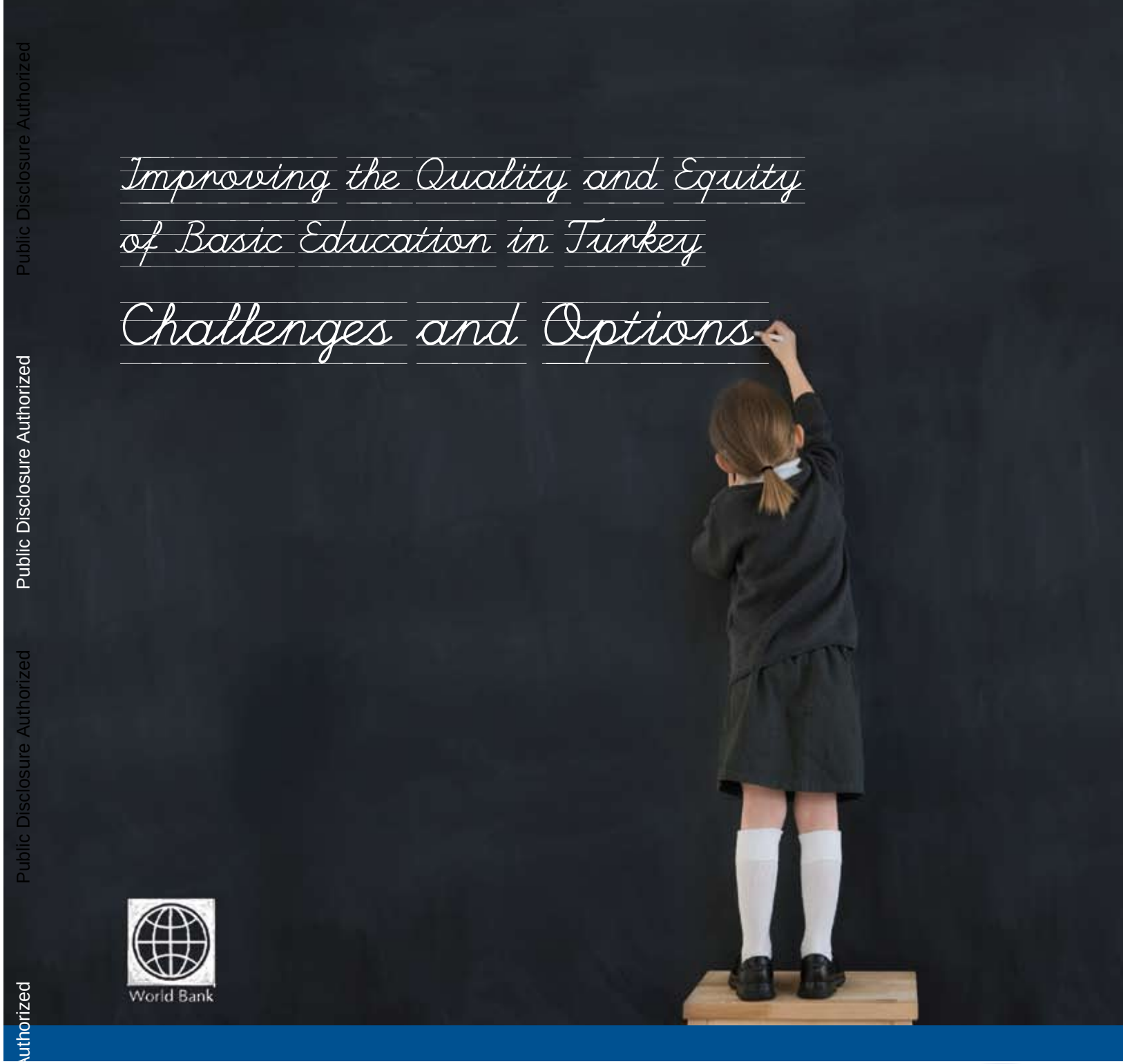
Improving the Quality and Equity of Basic Education in Turkey

Challenges and Options



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The World Bank
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CURRENCY EQUIVALENTS

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ACRONYMS AND ABBREVIATIONS

AÇEV	Anne Çocuk Eğitim Vakfı (Mother Child Education Foundation)
ECA	Europe and Central Asia
ECD	Early Childhood Development
ECE	Early Childhood Education (or Pre-Primary Education)
EMIS	Education Management Information Systems
ERI	Education Reform Initiative
ESD	E-School Database
GDP	Gross Domestic Product
LYS	Lisans Yerleştirme Sınavı (Undergraduate Placement Examination)
MoNE	Ministry of National Education
NGO	Non-governmental Organization
OECD	Organisation for Economic Co-Operation and Development
OKS	Ortaöğretim Kurumları Öğrenci Seçme Ve Yerleştirme Sınavı (High School Entrance Examination)
ÖBBS	Öğrenci Başarılarını Belirlenmesi Sınavı (Student Achievement Assessment Examination)
ÖSS	Öğrenci Seçme Sınavı (Secondary Education Entrance Examination)
ÖSYM	Öğrenci Seçme Ve Yerleştirme Merkezi (Student Selection and Placement Center)
ÖYGM	Öğretmen Yetiştirme Ve Eğitimi Genel Müdürlüğü (General Directorate of Teacher Training and Education)
PISA	Programme for International Student Assessment
PTC	Private Tutoring Center
SBS	Seviye Belirleme Sınavı (Level Determination Examination)
SPO	State Planning Organization
TALIS	Teaching and Learning International Survey
TEFBİS	Türkiye'de Eğitimin Finansmani Ve Eğitim Harcamalari Bilgi Yönetim Sistemi (Turkey Education Financing and Education Expenditures Information Management System)
UNICEF	United Nations Children's Fund
YGS	Yükseköğretime Geçis Sınavı (Higher Education Examination)
YÖK	Yükseköğretim Kurumu (Higher Education Council)

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Contents

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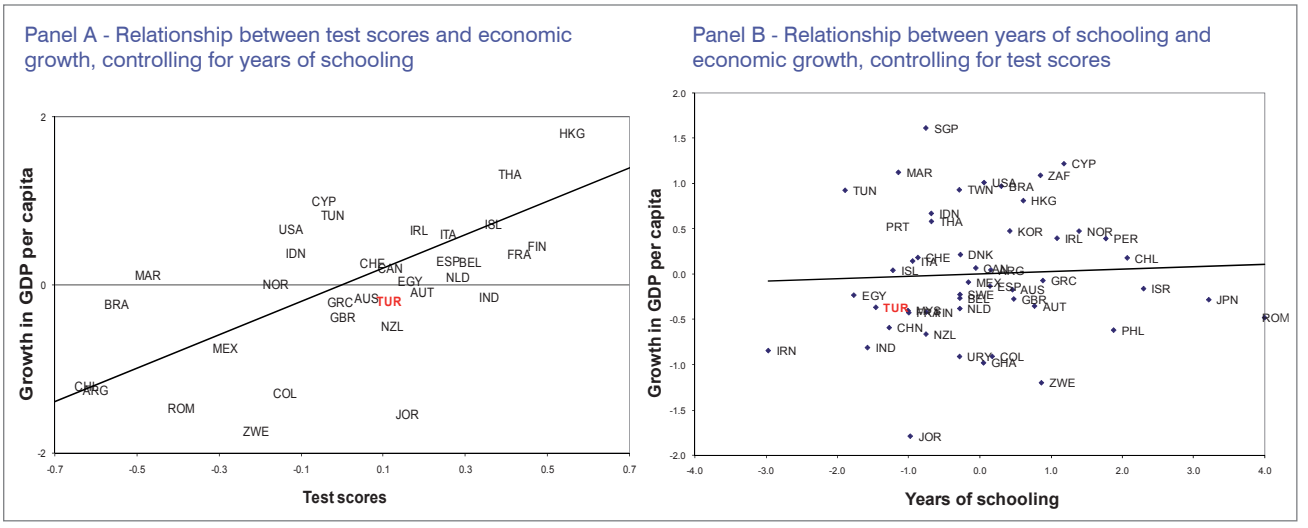
Executive Summary

Figure ES1 – Quality of Education Matters for Economic Growth



Source: Hanushek & Wößmann (2007b), Figure 4.2, p. 34

A. Introduction and Background

1. Providing education for all has been a core objective of many governments since the launch of the Millennium Development Goals a decade ago (UNESCO, 2010). Improving educational attainment alone is not enough, however. The quality of the education provided by the system is a necessary component to achieve long-term gains in economic growth. Therefore, equipping children with the high-quality knowledge and skills needed for today's labor market should be the priority.

As Figure ES1 shows, the level of students' knowledge and skills measured by international test scores is strongly associated with economic growth (Panel A). Increased years of schooling alone do not seem to have any impact on economic growth once we adjust for the quality of education (Panel B). In other words, attending school will have a substantial impact on the future economic development of the country only *if* students effectively learn the cognitive and non-cognitive skills needed to access the labor market.

2. Education is the biggest area of concern for Turkish people, according to a recent survey of 29 countries in the Europe and Central Asia (ECA) Region (EBRD, forthcoming). Roughly 5 in 10 Turks believe that education should be the highest priority area for additional government investment – the highest proportion among Europe and Central Asia (ECA) countries after Tajikistan. Turkey's level of dissatisfaction with public education (primary and secondary) is almost twice as high as when compared with the dissatisfaction with receiving medical treatment in the public health system.

3. Basic education is the foundation of education and learning and, as such, is the point where Turkey started its push for education for all. As a result, Turkey has made remarkable progress on access to basic education and now has almost universal primary school enrollment - a 98.4 percent net enrollment rate as of 2010/11. The gap in access across regions has also narrowed significantly over time, although enrollment continues to vary significantly across regions For example, in Hakkari, an Eastern province of Turkey, the net enrollment rate for primary education as of 2010-11 is 92.4 percent, while it is almost 100% for the province of Ankara, where the capital of the country is located (MoNE, 2011).

4. Having achieved close to universal participation in primary education, Turkey now sees the need to improve the quality of education. To address this issue

Turkey is beginning with basic education, as the quality of student learning in the initial years of education has a major impact on quality in later years.

5. An evaluation of the current status of basic education in Turkey shows that quality is much lower in Turkey than in most OECD countries with significant gaps between low and high performers. An international assessment of learning among 15-year-olds who are still enrolled in school (OECD's PISA 2009) shows that the average 15-year-old in Turkey is 1 school year behind the average OECD counterpart in reading, math and science skills (OECD, 2010a). Roughly half of 15 year-olds in Turkey are at or below the lowest proficiency level compared to about 20 percent for the average OECD country (Figure ES2). Proficiency levels vary by region in Turkey with lower scores in the Eastern regions. They also vary by gender. This being said if girls remain in school until they are 15 years old they perform as well as or better than boys on average.

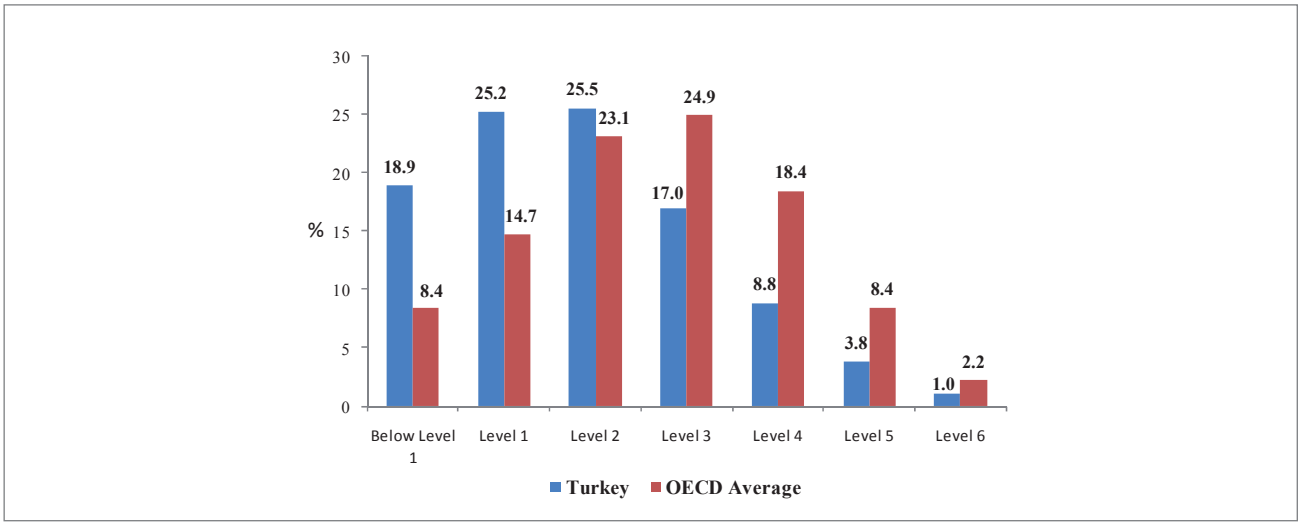
6. Quality is also uneven across different types of schools in Turkey, which leads to lifelong inequities among students depending on where they go to school. As Figure ES3 shows, only about 16 percent of the 15-year-olds in Turkey attend schools with average reading, math or science test scores that are comparable to or above the OECD average of 500 points (OECD, 2010a).

7. These differences in performance are associated with many factors, one of the most important being the differences in socio-economic and family background of individuals (Dinçer & Uysal, 2010). Results show that approximately two-thirds of the students in science high schools and one-half of the students in Anatolian high schools belong to the richest 20 percent of the households where at least one 15-year-old lives.

8. Differences in performance are also closely associated with specific characteristics of the school attended, most notably the degree of academic selectivity of these high-quality schools. As access to these institutions hinges heavily upon successful results in the secondary education entrance exams, some students start taking private tutoring classes at as early as 10 years old. But since access to private tutoring depends on the student's family income, enrollment in the top secondary schools is highly correlated with income and wealth. This, in turn tends to exacerbate the existing level of inequality with which the students enter the education system (Berberoğlu & Kalender, 2005). A system of high-stakes entry exams for secondary education coupled with few schools of significantly high quality tend to reduce a country's average educational performance and increase educational inequality (Hanushek & Wößmann, 2006).

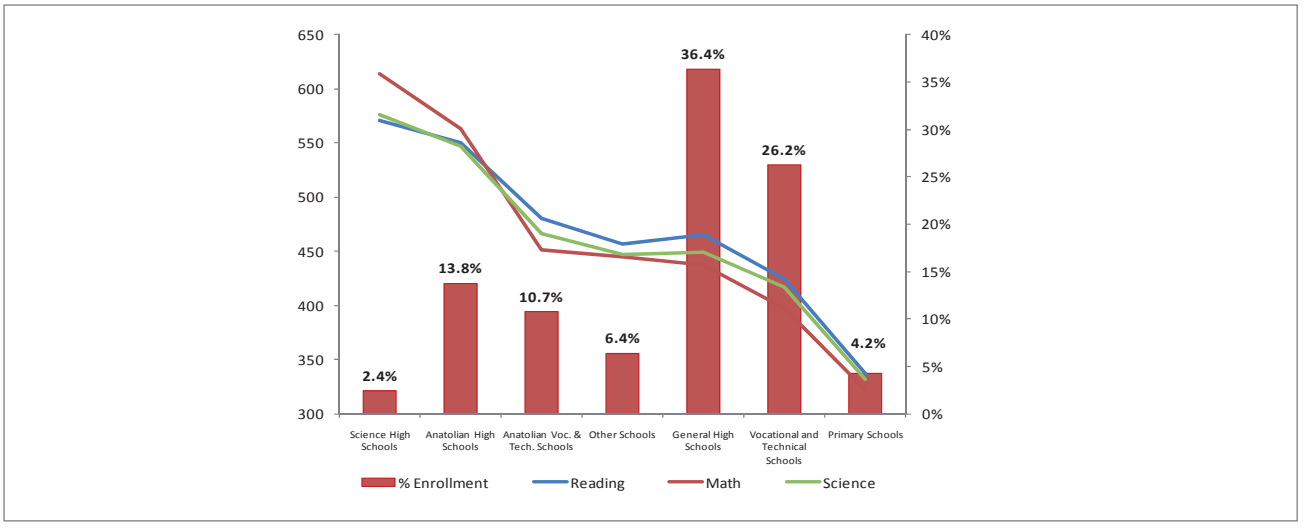
9. This Policy Note is designed as an input for the discussion among stakeholders in Turkey on how to improve the quality and equity of basic education. As shown in Figure ES4, three broad areas are critical in supporting high quality learning outcomes: (a) **inputs and processes**, including pre-primary education,

Figure ES2 - Distribution of Math proficiency Levels of 15-year- olds in Turkey and the OECD (PISA, 2009)



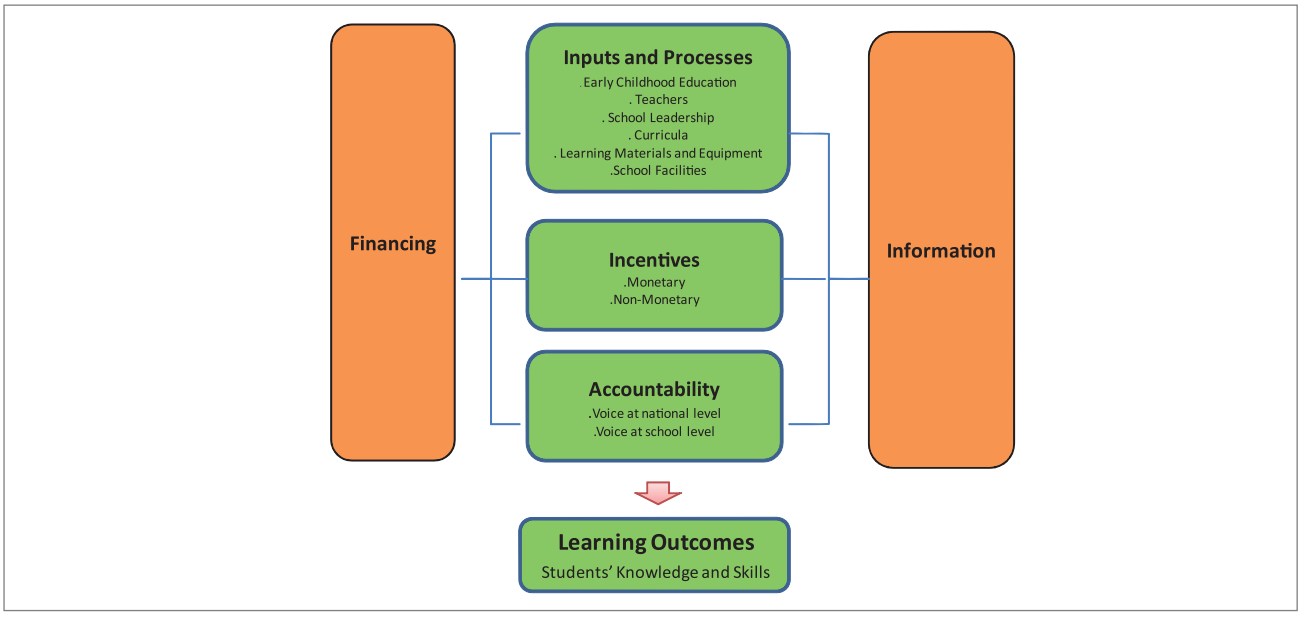
Source: World Bank on the basis of PISA 2009 results

Figure ES3 - Distribution of PISA 2009 Math scores of 15-year-olds across different types of schools in Turkey



Source: World Bank on the basis of PISA 2009 results

Figure ES4 - Critical Areas to Support High-Quality Student Outcomes



Source: World Bank adaptation of framework in World Bank (2008b)

teachers, school leadership, curricula, learning materials and equipment, and school facilities; (b) **incentives**, monetary as well as non-monetary, to encourage better teaching and learning; and (c) **accountability** for improved outcomes through more effective voice by students, parents, teachers, school leaders, and communities at the local level as well as policy makers and the public at the national level. Financing and information are tools that affect all three areas; in fact, a well-designed financing system and an educational system that encourages the use of information at all levels of decision-making can support a more efficient and equitable system.

10. The Policy Note examines in detail four areas in which the Government of Turkey (GoT) has indicated interest in policy dialogue with the World Bank: early childhood education, teachers, education financing, and information.

- Early Childhood Education: Early childhood development provides significant long-term benefits for future learning and helps to ensure that students start school with the endowments needed for successful learning. The government has recognized the need for more pre-primary education as coverage is low and unequal in Turkey.

- Teachers: High quality teachers are the most important factor in helping improve students' learning outcomes and are therefore the backbone of the educational system. The quality of teaching in Turkey is low by international standards, which is exacerbated by increasing demands for teachers due to a largely young population and efforts to increase student enrollment across the country.

- Financing: An efficient and equitable system of public and private financing helps support effective education. Turkey faces a rigid system of public financing that does not provide incentives for improved school performance coupled with high private spending that reinforces inequities in access to high quality education.

- Information: Effective education systems collect, use and disseminate information for parents, students, teachers, school leaders, communities, policy makers and the public to help improve performance, provide more voice, and introduce accountability. Turkey does not have such a system although the Ministry of National Education (MoNE) is undertaking initiatives to expand the availability and use of information.

