impact in rural areas and contributing to sustainable change and development.

In the organic system model, flexibility and adaptability are the most important conditions of effectiveness. School effectiveness may then be measured in terms of yearly intake, which could be attributed to intensive school marketing. Although the organic system model is inclined towards inputs, this does not necessarily exclude a concern for satisfactory outputs. This may be the case in situations where parents make the availability of inputs dependent on the quantity and/or quality of previous achievements (output).

The Human-Relations Approach: The School as a Good Place for Students and Staff. In the human-relations approach, organizational focus is inward. Emphasis is on the well being of individuals within an organization, leading to a focus on consensus, collegial relationships, motivation, and personal and professional development. Job satisfaction of workers and their involvement in the organization are the criteria for measuring the most desired characteristics of the organization. Organizational theorists who share this view regard such criteria as effectiveness criteria.

If we accept the view that a school is a part of students' and teachers' lives, this model supports the view that schools contribute to making life good. We must add here the view that a school may also be part of the life of an entire society, as in a rural village, where

teachers feel like mothers to their students and villagers contribute to school life by donating heaters or preparing costumes for school celebrations.

During visits to such rural schools, the author often heard statements such as: “We are like a family,” “We love each other,” “We are like mothers to the children,” “I love my teachers,” “Peer students are like my sisters,” “Love is something I would not change in 100 years,” to describe the atmosphere of harmonious well-being in these schools. Of course the aim of school is not simply to be a harmonious place; school results are also measured by student achievement. The human relations approach alone is thus insufficient to meet the basic aims of schooling, but it adds an essential element to the concept of efficiency.

In developing these three models and examining their application in rural Turkey, the author identifies good performance in schools with median resources and median clienteles. The challenges currently facing Turkish schools, including dramatic changes in clientele (e.g., students that are bused and increasing enrollments for girls), must be tackled in accordance with local conditions and aims. The author argues that using the three abovementioned models can assist schools to face the dynamic challenges of educating Turkish youth in the coming decades.

Student Achievement in the Turkish Education System by Giray Berberoglu

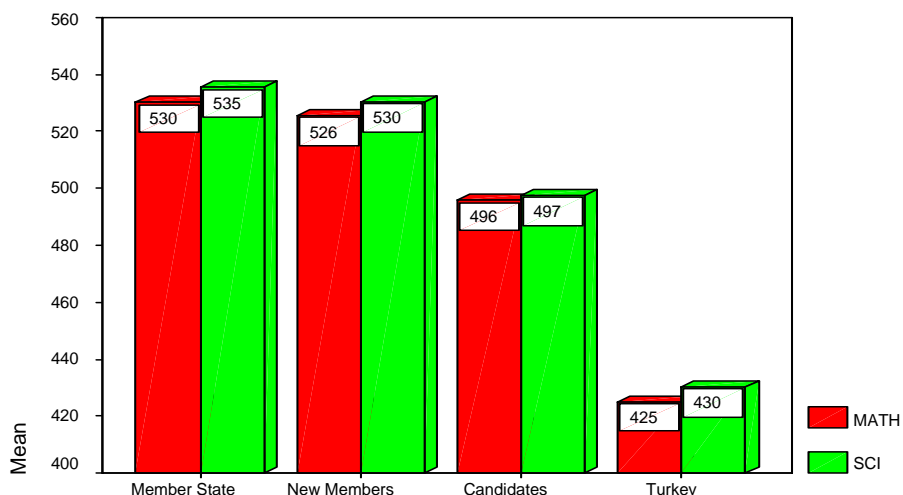
This paper presents results from a number of international student achievement evaluations in order to examine student learning levels across Turkey and the countries of the European Union (EU). These studies include the 1999 Trends in International Mathematics and Sciences (TIMSS) for eighth graders, the 2003 Progress in International Reading Literacy Study (PIRLS) for fourth graders, the 2003 International Student Assessment Program (PISA) for 15-year-old students (mathematics literacy skills), and the 2000 National Assessment Program (NAP) for sixth-, seventh- and eighth-graders (science and mathematics). Finally, the paper investigates how differences in region, gender, and school type affect learning outcomes in Turkey.

Student Learning Achievement in Turkey Compared with the European Union

TIMSS mathematics and science assessments show that students in Turkey not only perform below international averages, they also perform below EU countries (see Figure A1-14). Turkish students performed almost one standard deviation below the performance level of the member states of the EU on the 1999 TIMSS. When international benchmarks are considered, Turkish students' mean score in mathematics (425) corresponded to the lower-quartile benchmark, indicating that students are capable of basic computations with whole numbers. Thus, Turkish students can add, subtract, and round with whole numbers, subtract with multiple groupings when there are the same number of decimal places, round whole numbers to the nearest hundred, and recognize certain basic notation and terminology.

Using international benchmarks in science, Turkish students' mean score in science (430) corresponded to the lower-quartile benchmark, indicating that students recognize certain basic facts in earth, life, and physical sciences presented in non-technical language. Thus, on average, Turkish students can identify certain physical features of the earth, have certain knowledge of the human body, demonstrate familiarity with everyday physical phenomena, and can interpret and use information presented in simple diagrams.

Figure A1-14. Comparisons of TIMSS Standard Scores: Turkey and EU Countries, 1999



*Source: TIMSS, 1999.*⁴¹

The mean score of students from EU member states in mathematics is almost within the upper-quartile benchmark (555 and above). At this level, students can apply their understanding and knowledge to a variety of relatively complex situations; order, relate, and compute with fractions and decimals to solve word problems; solve multi-step word problems involving proportions with whole numbers; solve probability problems; use knowledge of geometric properties to solve problems; identify and evaluate algebraic expressions; and solve equations with one variable.

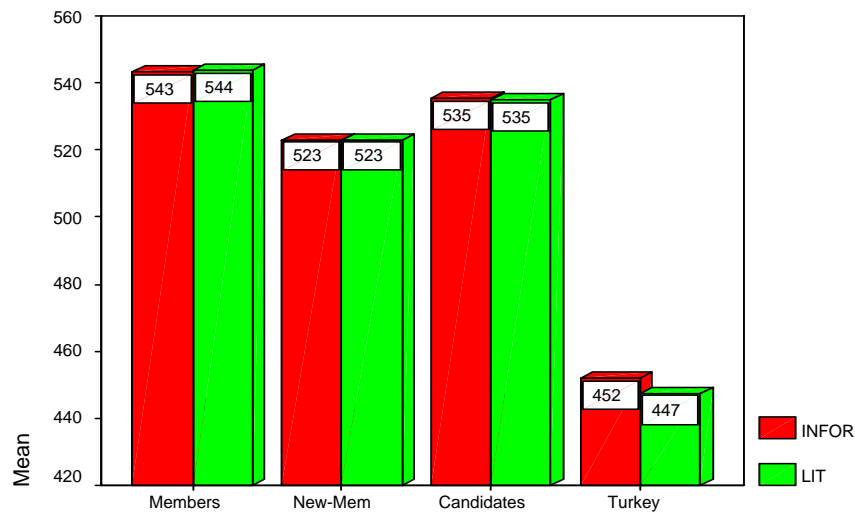
In science, the mean achievement level of students from EU states is again within the upper quartile (mean score of 558). At this level, students demonstrate conceptual understanding of certain science cycles, systems, and principles; have some understanding of the earth's processes, biological systems, and populations, as well as chemical reactions and the composition of matter; can solve physics problems related to light, speed, heat, and temperature; demonstrate basic knowledge of major environmental concerns; demonstrate some scientific inquiry skills; combine information to draw conclusions; interpret information in diagrams, graphs and tables to solve problems; and provide short explanations that convey scientific knowledge of the life sciences.

When student performance across European Union Countries is compared in the PIRLS assessments, Turkish students not only perform below international averages, they also performed below EU countries (see Figure A1-15). Turkish students performed almost one standard deviation below the performance level of students from EU member states in reading. The mean score of Turkish students (449) corresponded to the lower-quartile

⁴¹ Note: the vertical axis does not cover the whole range of TIMSS standard scores, but starts at 400. The standard deviation is 100 points.

benchmark. At this level in “Reading for Literary Experience,” students given short stories with one or two episodes of a problem and/or resolution and two central characters can retrieve and reproduce explicitly stated details about a character’s actions and feelings presented through narration, description, and dialogue; and could locate the relevant part of the story and use it to make inferences clearly suggested by the text. In the “Reading to Acquire and Use Information” dimension, given a variety of short informational materials (e.g., texts, maps, illustrations, diagrams, and photographs), students can locate and reproduce explicitly stated facts about people, places, and animals, and locate the sentence with relevant information and use it to make inferences clearly suggested by the text.

Figure A1-15. Comparisons of PIRLS Standard Scores: Turkey and EU Countries, 2003



Source: PIRLS, 2003.

When the results of both TIMSS and PIRLS are considered in terms of student learning achievement, *Turkish students on average do not perform beyond certain basic computational skills and demonstrate only a basic understanding of concepts in mathematics and science. In terms of reading skills, they generally can only retrieve explicitly stated information from a text.*

What Turkish Students Know and are Able to Do in Math, Science and Reading

When compared to international benchmarks for mathematics, only 1 percent of Turkish students could organize information, make generalizations, and explain solution strategies in non-routine problem solving situations that are part of the TIMSS mathematics assessment (see Table A1-7).

Table A1-7. Comparisons of TIMSS Benchmarks for Mathematics, Selected Countries, 1999

<i>Country</i>	<i>Top 10%</i>	<i>Upper</i>	<i>Median</i>	<i>Lower</i>
Turkey	1	7	27	65
Bulgaria	11	30	66	91
Hungary	16	41	74	94
Israel	5	18	47	77

Source: TIMSS, 1999.

Note: Scores in the cells are cumulative for each country from right (top 10%) to left (lower). Benchmark definitions are as follows. Top 10 percent: Students can organize information, make generalizations, and explain solution strategies in non-routine problem-solving situations. For example, only 1 percent of students in Turkey are capable of achieving the skills of the top 10 percent of all TIMSS test-takers globally. Upper: Students can apply their understanding and knowledge in a wide variety of relatively complex situations. Median: Students can apply basic mathematical knowledge in straightforward situations. Lower: Students can perform basic computations with whole numbers.

When compared to international benchmarks for science, only 1 percent of the Turkish students could demonstrate a grasp of certain complex and abstract science concepts in the TIMSS (see Table A1-8).