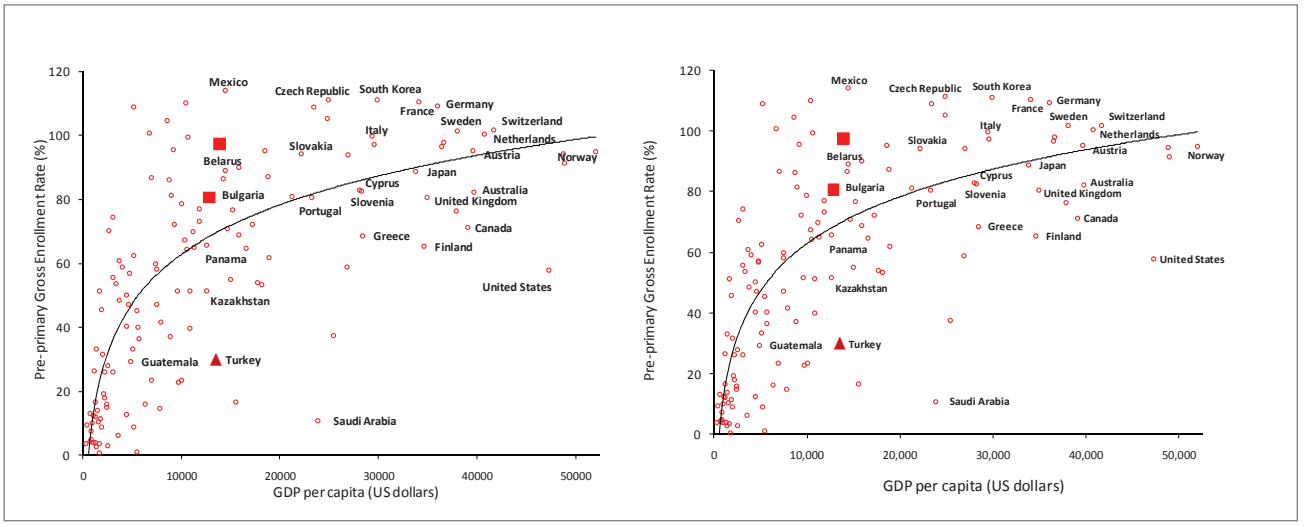
11. The document provides an analysis and benchmarking of the performance of basic education in Turkey in each of these areas along with international evidence and a discussion of specific policy options. The four policy areas are tackled sequentially.

B. Policy Area 1: Early Childhood Education

12. Investments in the early childhood years yield the highest rates of return, from an individual as well as a social point of view (Carneiro & Heckman, 2004). It is in the early years of life (from birth to 6 years old), that a child develops all the basic brain and physiological structures upon which growth and learning depend. The older a child gets with development delays, the harder and more costly it will be to get the child back to his/her normal development trajectory (World Bank, 2009). Benefits from early investments are highest for young children in at-risk families including but not limited to low-income families and families with parents who have low levels of education.

13. Although there has been significant progress in access to early childhood education in Turkey, especially in the last decade, participation is low and inequitably distributed. Pre-primary education in Turkey covers the period from 36 to 72 months of age (from when a child turns 3 until he or she turns 6, usually referred to as 3 to 5 years old), including two years of pre-school (ages 3 and 4) and the kindergarten year (age 5), and it is not compulsory. The coverage rate for pre-primary education in Turkey remains low (at 30 percent) compared to much higher rates for most countries with similar GDP per capita, like Bulgaria or Belarus (see Figure ES5). This problem is compounded by sharp differences in access across different socio-economic backgrounds: although the poorest families

Figure ES5 - Pre-Primary Education Gross Enrollment Rates for 3-5 Year-Olds, 2010 (percent)



Source: Authors' calculations on the basis of data from the International Monetary Fund (IMF) and the UNESCO Institute for Statistics (UIS)

have, on average, four more children than the richest, the latter group is 60 times more likely than the former to have at least one child enrolled in kindergarten (Aran et al., 2009). Finally, there are also significant disparities in enrollment rates across regions within the country - the highest enrollment rates are found in Amasya (Black Sea Region) – 86.6 percent for 4-5 year-olds and 59.2 for 3-5 year-olds – and the lowest in Hakkari (Eastern Anatolia) – 18.5 percent for 4-5 year-olds and 12.9 for 3-5 year-olds (MONE 2011).

14. The quality of pre-primary education appears to be fairly low according to the limited empirical evidence that exists so far. A recent study evaluated the quality of early childhood classrooms in a randomly selected set of both public and private pre-primary schools in Istanbul. The study concluded that both types of institutions face significant structural shortcomings, from physical arrangements to teacher-pupil interactions, although the private sector seems to handle daily routines and teacher-parent interactions more effectively (Göl-Güven, 2009).

15. The government has recognized the need for investing in early childhood education to ensure all students start school ready to learn. In order to achieve this, MoNE has recently launched a program aimed at fulfilling two targets by the start of the school year 2014/15:

- universal enrollment for kindergarten (students aged 60-72 months old), and
- 50 percent participation for pre-primary education (students aged 36-72 months old).

The program focuses initially on the 32 pilot provinces with the highest gross enrollment rates - those with above 50 percent participation for kindergarten – in order to achieve universal kindergarten enrollment in these provinces by the end of school year 2009/10. MoNE chose to begin with these provinces because they do not need new infrastructure in order to accommodate all new students. Thus, universal participation can be achieved more easily and more quickly in these provinces than in others. Beyond these provinces, the plan is to reach 100 percent coverage in about 12 provinces per year for the next four school years, expanding access last to areas with the lowest coverage and greatest needs.

16. Policy options for improving the coverage and quality of pre-primary education in Turkey are:

- **Modify the next stages of MoNE's roll-out of the expansion of early childhood education to ensure the country is able to meet its goal of universal access to kindergarten by 2014/15.** The next phases of this program could target the provinces with the lowest enrollment rates first, and not the other way around, as per the current scheme. In addition, focusing public resources exclusively on the kindergarten year (for 60 to 72 months old children) would ensure that every child can start primary school with at least one year of pre-primary education. The pre-school years (36 to 60 months of age) are also very important, and would be achieved with a significant degree of cooperation between the public and the private sector. While kindergartens would be fully supported by MoNE, the government would need to develop a plan using shared financing to extend pre-primary education to younger cohorts, focusing public resources primarily on those children from families most at risk.

- **Develop a quality assurance framework for public and private provision of early childhood education.** Expanding the scope and variety of pre-school options including centers, schools and kindergartens can be carried out more effectively when a quality assurance framework is in place. For example, Australia has recently introduced a new National Quality Framework that emphasizes improving staff-to-child ratios, setting new qualification requirements for early childhood educators, creating a new quality rating system and establishing a national body to guide the implementation and management of the overall framework (Council of Australian Governments, 2009).

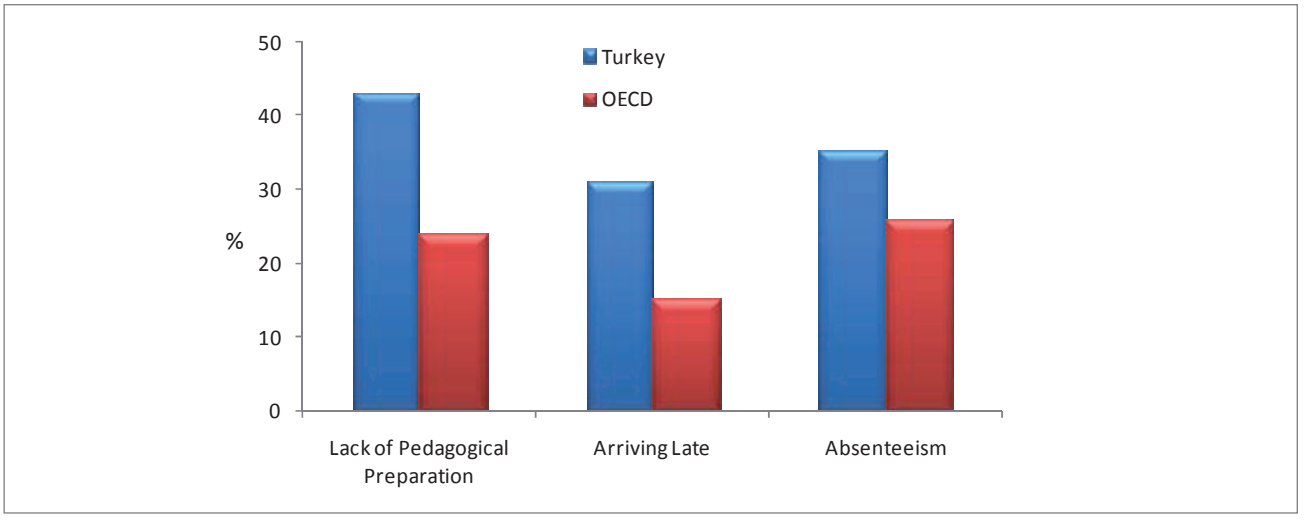
- **Expand the information campaigns about the importance of early childhood education.** A multipronged approach using media, websites, local MoNE branches, schools and community leaders, with special emphasis on the most disadvantaged areas of the country and the most disadvantaged populations would be needed. An excellent example of such activities in Turkey is AÇEV's "7 is too late" campaign (AÇEV, 2009).

C. Policy Area 2: Teachers

17. "Teacher quality" is the single most important school variable influencing student achievement (Hattie, 2003; Santiago, 2002; OECD, 2009a). Having effective teachers can substantially close the average achievement gap between low-income and high-income students, and low-performing students benefit more from more effective teachers (Ripley, 2010) . Great teachers tend to set big goals for their students and are constantly looking for ways to improve their effectiveness (Farr, 2010).

18. Turkey is a young country with a growing student population which generates pressing demands to increase the teacher corps. Short-term measures to mitigate these demand pressures on the system have usually come at the expense of quality, for example, through the hiring of less-than-qualified substitute teachers or by lowering the admission standards for placement into education faculties (Özden, 2004).

Figure ES6 - Teachers' Issues Hindering Instruction and Learning: Turkey vs. OECD



Source: World Bank on the basis of OECD (2009a)

19. The quality of teachers and teaching in Turkey is low by international standards. Whereas the average OECD school principal reported that about a quarter of the teacher corps lacked pedagogical preparation, the average Turkish principal reported that more than 4 in 10 teachers did (OECD, 2009a). Also, teachers in Turkey tend to arrive late to work twice more often than the average OECD teacher and have higher rates of absenteeism (Figure ES6). This seems to be partly related to a lack of a strong professional approach to teaching careers in Turkey. According to the results of a teacher survey conducted by the Turkish Education Personnel Union in 2009, 93.1 percent of the teachers indicated that the teaching profession is losing its prestige. Moreover, 57.6 percent are not pleased with the working environment. But it could also be related to work time and pay: whereas the total statutory working time for a primary education teacher is 10 percent larger in Turkey when compared to the average OECD teacher, the teacher salary per hour of net contact (teaching) time is almost 50 percent less, even when adjusted for purchasing power parity (OECD, 2009a, pp. 400 and 412). As in many countries, teaching disproportionately attracts people from lower-middle socio-economic status. A recent survey of more than 17,000 current students at teacher training institutes shows that roughly 70 percent of these students' mothers and about 40 percent of these students' fathers only completed primary education (Aksu et al., 2010).

20. Policy options to improve the quality of teaching in Turkey are:

- **Support and hold accountable new teachers in the first few years of teaching.** New teachers need support and learning on the job as they struggle with classroom management, assessing student work, motivating students to learn, interacting with colleagues, and communicating with parents. One approach is to build performance measures into

the system from the first year where new teachers needing more support have an apprenticeship year with extra help. For all new teachers, increased responsibilities in years two and three are based on performance as is ultimate tenure (Schwartz et al., 2010).

- **Create new incentives — monetary and non-monetary — to attract and retain high-quality teachers.** Creating a stronger connection between teachers' contributions and the pay and other rewards they receive will be central in redesigning teaching for the next generation (OECD, 2005; OECD, 2011a). To help make teaching a more attractive career choice, many countries, such as Switzerland, Japan and the US are creating new roles and responsibilities for teachers that reward their expertise without taking them out of the classroom (Schwartz et al., 2007). Other incentives could include the support for deployment schemes to place the best teachers in the most disadvantaged areas (Farr, 2010) as well as attempting to reward excellent performance by using performance-based pay (Sclafani & Lim, 2008).

- **Improve teacher training, aligning in-service with pre-service training, and establish school-based teacher training strategies.** The process of teacher formation involves the areas of pre-service training, induction and in-service training, which have many disconnects in Turkey, and need to be embodied within a new paradigm for lifelong learning that includes a high degree of harmonization of policies (Coolahan, 2002) and a high degree of peer learning (Kirabo Jackson & Bruegmann, 2009). In fact, emphasizing collaborative partnerships between teachers and extensive peer-to-peer feedback networks have proven highly effective in some developed countries like Japan and parts of the United States (Bayrakçı, 2009). Another initiative is that of "lead teachers". For example, Canada's Literacy and Numeracy Strategy - a major initiative designed to have all students read, write, do math, and comprehend at a high level by age 12 - provides intensive training to teachers in how to teach literacy and numeracy effectively and has increased the number of "lead teachers" in the primary grades, who share best practices with other teachers in their schools (OECD, 2005).

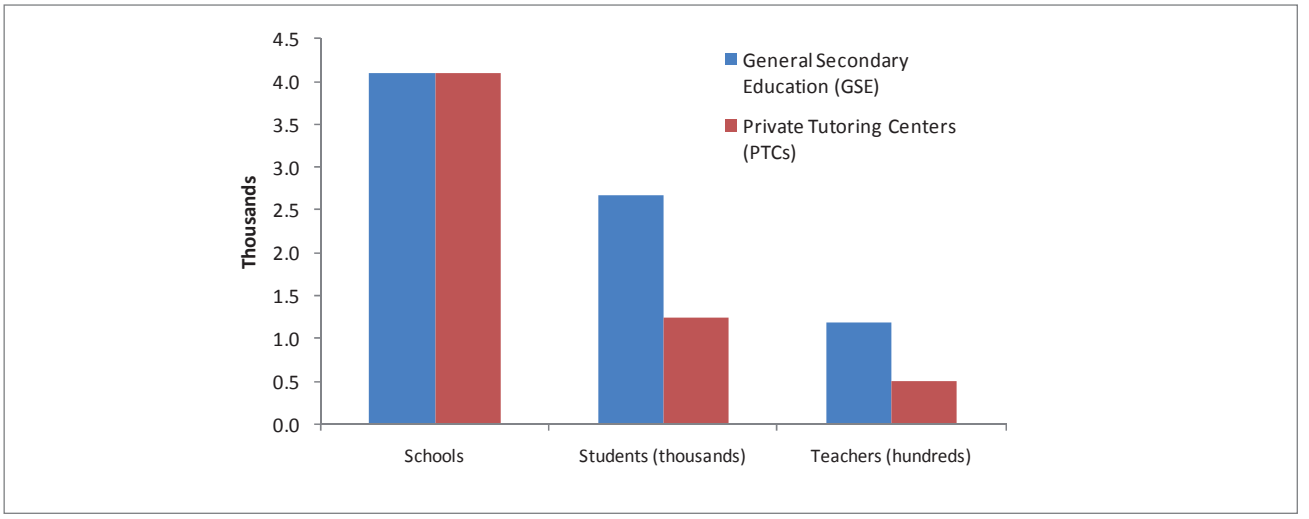
D. Policy Area 3: Financing

21. Educational expenditures in OECD countries, including Turkey, have been increasing rapidly in recent times, outpacing the growth in the GDP per capita (OECD, 2009c). Assessing the quality of this higher investment in education, from both public and private sources, is critical. This usually entails an assessment on two fronts: efficiency - how much the society gets per dollar invested - and equity - effectiveness in ensuring that each child gets access to a high-quality education.

22. Looking at public expenditure on education, Turkey seems to be relatively efficient, but adding private expenditures to the picture raises questions about the overall efficiency of Turkey's educational expenditures. In fact, Turkey's educational outcomes are in line with outcomes of other countries that spend similar amounts of public expenditure. However, when private expenditures on education are added to the equation, things change significantly. For example, Hungary and Turkey devote similar total expenditures per student for secondary education – roughly 4,000 US dollars of similar purchasing power parity (PPP) – and yet Turkey's 15-year-olds are approximately 2 school years behind their Hungarian counterparts in math skills.

23. On equity grounds, the panorama is more clear-cut: the financing foundations of the Turkish educational system are fairly inequitable and appear to significantly contribute to increasing the inequality of opportunity in education. According to the most recent available data, Turkey invests in education as much as the average OECD country (5.7 percent of the GDP), yet the share of private contributions is significantly higher than average: Turkish households account for about 36 percent of the total (public and private) expenditure on primary and secondary education (World Bank, 2005b). The distribution of this effort for education is highly unequal across different levels of income: the richest 20 percent of the households spend almost 14 times more on educational expenditures than the poorest 40 percent (Duygan & Güner, 2006), and despite the fact that 97 percent of all primary and secondary students attend public institutions, where they are not expected to pay any fees at all (MoNE, 2011).

Figure ES7 - General Secondary Education (GSE) Institutions and Private Tutoring Centers (PTC) in Turkey: 2010-11



Source: World Bank on the basis of MoNE (2011)

24. The significant financial contribution by households is rooted in a "parallel system of education" spearheaded by private tutoring centers, called *dershanes*. Dershanes are exclusively oriented towards helping students succeed both in the secondary school and university entrance examination tests. As of 2009/10, the number of dershanes was almost identical to the total number of general secondary education (GSE) schools, and roughly 1.2 million students were attending a dershane (Figure ES7). A recent study shows that attending a dershane increases the chances of entering university, but only if a relatively high amount of money (approximately 1,250 US dollars per year) is spent on private tutoring (Gürün & Millimet, 2008). With significant levels of poverty and inequality in the distribution of income in Turkey (World Bank, 2005c), having access to an expensive dershane perpetuates the existing differences in the distribution of resources and seriously undermines the equality of educational opportunities. High-stakes exams are at the core of the different ability tracks that students are placed in and thus contribute to unequal opportunities and outcomes.

25. The inequalities arising from access to private tutoring are reinforced by significant asymmetries in the distribution of public resources across regions (Çıngı et al., 2007). The system for financing public education allocates the bulk of money to provinces based on an outdated input-driven system. Financial resources do not adequately adjust for demographic movements (Yılmaz, 2006) or for the cost of educating more disadvantaged populations (Yılmaz & Emil, 2008).

26. Policy options to improve the quality of financing in Turkey are:

- **Introduce a new system for financing public education that uses formula funding arrangements based on capitation principles.** For example, per capita financing is a financing system whereby money follows the student and resources per student adequately adjust for factors that affect the cost of education (Alonso & Sánchez, forthcoming; Ross & Levačić, 1999). A reform in that direction is a good step but will be more effective if local schools have more control of and capacity to use their resources to meet local needs. Capacity building, autonomy and accountability will maximize the effectiveness of any of these potential changes (Barrera-Osorio et al., 2009; Eurydice, 2007).

- **Increase targeting of public resources towards the groups with the greatest needs and the highest returns to education.** Prioritizing the allocation of public resources to the groups that are most in need (the poor, girls, rural areas) maximizes the returns per dollar spent and contributes to more equal educational opportunities across the country. India, for example, created Education Development Indexes for each of its districts in an effort to better target quality-enhancement resources on the most disadvantaged. This effort is a good example of how to redistribute public resources to decrease educational inequities across regions within a given country (Jhingran & Sankar, 2009). Other important areas for targeting resources within the

education budget are pre-primary and primary levels where the highest returns to investment are experienced (Carneiro & Heckman, 2004).

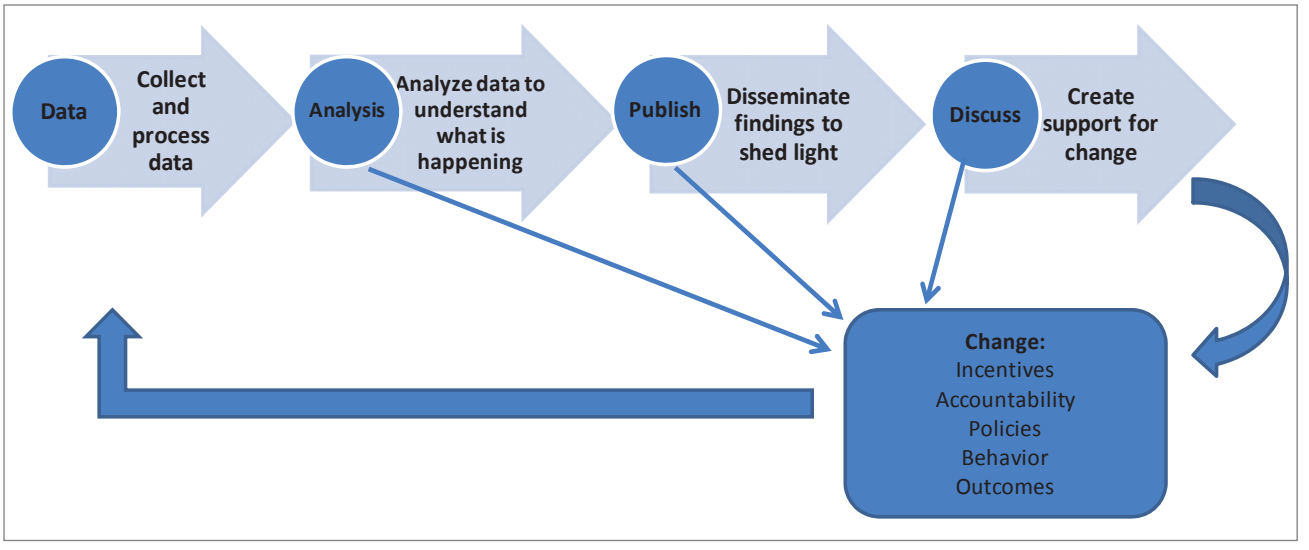
- **Overhaul the current system of secondary and tertiary education entrance exams.** The current system of entrance examinations encompasses a high degree of early tracking of students and makes the system heavily dependent on private tutoring. Since access to high-quality private tutoring is so highly correlated with socio-economic status, changing the current configuration of the system around these exams would be a significant step towards increasing educational opportunities across the country. One option to consider is the elimination of both exams. Of special interest is the secondary school entrance exam (SBS) which is not universal but encompasses one-third of the total number of students in dershanes, generating an early-tracking system that makes students as young as 11 years old (6th grade) start attending private tutoring to maximize their chances of attending the best public secondary schools in the country. A second option would be to significantly reform these exams. This could be accomplished by radically enhancing their scope and nature and comprehensively cover more aspects of the curricula. For example, in the case of the university entrance tests (YGS-LYS), Turkey could mimic successful end-of-cycle tests elsewhere in the world (e.g. International Baccalaureate, German Abitur, etc.).