Table A1-8. Comparison of TIMSS Benchmarks for Science, Selected Countries, 1999

<i>Country</i>	<i>Top 10%</i>	<i>Upper</i>	<i>Median</i>	<i>Lower</i>
Turkey	1	6	25	62
Bulgaria	14	34	65	88
Hungary	22	49	79	95
Israel	7	20	45	72

Source: TIMSS, 1999.

Note: Benchmark definitions are as follows. Top 10 percent: Students demonstrate a grasp of certain complex and abstract science concepts. Upper: Students demonstrate conceptual understanding of certain science cycles, systems, and principles. Median: Students can recognize and communicate basic scientific knowledge across a range of topics. Lower: Students recognize certain basic facts in the earth, life, and physical sciences presented in non-technical language.

Just as with the mathematics results presented in Table A1-7, Table A1-8 makes clear that the majority of Turkish students are far behind in science performance levels, compared to other countries. With respect to reading literacy skills, only 2 percent of the Turkish students demonstrate the ability to integrate: ideas and information; interpretations about characters' feelings and behaviors with textually-based support; ideas across a text to explain the broader significance of a story's theme; and ideas across various sections and types of materials and successfully apply them to real-world situations (see Table A1-9).

Table A1-9. Comparison of PIRLS Benchmarks for Reading Literacy, Selected Countries, 2003

<i>Country</i>	<i>Top 10%</i>	<i>Upper</i>	<i>Median</i>	<i>Lower</i>
Turkey	2	7	25	58
Bulgaria	21	45	72	91
Hungary	13	36	71	94
Israel	11	28	54	79

Source: PIRLS, 2003.

Note: Benchmark definitions as follows. Top 10 percent: Ability to integrate: ideas and information; interpretations about characters' feelings and behaviors with textually-based support; ideas across a text to explain the broader significance of a story's theme; and ideas across various sections and types of materials and successfully applying them to real-world situations.

Upper: Inferences based on different aspects of characters and events, ability to support inferences with evidence from a text, inferences to describe and contrast character actions, ability to recognize certain text features in literary texts.

Median: Ability to make elementary inferences and interpretations, inferences based on literary texts go beyond single phrases or sentences to sets of clearly related sentences or even different parts of a text.

Lower: Retrieval of explicitly stated details from the various literary and information texts, focus on the text typically remains at the sentence or phrase level.

As seen in Table A1-9 above, there are students who perform in the top 10-percent proficiency level in Turkey. However, the percentage of these students is much smaller than in the comparison countries.

The PISA mathematics scale uses six proficiency levels to describe student performances. Table A1-10 presents the proficiency descriptions of the 2003 PISA 2003. The mean score of Turkish students corresponded to level 2 in the table (423), while students from most OECD countries performed at level 3. This means that, on average, Turkish students can make direct inferences and extract relevant information from a single source, use single representations, and carry out algorithmic calculations. As seen in the definition of level 2, their reasoning skills are also limited to direct procedures.

Table A1-10. PISA Student Proficiency Levels in Mathematics

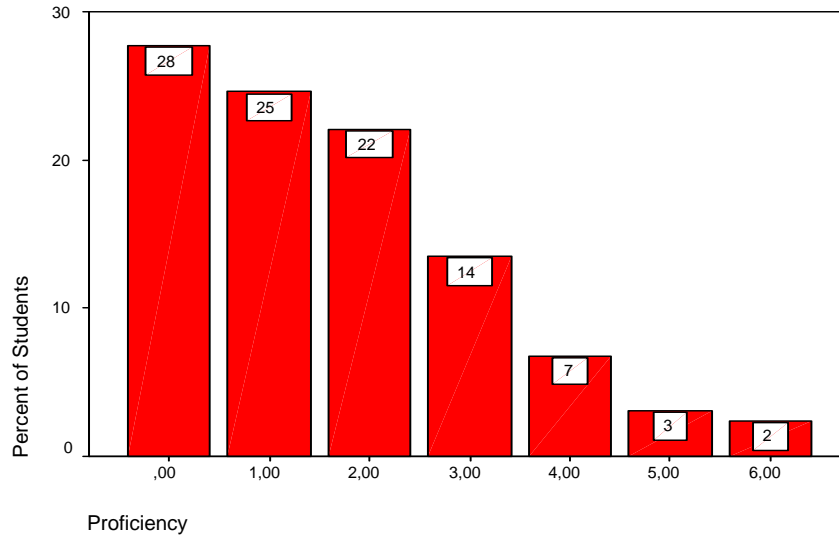
<i>Proficiency Level/ Benchmark Score</i>	<i>What students can typically do?</i>
Level 6 Score: 668	Students can conceptualize, generalize, and utilize information based on their investigation and modeling of complex problem situations. They can link different information sources and representations and flexibly translate among them. Students at this level are capable of advanced mathematical thinking and reasoning. These students can apply insight and understanding along with a mastery of symbolic and formal mathematical operations and relationships to develop new approaches and strategies for dealing with novel situations. Students at this level can formulate and precisely communicate their actions and reflections regarding their findings, interpretations, arguments, and the appropriateness of these to the original situation.
Level 5 Score: 606	Students can develop and work with models for complex situations, identifying constraints and specifying assumptions. They can select, compare, and evaluate appropriate problem-solving strategies for dealing with complex problems related to these models. Students at this level can work strategically using broad, well-developed thinking and reasoning skills, appropriately linked representations, symbolic and formal characterizations, and insight pertaining to these situations. They can reflect on their actions and communicate their interpretations and reasoning.
Level 4 Score: 544	Students can work effectively with explicit models for complex concrete situations that may involve constraints or call for making assumptions. They can select and integrate different representations, including symbolic ones, linking them directly to aspects of real-world situations. Students at this level can utilize well-developed skills and reason flexibly, with some insight, within this context. They can construct and communicate explanations and arguments based on their interpretations, arguments, and actions.
Level 3 Score: 482	Students can execute clearly described procedures, including those that require sequential decisions. They can select and apply simple problem-solving strategies. Students at this level can interpret and use representations based on different information sources and reason directly from them. They can develop short communications reporting their interpretations, results, and reasoning.
Level 2 Score: 420	Students can interpret and recognize situations in contexts that require no more than direct inference. They can extract relevant information from a single source and make use of a single representational mode. Students at this level can employ basic algorithms, formulae, procedures, or conventions. They are capable of direct reasoning and making literal interpretations of results.
Level 1 Score: 358	Students can answer questions involving familiar contexts where all relevant information is present and questions are clearly defined. They are able to identify information and carry out routine procedures according to direct instructions in explicit situations. They can perform actions that are obvious and follow immediately from the given stimuli.

Source: PISA, 2003.

The distribution of Turkish students across the six proficiency levels (see Figure A1-16) indicates that there are students in Turkey who have mastered the Level 6 proficiency level on the PISA mathematics scale. The exact percentage of these students is 2.4, which is greater than certain competing countries in the EU, including Italy (1.5 percent), Portugal (0.8 percent), Greece (0.6 percent), Spain (1.4 percent), and Latvia (1.6 percent).

On the other hand, the Turkish educational system has by far the highest proportion of students in the region who were unable to demonstrate skills at the lowest proficiency level.

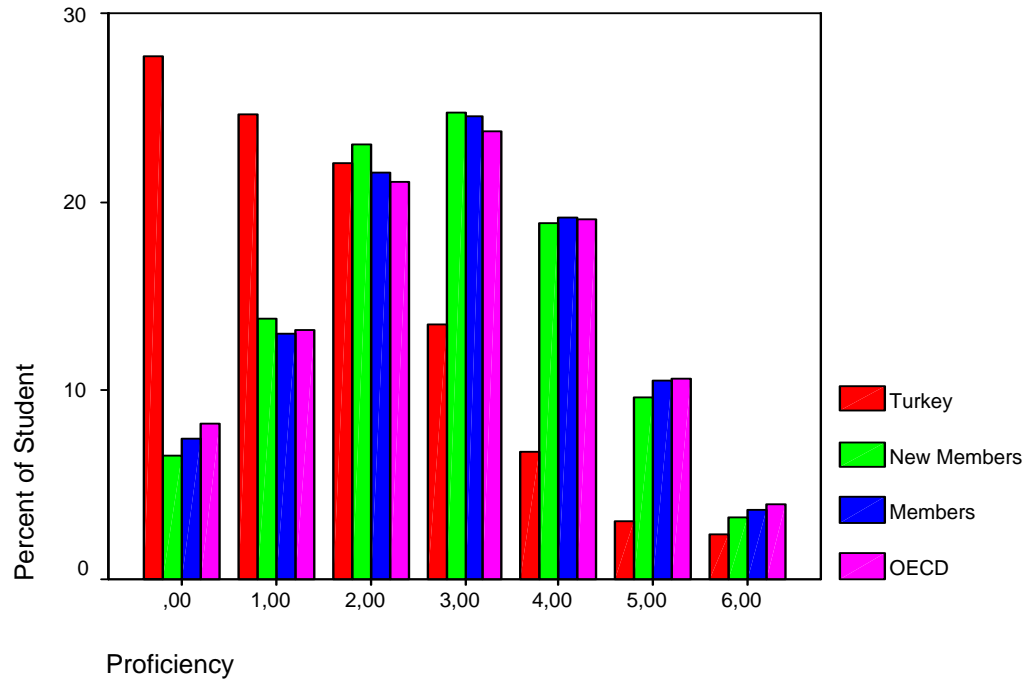
Figure A1-16. Distribution of Turkish Students by Proficiency Level in Math, 2003 PISA (%s)



Source: PISA, 2003.

As it is seen in Figure A1-16, compared to EU countries, almost 28 percent of 15-year-olds in Turkey performed at the bottom proficiency level (Level 1), and over 50 percent performed at level 1 or 0. The proportion of students in these two bottom categories is larger than the average proportions of students in these categories in OECD and EU countries (see Figure A1-17).

Figure A1-17. Distribution of Students by PISA Proficiency Level in Turkey and EU, 2003



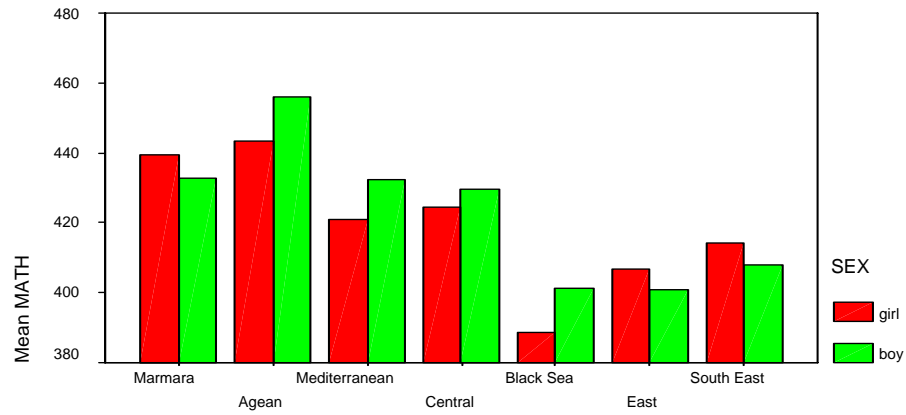
Source: PISA, 2003.

How does student learning achievement in Turkey differ by region, gender and school type?

In the National Assessment Program (NAP) conducted in Turkey in 2000, less than 45 percent of grade levels 6, 7, and 8 across the seven geographic regions of Turkey provided correct responses in science and mathematics. The Aegean and Marmara regions had favorable results in statistical terms, but these differences were very small in terms of practical significance. Overall, regional differences were quite a bit less than gender differences on the NAP.

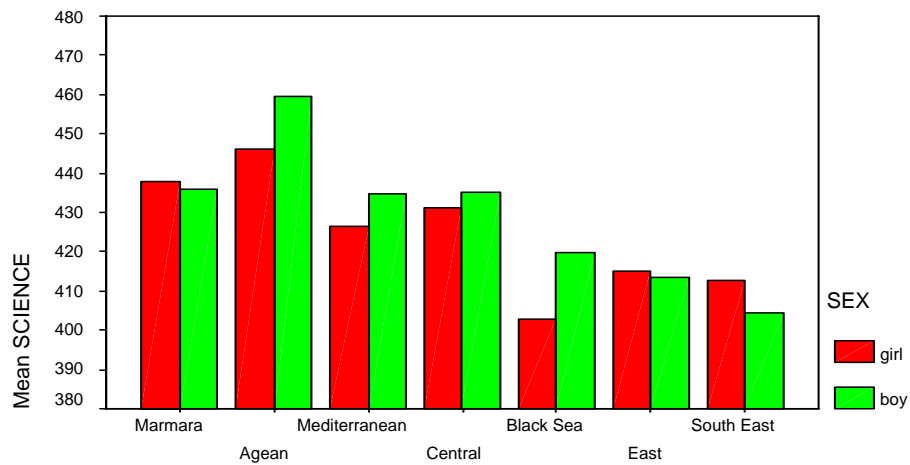
When gender differences are considered, no gender group in any region outperformed the other at the basic science and mathematics level. The same finding was also evident in the TIMSS 1999. However, males outperformed females in mathematical literacy among 15-year-old students. Figures A1-18 through A1-20 show the distribution of student learning achievement on the TIMSS and PISA across regions and gender groups. The figures indicate clear regional and gender differences in performance. Specifically, 15-year-old boys in the Aegean, Central, Marmara, and Mediterranean Regions perform best, and girls everywhere but in the southeast region perform worse than boys. Girls in the eastern region perform the worst of all students by a large margin.

Figure A1-18. Achievement in Mathematics by Region and Gender, Turkey, 1999



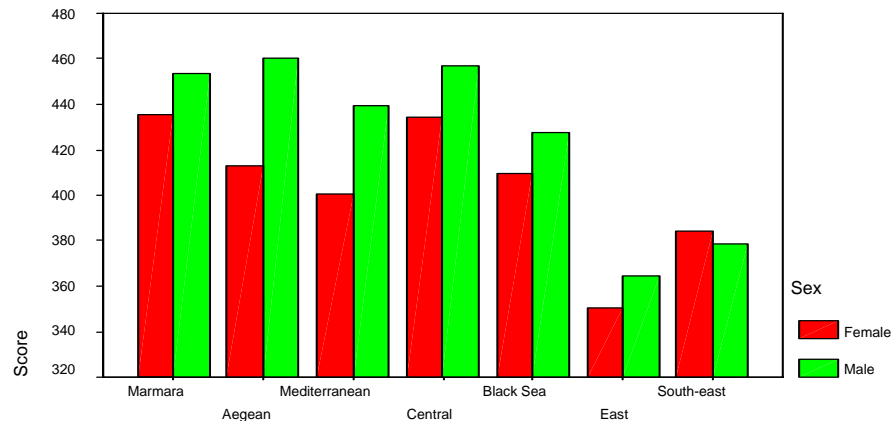
Source: TIMSS, 1999.

Figure A1-19. Achievement in Science by Region and Gender, Turkey, 1999



Source: TIMSS, 1999.

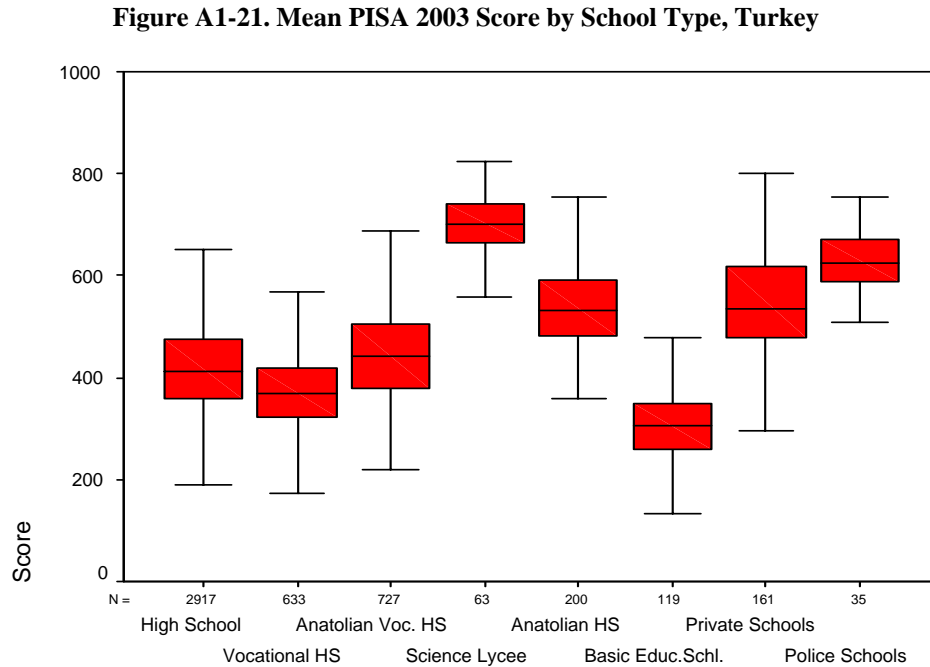
Figure A1-20. Achievement in Mathematics by Region and Gender, Turkey, 2003



Source: PISA, 2003.

How does student learning achievement differ across school types?

Student achievement across school types was studied in the 2003 PISA. Figure A1-21 shows box plots for the mean scores of different school types, according to the PISA 2003 Turkish data file.



Source: PISA, 2003.

As Figure A1-21 shows, there are remarkable differences in student performance across school types in Turkey. Students in two main groups of schools perform quite differently. The first group, which includes students in general secondary schools, vocational high schools, Anatolian vocational high schools, and basic education schools, has very low student performance. The other group, which includes science lycées, Anatolian high schools, and police schools, are the high-performing school group on the PISA. Differences in student performance among types of schools are significant and have a large impact. *Although less severe than differences among regions, differences in student performance level among types of schools is a very serious problem in the Turkish educational system.*

In order to understand student-related characteristics of schools, the two groups of schools described above were analyzed in terms of mean differences in student characteristics. Students in the successful schools had greater mean scores in mathematics self-concept and mathematics efficacy, reported a more disciplined climate in mathematic lessons, and indicated less anxiety about mathematics. When this analysis was extended to multiple linear regressions, these variables were found to explain almost 31 percent of the mathematics literacy scores in the PISA 2003.

Policy Implications

This study used comparisons between Turkey and member countries of the EU and certain other countries to indicate that:

- In different disciplines, student learning achievement in Turkey should be described clearly in the national curriculum in terms of basic and higher-order thinking skills.
- Teachers in Turkey need support and materials to enhance the higher-order and critical thinking skills of students across various subject matter areas.
- The education system in Turkey should place more emphasis on reducing the achievement gap between different school types, particularly by directing more resources and greater effort to raising student learning achievement in general secondary and vocational schools.
- Cognitive processes alone do not explain school success. Affective factors, such as student self-esteem, anxiety, and self-efficacy in mathematics are significantly related to performance in mathematics. Classroom management and the learning climate are also associated with performance in science and mathematics.

Transition from Education to the Labor Market by Keiichi Ogawa and Aysit Tansel

To what extent does education and training contribute to employment opportunities in Turkey? To what extent do knowledge and skills that graduates obtain from years of schooling and training relate to their jobs? One of the major issues confronting secondary and higher education in many countries is whether graduates can obtain jobs related to their education and training. For Turkey, the questions are: Where do graduates acquire the occupational skills to perform well in the labor market and increase their probability of employment? If formal education does not suffice to provide secondary-education graduates with the knowledge and skills to perform successfully in the labor market, are there occupational measures (e.g., apprenticeship training and course attendance programs) that can bridge the gap?

The results of the 1997 Formal and Adult Education Survey (FAES) in Turkey indicate that approximately 85 percent of university graduates obtained jobs related to their education in the period 1980–1989. This rate declined, however, to 80 percent in the period 1990–1997. Among graduates who were employed at jobs unrelated to their education, 41 percent claimed that they were unable to find such a job.

The focus of this study is twofold. First, it examines whether secondary-school and university graduates are able to obtain jobs directly related to their education and training. The study also assesses whether the education obtained by secondary and university graduates has a favorable impact on their job performance. Second, the study examines the effects of apprenticeship training on probable employment in Turkey. In countries such as Germany and Switzerland, participation in apprenticeship programs plays an important role in the transition from school to work.

Results of the 1997 Turkey Household Labor Force Survey (HLFS) suggest that, given a higher level of education: (i) the higher the probability that an individual believes that his or her education is related to his or her job; (ii) the higher the probability that an individual thinks that his or her education contributes to his or her job performance; (iii) the lower the probability that an individual cannot find a job related to his or her education; and (iv) the higher the probability that graduates rely on formal education to acquire occupational skills. Using logistic regression analysis, the level of an individual's education (controlled for gender, marital status, and age) significantly predicts the contribution of his or her education to better job performance.