E. Policy Area 4: Information

27. Information for policy makers, teachers, school leaders, students, parents and the community can help improve the quality and equity of basic education. It will provide all stakeholders with more voice to push for change at the local as well as the national level by identifying and analyzing what is working well and where improvements are needed. Figure ES8 shows how the collection, analysis, and use of information can encourage quality improvement through dissemination and discussion of data and needed changes, as well as the continuous nature of the feedback loop. This loop can and should occur at the classroom, school, system and policy levels. Without information, it is almost impossible to work on improving the quality of education since specific areas needing improvement, and the effects of changes remain unknown.

28. Recent initiatives in Turkey to start collecting and using information suggest an interest in moving towards better data and more use of it to improve the system. For example, Turkey recently participated in an OECD study on basic education (OECD 2007b) and in several international tests of student learning (such as OECD's PISA). MoNE also launched, in May of 2006, the E-School Database, an integrated database for all levels of education meant to support the process of achieving information-based education policies.

Figure ES8 - Using Information to Improve Quality



29. But more needs to be made out of this wealth of information if the data and studies are to be truly effective in helping bring about support for change and improvement in Turkey: it will require a cultural change. Turkey does not have a culture of disseminating, discussing and using information to educate the public, parents, students, and communities on the educational outcomes of individual schools or of the school system as a whole. Countries that have embarked on significant reform and expansion of education usually do so through reports on education and public discussion. For example, Ireland began its reforms in the 1960s through many key reports and continued this through the 1990s with an unprecedented level of consultation on the reports (Coolahan, 2008).

30. Policy options to increase the role of information for improving the degree of decision-making and accountability in the education system in Turkey are:

- **Encourage public discussion on education through the production of an annual report on the state of basic education in Turkey.** Analyzing, publishing and discussing data on Turkey's education inputs and outcomes would help to generate discussion and action on policy changes needed, as discussed in the Ireland example above. In addition, an annual report can help policy makers to monitor the system performance and evaluate efforts to improve quality, making adjustments as needed. A unit in MoNE could be established to prepare an annual report with high level government engagement in dissemination and discussion. Continuing to participate in international tests of learning outcomes, e.g. PISA, is also important in order to collect data over time and to benchmark Turkey's system against other countries. Coupled with these tests, however, is a need for coordinated conversation and consultation on the findings, and a willingness to discuss problems candidly.

- **Make information on individual schools, including inputs and outcomes, widely available to the public through the creation of school report cards for basic education.** Report cards would analyze, publish and discuss data on education inputs – e.g. availability of learning materials, teacher qualifications – and outcomes – e.g. graduation rates, results of achievement tests, improvement from year to year – at the school level providing more voice to students, parents and communities. Turkey could also focus additional resources on specific schools with lower outcomes to determine the problems, take steps to address the issues, and measure change over time. As indicated earlier, there are substantial differences in learning outcomes by types of schools, which need to be addressed to raise the overall quality of education and to reduce inequities. The analysis of school-level data needs to examine the resources at the school as well as the socio-economic status of the school. India, Australia, and the United States are good examples of such school-level information available publicly on the web.

- Improve the coverage, quality and availability of data on basic education through improvements to the E-School Database. If this school-level database is comprehensive and complete, it can be used to develop the annual report on education and school report cards. The World Bank's recent use and analysis of certain parts of the database indicate problems in the comprehensiveness and quality of the data that hamper its current function.

F. Conclusions

31. Although Turkey has significantly expanded access to education in the last decade, important challenges await on two interrelated fronts: quality and equity. Turkey's educational system is currently of low quality relative to the growth and competitiveness ambitions of the country and is also significantly more inequitable than other OECD countries.

32. Areas like early childhood education, teachers, financing, and information are key to jumpstart any process aimed at improving the quality of basic education in Turkey. Table ES1 below summarizes the key policy options discussed in the paper and the expected impacts on quality and equity. Bold reforms in these areas will be needed if Turkey wants to enhance the set of skills with which the average student leaves the education system. It will also help reduce the existing pattern of inequality across provinces, districts, schools and students. The system as of 2010 appears to jeopardize the future prospects of the country as well as its social cohesion.

Table ES1: Summary of Policy Options and Expected Impact on Quality and Equity

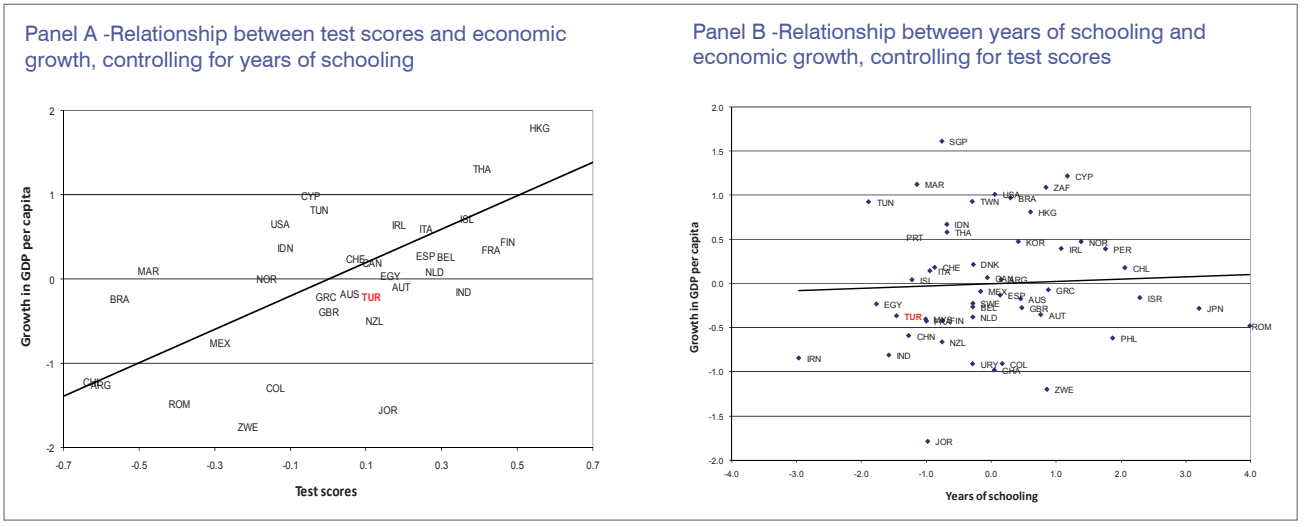
Policy Area	Policy Options	Expected Impact
Early Childhood Education	o *Modify the next stages of MONE's roll-out of early childhood education expansion program to ensure the country is able to meet its goal of universal access to kindergarten by 2014/15*	• Increased enrollment rate for 5-year-olds across the country and higher rates of return to education for the most disadvantaged provinces.
	o *Develop a quality assurance framework for public and private provision of early childhood education*	• Clearer goals for staff-to-child ratios, new requirements for early childhood educators, and the creation of a new quality rating system.
	o *Expand the information campaigns about the importance of early childhood education*	• Increased parents' desire for their children to start school earlier.
Teachers	o *Support and hold accountable new teachers in the first few years of teaching*	• Better environment for the teaching profession as a whole.
	o *Create new incentives — monetary and non-monetary — to attract and retain high-quality teachers*	• Better-remunerated, more highly motivated and more skillful teacher corps.
	o *Improve teacher training, aligning in-service with pre-service training, and establish school-based teacher training strategies*	• Better trained teachers and a less unequal distribution of skills across the teacher force, enhanced cooperation across teachers, and larger peer effects.
Financing	o *Introduce a new system for financing public education that uses formula funding arrangements based on capitation principles*	• Higher levels of inputs to improve the quality of the most disadvantaged schools.
	o *Increase targeting of public resources towards the groups with the greatest needs and the highest returns to education*	• Higher rates of return to education from the investment in those groups (e.g. lower levels of education, most disadvantaged regions, and girls).
	o *Overhaul the current system of secondary and tertiary education entrance exams*	• Reduced reliance on private funding for private tutoring or re-investment of these funds into the public system for quality-enhancement activities.
Information	o *Encourage public discussion on education through the production of an annual report of the state of basic education in Turkey*	• Improved knowledge and understanding of the performance of the education system; more discussion and support for education reform.
	o *Make information on individual schools, including inputs and outcomes, widely available to the public through the creation of school report cards for basic education*	• Improved transparency and accountability at the school level; empowered parents and students.
	o *Improve the coverage, quality and availability of data on education through improvements to the E-School Database*	• Better data for education policymaking and for decision-making by parents, students, teachers, and administrators.

Chapter I - Introduction

1. Providing education for all has been a core objective of many governments since the launch of the Millennium Development Goals a decade ago (UNESCO, 2010). As a result, enrollment in basic and secondary education has increased significantly in many countries, including in Turkey. In fact, Turkey's progress in increasing enrollment in basic education has been outstanding with almost universal primary school enrollment at this time (SPO, 2010).

3. Education is, by far, the biggest area of concern for Turkish people, according to a recent survey of 29 countries in the Europe and Central Asia (ECA) Region (EBRD, forthcoming). Between October 2009 and February 2010, the Life in Transition Survey (LITS), a joint region-wide initiative of the European Bank for Reconstruction and Development (EBRD) and the World Bank (WB), was carried out for the second time. The main objective of the LITS was to "assess the impact of transition on people, and to understand how contemporaneous attitudes of people towards market reforms and political evolution are related to objective individual and household characteristics"

Figure 1.1 - The quality of education is what matters for economic growth

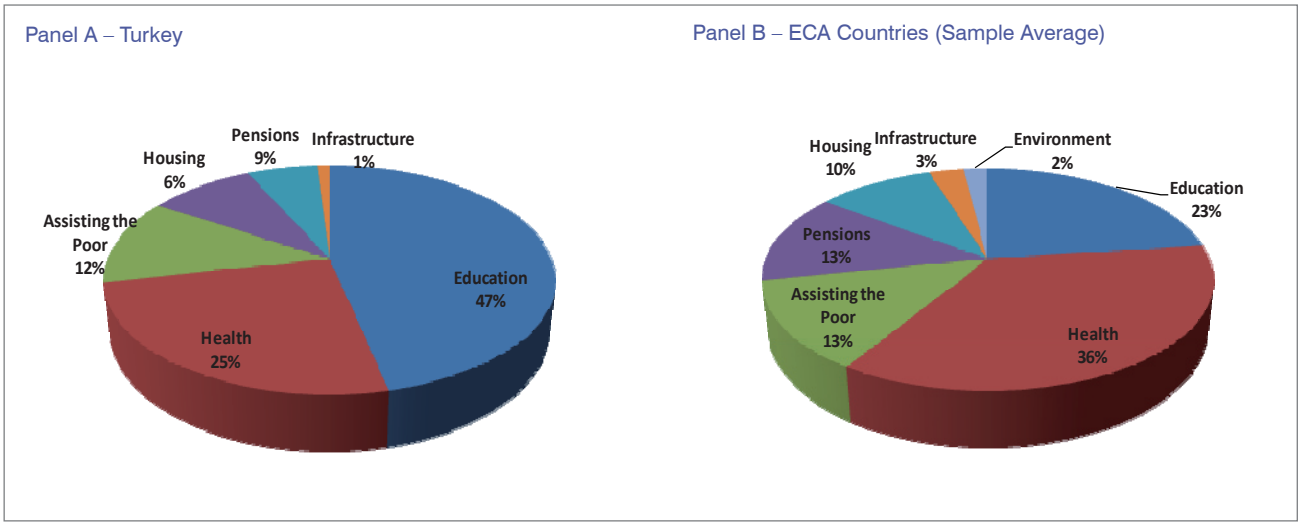


Source: Hanushek & Wößmann (2007b), Figure 4.2, p. 34

2. Educational attainment alone is not enough however: it must be coupled with quality. The quality of the education provided by the system is what really matters to achieve long-term gains in economic growth (Hanushek & Wößmann 2007a, 2007b, 2010). Therefore, equipping children with the high quality knowledge and skills needed for today's labor market is a priority. As Figure 1.1 shows the level of students' knowledge and skills as measured by scores on international tests is strongly associated with economic growth (Panel A). Increased years of schooling alone do not seem to have any impact on economic growth once we adjust for the quality of education (Panel B). In other words, attending school will have a substantial impact only if students effectively learn the cognitive and non-cognitive skills needed to access the labor market.

(World Bank, 2007b, Zaidi et al., 2009). Roughly 5 in 10 Turks believe that education should be the highest priority area for additional government investment – the highest proportion among Europe and Central Asia (ECA) countries after Tajikistan (Figure 1.2, Panel A). Interestingly, the situation is unlike what, on average, happens in most of the other ECA countries: whereas the bulk of ECA countries rate health as the sector where government should prioritize any extra government spending (Figure 1.2, Panel B), Turkey is just one of 6 countries where people believe that education should be the highest priority. In fact, Turkey's level of dissatisfaction with public education (primary and secondary) is almost twice as high as when compared with the dissatisfaction with receiving medical treatment in the public health system (11% of people say they are not satisfied with public education compared to about 6% in the case of public health.

Figure 1.2. What Should Be the First Priority for Additional Government Spending: Turkey vs. ECA Countries, 2010



Source: EBRD (forthcoming)

4. Basic education is the foundation of education and learning and, as such, is the point where Turkey started its push for education for all. The enactment of the National Law No. 4306 (August 17, 1997) extending compulsory education from five years to eight spearheaded a series of strategies to significantly increase access to primary education. These strategies encompassed not only the necessary attention to infrastructure and human resource needs, but also focused on providing an adequate level of support for other costs of schooling.

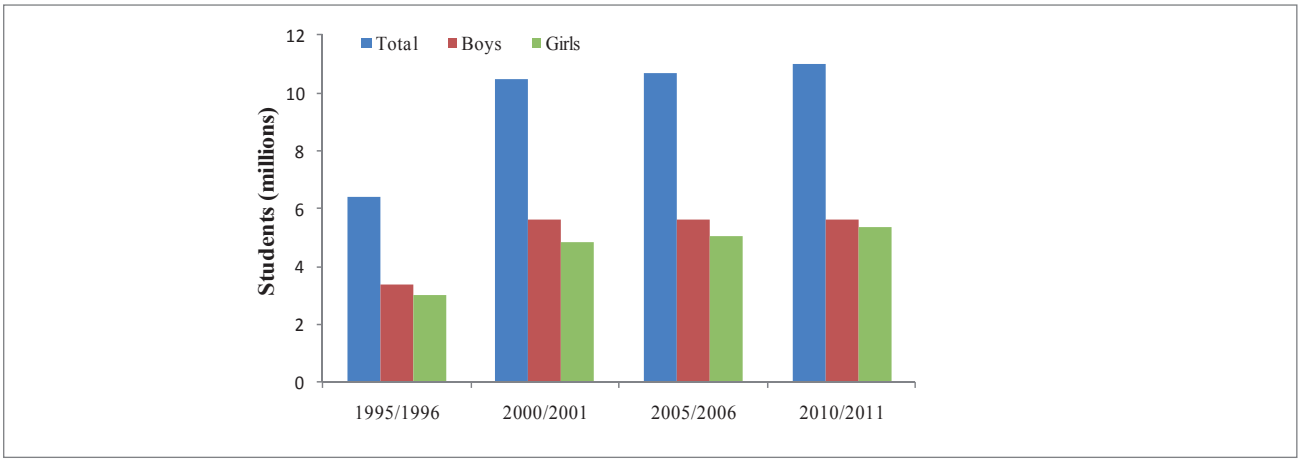
5. As a result of these changes, Turkey has made remarkable progress on access to basic education and now has almost universal primary school enrollment - a 98.4 percent net enrollment rate as of 2010/11. Since 1997, the annual increase in access to primary education (1.8 percent) has largely outpaced the annual increase in the population of school age (0.4 percent).[1] The primary education system now counts almost 11 million students, with a slight gender bias in favor of boys (Figure 1.3). The gap in access across regions has also narrowed significantly over time, although enrollment continues to vary significantly across regions. For example, in Hakkari, an Eastern province of Turkey, the net enrollment rate for primary education as of 2010-11 is 92.4 percent, while it is almost 100% for the province of Ankara, where the capital of the country is located (MoNE, 2011).

6. The expansion of the Turkish primary education system did not go without significant challenges, however. The massive expansion of the system ran alongside a simultaneous quick pace of urbanization, all of which resulted in a significant increase in class sizes across most of the urban schools. Also, the new wave of teachers who were quickly put to work to cope with the bottlenecks generated by this "new" demand was, on average, less skilled. In fact, given that the demand for teachers has exceeded the available yearly supply in the last years; Turkish educational authorities were forced to allow people who had not been trained as teachers to enter the profession so as to cope with the excess demand. These teachers were entitled to work as teachers after a one-year training course, provided they held a 4-year university degree.

7. Having achieved close to universal participation in primary education, Turkey now sees the need to improve the quality of education. To address this issue Turkey is again beginning with basic education as the quality of student learning in the initial years of education has a major impact on quality in later years. The recent 2010-2014 Strategic Plan issued by the MoNE includes numerous steps on improving quality such as increasing preschool enrollment, lowering the number of students per classroom, increasing the number of qualified teachers by subject area, and introducing a culture of quality through lifelong learning and improved institutional capacity and efficiency (MoNE 2009b).

[1] Authors' calculations on the basis of information from the National Institute of Statistics of Turkey.

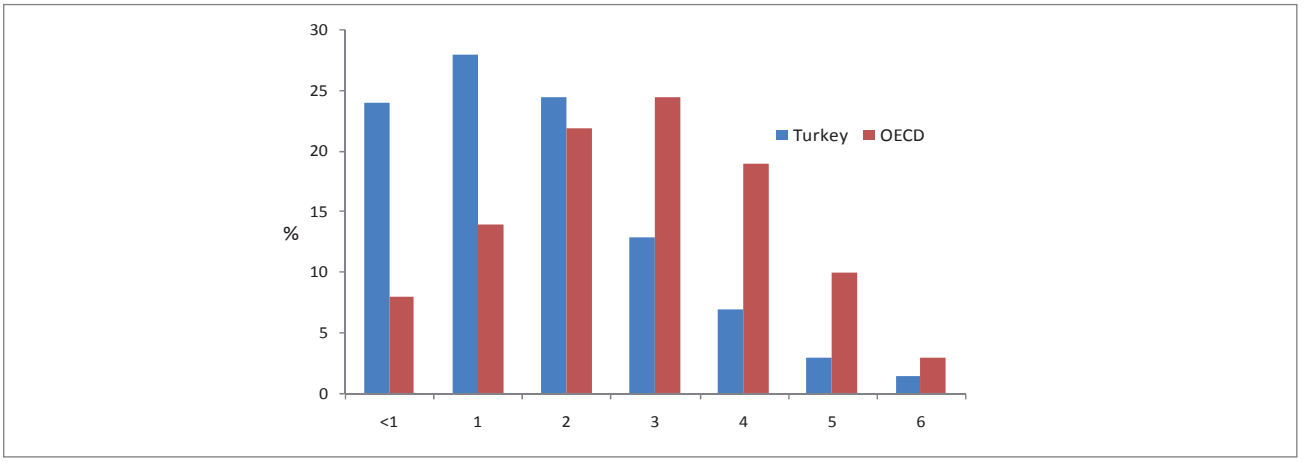
Figure 1.3 – Number of Students Enrolled in Basic Education, by year and gender



Source: World Bank on the basis of MONE (2011)

Note: Compulsory education was expanded to 8 years with law No. 4306 as of the educational year 1997/'98.