The findings show that 45 percent of secondary vocational graduates find jobs directly related to their training, with an additional 14 percent reporting that their jobs are at least partially related. On the other hand, 70 percent of university graduates say their jobs are directly related to their training, with an additional 13 percent stating that their jobs are at least partially related. However, 36 percent of vocational graduates say their training does not contribute to job performance, with an additional 16 percent reporting that their training only partially improves job performance.

Half of vocational graduates say they learned their skills on-the-job and not in school. It is not surprising, therefore, that secondary vocational graduates show a greater reliance on on-the-job training than university graduates. The reason for this discrepancy is probably due to the fact that the skills required in the labor market are not being taught at the secondary vocational school level. At the same time, secondary schools are not providing high-quality education to meet the labor market demand.

In order to examine whether apprenticeship and training programs have a positive impact on employment in Turkey, probit models of employment were estimated for the survey samples of all students, female students, and male students. Apprenticeship training programs were found to increase the probability of employment by about 22 percent overall, 40 percent for females, and 8 percent for males. The educational program alone was found to increase the probability of employment by about 6 percent for all students, 2 percent for female students, and 5 percent for male students in the survey sample. Descriptive statistics for the variables used in the analysis can be found in Table A1-11.

Table A1-11. Mean and Standard Deviation of Variables, 1997

<i>Variable</i>	<i>Total</i>	<i>Female</i>	<i>Male</i>
Experience	21.27 (16.0)	21.84 (16.3)	20.67 (15.7)
Experience squared	708.19 (851.2)	741.69 (887.0)	672.32 (809.6)
Education ^a :			
Non-graduate	0.1604 (0.37)	0.2366 (0.43)	0.0787 (0.27)
Primary	0.5302 (0.50)	0.5225 (0.50)	0.5384 (0.50)
Middle	0.1209 (0.33)	0.0928 (0.29)	0.1511 (0.36)
High School	0.0959 (0.29)	0.0824 (0.28)	0.1103 (0.31)
Vocational High	0.0426 (0.20)	0.0299 (0.17)	0.0562 (0.23)
University	0.0501 (0.22)	0.0359 (0.19)	0.0652 (0.25)
Urban ^a	0.7150 (0.45)	0.7124 (0.45)	0.7178 (0.45)
Female ^a	0.5172 (0.50)	1.0000	0.0000
Apprenticeship ^a	0.0061 (0.08)	0.0015 (0.04)	0.0110 (0.11)
Course Training ^a	0.0412 (0.20)	0.0486 (0.22)	0.0333 (0.18)
Mos. of Apprenticeship	0.1741 (2.72)	0.0311 (1.09)	0.3274 (3.74)
Regions ^a :			
Marmara	0.2792 (0.45)	0.2741 (0.45)	0.2846 (0.45)
Aegean	0.1480 (0.36)	0.1482 (0.36)	0.1478 (0.36)
Mediterranean	0.1217 (0.33)	0.1209 (0.33)	0.1226 (0.33)
Central Anatolia	0.1800 (0.38)	0.1823 (0.39)	0.1776 (0.38)
Black Sea	0.1078 (0.31)	0.1099 (0.31)	0.1057 (0.31)
East Anatolia	0.0702 (0.26)	0.0713 (0.26)	0.0689 (0.25)
Southeast A.	0.0931 (0.29)	0.0933 (0.29)	0.0928 (0.29)
No. of observations	51,022	26,388	24,634

Source: Authors' computations based on SIS, Household Labor Force Survey, 1997.

Notes: Standard deviations are given in the parentheses. "a" indicates dummy variables.

A chi-square test of independence confirmed the hypothesis that as educational grade level increases, the probability of a graduate's education being related to his or her current job also increases. . Table A1-12 shows the distribution of male and female vocational school and university graduates according to whether they thought the department from which had graduated was related to their present job. About 74 percent of vocational school and university graduates believed that their current jobs were either directly or partially related to their educational department. The incidence was much higher among university graduates (84 percent) than vocational school graduates (60 percent) for both males and females.

When the authors reviewed the findings by gender, about 81 percent of female vocational school and university graduates believed that their current jobs were either directly or partially related to what they had studied, compared to 72 percent of their male counterparts. Among university graduates, nearly 90 percent of females versus 82 percent of males thought their jobs were related to what they had studied. Similarly, among vocational school graduates, 65 percent of females and 58 percent of males thought that their jobs were related to their educational department. The chi-square test found a significant correlation between education level and the relatedness of educational department to present job for both male and female graduates.

Table A1-12. Distribution of vocational school and university graduates according to relatedness of educational department to present job, 1997

<i>Gender</i>	<i>Relatedness of educational department to present job</i>	<i>Vocational secondary or high school graduates</i>	<i>University or higher education graduates</i>	<i>All graduates</i>
Male	Yes	453 (43.3%)	921 (67.8%)	1,374 (57.2%)
	Partially	153 (14.7%)	192 (14.1%)	345 (14.4%)
	No	439 (42.0%)	246 (18.1%)	685 (28.4%)
All males		1,045 (100.0%)	1,359 (100.0%)	2,404 (100.0%)
Female	Yes	143 (52.4%)	501 (76.3%)	644 (69.2%)
	Partially	34 (12.4%)	79 (12.0%)	113 (12.2%)
	No	96 (35.2%)	77 (11.7%)	173 (18.6%)
All females		273 (100.0%)	657 (100.0%)	930 (100.0%)
Total (male and female)	Yes	596 (45.2%)	1,422 (70.5%)	2,018 (60.6%)
	Partially	187 (14.2%)	271 (13.4%)	458 (13.7%)
	No	535 (40.6%)	323 (16.1%)	858 (25.7%)
Total		1,318 (100.0%)	2,016 (100.0%)	3,334 (100.0)

Source: Estimated on the basis of Turkey's 1997-1998 censuses of schools. (N=3,334)

Notes: Males – Pearson chi-square=180.26 (degrees of freedom=2; p<. 001). Females – Pearson chi-square=72.89 (degrees of freedom=2; p<. 001)

In a chi-square test of independence the compared education level and the contribution of education to better job performance by gender, it was found the probability of education contributing to better job performance increased with the level of education. Table A1-13 shows the distribution of male and female vocational school and university graduates

according to whether they thought their educations helped them to perform better in their jobs.

Nearly 90 percent of university graduates believed that their education contributed to better job performance, while only 64 percent of vocational school graduates felt the same way. The level of satisfaction was higher among female vocational school and university graduates (86 percent) than male vocational school and university graduates (76 percent). About 79 percent of vocational school and university graduates believed that their education either directly or partially contributed to better job performance. The incidence is much higher among university graduates (88 percent) than vocational school graduates (64 percent) for both males and females. When findings are analyzed by gender, nearly 92 percent of female university graduates, versus 86 percent of male graduates, thought that their education helped them to perform better in their jobs. Similarly, among vocational school graduates, 70 percent of females and 62 percent of males expressed the same belief.

The conclusion from the chi-square test is that there is a significant correlation between grade level and contribution of education to better job performance for both male and female graduates.

Table A1-13. Distribution of vocational school and university graduates according to contribution of education to better job performance, 1997

<i>Gender</i>	<i>Contribution of education to better job performance</i>	<i>Vocational secondary or high school graduates</i>	<i>University or higher education graduates</i>	<i>All graduates</i>
Male	Yes	484 (46.3%)	961 (70.7%)	1,445 (60.1%)
	Partially	162 (15.5%)	213 (15.7%)	375 (15.6%)
	No	399 (38.2%)	185 (13.6%)	584 (24.3%)
All males		1,045 (100.0%)	1,359 (100.0%)	2,404 (100.0%)
Female	Yes	151 (55.3%)	522 (79.4%)	673 (72.4%)
	Partially	42 (15.4%)	82 (12.5%)	124 (13.3%)
	No	80 (29.3%)	53 (8.1%)	133 (14.3%)
All females		273 (100.0%)	657 (100.0%)	930 (100.0%)
Total (male and female)	Yes	635 (48.2%)	1,483 (73.6%)	2,118 (63.5%)
	Partially	204 (15.5%)	295 (14.6%)	499 (15.0%)
	No	479 (36.3%)	238 (11.8%)	717 (21.5%)
Total		1,318 (100.0%)	2,016 (100.0%)	3,334 (100.0%)

Source: Estimated on the basis of Turkey's 1997–1998 census of schools. (N=3,334).

Notes: Males – Pearson chi-square=205.30 (degrees of freedom=2; p<.001). Females– Pearson chi-square=77.57 (degrees of freedom=2; p<.001).

A chi-square test of independence that compared grade level and reasons why male and female graduates were not working at jobs related to their education found that as education level decreased, the probability of finding a related job increased. Table A1-14 shows the distribution of male and female vocational school and university graduates according to the reasons why they were not working at jobs related to their education.

Overall, 48 percent of male and 58 percent of female vocational school and university graduates claimed that they could not find jobs related to their education. Among male adults, 54 percent of vocational school graduates and approximately 40 percent of university graduates could not find related jobs. Conversely, nearly 70 percent of female vocational school graduates and 44 percent of female university graduates were unable to find a related job.

The chi-square test found a significant correlation between education level and ability to find a job related to one's education for both male and female graduates.

Table A1-14. Distribution of vocational school and university graduates according to reason for not working at a job related to their education, 1997

<i>Gender</i>	<i>Reason for not working at a job related to education</i>	<i>Vocational secondary or high school graduates</i>	<i>University or higher education graduates</i>	<i>All graduates</i>
Male	Couldn't find related job	235 (53.5%)	95 (38.6%)	330 (48.2%)
	Not interested in subject	40 (9.1%)	27 (11.0%)	67 (9.8%)
	Education was not sufficient	17 (3.9%)	5 (2.0%)	22 (3.2%)
	To continue family occupation	49 (11.2%)	28 (11.4%)	77 (11.2%)
	Insufficient income	25 (5.7%)	25 (10.2%)	50 (7.3%)
	Unsuitable working condition	26 (5.9%)	22 (8.9%)	48 (7%)
	Changed job	23 (5.2%)	17 (6.9%)	40 (5.8%)
	Other	24 (5.5%)	27 (11.0%)	51 (7.4%)
All males		439 (100.0%)	246 (100.0%)	685 (100.0%)
Female	Couldn't find related job	66 (68.8%)	34 (44.2%)	100 (57.8%)
	Not interested in subject	13 (13.5%)	10 (13.0%)	23 (13.3%)
	Education was not sufficient	3 (3.1%)	6 (7.8%)	9 (5.2%)
	To continue family occupation	3 (3.1%)	3 (3.9%)	6 (3.5%)
	Insufficient income	0 (0%)	4 (5.3%)	4 (2.3%)
	Unsuitable working condition	5 (5.2%)	7 (9.0%)	12 (6.9%)
	Changed job	1 (1.0%)	7 (9.0%)	8 (4.6%)
	Other	5 (5.3%)	6 (7.8%)	11 (6.4%)
All females		96 (100.0%)	77 (100.0%)	173 (100.0%)

Source: Estimated on the basis of Turkey's 1997–1998 census of schools. (N=858).