Figure 1.4 - Distribution of Math proficiency Levels of 15-year-olds in Turkey and the OECD (PISA, 2009)



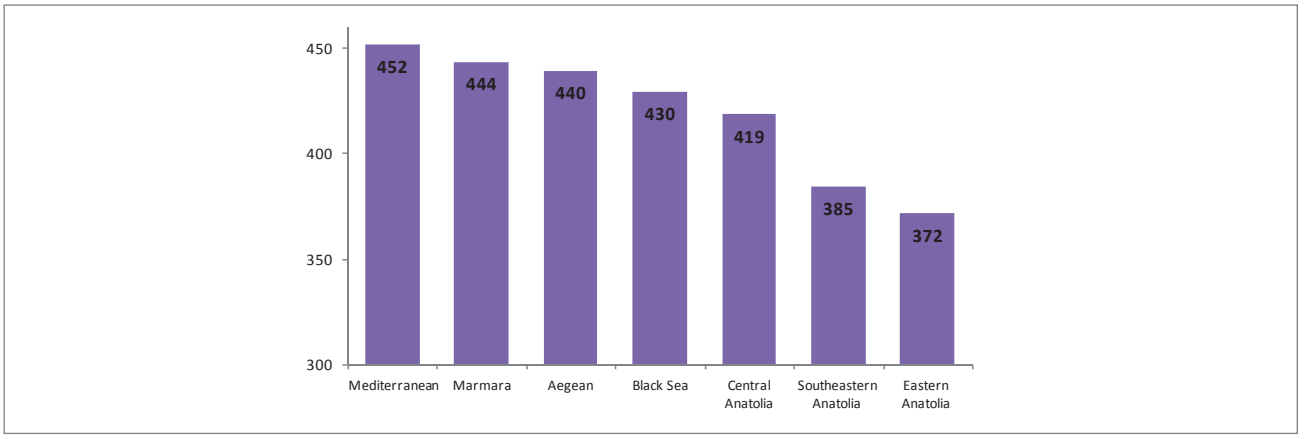
Source: World Bank on the basis of PISA 2009 results.

8. An evaluation of the current status of basic education in Turkey shows that quality is much lower in Turkey than in most OECD countries with significant gaps between low and high performers. A recent international assessment of learning among 15-year-olds who are still enrolled in school (OECD's Programme for International Student Assessment, or PISA, 2009) shows that the average 15-year-old in Turkey is, on average, one full school year behind his/her average OECD counterpart in reading, math and science skills (OECD 2010a).[2] For example, in mathematics, roughly half of 15-year-olds are at or below the lowest proficiency level compared to about 20 percent for the average OECD country (Figure 1.4).

9. Quality varies by region, with lower levels of skills and proficiency, on average, in the Eastern and more remote regions of Turkey. For example, using PISA results, we can see that the average 15 year-old in the Southern Anatolia region is about 2 full school years behind his/her average counterpart in the Mediterranean region (Figure 1.5). These differences, however, are magnified by the fact that only those 15-year-olds in the education system participate in PISA. Therefore, as enrollment in Southeastern Anatolia is, on average, much lower than in the Eastern regions, the skills of the students who are not enrolled, either because they dropped out of school before the age of 15 or because they never attended one, are not even reflected in these averages.

[2] A PISA differential score of 40 points is roughly equivalent to a full year of schooling. Turkey's PISA 2009 scores for Reading, Math and Science were, respectively, 29, 51 and 47 points behind the OECD average.

Figure 1.5 –Distribution of Math Scores by Region (PISA, 2006)*

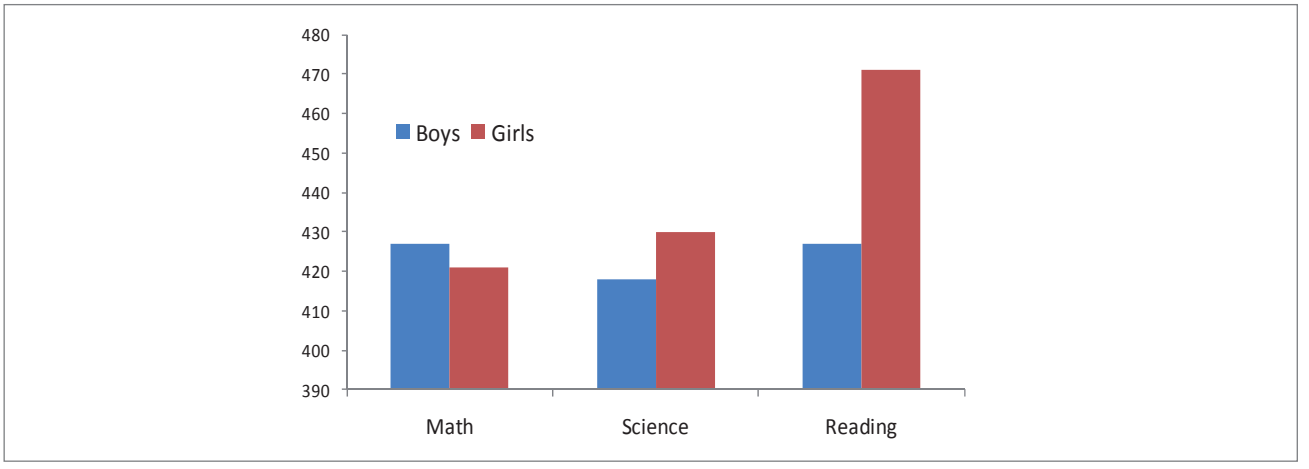


Source: ERI (2009b)
*Results by region were not available for the PISA 2009 wave.

10. Quality also varies by gender with 15-year-old girls performing, on average, at equal or higher levels than boys on reading and science, but not in math (Figure 1.6). PISA 2009 results show that the average score for girls is significantly higher than for boys especially in reading, where girls tend to score about 40 points higher, i.e. about one full school year ahead in reading, when compared to boys. This trend of much better performance for girls, especially in reading, is however fully prevalent across the OECD countries.[3]

11. Quality is also uneven across different types of schools in Turkey, which leads to lifelong inequities among students depending on where they go to school. As Figure 1.7 shows, only about 16% percent of the 15-year-olds in Turkey attend schools with average reading, math, and science test scores that are comparable to or above the OECD average of 500 points (OECD, 2010a). These types of schools, most notably science high schools and Anatolian high schools, are known to be the so-called "elite public schools". They have one feature in common: they tend to select their incoming students through a secondary education entrance examination and, therefore, the quality of their students is far higher, on average, that the quality of the students elsewhere in the system. On average, a student attending either a science high school or an Anatolian high school is anywhere from 2 (reading) to 3 (math) full school years ahead of the average student attending a general high school.

Figure 1.6 –Mean Scores, by type of subject tested and gender (PISA, 2009)



Source: World Bank on the basis of PISA 2009 results.

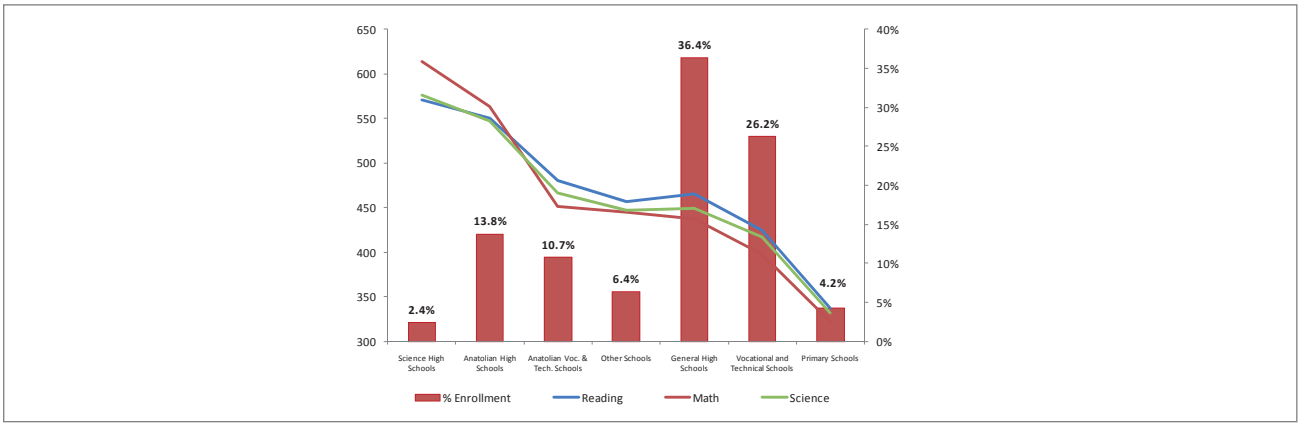
[3] The difference in reading scores between girls and boys in reading, for PISA 2009, is also roughly 40 points. See OECD (2010b), Table I.2.3, p.197.

12. These differences in performance are associated with many factors, one of the most important being the differences in socio-economic and family background of individuals (Dinçer & Uysal, 2010). Results from the analysis of socio-economic characteristics of PISA 2009 participants show that approximately two-thirds of the students in science high schools and one-half of the students in Anatolian high schools belong to the richest 20 percent of the households where at least one 15-year-old lives. On the contrary, about 1 in 30 students attending a science high school and 1 in 17 students attending an Anatolian high school come from the poorest 20 percent of families sending their 15-year-olds to school (Figure 1.8).

13. Differences in performance are also closely associated with specific characteristics of the school system, most notably the degree of academic selectivity of the high-quality schools. Being able to attend any of the aforementioned schools tends to secure the entrance to a high-quality higher education institution that may likely result in a much favorable position when the individual joins the labor market. But access to these high-quality secondary institutions hinges heavily upon successful results in the secondary education entrance exams. This is one of the reasons why the pressure to get into selective schools early in students' lives has fostered an extensive system of private tutoring to perform well in these entrance exams (Tansel & Bircan, 2008). Students start taking private tutoring classes at as early as 10 years old.[4] But since access to private tutoring depends on the student's family income (or his/her parents' ability to pay), enrollment in the top secondary schools is highly correlated with income and wealth. This, in turn, tends to exacerbate the existing level of inequality with which the individuals enter the education system (Berberoğlu & Kalender, 2005). A system of high-stakes entry exams for secondary education coupled with few schools of significantly high quality tend to reduce a country's average educational performance and to increase educational inequality (Hanushek & Wößmann, 2006).

14. The combination of high-stakes entrance exams and a disproportionately vast network of private tutoring centers (PTCs) in Turkey raise serious questions about the distribution of opportunities and the levels of intergenerational mobility in Turkey (Gürün & Millimet, 2008; Tansel & Bircan, 2006). As mentioned above, attending a PTC is highly positively correlated with the socio-economic status of the household where the student lives (Tansel & Bircan, 2005). Even more important is that attending a PTC increases the chances of entering university, but only if a relatively high amount of money - approximately 1,250 US dollars per year - is spent on private tutoring (Gürün & Millimet, 2008). In other words, private tutoring can really pay off if you have enough money to spend; otherwise, it is a waste of resources for the most part. And households may spend anywhere from 1 percent to 15 percent of their incomes, on average (Tansel & Bircan, 2006). The system of PTCs creates a truly parallel system of education with a number of institutions that is higher than the total number of general secondary education institutions in the country (Figure 1.9).

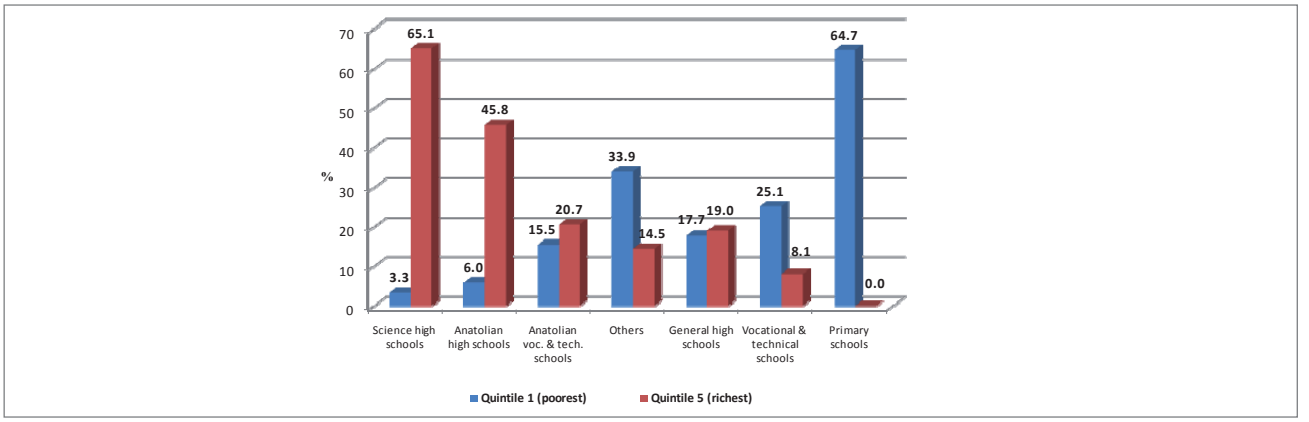
Figure 1.7 - Distribution of PISA 2009 Math scores of 15-year-olds across different types of schools in Turkey



Source: World Bank on the basis of PISA 2009 results.

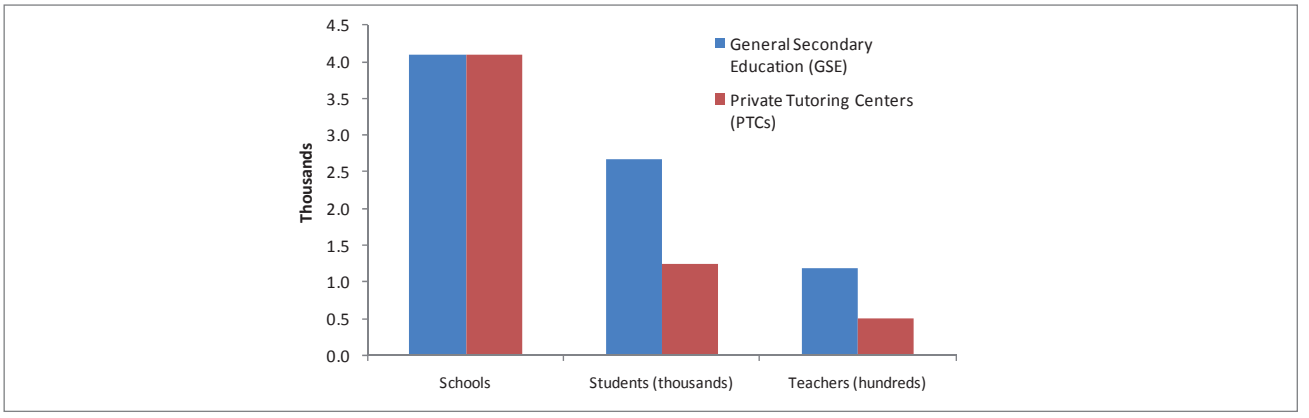
[4] In fact, more than 12,000 4th-graders around the country took private tutoring in the year 2009, according to an article - "Dershaneye gitme yaşı 10'a düştü" (The age for enrolling in a private tutoring center dropped to 10) - published in the Radikal newspaper on April 25, 2010.

Figure 1.8 - Distribution of students participating in PISA 2009 according to their families' income, by type of school



Source: World Bank on the basis of PISA 2009 results.

Figure 1.9 - General Secondary Education (GSE) Institutions and Private Tutoring Centers (PTC) in Turkey: 2010-11



Source: World Bank on the basis of MoNE (2011)

15. This Policy Note is designed as an input into the discussion among stakeholders in Turkey on how to improve the quality and equity of basic education.[5] As shown in Figure 1.10, three broad areas are critical in supporting high quality learning outcomes: (a) **inputs and processes,** including pre-primary education, teachers, school leadership, curricula, learning materials and equipment, and school facilities; (b) **incentives,** monetary as well as non-monetary, to boost the teaching profession and encourage better teaching and learning; and (c) **accountability** for improved outcomes giving more voice to parents, teachers, school leaders, and communities at the local level as well as policy makers and the public the national level. Financing and information are tools to affect all three areas; in fact, when used well financing and information can help support a more efficient and equitable system.

16. The paper examines in detail four areas in which the Government of Turkey (GoT) has indicated interest in policy dialogue with the World Bank: early childhood education, teachers, financing, and information.

- *Early Childhood education:* Early childhood development provides significant long-term benefits for future learning and helps to ensure that students start school with the endowments needed for successful learning. The Government has recognized the need for more pre-primary education as coverage is low and unequal.

- *Teachers:* High-quality teachers are the most important factor in helping to improve students' learning outcomes and therefore the backbone of

[5] Note that this document focuses on "basic education", understood as the level of education embedding grades 1 to 8 (compulsory education grades in Turkey) plus the kindergarten year (non-compulsory yet, but that will become compulsory starting on school year 2014/15). Also, it is important to clarify that this document only deals with regular education and will therefore not address education for students with special needs or also known as special education.

the educational system. The quality of teaching in Turkey is low by international standards, which is exacerbated with increasing demands for teachers due to a young population in Turkey and efforts to increase student enrollment across the country.

- *Financing:* An efficient and equitable system of public and private financing helps to support effective education. Turkey has a rigid system for financing public education that does not provide incentives for improved school performance coupled with high private spending that reinforces inequities in access to high quality education.

- *Information:* Effective education systems collect, use and disseminate information for parents, students, teachers, school leaders, communities, policy makers and the public to help improve performance, provide more effective voice, and introduce accountability. Turkey does not have such a system although the Ministry of National Education (MoNE) is undertaking initiatives to expand the availability and use of information.

17. The document provides an analysis and benchmarking of the performance of basic education in each of these four areas along with international evidence and a discussion of specific policy options. The chapters that follow tackle these four policy areas sequentially. A final chapter summarizes the whole discussion by providing, first, a snapshot of each policy option alongside a short description of how these are expected to impact the quality and equity of basic education.

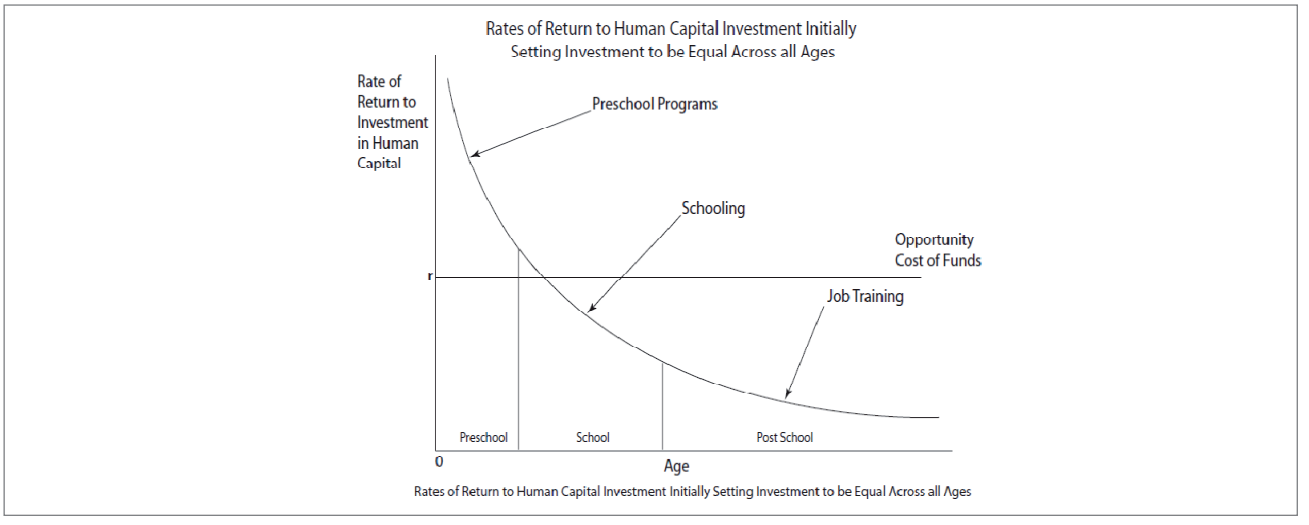
Chapter II
Early Childhood Education

A. Background

18. Early childhood education (ECE) is an intervention for the physical and intellectual growth of children in their early years of life[6], which is embedded within the broader notion of early childhood development (ECD) policies. ECD is defined as "the physical, cognitive, linguistic, and socio-emotional development of children [from conception] until they transition to primary school (p.5)" (Naudeau et al., 2011). Evidence from international research has shown that ECD interventions are probably one of the best instruments for breaking the intergenerational transmission of poverty and inequality (Alderman, 2011; Vegas & Santibáñez, 2010; World Bank, 2009), especially for low-income countries (Fernald et al., 2009).[7] ECD interventions involve a wide set of strategies that encompass several domains - education, health, nutrition, social and emotional care – and are aimed at helping brain development in the early years of childhood (Almond & Currie, 2011; Young & Richardson, 2007).[8] For an ECD strategy to be most effective, though, it is critical to: a) provide learning to both children and families; b) be targeted to the most disadvantaged, c) be of adequate duration, intensity, and quality, and d) integrate educational services, family support, health, and nutrition components (Engle et al., 2007).

19. ECE is the ideal intervention for developing cognitive, motor, and socio-emotional skills in children before they start a primary education.[9] Grantham-McGregor et al. (2007) estimate that more than 200 million children in the developing world are

Figure 2.1 - Rates of Return to Human Capital Investment



Source: Carneiro and Heckman (2004), Fig.2.6, Panel A, p.91

6 In this chapter, the term ECE (Early Childhood Education) is used to encompass all ECD interventions that happen at an institution that provides activities stimulating the cognitive, motor and socio-emotional skills of children before the start of primary school (from ages 0 to 6). Therefore, day care, pre-school education, and kindergarten are all embedded within the broad definition of ECE. The literature on the topic, however, tends to utilize other terms like Early Childhood Education and Care or ECEC (Eurydice, 2009; OECD 2001, 2006, 2009b, 2009c).

7 Some authors have even labeled ECD interventions as a "business imperative" of the 21st century. See Coffey (2007).

8 As the Consultative Group for Early Childhood Care and Development explains, "in the early years a child develops all the basic brain and physiological structures upon which later growth and learning are dependent". See http://www.ecdgroup.com/principles_child_development.asp.