Notes: Males – Pearson chi-square=187.32 (degrees of freedom=7; p<.001). Females – Pearson chi-square=92.28 (degrees of freedom=7; p<.001)

A chi-square test of independence that compared grade level and acquisition of occupational skills supported the hypothesis that as grade level increases, the probability that graduates rely on formal education to acquire occupational skills also increases. Table A1-15 shows the distribution of male and female vocational school and university graduates according to where they acquired their job skills.

Not surprisingly, about 70 percent of university graduates reported that they had acquired their occupational skills at school, whereas only 40 percent of vocational school graduates gave this response. While 50 percent of male and 44 percent of female vocational school graduates reported that they had acquired occupational skills through on-the-job training, only 23 percent of male and 20 percent of female university

graduates made the same claim. Consequently, *vocational graduates tend to rely more on on-the-job training compared with university graduates.*

Table A1-15. Distribution of vocational school and university graduates according to where they acquired their occupational skills, 1997

<i>Gender</i>	<i>Acquisition of occupational skills</i>	<i>Vocational secondary or high school graduates</i>	<i>University or higher education graduates</i>	<i>All graduates</i>
Male	Vocational school	407 (38.9%)	45 (3.3%)	452 (18.8%)
	University or higher education	0 (0%)	940 (69.2%)	940 (39.1%)
	Apprenticeship school	9 (0.1%)	1 (0.1%)	10 (0.4%)
	On the job	518 (49.6%)	318 (23.4%)	836 (34.8%)
	Interior service education	26 (3.2%)	20 (1.5%)	46 (1.9%)
	Vocational course	16 (1.5%)	2 (0.1%)	18 (0.7%)
	Foreman-apprentice relation	12 (1.1%)	1 (0.1%)	13 (0.5%)
	Family	55 (5.5%)	30 (2.2%)	85 (3.6%)
	Other	2 (0.1%)	2 (0.1%)	4 (0.2%)
All males		1,045 (100.0%)	1,359 (100.0%)	2,404 (100.0%)
Female	Vocational school	132 (48.4%)	15 (2.3%)	147 (15.8%)
	University or higher education	0 (0%)	497 (75.6%)	497 (53.4%)
	Apprenticeship school	0 (0%)	0 (0%)	0 (0%)
	On the job	120 (44.0%)	129 (19.7%)	249 (26.8%)
	Interior service education	6 (2.2%)	9 (1.4%)	15 (1.6%)
	Vocational course	5 (1.8%)	3 (0.4%)	8 (1.0%)
	Foreman-apprentice relation	0 (0%)	0 (0%)	0 (0%)
	Family	9 (3.3%)	2 (0.3%)	11 (1.1%)
	Other	1 (0.3%)	2 (0.3%)	3 (0.3%)
All females		273 (100.0%)	657 (100.0%)	930 (100.0%)

Source: Estimated on the basis of Turkey's 1997–1998 census of schools (N=3,334).

Notes: Males – Pearson chi-square=1293.56 (degrees of freedom=8; p<.001). Females – Pearson chi-square=527.76 (degrees of freedom=8; p<.001)

The implied marginal effect of each variable on the probability of being employed, evaluated at the mean values of the variables, is provided in Table A1-16. The results indicate that years of experience enter the probit for employment equation with highly significant linear and quadratic terms. Thus an additional year of experience increases the probability of being employed by about 0.69 percent in the total sample and by 0.09 and 1.41 percent among female and males, respectively. The probability of being employed peaks at ages 26, 27 and 28, respectively, for the total, female and male samples.

Table A1-16. Maximum Likelihood Probit Estimates of Employment Status, 1997

Variables	Total	Female	Male
Experience	0.0367 (63.8)	0.0053 (10.0)	0.0554 (75.6)
Experience Squared	-0.0007 (60.5)	-0.0001 (10.7)	-0.0010 (72.3)
Education ^a :			
Primary	0.0302 (3.58)	0.0134 (1.80)	0.0647 (5.01)
Middle	-0.0038 (0.33)	-0.0083 (0.72)	-0.1091 (6.49)
High School	0.1697 (13.2)	0.1913 (12.0)	-0.0322 (1.88)
Vocational High School	0.2647 (18.6)	0.3187 (14.4)	0.0409 (2.30)
University	0.4504 (43.5)	0.6508 (42.9)	0.0842 (5.05)
Other Characteristics	-0.2773 (46.7)		
Urban ^a	-0.5117 (115)	-0.2892 (41.8)	-0.1468 (21.4)
Female ^a	0.2213 (6.76)	-	-
Apprenticeship ^a	0.0550 (4.17)	0.4038 (5.03)	0.0801 (2.89)
Course Training ^a	-	0.0228 (2.00)	0.0540 (3.04)
-Log Likelihood	24,231	10,801	11,647
Chi Square (K)	20,584	4,260	7,832
Pseudo R-Square	0.2981	0.1647	0.2516
No. of Observations	50,633	26,124	24,509

Notes: "a" indicates dummy (0/1) variables. Table cites marginal effects (for dummy variables, this is the discrete change from 0 to 1). Regional comparisons were excluded; associated asymptotic t-ratios are provided in parentheses.

The education variables are jointly significant in all samples, although middle-school coefficients are insignificant in the total and female samples, and have a negative coefficient in the male sample. The base category was non-graduates, consisting of those who were illiterate or literate, but without a diploma. A primary-school graduate has about a 3-percent higher probability of being employed than a non-graduate. The same probabilities are 16, 27, and 45 percent, respectively, for male high school, vocational high school and university graduates. Thus, a vocational high school graduate is more likely to be employed than a general high school graduate. In the female sample, a primary school graduate has about a 1-percent higher probability of being employed than a non-graduate. The same probabilities are 19, 31, and 65 percent, respectively, for female general high school, vocational high school and university graduates. In the male sample, a vocational high school graduate has about a 4-percent and a university graduate about an 8-percent higher probability of being employed than a non-graduate.

The authors conclude that government intervention in the labor market through programs such as apprenticeship training and educational programs alone would seem to significantly increase the employment probabilities of both females and males. Nonetheless, success in increasing employment probability must be appraised against the cost. To date, no study on the cost aspect of these programs has been conducted. Given that increased probability of employment is not the only beneficial outcome of training programs, but that improving the wage possibilities of participants is an equally important goal, data on wages should be collected to study this aspect of training programs.

These findings show that it is less likely for graduates of secondary vocational schools than university graduates to find a job directly related to what they learned in school. In terms of job performance, it is also more likely for the latter than the former that their education has helped them in their work. It is not surprising, therefore, that this study shows that secondary vocational graduates rely more on on-the-job training than do university graduates. The reason for this discrepancy is probably due to the fact that the skills required in the labor market are not being taught at the secondary vocational school level. At the same time, secondary schools are also not providing high-quality education to meet labor market demand.

These results have several policy implications. Ensuring that all graduates benefit from their education is a clear priority. The authors suggest that the government promote on-the-job training and/or apprenticeship program for students, especially at the secondary-school level. ***A system should be developed between schools and prospective employers to hone the skills of potential job candidates.*** The relevance of school curriculums and teaching methods (in terms of quality measures) should also be reviewed with respect to labor market demand.

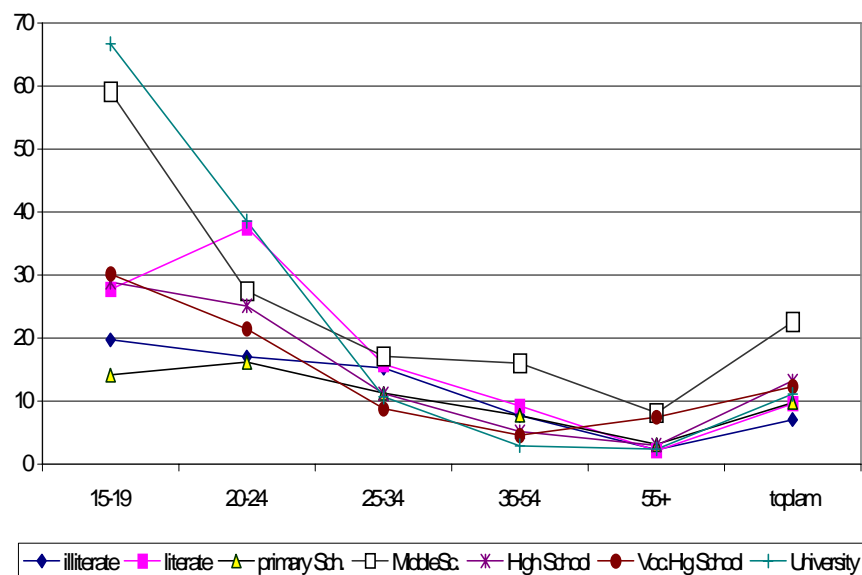
Education and Labor Market Outcomes in Turkey by Aysit Tansel

As in the case of most developed economies, private returns on education in Turkey increase with the level of education. That is, with the attainment of additional years of schooling (and the corresponding investment associated with that attainment), an individual earns higher wages, thus reaping a positive return on his investment in education.

The recent expansion of compulsory education from five to eight years in Turkey has helped fuel demand for higher education. Currently, excess demand exists for university education. Only 35 percent of students who took the university entrance exam in 2003 were awarded a place in some type of post-secondary education institution: 12.5 percent in four-year programs, 9 percent in two-year programs, and 13.4 percent in the distance-learning Open Education System. Students who do not win access to the tertiary system do not seem to be finding jobs either. Unemployment rates are highest for the two youngest age groups: approximately 19 percent for 15–19 year olds and 23 percent for 20–24 year olds.

When unemployment is examined in terms of educational attainment and other characteristics, graduates of general and vocational high schools are found to have the highest unemployment rates. Comparing unemployment rates by both age and educational characteristics reveals that the young, educated population is the group with the highest unemployment rates: for 20–24 year old graduates the rate is 30 percent (see Figure A1-22).

Figure A1-22. Unemployment Rates by Age and Education in Turkey, 2003



Unemployment rates for 20–24-year-old vocational high school graduates are 22 percent, while middle-school completers are nearly 30 percent. The high rates for young people aged 15–19 likely indicates current enrollment. Many of these highly educated unemployed were first-time job seekers; counseling and job-search strategies may reduce these rates.

Labor force participation has been declining over time; male participation rates declined from 95 percent in 1955 to 70 percent in 2003 (see Figure A1-23). Female rates have mirrored this trend, decreasing from 72 to 26 percent over the same time period. There are several factors responsible for these declines, including longer periods of school enrollment on the part of young people, mass migration from rural agriculture to urban employment (where women are less likely to work outside the home) and, finally, government retirement schemes (until 2001, men could retire after only 25 years of service, or age 55).

Figure A1-23. Male Labor Force Participation Rates by Age, Selected Years

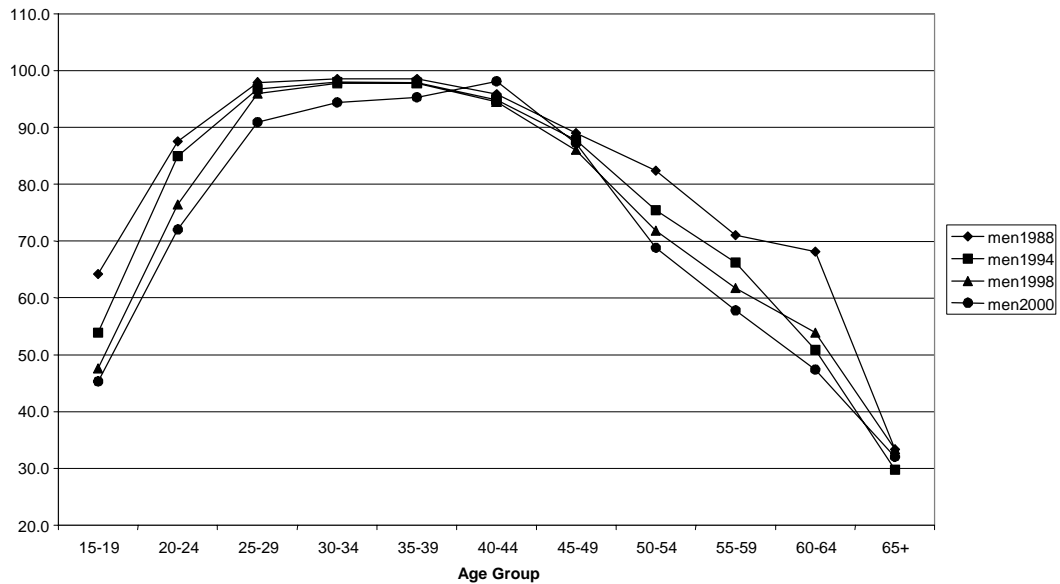
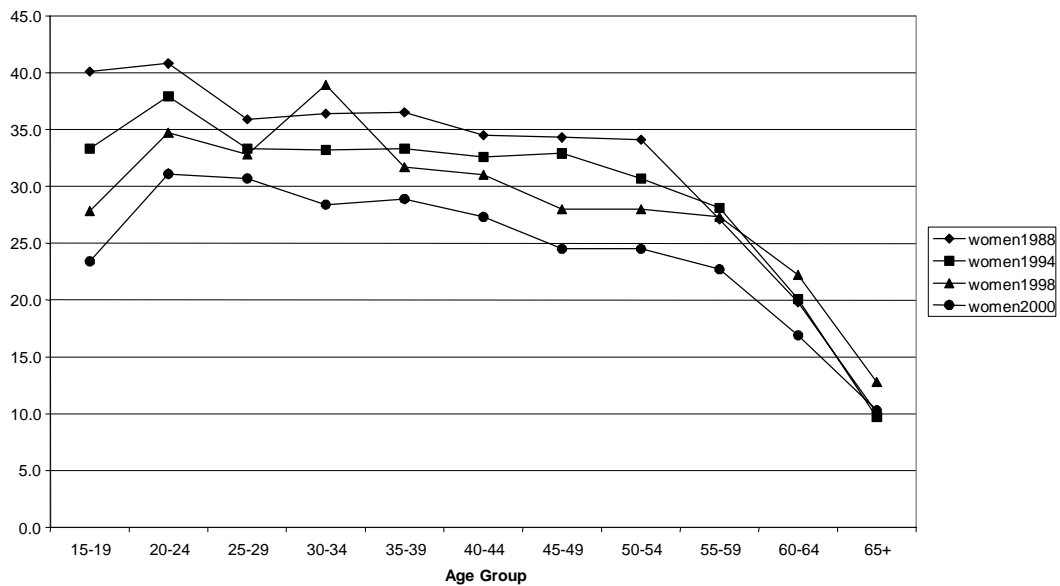


Figure A1-24. Female Labor Force Participation Rates by Age, Selected Years



In most of the world, female returns on education are higher for females than for males. In Turkey, a 1987 study showed female returns on education are actually quite similar to those of men. Beginning in 2002, however, female returns on education began to outpace those of males. This reversal suggests an expansion of women’s schooling. The expansion of vocational high school revealed similar results: returns on vocational high school education are significantly higher than returns on general high school education for men. For women, the 1987 study showed that the returns on vocational high school

education were lower than those on general high school education. This situation now appears to have changed. In 2002, both men and women had higher returns on vocational high school education than general high school education.

Table A1-17. Private Returns on Schooling for Men in Turkey (%s), 1994

<i>Survey Used</i>	<i>Primary School</i>	<i>Middle School</i>	<i>High School^e</i>	<i>Voc. High School^f</i>	<i>University^g</i>	<i>University^h</i>	<i>No. of Observations</i>
Household Expenditure Survey, 1994							
Wage Earners ^a							
All Ages	3.22	5.08	16.03	24.33	16.91	10.76	10,885
Under 25	5.27	13.12	16.07	18.85	23.46	21.37	2,287
Ages 25-44	7.36	9.28	12.15	20.89	15.77	9.22	6,861
Over 44	0.91*	negativ	1.81*	12.12*	11.32	3.57	1,737
e							
Wage Earners ^b	3.95	8.02	12.60	19.16	15.34	10.43	10,885
* Self-Employed	3.33	8.57	6.68	1.55	10.66	14.51	3,406
Wage Earners: ^c							
Regions:							
Marmara	Negative	6.46	14.67	21.61	15.88	10.51	1,664
Aegean	1.02*	4.92	11.86	16.98	15.70	11.88	1,192
Mediterranean	4.32	5.09	10.98	22.08	18.66	10.33	1,582
Central Anatolia	4.20	7.79	15.98	15.66	11.31	11.55	1,919
Black Sea	5.07	9.65	12.59	16.31	12.22	9.43	1,613
East Anatolia	5.47	5.90	9.95	22.19	13.11	3.94	1,529
Southeast Anatolia	5.52	10.20	10.73	16.85	12.88	8.29	1,386
Household Expenditure Survey, 1994 ^d							
Public Adm.	-	1.04*	8.67	13.55	13.01	9.35	
State Owned Ent.	1.70*	3.59	8.47	13.94	8.57	4.46	
Formal Private Sector	2.42	6.26	13.32	16.19	19.04	16.89	

Sources: a,b,c: Bircan 2004; d: Tansel 2004.

Notes: neg.: negative coefficient estimates.

*: not significant at 5 percent level.

e,f: Numbers in these columns are based on the assumption that high schools and vocational high schools provide three years of training.

g: Numbers are computed for university education after high school.

h: Numbers are computed for university education after vocational high school.

Table A1-18. Private Returns on Schooling for Women in Turkey (%s), 1994

<i>Survey Used</i>	<i>Primary School</i>	<i>Middle School</i>	<i>High School^e</i>	<i>Voc. High School^f</i>	<i>University^g</i>	<i>University^h</i>	<i>No. of Observations</i>
Household Expenditure Survey, 1994							
Wage Earners ^a							
All Ages	6.69	10.83	14.87	23.33	19.46	13.14	2,512
Under 25	1.14*	11.26	10.75	20.17	22.39	15.32	803
Ages 25-44	8.36	13.84	14.34	21.17	17.41	12.29	1,493
Over 44	negative	negative	31.74*	19.13*	28.56	38.02*	216
Self-Employed							
Wage Earners ^b	6.69	10.50	13.60	21.55	17.62	12.22	2,512
Self-Employed	1.35*	16.52	23.46	23.67	30.33	30.17	551
Wage Earners: ^c							
Regions:							
Marmara	negative	7.34*	11.19*	23.77*	25.49	16.06	456
Aegean	e	7.98	18.50	25.50	20.80	15.55	440
Mediterranean	4.55	15.36*	11.18	18.45	16.34	10.88	460
Central Anatolia	1.45*	5.00	24.53	24.99	16.00	15.65	333
Black Sea	13.54	11.09	12.03	17.62	16.68	12.48	490
East Anatolia	19.57	16.41	9.45	19.31	15.39	8.00	226
Southeast Anatolia	8.14	negative	3.18*	negative	2.17*	4.59*	107
Household Expenditure Survey, 1994 ^d							
Public Adm.	-	1.04*	8.67	13.55	13.01	9.35	
State Owned Ent.	1.70*	3.59	8.47	13.94	8.57	4.46	
Formal Private Sector	2.42	6.26	13.32	16.19	19.04	16.89	

Sources: a,b,c: Bircan 2004; d: Tansel 2004.

Notes: See Figure A1-17.

A comparison of the returns on education for wage earners and the self-employed yields mixed observations (see Tables A1-17 through A1-20). For men in 1994, returns on general high school, vocational high school, and university education are higher for the wage-employed than the self-employed, while the reverse is true at primary- and middle-school levels. The 2002 data shows higher returns for the wage-employed than for the self-employed at all levels of schooling. For women, higher returns are observed for the self-employed than the wage-employed, particularly at the university level. Similar to world averages, the returns on education in the private sector in Turkey, where competition exists, is higher than in the public sector, where competition is limited.