9 It is important to note that the kindergarten year, i.e. the year prior to the start of 1st grade, has been integrated in many countries as an essential component of the elementary school, and is therefore a compulsory year in children's education cycle (e.g. in the United States). Therefore, technically speaking, in these countries the kindergarten year is indeed the start of primary education. Pre-school education (or pre-kindergarten education) is the term used in these cases to refer to the education for all non-compulsory years of education (0-4).

exposed to a series of multiple risk factors before the age of 5 that strongly affect their future cognitive and educational performance. These risk factors, one of which is known as *inadequate cognitive stimulation* (Walker et al., 2007), can be most adequately tackled with ECE.[10] The older a child gets with developmental delays like this, the more intense, costly and less likely it becomes to get him/her back to a normal developmental trajectory.

20. ECE programs are also the most cost-effective interventions in education. Evidence from international research shows that ECE programs tend to have higher rates of return when compared to education interventions of identical initial cost at later stages of individuals' lives (See Figure 2.1). And the benefit is maximized when children from disadvantaged families are targeted (Halle et al, 2009; Heckman, 2008). ECE programs have shown to have significant short- and long-term effects on educational outcomes, like increased cognitive development, decreased likelihood of placement into special education programs, higher grade retention and increased probabilities for school graduation (Burger, 2010; Heckman & Cunha, 2007; World Bank 2006b)[11]. Not only has the public provision of universal kindergarten has been demonstrated to have significant pay-offs (Cascio, 2009), but that the pre-kindergarten years (sometimes referred to as "pre-school years") are also instrumental in enhancing children's school readiness (Magnuson et al, 2007).

Box 2.1 – Early Childhood Education in Turkey: Does it Pay Off?

Research on the relevance and effectiveness of ECE policies in Turkey is growing. A portion of this body of research comes from the evaluation of one set of successful experiments undertaken a long time ago: the long-term study known as the Turkish Early Enrichment Project (TEEP). This project introduced pre-primary enrichment programs, both for children and mothers, in low-income areas of Istanbul back in 1982 and followed children who had participated in the first rounds of the program until adulthood, 22 years later (Kağıtçıbaşı et al. 2001, 2005). The study found that children who benefited from the program were, compared to a control group, more likely to have graduated from high school and even university, and more likely to be employed when compared to peers. Other recent effort to document the importance of ECE policies in Turkey was the cost-benefit study undertaken by Kaytaz (2005). The author found that ECE interventions in Turkey yield anywhere between 2.1 (low-case scenario) to 6.3 (upper-case scenario) Turkish Liras (TL) per each TL invested. More importantly, the author found that programs that supplement pre-primary education for children with support for parents could end up being up to 30 percent more cost-effective (see Kaytaz 2005, Table 3.1, p.29).

B. What is the status of Early Childhood Education in Turkey?

21. ECE in Turkey covers the period from 36 to 72 months of age (from when a child turns 3 until he or she turns 6, usually referred to as the group of 3-to-5-year-olds), including two years of pre-school (ages 3 and 4) and the kindergarten year (age 5), and it is not compulsory. There are several ECE programs in Turkey, offered both by public and private institutions.[12] Some institutions offer full-day schooling and others offer only half-day. Aside from a parental contribution to expenditure on meals and cleaning materials, all public ECE institutions are free of charge. Private ECE institutions charge fees.

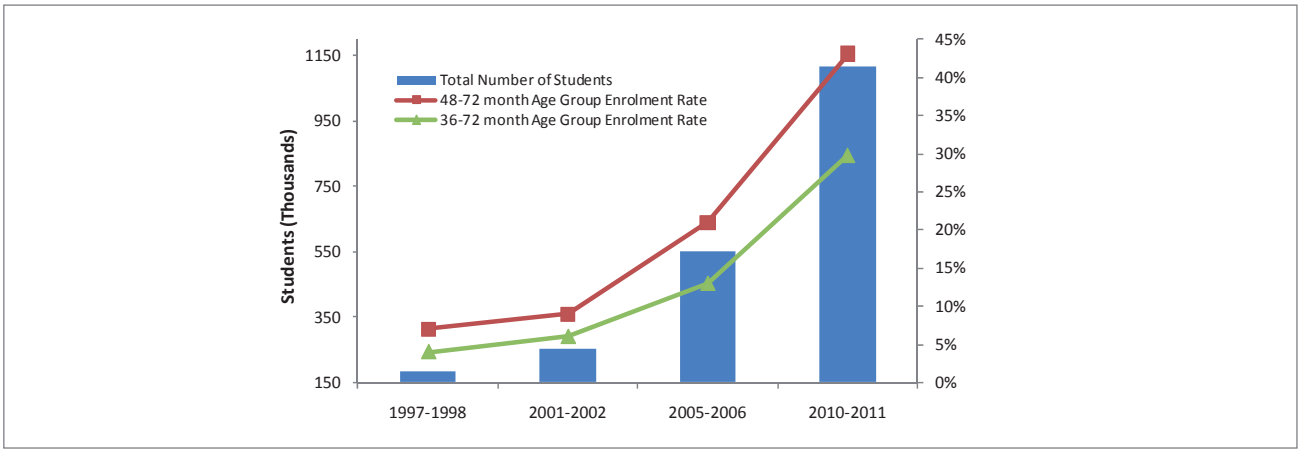
22. Turkey has made huge progress in access to ECE in the last twenty years, multiplying the number of children enrolled in pre-primary education by approximately 800 percent (MoNE, 2011). These trends, however, were most dramatic in the last five school years, where about 113,000 students were added to the system annually, resulting in a significant increase in the gross enrollment rate for those children between 36 and 72 months of age (see Figure 2.2). The absolute increase in enrollment at this level of education was by far the highest of all levels of education in the country during this 5-year period.

[10] In fact, Nores and Barnett (2010) find that ECD interventions of educational nature - like the provision of pre-primary education – or combining educational components with other areas – like cash transfers – appear to have larger cognitive effects compared to those ECD interventions that do not have educational components embedded in the design.

[11] Box 2.1 documents the evidence for Turkey.

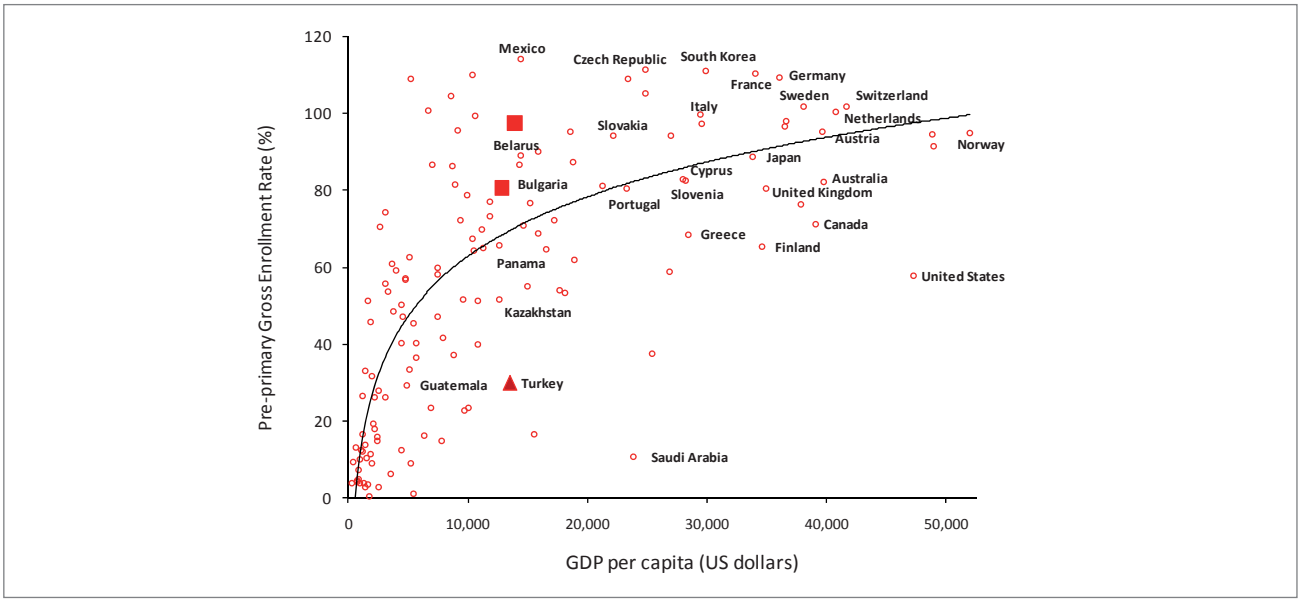
[12] See Table A1 and A2 in the Annex for details. Of special interest is a recent set of family education programs oriented for parents of children aged 0 to 6 that was launched in school year 2010/11 by the General Directorate for Apprenticeship and Informal Education.

Figure 2.2 - Number of Students and Increase in Enrollment Rate in Pre Primary Education in Turkey, 1997/98 – 2010/11



Source: World Bank on the basis of AÇEV (2009)

Figure 2.3 - Pre-Primary Education Gross Enrollment Rates for 3-5 Year-Olds, 2010 (percent)



Source: Authors' calculations on the basis of data from the International Monetary Fund (IMF) and the UNESCO Institute for Statistics (UIS)
* GDP per capita data is measured in US dollars of similar purchase power and were taken from IMF's World Economic Outlook Database-April 2011.
** Pre-Primary Education Gross Enrollment Rates were obtained from the UIS Dataset of Educational Indicators. It contains only countries for which the latest year with information on this indicator did not go below 2007.

23. Although there has been significant progress in access to ECE in Turkey, participation remains relatively low and unequally distributed. The coverage rate for pre-primary education for ages 3-5 (36 to 72 months old) in Turkey remains low (at 30 percent) compared to much higher rates for most countries with similar GDP per capita, like Bulgaria or Belarus (see Figure 2.3).[13] This problem is compounded by sharp differences in access across different socio-economic backgrounds: although the poorest families have, on average, 4 more children than the richest, the latter group is 60 times more likely than the former to have at least 1 child enrolled in kindergarten (Aran et al., 2009). In other words, the children who are enrolled in ECE institutions do not come from the high risk groups who would

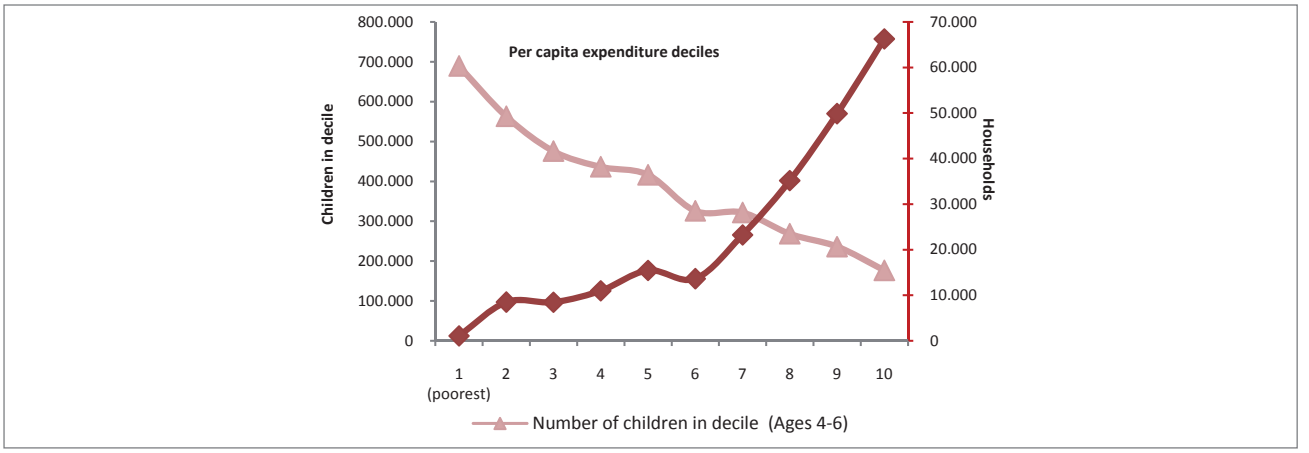
[13] Two key reasons may help explain the low coverage: a) the fact that pre-primary education is still a non-compulsory level of education; 2) the fact that pre-primary education does not currently benefit from the transportation for students that does exist for other levels of education. We are indebted to one participant at a presentation delivered in the Middle East Technical University for pointing this out to us.

especially benefit from early education (see Figure 2.4). As a result, the children in the latter group begin primary school without any preparation and therefore start their educational life lagging their better-off peers in more developed regions of the country. Finally, there are also significant disparities in enrollment rates across regions within the country - the highest enrollment rates are found in Amasya (Black Sea Region) – 86.6 percent for 4-5 year-olds and 59.2 for 3-5 year-olds – and the lowest in Hakkari (Eastern Anatolia) – 18.5 percent for 4-5 year-olds and 12.9 for 3-5 year-olds (MONE, 2011).

24. Not only are low coverage and inequity in access to ECE important problems in Turkey, but the quality of pre-primary education appears also to be fairly low. In a recent publication by UNICEF, out of ten indicators considered for benchmarking the quality and access standards of ECD, Turkey only met three, ranking at the bottom of OECD countries (see Table 2.1). Of particular interest to ECE is the fact that Turkey has a 20:1 student-teacher ratio at this level of education, which is much higher than the recommended minimum of 15:1 (UNICEF, 2008).

25. The low quality of ECE in Turkey appears to be related to both the quality of teaching and the quality of teaching environments. Göl-Güven (2009) recently evaluated the quality of early childhood classrooms in a randomly selected set of both public and private pre-primary schools in Istanbul. The study concluded that both types of institutions face significant structural shortcomings, from physical arrangements to teacher-pupil interactions, although the private sector seems to handle daily routines and teacher-parent interactions more effectively. Özgan (2009)'s qualitative evaluation of the pre-school development process in the province of Kilis also points out to the impact of inadequate physical conditions and facilities, but also to a lack of school-family cooperation due to pre-primary education still not being perceived as fundamental to children's cognitive, motor and socio-emotional development. Teacher quality in pre-primary education is another issue of concern. Educating/training teachers and preparing them for pre-primary teaching is a relatively new subject in Turkey (See Box 2.2). Teacher training and education has become one of the key areas of reform need in Turkey (Atay-Turhan et al., 2009). The curriculum revision in teacher education has been an important starting point in raising the quantity and quality of the teaching force in Turkey (see Tables A3 and A4 in the Annex). Renewal of pre-primary education curricula implies a clear tendency of the government to take appropriate action to increase the quality of pre-primary education, as well as increasing the level of preparedness of students prior to primary education.

Figure 2.4- Who benefits from pre-primary education in Turkey?



Source: Aran et. al. (2009), Fig.4, Panel B, p.12

Table 2.1 - Benchmarking ECD Services across Selected OECD Countries

	Turkey	Mexico	Spain	Germany	Italy	Japan	Potugal	Korea	Hungary	Slovenia	Finland	France	Sweden
Prenatal leave of 1 year at 50% salary										X	X	X	X
National plan prioritizing disadvantaged children		X		X	X	X	X	X	X	X	X	X	X
Subsidized child care services for 25% of 3-year-										X	X	X	X
Subsidized and accredited ECD services for 80% of 4-			X	X	X	X	X		X			X	X
80% of all child care staff trained	X	X	X		X	X	X	X	X	X	X	X	X
50% of ECD staff educated with relevant qualification	X	X	X	X	X		X	X	X	X		X	X
Minimum staff to children ratio 1:15 in pre-primary				X					X		X		X
1% of GDP spent on ECD services											X	X	X
Child poverty rate less than 10%									X		X	X	X
Near universal outreach of essential child health	X					X		X		X	X		X
TOTAL BENCHMARKS MET	3	3	3	4	4	4	4	4	6	6	8	8	10

Source: Aran et al. (2009), Table 3, p.14

Box 2.2 - Teacher Training and its Significance in Improving the Quality of Pre-Primary Education in Turkey

In Turkey, the quality of pre-primary services is measured to a large extent by the infrastructure of schools and the diploma of the school teacher in the program (Bekman & Gürlesel, 2005). However, these are only limited aspects of quality. According to OECD quality benchmarks, having smaller classrooms for preschools with more teacher interaction (minimum staff-to-children ratio of 1:15 in preschool education) as well as expanding subsidized and low-cost access to regulated child-care services for younger children (and not only 5-6 year olds) are part of quality concerns when setting up pre-primary school systems (OECD, 2006). Australia, Canada, France, Ireland, and the Netherlands, train their teachers to take up service in either pre-primary (for 36-72 months of age) or primary school classes. This leads to a unity of goals and methodologies for the two sections, and reinforces pedagogical continuity. In France, common training for pre-primary and primary school teachers in teacher training and university institutes was introduced in 1993. The training contains courses on education studies, philosophy, sociology, psychology, subject study, administrative tasks, and optional subjects (Oberhuemer & Ulich, 1997).

26. The Government of Turkey has recognized the need for more comprehensive ECE and the need to ensure all students start school ready to learn. The MoNE has recently launched a program aimed at fulfilling two targets by the start of the school year 2014/15: a) universal enrollment for kindergarten (students aged 60-72 months old), and b) 50 percent enrollment rate for the pre-primary education level as a whole (students aged 36-72 months old).[14] The program focused initially on achieving universal kindergarten in the 32 pilot provinces with the highest gross enrollment rates (GERs) for the kindergarten year (60-72 months old). The cut-off point for determining these provinces was a GER for the 5-year-olds higher than 50 percent and the goal was to achieve universal kindergarten enrollment in these provinces by the end of school year 2009/10.[15] MoNE chose to begin with these provinces because, on average, they did not need new infrastructure in order to accommodate for all the new students in the 5-year-old range. Thus, universal participation could be achieved more easily and more quickly in these provinces than in others. Beyond these provinces, the plan is to reach 100 percent coverage in an average

[14] The targets for 4-year-olds (48 to 60 months old) and 3-year-olds (36 to 48 months old) are 25% and 11%, respectively.

[15] Universal kindergarten was reached in 5 of the 32 provinces (Amasya, Ardahan, Burdur, Karaman, and Kütahya), but there was significant progress in the remaining 27. The average GER by the end of the 2009/10 school year for the 32 provinces was 92%, with a total of 31,310 more children enrolled in kindergarten compared to the previous years, just in those 32 provinces (a 31% improvement).

Table 2.2 – MoNE's ECE Expansion Program, 2009/10 - 2013/14: Brief snapshot

School year	Number of provinces targeted	Number of students to be added to the system in order to meet MONE's goals			
		5-year-olds	4-year-olds	3-year-olds	Total
2009/10	32	41,875	7,513	8,560	57,949
2010/11	13	62,851	14,099	13,389	90,339
2011/12	12	88,157	21,165	11,732	121,055
2012/13	14	139,449	32,251	21,402	193,102
2013/14	10	240,540	58,169	31,728	330,437
		572,872	**133,196**	**86,812**	**792,881**

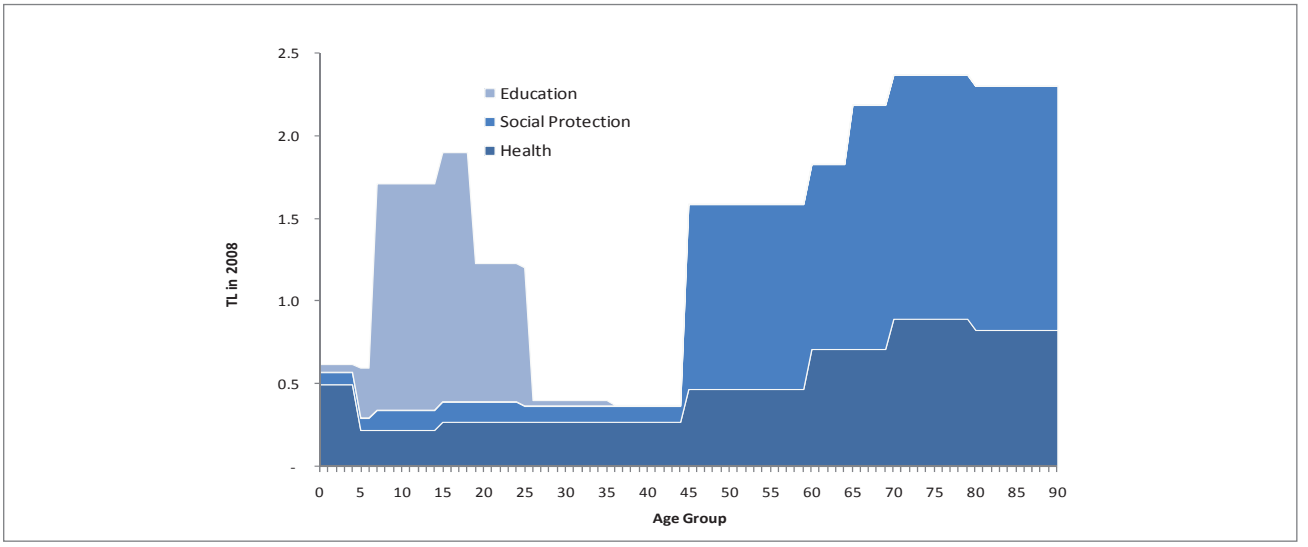
Source: World Bank on the basis of information provided by MoNE.

Note: The estimations assume that by the end of school year 2013/14, all 81 provinces have reached universal kindergarten and 50 percent coverage for the group of 3-5 years old.

12 provinces per year for the next four school years, expanding access last to areas with the lowest coverage and greatest needs. The magnitude of this expansion program is really sizeable (see Table 2.2). The goal is to be able to place in the pre-primary system around 800,000 new children. However, the configuration of the expansion scheme is such that it places an ever increasing pressure in the amount of resources that would need to be put in place to absorb significant yearly increases in the number of students as a result of leaving those provinces with the highest needs last.

27. Although children feature prominently in the government's strategic development targets, as the ECE expansion program attests, the resources allocated to programs that target young children do not yet live up to the expectations set in these documents. According to World Bank (2009) estimations, Turkey's children in the 0-6 year-old group receive, on a per capita basis, up to 3 times less educational spending than children of primary education age (See Figure 2.5). Also, Turkey lags well behind the spending benchmark agreed for pre-primary education of 1 percent of GDP on child care and pre-primary education services (UNICEF, 2008). According to Aran et al. (2009, p.5) "as of 2008, Turkey spends 0.02 percent of GDP on the 0-6 year and 0.5 percent of GDP on the 0-8 year group for these services".

Figure 2.5 – Per Capita Social Public Expenditures by Age Group, 2008



Source: World Bank (2009), Figure 22, p.23

C. Policy Options

28. Modify successive stages of MoNE's roll-out of the expansion of early childhood education to ensure that the Government's goal of universal access to kindergarten is met by 2014. In doing so, changes are suggested in the *targeting mechanism* and the *scope*. The next phases of this program could target the provinces with the lowest pre-primary gross enrollment *rates* first, and not the other way around, as per the current scheme. In addition, *focusing public resources exclusively on the kindergarten year* (for 60 to 72 months old children) would ensure that every child can start primary school with at least one year of pre-primary education. This will substantially reduce the burden on the public resources that the sector will need in the upcoming years. Such a proposal will require developing a fully-costed plan to expand coverage of the kindergarten year to the 81 provinces, including needs for new and well-prepared teachers, infrastructure (including new classrooms), appropriate educational materials and plans for sequencing. Under this alternative proposal, the 50 percent coverage for the pre-school years (children in the range of 36 to 60 months old) could best be achieved by a significant degree of cooperation between the public and the private sector, via not-for-profit or for-profit institutions (Cleveland & Krashinsky, 2003; Grun, 2008). Actually, it would be critical to start *considering public-private partnerships* of this kind in Turkey since this appears to be the only realistic way to achieve the ambitious goals set by the Government also for the 3-to-4-year-old group unless the Government can secure massive yearly increase in resources.[16] The General Directorate of Private Education Institutions in MoNE recently set as one of the key targets for the 2010-2014 Strategic Plan to roughly double the number of private institutions in basic education, currently at a meager 5% for primary and secondary education combined (MoNE 2009b). Such an increase could help provide an important boost to the increase in early childhood education coverage.

29. Develop a quality assurance framework for public and private provision of early childhood education. Expanding pre-school centers, schools and kindergartens can be carried out more effectively when a quality assurance framework is in place. This is especially relevant in Turkey since the number of responsible institutions for early childhood education is high and inspection mechanisms are fragmented (Bekman & Gürlesel, 2005). For example, Australia has recently introduced a new National Quality Framework that aims at improving staff-to-child ratios, setting new qualification requirements for early childhood educators, creating a new quality rating system and establishing a national body to guide the implementation and management of the overall framework (Council of Australian Governments, 2009). Another interesting example is Hong Kong where a two-pronged approach to quality review based on internal school evaluations and external school reviews was established in 2007 (Poon, 2008). In Chile, as the country is working on reforming its education quality assurance system, it has been clear that a strong implementation process is just as important as a great design. A wide range of issues regarding the implementation of the proposed changes to achieve the goal of setting up a functioning quality assurance system include, among others, the degree of independence between and coordination of organizations that set education policies and those that oversee how these policies translate into classrooms and schools; the extent of consultation and participation by students, parents, teachers, school principals, schools, and school owners; accountability mechanisms for public organizations to build an institution's legitimacy; strong leadership to inject a culture of change; gradual implementation along with public sector modernization; properly communicating the benefits of the reform to the public and the stakeholders making sure "the focus of education quality assurance reforms is the student" message is being transmitted; and full commitment from the

[16] Aran et al. (2009, p.18) underline the limited role the private sector currently plays in pre-primary provision in Turkey: "As of 2007, only 6 percent of enrollments in 4-6 year old category in preschools are in private schools. Of the total number of preschool classes, 9.6 percent belong to private centers and of the teachers in ECD provision only 9.5 percent are hired by private providers. Most of the children enrolled in such private preschools are in the upper socio-economic groups and the cost of private preschools and day-care centers in Turkey is high and are only affordable by a select group of households in the country. Affordable day-care and preschool options are not available for mothers in poorer households, although there is a significant level of observed demand for such services. This demand is currently not being met by the private or public sectors and for existing services that serve the few, the costs are extremely high."

national government and the Minister of Education (World Bank, 2010).

30. Expand the information campaigns about the importance of early childhood education. A multipronged approach using media, websites, local MONE branches, and community leaders with special emphasis on the most disadvantaged areas of the country and most disadvantaged populations would be needed. An excellent example of a potential partnership for such campaigns would be with The Mother Child Education Foundation (or AÇEV, in its Turkish acronym). AÇEV, founded in 1993, is a non-governmental organization with vast experience in early childhood education that is dedicated to reaching those who have limited access to educational and economic resources by using a wide range of activities, such as the "7 is too late" campaign. This campaign was initiated to raise awareness about the importance of early childhood education (0-6 yrs of age), to generate support for the issue from all levels of society and to enable all children in Turkey to benefit from preschool education services through bringing about the necessary policy changes. AÇEV has been organizing increasingly frequent meetings, conferences, workshops and symposiums to continue its awareness campaign on pre-primary education issues in Turkey as well as trying to influence policy makers on its importance (AÇEV, 2009). Indeed, AÇEV has been partnering with MoNE for some time now and Mother-Child Education Program this institution developed continues to be used by MoNE today. Therefore, using AÇEV's good reputation and MoNE's convening power could be a positive starting point for massive nationwide campaigns that help increase awareness and raise the profile of ECE.

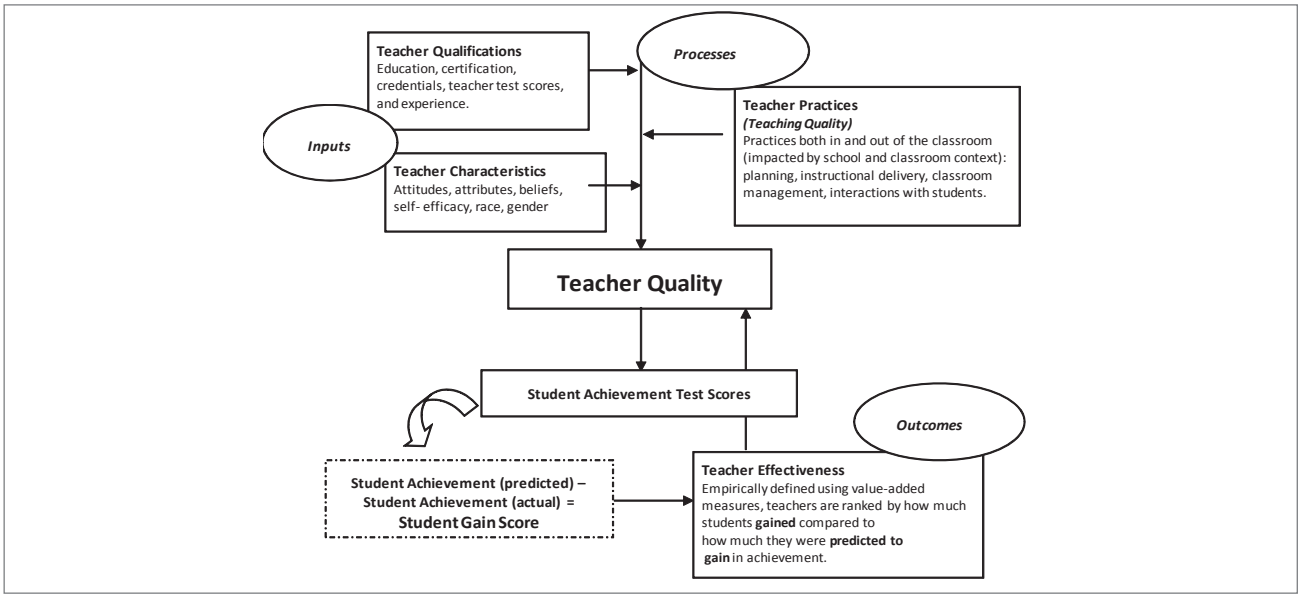
Chapter III: Teachers

A. Background

31. Teachers are the single most important school variable influencing student achievement (Hattie, 2003). Having effective teachers can substantially close the achievement gap between low-income and high-income students, and low-performing students benefit more from more effective teachers. Rockoff (2004), who followed the same group of teachers over a 10-year period, estimated that differences in the quality of teachers explain up to 23 percent of the variation in student performance. In a review of more than 500,000 studies on factors affecting student performance, Hattie (2003) reaches a similar conclusion: teachers are the most important factor in control of the school system and account for about 25 percent of the variance in student achievement.

32. Improving teacher quality will therefore lead to substantial gains in student performance (Hanushek, 2008).[17] In fact, as Goe (2007) shows, teacher quality works through two channels, both as an input to the educational system, but also as part of the process that generates student learning (Figure 3.1). Teachers' qualifications and characteristics are critical input factors: *the type of education and certification* (credentials), the teachers' *proven knowledge in a given area of expertise* (often measured by test scores), *his/her experience in the field* (usually measured by the number of years he/she has been working as a teacher and the type of work done) and, last but not least, *teachers' personality traits* are all essential ingredients of the educational system. The quality of teachers, however, also relies heavily on their teaching practices. In other words, teachers' degree of planning, instructional delivery, classroom management, and interactions with students play a fundamental role in learning achievement. *Teacher effectiveness* is then usually defined as the capacity of a given teacher to lead their students to sustained achievement gains.[18] Box 3.1 presents an example of the types of effective teachers that are able to achieve such gains.[19]

Figure 3.1 – A framework for understanding how teacher quality works



Source: Goe (2007), Fig.1, p.9

[17] Hanushek (2010) estimates that the economic value of improving teacher quality could be highly significant. A teacher which is one standard deviation above the mean effectiveness for teachers in the United States could generate marginal annual gains of over $400,000 in the present value of student future earnings.

[18] The most widely used variable for measuring student achievement is the scores students obtain in given tests. Statistical models can then be used for predicting students' achievement given students' background and teachers' characteristics and qualifications. Achievement gains are then measured as the difference between the actual test scores and those predicted by the statistical models.

[19] On what characteristics make an effective teacher, see the recent paper by Lavy (2011).

Box 3.1 - What Makes a Good Teacher?

Teach for America, a nonprofit that recruits college graduates to teach in low-income schools, has developed its views on what makes a good teacher based on the extensive experience they have acquired over the years in America. They claim that more than any other variable in education—more than schools or curriculum—teachers matter (Ripley, 2010).

Great teachers tend to set big goals for their students. They are also perpetually looking for ways to improve their effectiveness. They constantly reevaluate what they are doing and they avidly involve students and their families in the teaching process; they maintain focus, ensuring that everything they do contributes to student learning; they plan exhaustively and purposefully—for the next day or the year ahead—by working backward from the desired outcome; and they work relentlessly. Innovative and fun ways of teaching – group work, learning games, and understanding what students are stimulated by - are very important in this framework (Farr, 2010).

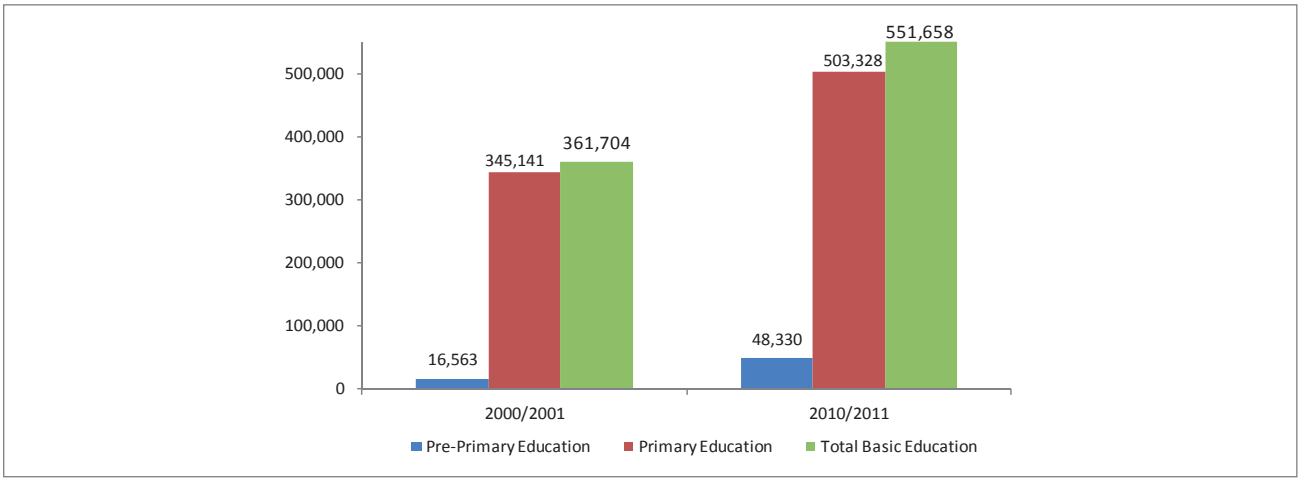
33. Teachers' importance is also reflected in the size of the teacher workforce in a given country. Teachers usually constitute a large part of the public workforce and, on average, roughly two-thirds of educational expenditures by schools is allocated to teachers' compensation (OECD, 2005). Teacher policies can therefore have enormous implications for school budgets. A critical issue for countries to sustain an education system that is internationally competitive relies then on how to recruit, retain, develop and maintain a high-quality teaching force (OECD, 2005). The demand for, supply and quality of teachers are, as a result, significant points of concern for many countries (Santiago, 2002; Schacter & Thum, 2004). To increase the quality of education and teaching, schools need to attract good teachers, select the best from all teaching candidates, and retain the particularly effective ones. Knowing which teachers schools want to hire and why as well as which ones leave schools can help policy makers achieve more optimal selection and retention policies (Boyd et al., 2010, Goldhaber et al., 2009; Hanushek, 2009).

B. What is the status of teachers in Turkey?

34. Turkey is a fairly unique country within the context of OECD countries in that it has a sizeable school-age population that has been increasing for some time and will continue to grow in the near future. Turkey's student population comprises, as of 2010/11, more than 12 million children, roughly 11 million in primary education and slightly more than 1 million in pre-primary education. More than 137,000 new children per year have entered the system, at different levels of education, since 2000/01, a remarkable feat for a developing country that has worked hard to ensure universal coverage of primary education and is now pursuing the goal of universal coverage of the kindergarten year by 2014.

35. These significant pressures in the demand for schooling in Turkey constitute a formidable challenge for the educational system of the country insofar as

Figure 3.2 – Teacher Workforce in Turkey: Changes in the Last Decade 2000/01-2010/11

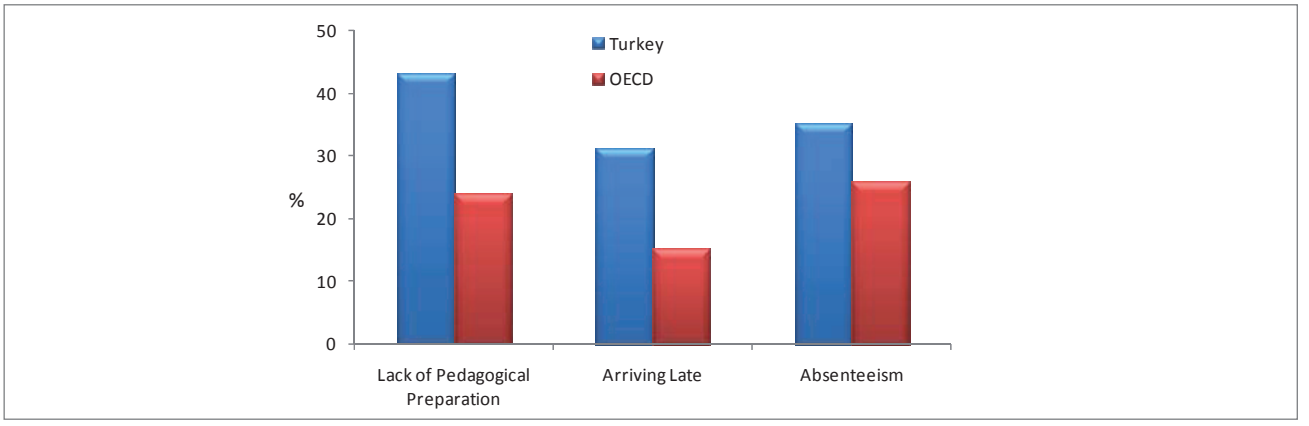


Source: World Bank on the basis of MoNE (2011)

the demand for teachers is continually increasing. In the last decade alone, Turkey's teaching workforce for basic education (primary and pre-primary levels) expanded by roughly 50 percent and is now employing more than 550,000 teachers (see Figure 3.2). Every year, at least an additional 19,000 new teachers are needed to be recruited to accommodate increasing enrollment. Keeping up with these trends, however, places an important burden on the country both in terms of quantity and quality. In regards to the former, because strong differences exist in student-teacher ratios across the country, it is urgent to increase hiring to start leveling the playing field, especially in the poorest districts of the country.[20] As to the latter, increasing pressures on the demand for teachers has usually resulted in a lower average quality of the incoming cohort.[21]

36. As a result of this increasing demand for teachers in the country, Turkey's teachers tend to be, on average, much younger, much less experienced and of much lower quality than the average OECD-like country. According to the results of OECD's Teaching and Learning International Survey (TALIS) 2009[22], roughly 50 percent of Turkish teachers are less than 30 years old, whereas the average proportion of teachers that are less than 30 years old for OECD-like countries is barely higher than 15 percent (see Table A5 in the Annex)[23]. In addition, whereas almost 70 percent of Turkish teachers have less than 10 years of work experience, the corresponding proportion for the average OECD-like country is 37.5 percent. The overwhelming majority of Turkish teachers (88 percent) hold a Bachelor's degree and only 5.8 percent have obtained either a Master's or a Doctoral degree; in comparison, the average proportion of teachers with degrees from graduate schools for TALIS's participating countries is 31.6 percent. Finally, TALIS 2009 results show that Turkish teachers, when compared with their TALIS counterparts, tend to suffer from a lack of pedagogical preparation. They also tend to arrive late to work twice more often than the average OECD teacher and also present larger rates of absenteeism (see Figure 3.3).[24]

Figure 3.3 - Teachers' Issues Hindering Instruction and Learning



Source: World Bank on the basis of MoNE (2011)

[20] Çıngı et al. (2007) estimate the number of new teachers that should be hired to bring all districts whose student-teacher ratios are higher than the national average to this national mean: their estimates show that roughly 65,000 additional teachers would be needed for primary schools alone. See Çıngı et al. (2007), Table 51, p.227.

[21] Özden (2004) state that lowering the admission standards for placement into teacher training schools has been used as a short-term measure directed to mitigate teacher demand pressures on the system. Other recent measures that were utilized to cope with these increasing demands have also entailed the hiring of less-than-qualified substitute teachers.

[22] TALIS is the first international survey to focus on the learning environment and the working conditions of teachers in schools and it offers an opportunity for teachers and principals to give their input into education analysis and policy development in some key policy areas. The first TALIS survey has been conducted in 24 countries across four continents in 2009. See OECD (2009a).

[23] Note that we refer above to OECD-like countries and not OECD countries. The reason for this distinction is given by the fact that 7 out of the 24 countries participating in TALIS 2009 are not members of the OECD countries. However, with the exception of Brazil and Malaysia, the remaining 5 (Bulgaria, Estonia, Lithuania, Malta, and Slovenia) are Eastern European countries, some of which are already part of the European Union. For the whole list of participating countries, see OECD (2009a), Figure 1.1, p.18.

[24] Specifically, 43 percent of Turkish teachers are in schools where the principal reports that lack of pedagogical preparation is a factor hindering instruction a lot or to some extent (TALIS av. = 24 percent); 31 percent of teachers are in schools where the principal reports that teachers arriving late hinders instruction a lot or to some extent (TALIS av. = 15 percent); and 35 percent of teachers are in schools where absenteeism is reported by principals as hindering instruction a lot or to some extent (TALIS av. = 26 percent). See OECD (2009a).

37. The low quality of teachers is in part related to the lack of a strong professional approach to teaching careers in Turkey. This is the result of a combination of poor pre-service training, lack of access to learning resources while teaching, and the lack of professional development opportunities to improve the quality of their interactive teaching skills. 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 (Şahin, 2005)[25]. But also in-service training in Turkey seems to be insufficient: every year, about 20,000 teachers get trained out of a total pool of about 600,000. This means that the average Turkish teacher gets in-service training only once in his/her lifetime as a teacher. As a result of all these factors, Turkish teachers are not equipped enough to engage students' interest and enthusiasm, teach interactively, or offer stimulating learning experiences that help students construct their own knowledge and skills.

Box 3.2 – Teacher Education in Turkey: Should the Connection Between the Ministry of National Education and the Higher Education Council Be Improved?

The institutions responsible for teachers' education and training in Turkey are the Higher Education Council (YÖK, in its Turkish acronym) and the Ministry of National Education (MoNE). Whereas YÖK is in charge of the pre-service training or education, MoNE is in charge of the in-service training process, after students from the Schools of Education get their teachers' degree and start their careers. As with all secondary-school students, teacher candidates for university are principally selected via the high-stakes university entrance exam. After selection for university, teacher education is divided into two stages: pre-service teacher training and in-service teacher training.