Table A1-19. Private Returns on Schooling for Men in Turkey (%s), 2002

<i>Survey Used</i>	<i>Primary School</i>	<i>Middle School</i>	<i>High School^e</i>	<i>Voc. High School^f</i>	<i>University^g</i>	<i>University^h</i>	<i>No. of Observations</i>
Household Expenditure Survey, 2002							
Wage Earners ^a	5.73	5.61	13.42	18.27	17.91	14.27	5,239
All Ages	5.98	7.79	14.46	15.40	17.52	16.82	988
Under 25	8.06	8.79	12.22	14.66	16.55	14.72	3,342
Ages 25-44	3.55	6.99	negative	7.80	16.79	10.23	909
Over 44							
Wage Earners ^b	6.02	7.75	11.82	14.34	16.12	14.24	5,239
Self-Employed	6.00	6.15	5.45	0.06	negative	4.02	1,078
Self-Employed (OLS)	(4.11)	(4.15)	(10.63)	(12.80)	(4.89)	(3.25)	(1,078)

Sources: a,b,c: Bircan 2004.

Notes: See Table A1-17.

Table A1-20. Private Returns on Schooling for Women in Turkey (%s), 2002

<i>Survey Used</i>	<i>Primary School</i>	<i>Middle School</i>	<i>High School^e</i>	<i>Voc. High School^f</i>	<i>University^g</i>	<i>University^h</i>	<i>No. of Observations</i>
Household Expenditure Survey, 2002							
Wage Earners ^a	3.50	6.86	16.89	20.09	20.47	18.07	1,287
All Ages	2.41*	6.17*	4.79	2.13	13.29	15.29	473
Under 25	2.73*	1.02*	25.01*	32.51*	17.98	12.35	687
Ages 25-44	negative	13.98*	17.69	2.30	3.88	15.42	127
Over 44	e						
Wage Earners ^b	3.66	6.62	16.20	18.93	19.45	17.41	1,287
Self-Employed	1.57*	9.50*	negative	17.92*	37.56*	20.81*	212

Sources: a,b,c: Bircan 2004.

Notes: See Table A1-17.

The most critical issue to achieving a more equitable society in Turkey is narrowing the gender gap in both earnings and educational attainment. Both the present study and previous studies indicate that, although schooling is an important determinant of earnings, it does not seem to explain the earnings inequality between genders. ***Rather, discrimination against women in the labor market was found to be the most important factor explaining the male-female wage gap, which in fact widened by 37 percent during the period 1988–94 (Kasnakoğlu and Dayioğlu, 1997).***

Recent studies have found that , education increases the labor force participation rate of both men and women in Turkey, with the effect higher for women than for men. For example, a university diploma increases the labor force participation of women by 50 percent. For men, the highest marginal contribution is a vocational high school certificate. Given the gender gap in education in favor of men, it is essential to investigate policies aimed at encouraging families to devote more resources to the education of their

daughters, so that they may play an important role in improving the quality of family life and the education of their children.

With expanding educational opportunities comes an expansion of the educated labor force, and in some countries, a decline in the returns on education. In the case of Turkey, analysis of male returns on education reveals that returns are highest for the youngest cohort, with these returns actually rising in recent years. When comparing regional differences, contrary to expectations, the most developed region of Marmara has higher returns on education than less-developed regions such as Southeastern, Eastern, Anatolian, and Black Sea regions.

A number of individual, household and community factors are considered in the analysis of the determinants of the school attainments of boys and girls in Turkey. Schooling attainment is strongly related to household permanent income, with higher incomes leading to higher schooling attainments. This effect was larger for girls than for boys. Another important factor was parents' education. Higher levels of parent education led to higher schooling attainments. Again, this effect was larger for girls than for boys. ***This result suggests that there is less social mobility for girls than for boys.*** Having a self-employed father reduced educational attainment in most samples, implying that work opportunities within a family business or on a family farm may be an alternative to schooling for boys.

Urban locations were associated with significantly higher schooling attainment. Within such locations, undeveloped streets or squatter settlements (indicators of low school availability) were in most samples associated with lower schooling attainment. The longer distances to the regional metropolitan centers were associated with lower school attainments at the middle- and high-school level. Distance to Istanbul was also associated with lower schooling attainment at the primary school level. ***These results suggest that easier migration possibilities increase the probability of school attainment.*** The greater the proportion of local employment in industry, the higher the probability of schooling at the primary level. This suggests that households in industrializing communities tend to educate their children better than do households in agricultural communities.

Regarding education and economic growth in Turkey, an increase in average education level by one year increased industrial output by approximately 34 percent with the first differenced regression, and by 43 percent with a fixed-effects model. (These estimates are based on aggregate production output data across provinces of Turkey in the period 1980–1990.) The threshold effect of education on industrial output starts at four years of average educational attainment and reaches its peak at six years.

Turkey's Rapid Coverage for Compulsory Basic Education Program: A Case Study by Ilhan Dulger

Since the early 1970s, successive governments of Turkey have sought to extend the amount of compulsory basic education provided to all school-aged children from five to eight years, as well as to expand educational coverage to 100 percent of school-aged children. Turkey has experienced difficulty in reaching the last segment of the target population, children aged 11–13. A breakthrough came with the passage of the Eight-Year Compulsory Basic Education Law in 1997, which introduced extended compulsory basic education.

In order to implement the 1997 law, the government prepared the Basic Education Program and provided substantial new funding to finance additional infrastructure and human resources to replace a system that had consisted of five-year primary schools and three-year lower secondary schools, or alternatively, eight-year primary schools. The government also provided incentives to get all families to send all school-aged children to school and carried out a variety of other initiatives to address social, economic, and cultural factors that affect enrollment and attendance rates of many segments of the population.

During the first four years of the program's implementation, the government spent nearly US\$2 billion more than was envisioned to accelerate the construction and rehabilitation of school buildings, provide new educational materials and equipment, and recruit additional teachers. As a result, enrollment in basic education increased by over 1.1 million students, raising the gross enrollment ratio from 85.63 percent in 1997 to 96.30 percent in 2002. Enrollment rates for girls, especially in rural areas, made particularly impressive gains. For example, ***in the nine provinces in the eastern and southeastern regions of Turkey that had the largest gender disparity, female enrollment increased 160 percent.***

The Rapid Coverage for Compulsory Basic Education Program, with its special provisions for poor children, is considered Turkey's largest poverty-alleviation program. The program was designed and implemented during a period of severe economic crises and short-lived coalition governments. Given economic and political instability, the government chose a "big bang" approach to basic education reform. By acting quickly, it became too difficult for potential opponents to overturn the reform or cut its financing. Yet the approach precluded the government from building coalitions, developing more quality-enhancing components of the program, or undertaking complementary steps to assuage different interest groups and populations.

The rapid approach brought fast action. The intensity of the government's effort also apparently awakened a spirit of contribution on the part of large segments of the public. Rising enrollment rates and the construction of long-awaited facilities helped push Turkish education to higher standards.

Since education is one of the main instruments of social mobility in Turkish society, it produced important social benefits. Children living in poorer urban slums (*gecekondu*) and rural areas, especially girls, gained the most from the expansion of compulsory basic education, as increased educational opportunities opened the doors to better jobs, higher incomes, and enhanced welfare.

Emerging evidence suggests, however, that the “big bang” approach missed opportunities to make the kinds of incremental change that could have helped sustain the reform. More careful fund utilization and infrastructure planning (particularly utilization of existing infrastructure) could have saved the reform from becoming too uni-dimensional, and directed attention and resources towards more careful implementation of qualitative and organizational issues, such as modernizing the national curriculum and introducing higher-quality standards. The one-party government, elected at the end of 2002, unlike many earlier coalition government administrations, has a tremendous opportunity to transform the Rapid Coverage for Compulsory Basic Education Program into a more democratic and comprehensive package of reforms.

The lesson from Turkey’s rapid expansion of compulsory education is twofold. ***Equity-oriented policy reforms in education can be successfully launched using a bold, “big bang” model, but efforts to achieve social inclusion and involve stakeholders are also needed to assure the institutional, social, and economic sustainability of such reforms.***

Towards an Education Decentralization Strategy for Turkey by Alec Gershberg

Turkey's education system is highly centralized—in many respects, it is one of the most centralized among middle-income countries (MICs). It is not unreasonable to argue that a well-designed reform process that includes decentralization goals could improve educational service provision and, over time, achievement in the country. There are, however, legitimate reasons—political, societal and historical—why Turkey's education system has remained so centralized. International experience, moreover, suggests that it is possible to decentralize some aspects of an education system while maintaining significant control over the system, particularly over ideology and the curriculum.

This paper focuses on the decentralization of basic education functions and responsibilities in Turkey. The author develops a typology and conceptual framework for considering this process in Turkey. The main objective of the study is to inform policymakers and other stakeholders of the issues, justifications, advantages, and risks of decentralizing or “deconcentrating” educational management, service delivery, and financing in Turkey. Such decentralization means transferring authority and responsibility from the Ministry of National Education (MONE) to local municipal governments, local offices of the Ministry located in provincial governors' offices, or directly to schools and communities themselves. The *rationales for education decentralization* include improving efficiency, effectiveness, democracy, and equity.

Efficiency and effectiveness mean:

1. A more accurate fit of services to recipient demand.
2. Reducing bureaucracy.
3. Reducing leakage of resources.
4. Adaptation of standardized government programs to local conditions.
5. Reduced costs of communication with poor and rural populations on issues involving other government programs.
6. Increased sectoral resources through local resource mobilization, based on either self-help, user charges, or matching grants.
7. Gains in technical knowledge, both from and to local populations.
8. Better accountability and performance, derived particularly from a better fit between education services and needs; increased resources; and a watchdog function for stakeholders.
9. Lower costs through cooperation.

Democracy. Decentralization has the potential to increase the number and voice of stakeholders and incorporate democratic decision-making.

Equity. Decentralization could worsen equity if it is based on sub-national revenue generation and/or school fees, but it can improve equity if the poor receive better service delivery. The keys to success are compensatory mechanisms designed and overseen by the central government.

There is no silver bullet: what is equitable may not be efficient, what is efficient may not be democratic, and what is democratic may not be equitable. In practice, reform strategies must attempt to optimize sometimes inevitable trade-offs between efficiency, equity, and democracy, while seeking to improve all three. The actual design and implementation of decentralization reforms are inherently political; thus, decisions about trade-offs rightly occur in the political arena. ***Successful decentralization is a long, evolutionary process.*** Failed decentralization reforms (even if they do not represent true decentralization) taint any future efforts to decentralize, so the stakes are high to “get it right the first time.”

Most decentralization typologies begin with requisite references to deconcentration, devolution, and delegation. This is particularly true when education decentralization is part of a general decentralization of government, often a public sector reform to improve democracy and the legitimacy of the state. Recently, equal if not more attention has been focused on decentralization of schools and school management committees (commonly called school autonomy or school-based management, SBM) as opposed to decentralization of governments. Decentralization reforms can emphasize decentralization to sub-national jurisdictions or the decentralization of schools, but many reforms have components of each type of decentralization.