All primary (and some secondary) school teacher candidates are required to complete a 4-year program at a faculty of education. As of 2010, there are 154 universities in Turkey, 65 of which have Schools of Education, many of which were created very recently to cope with the increasing demand and are, therefore, of widely varying quality. Since 1998, all schools of education in Turkey have been following a standardized curriculum prescribed by the YÖK. Secondary school teachers are trained either in a 5-year undergraduate program or, for graduates of a 4-year non-education faculty, in a Masters' of Science degree program, both in education faculties. Schools of Education are not the only institutions where teachers' degrees can be obtained. Science Schools' students who complete pedagogical course requirements (within the scope of a Postgraduate Certificate in Education) after having obtained a bachelor's degree in their fields are also eligible to apply for a teaching position. The length of each teacher training program, the number of credits, the titles of courses, and the qualification the program leads to are all defined by YÖK.

Upon graduation from a university program, candidates are eligible to enter the profession after passing the civil service exam (KPSS, in its Turkish acronym). The distribution of topics on this examination, their relative weight, the multiple choice format, and the assessment of results are all the responsibility of the Student Selection and Placement Center (ÖSYM, in its Turkish acronym). The score that students receive on the KPSS determines whether or not they are assigned to their preferred location. 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 YÖK, ÖSYM and MoNE.

Source: Aksu et al., 2010; World Bank, 2005b; General Directorate of Higher Education of MoNE

[25] This is starting to change, little by little. Garanti Bank, a leading bank in Turkey, has launched in 2008 a long-range project called "No Limits in Teaching", under a five-year agreement with the Teacher Academy Foundation (Öğretmen Akademisi Vakfi, or ORAV) and MoNE, to organize activities aimed at fostering the personal and professional development of teachers. Having started in May 2009, 10,000 teachers in 272 schools across 32 cities have been reached so far. Participation in the project, which is voluntary and free of charge, is open to all primary school teachers, administrative personnel, and inspectors. At the trainings which are organized at the teachers' own schools, main topics of "communication", "classroom management" and "evaluation" are covered. Those who take part in the program also receive ministry-approved certification. Moreover, participants continue their personal and professional development with an Internet website subscription. For further details, see http://www.garanti.com.tr/en/our_company/social_responsibility/projects_on_education/teacher_academy_foundation.page.

38. The lack of a strong professional approach to the teaching profession in Turkey makes it hard to recruit, retain, develop and maintain a high-quality teaching force. Teaching disproportionately attracts people from lower and middle income backgrounds (Aksu et al., 2010). The low socio-economic status of teachers prevents highly qualified students from preferring the teaching profession, but also engenders big challenges for those that do get into the profession in the sense that, precisely due to their low economic and socio-cultural backgrounds, new teachers have a hard time understanding or adapting to new approaches (Gürkaynak et al., 2003). According to the results of a teacher survey conducted by the Turkish Education Personnel Union in 2009, 93.1 percent of the teachers stated that the profession of teaching was losing its prestige and 57.6 percent were not pleased with the working environment.[26] Deniz and Şahin (2006) state that Turkish teachers lack the professional skills and knowledge to cope with the educational goals of today's society, have low status, heavy demands on time, heavy workload, and a generalized lack of opportunities to improve their professional knowledge and effective performance.[27]

39. An important question to analyze is whether the low quality of teachers in Turkey is related to pay conditions. The answer is not straightforward: whereas teacher salaries seem to be low relative to the OECD average under some indicators, other indicators show a less disadvantaged picture (OECD 2009a). On the one hand, the absolute level of teacher salaries in Turkey seems to be lower than in the OECD, regardless of whether we measure them in absolute terms or per hour of net contact (teaching) time. In both cases the average Turkish teacher gets roughly 50 percent less than its typical OECD counterpart. Things get even worse as teachers become more experienced due to the high compression of the salary scale in Turkey's wage grid: after 15 years of experience the average OECD teacher gets 3 times as much as the average Turkish teacher with equivalent longevity at work. On the other hand, teacher salaries in Turkey are comparable with the average OECD country when *salaries are measured as a proportion of per capita GDP*. The average salary for a Turkish primary school teacher, after 15 years of work experience, is 3 percent higher than its OECD counterpart, when salaries are measured relative to the level of income of the average citizen (See Table 3.1 below and Table A8 in the Annex).

40. The Turkish government has recognized the importance of teachers and has been working hard on reforming the pre-service and in-service teacher training system since the late 1990s. In 1997, the Education Faculties in universities underwent a series of reforms through which a Teacher Training National Committee was established to ensure control, continuation and updating of teacher training programs; the number and credit of formation courses was increased; and training of branch teachers for upper secondary education was rearranged by means of graduate studies differing from the former practice enclosing overall 4-year education. The third large scale reform was introduced in 2006-2007 to revise the non-functioning parts of the 1997 arrangements such as re-introduction of general knowledge courses that were mostly eliminated from the curriculum in 1997, and the transfer of 25 percent of the authority to determine the curriculum to education faculties themselves. The last reform came in 2009 with the abolition of the graduate school requirement for upper secondary education teacher candidates starting in the 2010-2011 school year. Instead, of those students enrolling in the Faculties of Arts and Science, the ones who complete pedagogical course requirements in the faculties of education after having obtained a bachelor's degree in their fields of study are eligible to apply for a secondary teaching position (MoNE, 2008; ÖSYM 2009; ÖYGM, 2009; Özoğlu, 2010; YÖK, 2007).

[26] See http://www.umut.org.tr/en/sayilarla.aspx?id=19800, accessed June 15, 2010.

[27] TALIS 2009 results show that less than one in ten teachers in Turkey received feedback in their school and fewer than 2 percent of teachers are in schools that had no evaluation (external or internal) in the last 5 years. Also, of those teachers receiving appraisal/feedback, only about 40 percent reported that it resulted in a development plan to improve their teaching. For further results on teachers' perception of their key professional development needs and the type of professional development they receive, see Tables A6 and A7 in the Annex.

Table 3.1 - Analyzing Various Dimensions of the Teaching Profession in Primary Schools: Turkey vs. OECD, 2007

	Turkey	OECD Av.	OECD Max.	OECD Min.	Ratio (Turkey /OECD Av.)	Ratio (Turkey /OECD Max.)	Ratio (Turkey /OECD Min.)
Annual Working Hours	1,832	1,662	1,960	1,265	1.10	0.93	1.45
			(Japan)	(U.K.)			
Average class size (Public Schools)	27.5	21.4	31.0	15.6	1.29	0.89	1.76
			(Korea)	(Luxembourg)			
Student-teacher ratio	26.2	16.0	28.0	10.1	1.64	0.94	2.59
			(Mexico)	(Greece)			
Starting salary/minimum training*	14,063	28,687	49,902	11,216	0.49	0.28	1.25
			(Luxembourg)	(Hungary)			
Salary at top of scale/minimum training*	17,515	47,747	101,707	17,515	0.37	0.17	1.00
			(Luxembourg)	(Turkey)			
Ratio of salary at top of scale to starting salary*	1.25	1.71	2.77	1.13	0.73	0.45	1.11
			(Korea)	(Denmark)			
Ratio of salary after 15 years of experience to GDP per capita*	1.21	1.17	2.21	0.68	1.03	0.55	1.78
			(Korea)	(Norway)			
Salary per teaching hour after 15 years of experience*	25	49	89	23	0.51	0.28	1.09
			(Luxembourg)	(Mexico)			

* In equivalent USD converted using Purchasing Power Parity Measures

Source: World Bank on the basis of information provided by MoNE.

Note: The estimations assume that by the end of school year 2013/14, all 81 provinces have reached universal kindergarten and 50 percent coverage for the group of 3-5 years old.

C. Policy Options

41. Support and hold accountable new teachers in the first few years of teaching. New teachers need support and learning on the job as they struggle with classroom management, assessing student work, motivating students to learn, interacting with colleagues, and communicating with parents, especially as new teachers are often placed in the most-difficult-to-serve locations (OECD, 2011a). One approach is to build performance measures into the system from the first year where new teachers needing more support have an apprenticeship year with extra help. For all new teachers, increased responsibilities in years two and three are based on performance as is ultimate tenure (Schwartz et al., 2010).[28] This support in the first few years needs to be accompanied by a significant degree of in-service training. 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. In Korea, for example, teachers in their third year must complete a formal four-week training program. 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). Finally, a clear, well structured and widely supported teacher profile can be a powerful mechanism for aligning the elements

[28] Such a system needs to be developed along with a parallel system of teacher evaluation. Isoré (2009) documents the current practices in OECD countries in relation to teacher evaluation. The author presents examples on how different systems of teacher evaluation work and what their motives are. For example, whereas the US system seems to develop a teacher evaluation for summative purposes with clear links to pay, the Finnish and English systems rely more on teacher evaluations for formative purposes within broader school policies. The Chilean system seems to take a comprehensive stance where both approaches are integrated. See pp.33.37.

involved in developing teachers' knowledge and skills, and for providing a means of assessing whether teacher development programs are making a difference. Developing new teacher profiles, matching assignments to skills, providing a sense of leadership, vocation and teamwork can help align teacher development and performance with school needs (Çakıroğlu & Çakıroğlu, 2003).

42. Create new incentives — monetary and non-monetary — to attract and retain high-quality teachers (OECD, 2011a; OECD, 2011b). Creating a stronger connection between teachers' contributions and the pay and other rewards they receive will be central in redesigning teaching for the next generation (OECD, 2005). To help make teaching a more attractive career choice, many countries, such as Switzerland, Japan and the US are creating new roles and responsibilities for teachers that reward their expertise without taking them out of the classroom (Schwartz et al., 2010). Other options could include the support for deployment schemes to place the best teachers in the most disadvantaged areas (Farr, 2010), as well as attempting to reward excellent performance by using performance-based pay bonuses (Neal, 2011; Sclafani & Lim, 2008). Singapore, for example has a highly developed career system to recognize, support and reward outstanding classroom teachers with a performance-based pay plan in place for about a decade. More recently, the government has created three career tracks for teachers: a leadership track, a specialist track and a teaching track. The "teaching track" caters to the majority of educators, who want to focus on achieving excellence in the classroom. Within that track, teachers can move up from a "senior teacher" to a "master teacher" with their pay rising to reflect both their expertise and additional responsibilities. The US also has promising ingredients for the development of a full-fledged teacher career and compensation system.[29] Also, a series of complementary non-monetary initiatives could be a powerful attracting mechanism. One of them, for example, consists in introducing a more flexible system of teacher education that would provide more routes into the profession, including post-graduate study following an initial qualification on a subject matter field, opportunities for those who started in schools as paraprofessionals or teachers' aides to gain full qualifications that build on their experience in schools and possibilities for mid-career changes to combine reduced teaching loads and concurrent participation in teacher preparation programs.

43. Improve teacher training, aligning in-service with pre-service training, and establish school-based teacher training strategies. The process of teacher formation involves the areas of pre-service training, induction and in-service training. For starters, *pre-service teacher training* in Turkey needs to be rationalized and realigned to reflect changed instruction requirements, and should include greater communication among MoNE, YÖK, ÖSYM and the universities (see Box 3.2). Similarly, the re-organization of *in-service training*, including revisions of the curriculum of faculties of education, particularly courses for the teaching profession, should be based on the findings of research, related literature and expert opinions. Many Turkish teachers consider good teaching to be drill and practice, especially with respect to materials tested by the SBS, YGS, and LYS exams. These expectations leave teachers little room to use innovative, student-centered teaching methods (Şahin, 2005). Therefore, a greater emphasis on knowledge-centered academic learning should become the focal point of school curricula. Teacher education and the teaching career should also be regarded within a new paradigm for lifelong learning (Coolahan, 2002). In this new paradigm, *school-based teacher training schemes* become critical. One such scheme is the creation of a *"peer-to-peer feedback network"* (Kirabo Jackson & Bruegmann, 2009). Such collaborative partnerships between teachers have proven highly effective tools in some developed countries like Japan and parts of the United States (Bayrakçı, 2009). Another interesting initiative is that of "lead teachers". For example, Canada's Literacy and Numeracy Strategy - a major initiative designed to have all students read, write, do math, and comprehend at a high level by age 12 - provides intensive training to teachers in how to teach literacy and numeracy effectively and has increased the number of "lead teachers" in the primary grades who share best practices with other teachers in their schools (OECD, 2005).

[29] Nearly 50,000 US teachers have earned recognition from the National Board for Professional Teaching Standards, a voluntary assessment program that certifies accomplished teachers who have met professional standards. A growing number of states and districts are also experimenting with paying teachers based on their performance. See Schwartz et al. (2010).

Chapter IV - Financing

A. Background

44. Education is one of the most profitable investments from both an individual and a societal point of view. For an individual, the economic benefits of education come from increased earnings with each new level of education attained and lower rates of unemployment (OECD, 2009e). For a society, the higher the education of its population usually results in a larger collection of tax receipts, as well as improved health and political stability, among others (McMahon 2004, 2006).

45. *Financing public education,* however, is a tricky area since a lot of questions need to be answered and a series of trade-offs need to be resolved. These issues range from the national strategic discussion of what proportion of the national income needs to be invested in the sector to whether or not to subsidize a particular level of education or a particular set of providers.

46. Analyzing *the quality of the financing of education* is an even harder undertaking, and usually boils down to assessing a series of "how" questions in terms of two domains: *efficiency* and *equity.* In regards to the former, analyzing how *efficiently educational funds are spent* involves comparing inputs and outputs of the system. Although there is no simple relationship between these two dimensions, this is usually undertaken between measures of relative spending (as a proportion of the national income, on per capita terms, etc.) and indicators of student performance (either of *attainment* or *achievement* nature). As for the latter, evaluating how *equitably distributed financial resources for education are* usually means that the emphasis is placed within an "equal-opportunities" framework, like whether public financing is equivalent on a per student basis across different regions of the country and what mechanisms are put in place to ensure equivalency.

47. The latest international evidence on both the trends and the quality of educational spending shows that educational expenditures in OECD countries, including Turkey, have been increasing rapidly in recent times, outpacing the growth in the GDP per capita (Field et al., 2007; Levin, 2003, see also Tables A9 and A10 in the Annex). With regards to how efficiently resources are used in the sector, OECD (2009e) reaches one important conclusion: although there is a positive relationship between educational spending and student performance, this relationship is not as strong as it would be expected and only explains 15 percent of the variation in mean performance between countries.

B. What is the status of financing in Turkey?

48. Turkey's expenditure on public education in the last decade (2000-2009) has been steadily increasing in nominal terms and generally increasing relative to Turkey's GDP. It went from about 2.6 percent of GDP in 2000 to about 3.8 percent in 2011 (MoNE, 2010). This rate of expenditure is, however, still well below the average OECD country, which tends to invest around 6 percent of its GDP. However, in line with what happened with other countries in the OECD, Turkey did follow the same trends with regards to: a) education expenditure outpacing GDP growth (by about 25 percent in the period 2000-2011); and b) public education expenditure increasing as a proportion of the total consolidated budget of the public sector (from 9.4 percent in 2000 to 14.6 percent in the year 2011).

49. Expenditure on education in Turkey seems to be relatively efficient, when we compare the amount of public expenditure in education, as a percentage of the GDP, and the results from international assessments. Figure 4.1 shows Turkey's 15-year-old skills lie exactly on the line that best fits OECD countries' public expenditure on education and Math test scores in PISA 2006.[30]

50. Looking only at Turkey's public expenditure on education could be misleading, however, since the

[30] The analysis undertaken from here onwards is made on the basis of year 2006, the last year for which comparable cross-country information on both international assessments of learning outcomes and educational expenditure (private and public) existed.

country is characterized by a very large proportion of expenditures covered by private expenditures. Chawla et al. (2005) calculated the proportion of private education funding to total education funding to be of around 36 percent, based on a national-accounts approach to estimates from the 1994 Household Income and Consumption Expenditure Survey (HICES). Unfortunately, no later study has been able to determine the proportion of private funding for education as a percentage of total funding for education in Turkey. If we assumed that this proportion did not change much since 1994, Turkey would rank, as of 2006, as the fifth largest private investor in education of all OECD countries - only surpassed by Korea, USA, Canada, and Japan – in terms of the proportion of the GDP to fund education from non-public sources (Table 4.1). Turkey's families devote twice as much as the average OECD family for educating their children, relative to their income. Roughly two-thirds of that investment goes to primary and secondary education, despite the fact that more than 95 percent of all pre-university educational institutions (pre-primary, primary and secondary) are public and fee-free.

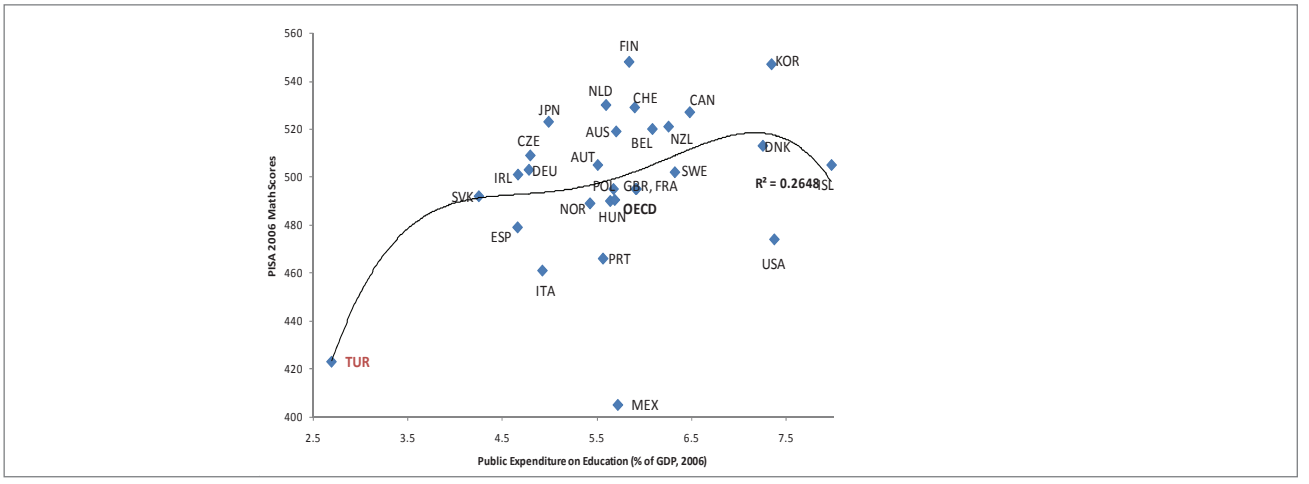
51. Therefore, when the educational investment that is spent by households as a percentage of their incomes is factored in, Turkey's efficiency of total educational expenditure is largely in question (See Figure 4.2). This does not seem to be just an artifact of the different total (public + private) expenditure levels of the potential countries involved. For example, Hungary and Turkey devote fairly similar total amounts of per student expenditure for secondary education – roughly 4,000 US dollars of similar purchase power parity (PPP), see Table A11 in the Annex – and yet Turkey's 15-year-olds are roughly 2 school years behind Hungary's counterparts in math skills.

Table 4.1 - Private expenditure on education in OECD countries (percent of GDP)

Country	Private expenditure on education (% of GDP)
Korea	2.9
United States	2.4
Canada	1.7
Japan	1.7
Turkey	1.6
Australia	1.6
New Zealand	1.3
Mexico	1.1
Iceland	0.8
Netherlands	0.8
United Kingdom	0.7
Germany	0.7
Slovak Republic	0.6
Denmark	0.6
Czech Republic	0.6
Poland	0.5
Hungary	0.5
Spain	0.5
Portugal	0.4
France	0.4
Austria	0.4
Italy	0.3
Ireland	0.3
Belgium	0.2
Sweden	0.2
Finland	0.1
OECD average	**0.8**

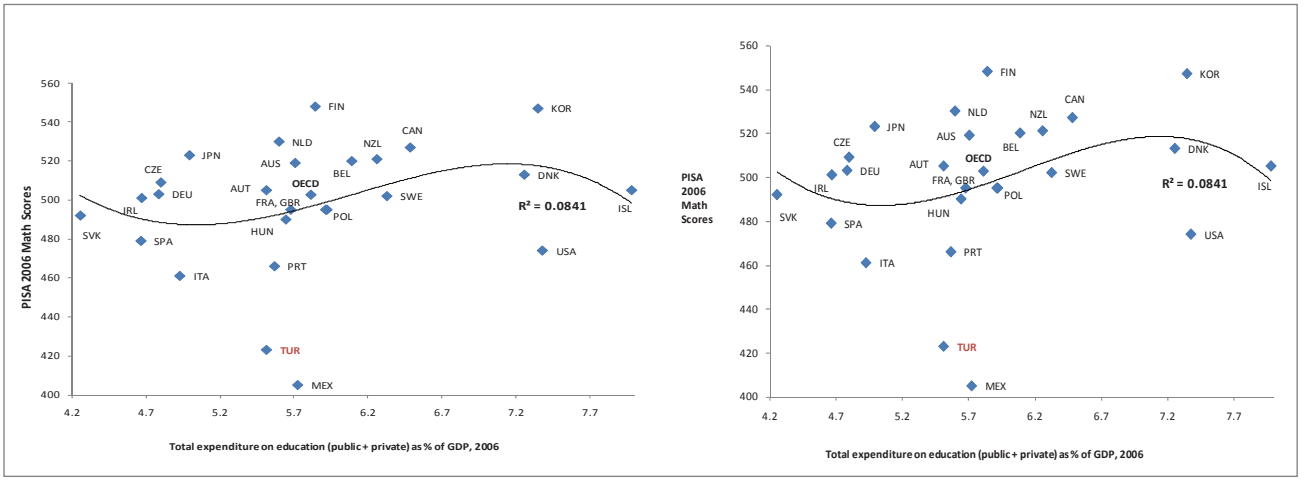
Source: OECD (2009d), Table B2.4, p.221 for all countries except Turkey, where estimates were calculated by the authors using the estimates drawn from World Bank (2005b), p.30.
Note: Estimates for all countries are for year 2006.