- *Education deconcentration* is the transfer of decision-making authority from the central government ministry of education to either regional and/or local offices of the ministry or regional offices of the central government. This process typically entails giving such offices increased autonomy, both to recruit, evaluate, and promote personnel, and to allocate and reallocate budgets. Deconcentration includes decentralization of payroll and other administrative matters as well. It may also include some degree of political decentralization. Local politicians may gain some influence over local administrative decisions, even though they have no direct authority over education.
- *Education devolution* is the transfer of decision-making authority from the central government to popularly elected regional or local governments. Key management decisions, including naming school principals and allocating regional and/or local education budgets, are given to the governor and legislature, or to the mayor and city council. In some cases, these decisions may in turn be delegated to schools or school councils. In most cases, revenues of the newly empowered regional or local government are derived almost entirely from central government transfers, thus limiting their fiscal autonomy. Fiscal autonomy and, arguably, fiscal accountability is higher when regional or local governments must raise a significant share of their own revenues. As with deconcentration, administrative and personnel functions are

often transferred. Devolution can be a part of the decentralization of political power or a simply a way for central governments to offload service responsibility.

- *Education delegation* is the reversible assignment of authority by the central government to public school principals and/or school councils. The powers of such school councils vary greatly. In some cases, they do no more than maintain physical plant, while at the other extreme, they may name school principals and help prepare and approve school development and spending plans.

Turkey originally designed much of its local government sector based on the French system, emphasizing a strong role for central government and limited local autonomy. Tables A1-21 and A1-22 (see the end of this section) delineate four areas of decision-making that may be decentralized. Note that while France is considered quite centralized, many education decisions in that country are taken at the local level, including use of resources for school staff and some current expenditures. France is, in fact, significantly more decentralized than Turkey. To cite another example, Korea is quite centralized in all aspects except the organization of instruction.

It is crucial to emphasize that so-called “decentralization” is really a series of hundreds of decisions in each of these areas. Reform-minded governments must think through an implementation strategy to ensure the right mix across all areas of concern. As complex as Table A1-22 appears, real decentralization is even more complex. Many decisions require increasing central control or capacity in some way. For instance, central governments implementing school-based management must become much better at central evaluation and holding schools accountable. In fact, both the initial and ongoing roles of the central government in decentralization are vital: at a minimum, the center must set and enforce the rules of the game, offer compensatory funding to ensure equity, and strengthen the evaluation, flow, and management of information.

On the other hand, the largest fear expressed by national education ministries is that sub-national jurisdictions, communities, and/or schools lack the capacity to manage education. This is often not true. In fact, *there is often more latent capacity to manage education waiting to emerge than central governments anticipate*. Training and capacity building delivered in advance of decentralization is usually less effective than that delivered concomitantly with decentralization. The key is to create effective inter-governmental incentives for service provision. Some key incentives include:

Intergovernmental transfers. Under decentralization, education provided at the sub-national level is largely financed through intergovernmental transfers. The first model is *general block grants to local governments*, which may then determine spending priorities for education. The second model is *conditional grants* that are specifically earmarked for education. No matter what the arrangement, there is likely to be considerable controversy and negotiation over the funding formula of such grants. For instance, to what extent should grants be based on historical spending patterns? How should compensatory funding for disadvantaged groups be included, if at all? International experience now supports a strategy to keep the formula simple and transparent.

School grants and direct funding of schools. School grants are becoming increasingly common as a vehicle for transferring resources to school governing councils. Grants are used as a means to ensure minimum spending on non-personnel outlays, create incentives for desired school behaviors, and target schools serving the poor. Significant accumulated international experience with school autonomy now exists. Decentralization of real decision-making power to schools or school councils is a means of increasing the voice of the clients of education and can also significantly increase *parental participation* in schools. (In contrast, school councils that are advisory in nature often cannot sustain parental participation.) High levels of parental and community participation are associated with improved school performance.

Holding service providers and policymakers accountable. Efficiency and effectiveness are most likely to improve when service providers—schools, local governments, and/or regional governments—are held *accountable for results* (i.e., they suffer the consequences of poor performance or receive rewards for good performance). Accountability is arguably stronger when a local government or school community share responsibility for financing. It is often recognized, however, that strong central evaluation is the key to realizing these potential gains.

Table A1-21. Types of School-level Decisions that *May* be Decentralized

<i>Domain</i>	<i>Sample Decisions</i>
Organization of Instruction	Select school attended by student. Set instruction time. Choose textbooks. Define curriculum content. Determine teaching methods.
Personnel Management	Hire and fire school director. Recruit and hire teachers. Set or augment teacher pay scale. Assign teaching responsibilities. Determine provision of in-service training.
Planning and Structures	Create or close a school. Select programs offered in a school. Define course content. Set examinations to monitor school performance.
Resources	Develop school improvement plan. Allocate personnel budget. Allocate non-personnel budget. Allocate resources for in-service teacher training.

ANNEX 2. ESS-SPONSORED WORKSHOPS

Table A2-1. List of ESS Workshops, Seminars, Colloquia, and Site Visits

<i>Date</i>	<i>Location</i>	<i>Participants</i>	<i>Topic</i>
2004/1	Ankara	Treasury/SPO	Study objectives
2004/2	Ankara	SPO Education Staff	Study objectives
2004/2	Ankara	SIS	Collaboration on the study
2004/2	Ankara	Government CG	National education accounts terms of reference
2004/3	Ankara	Treasury, SPO	Options for policy notes
2004/3	Izmir Economy University	Academic Community, Provincial ED	Status and trends in education; economic returns on education
2004/5	Van 100 Yil University	Academic Community, Provincial ED	Status and trends in education; education quality; economic returns to education
2004/5	Van	MONE, Treasury, Nongovernment	Visits to schools and communities with government officials and stakeholders
2004/6	Eskisehir Anadolu University	Academic Community, Provincial ED	Status and trends in education; education quality, economic returns to education
2004/6	Ankara University	Academic Community, Provincial ED	Status and trends in education; education quality, economic returns to education
2004/6	Marmara University	Academic Community, Provincial ED	Status and trends in education; education quality; economic returns to education
2004/8	Board of Education	Board of Education members	Assessment results from TIMSS and PIRLS
2004/8	Ankara	Youth Voices Group	Education quality; secondary education
2004/9	Ankara	Government CG	Status and trends in education; early childhood education
2004/10	Board of Education	MONE high level officials and staff, BOE	Secondary education reform; international trends
2004/12	MONE Backent Ogretmenevi Hall	MONE high level officials, DGs, and staff	PISA results and education quality
2004/12	Istanbul	Nongovernment CG, Business community, Press	PISA results and education quality
2005/1	Ankara	MONE	Information, communication technologies in education—discussions with Russian Ministry officials
2005/1	Ankara	Board of Education Members	Curriculum reform in Turkey, Indonesia, Finland, Philippines and Malaysia, with officials from these countries
2005/3	Ankara	Government CG	National education accounts results
2005/3	Istanbul	Nongovernment CG	Transition from education to the labor market; national education accounts results

<i>Date</i>	<i>Location</i>	<i>Participants</i>	<i>Topic</i>
2005/3	Istanbul	MONE and Non-Government CG	Vocational education in Turkey, Germany, and the UK
2005/4	Sanliurfa	Provincial ED and University/MYO officials	Secondary and postsecondary education
2005/4	Diyarbakir	Provincial ED and University/MYO officials	Secondary and postsecondary education
2005/4	Cankiri	University/MYO officials	Postsecondary education
2005/5	Durusu/Istanbul	All Stakeholders	Final Workshop: ESS Conclusions and Policy Options

Key: CG – Consultative Group; DG – Director General; ED – Education Department.

Table A2-2. Durusu Workshop Participants, May 2005

<i>Name</i>	<i>Institution</i>	<i>Name</i>	<i>Institution</i>
Adem Karabayır	Ministry of Finance	Hikmet İşler	Ass. for Support to Contemporary Life (ÇYDD)
Ahmet Alkan	Sabancı University	İlhan Dülger	State Planning Organization
Akshay Sethi	World Bank	İpek Gürkaynak	Gürkaynak Citizenship Institute
Ali Baykal	Boğaziçi University	İrfan Yazman	Foundation for Supporting Vocational Education and Small Enterprises
Ali Ekber Şahin	Hacettepe University	Jilda Ulumeriç	ÇYDD
Anders Lönnqvist	European Union	John Innes	World Bank
Ayla Göksel	Mother and Child Foundation	Kerim Gürçay	Açı Schools
Ayşe Akkiraz	Treasury	Kerim Paker	Moderator
Başak Şengül	CNN	Mahir Toprak	Anatolian Young Leaders
Batuhan Aydagül	Education Reform Initiative	Margaret Sands	Bilkent University
Bülent Yılmaz	State Institute of Statistics	Maureen McLaughlin	World Bank
Bülent Hasan	Member of the Parliament	Mehmet Kaytaz	Boğaziçi University
Cahit Orhan	ENKA Schools, Adapazarı	Murat Altınsoy	State Planning Organization
Can Şimşek	World Bank	Mustafa Arık	Diyarbakır Kazım Karabekir Primary School
Cem Mete	World Bank	Muzaffer Doğan	Head of Inspectorate, MONE
Ekrem Toklucu	MONE Provincial Director	Münevver Mertoğlu	İstanbul Provincial Director
Emin Karip	MONE (Board of Education)	Neyyir Berktaş	Education Reform Initiative
rdoğan	MONE	Oğuz Borat	European Union
Esin Aksay	Education Reform Initiative	Osman Gundogdu	Treasury
Evren Gönül	Education Reform Initiative	Petek Aşkar	Hacettepe University
Faruk Aydın	MONE Provincial Director	Robin Horn	World Bank
Ferda Şahmalı	World Bank	Ruhi Kılıç	MONE
Gina Lucarelli	UNICEF	Salih Çelik	MONE
Giray Berberoğlu	Middle East Technical	Serdar Polat	State Planning Organization
Gönül Akçamete	Ankara University	Serra Tar	İstanbul High School
Gülesin Nemitlu	Moderator	Soner Yıldırım	Middle East Technical University
Hakan Yılmaz	Middle East Technical	Yörük Kurtaran	Moderator
Hasan Ersel	Economic Policy Research Institute	Zeynep Cemalcılar	Koç University