Figure 4.1 - Public Expenditure on Education and Learning Outcomes in OECD Countries, 2006



Source: World Bank on the basis of MoNE (2011)

Figure 4.2 - Total Expenditure on Education and Learning Outcomes in OECD Countries, 2006



Source: World Bank on the basis of OECD (2007a) and OECD (2009d)

52. Turkey's reliance on private financing also presents serious obstacles to equity (ERI, 2009a; ERI, 2009b). The distribution of private expenditures for education is very unequal across different levels of income. Duygan and Güner (2006) calculate that the educational expenditure per child is very similar for the lowest (1st) and second lowest (2nd) quintiles of the distribution of income, but is almost 3 times higher for the middle quintile (3rd), 4.2 times higher for the second highest quintile (4th) and almost 14 times higher for the top quintile (5th).[31]

53. A sizeable portion of private funding goes to the private tutoring system. This system was born as a student-driven response to the institutionalization of two high-stakes national exams and has developed since into one of the biggest industries in the Turkish economy (see Box 4.1). The bulk of the private tutoring system takes the form of private tutoring centers, known as dershanes, and their annual cost per student can range anywhere from 400 to up to 10,000 US dollars.[32] The private tutoring industry gives formal employment to more than 50,000 teachers and generates nearly 1 billion US dollars per year in gross income, according to estimates by the largest union of private tutoring workers in Turkey, ÖZDEBIR.[33] Having surpassed the million-student population already, the private tutoring industry has become a true "parallel system of education". As of 2010/11, the number of dershanes was almost identical to the total number of general secondary education (GSE) schools.

54. The combination of high-stakes entrance exams for secondary and higher education and a disproportionately vast network of dershanes in Turkey combine to raise serious questions about the distribution of opportunities and the levels of intergenerational mobility in Turkey (Gürün & Millimet, 2008; Tansel & Bircan, 2006). To start with, attending a dershane is highly positively correlated with the socio-economic status of the households where the student lives (Tansel & Bircan, 2005). Even more important is that attending a dershane increases the chances of entering university, but only if a relatively high amount of money - approximately 1,250 US dollars per year - is spent on private tutoring (Gürün & Millimet, 2008).[34] In other words, private

[31] See Duygan and Güner (2006), Table 3.12, p.81.

[32] Two other forms of private tutoring are used in Turkey. The first one is also a private sector initiative and takes the form of individualized or one-to-one teaching. The second form is a public sector initiative led by MoNE by which private tutoring is offered as a fee-based after-school course offered by mainstream teachers. Whereas the former variant is, by far, the most expensive version of private tutoring, with costs ranging anywhere from 60 to up to 140 US dollars, as anecdotal evidence suggests, the latter variant is the cheapest: fees are in the range of 1-2 US dollars per hour, depending on the location (Tansel & Bircan, 2008, p.12).

[33] See Tansel and Bircan (2008), p.28. ÖZDEBIR is the Turkish acronym for the Association of Private Tutoring Centers (Özel Dershaneler Birliği Derneği), which counts 500 members operating a network of about 800 PTCs (Tansel & Bircan, 2008, p.14).

[34] Gürün & Millimet (2008) find that the use of private tutoring is positively associated with university placement but only because there is a strong selection bias effect into tutoring. When correcting for even a modest degree of self-selection, there seems to be a negative effect of private tutoring spending on the probabilities of university placement, except when spending goes beyond the $1,275 US dollars a year. This number represents, roughly, about 15 percent of Turkey's GDP per capita, according to the World Economic Outlook Database of the International Monetary Fund (available at http://www.imf.org/external/pubs/ft/weo/2009/02/weodata/index.aspx, accessed on March 1, 2010).

tutoring can really pay off if you have enough money to spend; otherwise, it seems to be a waste of resources for the most part. And households may spend anywhere from 1 percent to 15 percent of their incomes, on average (Tansel & Bircan, 2006). In a nutshell, access to high-quality education in Turkey seems to be highly correlated with socio-economic background, but the very foundations of the education system, epitomized by both the entrance examinations for secondary and higher education and a "parallel system of education" fully financed by the private sector, appear to perpetuate any existing inequalities in the distribution of income. These early-tracking systems have been shown to not only increase educational inequality, but also to reduce average educational performance (Hanushek & Wößmann, 2006).And even on other life domains, like public health, high-stakes exams appear to be a major problem with significant repercussions, for example, in terms of high rates of depression (Yıldırım et al., 2007).[35]

Box 4.1 - The birth and rise of the system of private tutoring in Turkey

The centralized system for admission of students into higher education institutions (HEIs) started in the year 1964-65, with the institutionalization of the mandatory University Entrance Examination, known as ÖSS (Öğrenci Seçme Sınavı). This policy measure was thought as a way to deal with the explosion in the demand for higher education in the country and established a merit-based system that could ensure, first, the selection of the best-performing secondary education graduates into the existing set of universities, and second, that the best among the selected could choose the career of their choices with priority over the rest.

Table 4.2 - Trends in Dershanes, Applicants for the University Entrance Examination and Students Placed in Higher Education Institutions

Years	*Dershanes*	Students (thousands)	Teachers	Applicants for the University Entrance Examination	Students finally placed on higher education institutions	Ratio applicants / placed (%)
1975-76	157	45.6	1,384	280,504	40,468	14.4
1980-81	174	101.7	3,826	466,963	41,574	8.9
1990-91	762	188.4	8,723	892,975	196,253	22.0
1995-96	1,292	334.3	10,941	1,265,103	383,974	30.4
2000-01	1,920	556.3	17,300	1,414,872	414,647	29.3
2005-06	3,986	1,071.8	47,621	1,730,876	607,994	35.1
2010-11	4,099	1,234.7	50,209	1,587,993	874,375	55.1
Annual cumulative growth rate (%)	**9.7**	**9.4**	**10.6**	**5.3**	**8.0**	**2.6**

Source: World Bank based on data from Tansel and Bircan (2008), Table 1, p.32; MoNE (2011), Table 1.16, p. 35; and from ÖSYM (2011), Table 1, p.11.

With a continuously growing population of applicants for HEIs and a somewhat fixed number of annual vacancies in HEIs, the competition for entrance into universities became increasingly harder and created the right incentives for the first wave of Private Tutoring Centers (or dershanes) which, just a decade after the introduction of the ÖSS, already counted more than 150 schools and 45,000 students, when the HEIs were already absorbing about 40,000 per year. Although the excess demand for places at HEIs did ease somehow - with the Government stepping up the pace at which it increased the number of students finally placed on HEIs compared - the rhythm of expansion of the private tutoring system was relentless: in the last 35 years, the number of schools, students and teachers grew at an annual cumulative rate of about 10 percent annually, as Table 4.2 shows.

Hidden in the statistics of Table 4.2 lies another significant factor that fueled the growth in the system of dershanes even further: the creation of a mandatory national exam for entering the most prestigious secondary schools in the country, currently known as the SBS (Seviye Belirleme Sınavı or Student Placement Examination). This exam resulted in a further expansion of the dershane system. As of today, roughly one-third of the population of dershane students is made up of primary education students preparing their SBS (Tansel & Bircan 2008, p.13).

[35] The authors' conclusions in regards to how intertwined private financing, the early-tracking system fostered by entrance examination tests and potentially serious health issues are: "It is clear that the single administration of a standardized test that defines the future lives of high school seniors is not only stressful and leads to high observed rates of depressive symptoms among students but is also a contentious national educational policy. And despite the process being perceived as meritocratic and immune to manipulation, it is also clear that many students are tutored privately and the resources of the family and the motivation of the parents themselves define the success rate among the students" (Yıldırım et al., 2007, p. 40).

55. The significant disparities in private financing of education in Turkey are reinforced by significant differences in the distribution of monetary resources from public funding across the country. As a matter of fact, the bulk of the financing of public education in Turkey, especially for the pre-university levels, is highly centralized and very rigidly based on a fully norm-based scheme by which per school allocations are determined on the basis of a few inputs like the number of classes, students, and teachers, but not on the basis of real needs driven by demand factors (e.g. school-age population growth) or by equity-driven factors (e.g. higher per pupil cost for students from disadvantaged populations) (World Bank 2005b, 2006a). As a result, per student expenditure allocations do not seem to correct for regional differences, but instead to reinforce these patterns.[36]

56. Non-monetary resources also appear to be aligned in a way that exacerbates the inequality of opportunities. Çıngı et al. (2007) undertake a comprehensive quantitative study of four dimensions of educational opportunity[37] and form an index of educational development for each of the 923 sub-provincial districts in the country. In the case of physical infrastructure for primary schools, they come to the conclusion that, to equalize physical infrastructure across the country[38], the Government would need to build 124,165 classrooms, 5,708 computer labs, 4,518 science and language labs, 4,096 libraries, and also procure 78,425 computers (Table 51, p.227).[39]

57. Finally, the allocation of public resources across different levels of education in Turkey also looks highly inequitable. Education financing overall – with the big contribution of private funding - is highly correlated with socio-economic background and too tilted towards the highest levels of education, with the difference in per student costs by level of education still excessively high compared to the average OECD country.[40] *This imbalance in the funding of educational levels across the school system* further perpetuates regional asymmetries directly impinging on the stark differences in the quality and equity of education across the country.

58. The Government of Turkey is taking some steps to better understand the dynamics of the financing of education through the collection of detailed data. The most significant initiative was the creation of the Turkey's Financing of Education and Educational Expenditure Information System (TEFBIS, in its Turkish acronym). TEFBIS is a public-private partnership involving the Ministry of Education, Hacettepe University and BNB Consulting Firm that started in 2006 and its design was completed in December 2009 (Ergün, 2009). This project has been designed to keep record of the revenues and expenditures of education institutions tied to MONE (as well as district-, province- and region-level data). On the revenue side, this system will attempt to document all sources of private funding accruing public schools, like parent-teacher associations (PTAs[41])' contributions, probably the key outside source of financing for all public schools. The database includes a specific module on PTAs and their contributions, which will be the first of

[36] World Bank calculations based on Yılmaz and Emil (2008, Annex 3.1, p.59) show that there is a positive correlation of 0.17 between per student expenditure on public basic education (primary and pre-primary) and the level of educational development of the provinces. Yılmaz (2006) also shows that the correlation between per student expenditure and annual population growth of the provinces is -0.73, which seems to run counter to expectations, even before any equity-driven adjustments we may think of. Instead, this seems to be showing that sudden changes in demographics are not properly incorporated or adjusted for by the current financing arrangements.

[37] These dimensions are basic educational infrastructure, physical infrastructure of the school, level of (public and private) educational investment, and educational achievement. See Çıngı et al. (2007), pp.9-14.

[38] The equalization principle is given by bringing each district's value in each category to the current average for that particular indicator for the whole country.

[39] Çıngı et al. (2007) also undertake a thorough assessment of the 57 districts that fall within the highly under-developed category of the educational development index and they survey them. Interestingly enough, although the "lack of libraries or labs" and "lack of material" categories are seen as very important problems by a majority of these districts (39.3 percent and 46.8 percent of districts, respectively), the three resource areas with the highest degree of agreement in regards to urgent attention needed by educational authorities are the lack of janitorial services (91.9 percent), the lack of teachers (74.2 percent) and the lack of adequate accommodation for teachers (73.8 percent) (See Table 65, p.364).

[40] For example, whereas the typical ratio of total per student cost for secondary versus primary education is about 1.2, each secondary student in the Turkish system costs 130 percent more than the typical primary education. An even more pronounced situation happens when we compare higher education with any of the other two levels: whereas the typical per student higher education cost for an OECD country is roughly twice as high as its primary education counterpart, for Turkey the ratio hovers around 5. No other OECD country presents a ratio higher than 3.2 (see Table A11 in the Annex).

[41] PTAs in Turkey are known instead as Schools-Parents Associations, following the translation of the expression Okul-Aile Birliği. See Eurydice (2010), p. 64.

its kind ever in Turkey.[42] TEFBIS is in the process of being rolled-out to the whole country and will become a mandatory form, from 2011 onwards, to be filled out annually by schools. The idea behind documenting all sources (public and private) of funds for financing schools in Turkey is to get a comprehensive picture of per student funding in the country. Upon this thorough diagnosis of asymmetries in funding, the Government is thinking about introducing corrective measures. Among these measures we find the design of specific programs or funding targeted to the most disadvantaged populations.[43]

C. Policy Options

59. Introduce a new system for financing public education that uses formula funding arrangements based on capitation principles. The most efficient and equitable systems of financing education are those that heavily rely on formula-based funding arrangements around a general per capita financing (PCF) scheme (Alonso & Sánchez, forthcoming; Levačić, 2008; Ross & Levačić, 1999). These systems are characterized by the principle that "money follows the user" and are also used in other social sectors (e.g. health, see World Bank, 2008a). Funding is determined according to the *number of pupils*, the main indicator in the formula, but pupils are differentiated according to characteristics that cause the costs of educating them to differ (e.g. grade/age, curriculum, location, minority language, social disadvantage). As a result, such a system directly addresses *equity* concerns by generating per student expenditures that better reflect the real cost of education in different places and for different student populations. Furthermore, these schemes can present strong incentives to improve educational equity by rewarding, for example, increases in access to school of the out-of-school population, improvements in educational outcomes or quality improvements at the school level. Finally, other factors may be included in the formula that may help address other structural issues outside the control of the education system, like the school-age population density.

A reform in that direction is a good step but will be more effective if local schools have more control of and capacity to use their resources to meet local needs. In other words, a successful introduction of PCF systems entails a significant degree of decentralization of resources from the Central Government to the local governments, first, and from local governments to schools, in second place. With decentralized financing to the schools, *resources are no longer budget-line earmarked*, and therefore school principals do not simply execute budgets per the government-issued norms, but they are now fully in charge of the school budget.[44] *Capacity building, autonomy and accountability* are thus essential complementary ingredients that will maximize the effectiveness of any of these financing changes (Barrera-Osorio et al., 2009; Eurydice, 2007; Gershberg, 2005).

60. Increase targeting of public resources towards the groups with the greatest needs and the highest returns to education. Prioritizing the allocation of public resources to the groups that are most in need (the poor, girls, rural areas) maximizes the returns per dollar spent and helps to equalize educational opportunities across the country (Harmon et al., 2003; Patrinos, 2008). Therefore, targeting public resources to these particular groups is sensible from a purely economic standpoint: getting the most out of each dollar invested helps to improve the efficiency in the use of scarce resources.

Targeting resources, however, is also key to foster a culture that sees equity as a core value of the system. When the impact of socio-economic background on student performance is high, as it is the case in Turkey, urgent remedial measures are at stake. As Alacacı and Erbaş (2010) put it, measures to compensate for "deficiencies in *school social capital*" are needed in

[42] The system will also reflect income derived from the rental of school areas. Through this system it will be possible to monitor school-based expenditures, follow up on donor contributions to see what they are used for, produce up-to-date information for national researchers and international organizations on education expenditures, and, as a result, create a system of data transparency and credibility.

[43] The Central Government is also attempting, through the projected financing of specific programs, to start addressing some of the profound disparities in access to a higher-quality education. For example, the Government is planning to expand the bussing of disadvantaged students, especially girls, from primary to secondary education to increase the coverage rate (and lower the existing gender bias) for the latter. Also, there is a plan for significantly rehabilitating the facilities (e.g. bathrooms) in a number of regional boarding schools so as to entice parents into sending their children to these schools and stop attending bad-quality schools from their villages. See MoNE (2009c), p.95.

[44] Principals are now empowered with a completely new role by which they become financial and resource managers, and most importantly they become instructional leaders, because of the possibility of administering resources in a more rational way and applying any savings to quality-enhancement expenditures.

order to reduce the large differences across schools in the distribution of learning outcomes. A systematic strategy for enhancing the equity in the distribution of resources across regions of the country could go a long way in creating such an equity culture. For example, India presents an interesting case of a highly-populated country that attempted to introduce educational development indices some time ago to start targeting resources in a way that significantly helped to align the real investment needs of each district with the annual allocations (Jhingran & Sankar, 2009).[45] Exploring substantial changes to the current pattern of sub-sectoral funding could be another potential avenue for improving the targeting of resources. Shifts in funding priorities across different levels of education towards the lowest levels, where universal coverage has not been ensured, would be an equity-oriented approach to compensate for significant differences in the socio-economic background with which children enter the system.

61. Overhaul the current system of secondary and tertiary education entrance exams. The current system of entrance examinations encompasses a high degree of early tracking of students and makes the system heavily dependent on private tutoring. Since access to high-quality private tutoring is so highly correlated with socio-economic status, changing the current configuration of the system around these exams would be a significant step towards increasing educational opportunities across the country (Ferreira & Gignoux, 2010; Polat, 2008). *One option to consider is the elimination of both exams*. Of special interest is the secondary entrance exam (SBS) which is not universal but encompasses one-third of the total number of students in dershanes, generating an early-tracking system that make students as young as 11 years old (6th grade) start attending private tutoring to maximize their chances of attending the best public secondary schools in the country. A second option would be to significantly reform these exams. This could be accomplished by radically enhancing their scope and nature and comprehensively cover more aspects of the curricula. For example, in the case of *the university entrance test (YGS-LYS)*, Turkey could mimic successful end-of-cycle tests elsewhere in the world (e.g. International Baccalaureate, German Abitur, etc.). The World Bank (2005a, pp.23-4) presents a comprehensive set of benefits that would arise from a new exam system for accessing higher education. They are well synthesized in World Bank (2007a): "[a]t a minimum, the exam should be comprehensive covering all curricula and should measure what students learned in secondary school, including the curricula for the last year of secondary schooling. Looking at exams in other countries – for example, the International Baccalaureate, the German Abitur, and the British "A" levels – is a way to start thinking about how to develop a new exam" (p.34).[46]

[45] Although the equity orientation of this general program of resource allocation (known as Elementary Education for All Mission, or Sarva Shiksha Abhiyan) still needs further improvements, changes made in the last few years have significantly resulted in an increase of educational equity across many dimensions. Two interesting principles are at the core of the system: 1) resource allocations follow evidence-based targeting principles; and 2) "equitable and not equal should be the guiding principle" (Jhingran & Sankar, 2009, p.25).

[46] Although a purely merit-based system for selection into secondary and tertiary education could look as the fairest solution on paper, the correlation between socio-economic background and success at these entrance exams is so strong that if needs-based elements are not introduced in selection processes of elite public institutions the equality of educational opportunities across the country will be greatly jeopardized. A radically different set of entrance exams buttressed by a significant push for quality-enhancing improvements in public education in the country could go a long way in gradually decreasing the heavy reliance of the system on the private tutoring industry and, as a result, significantly boost the efficiency, equity and quality of the system.

Chapter V: Information

A. Background

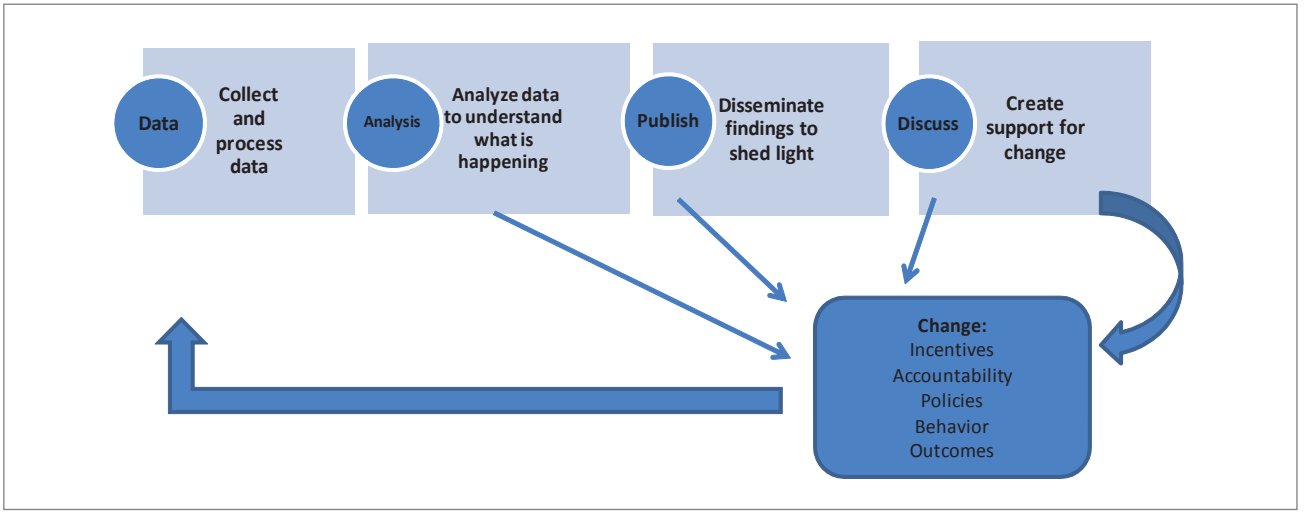
62. Information is a key crosscutting tool to affect the three broad areas that are critical to support high-quality student outcomes: inputs and processes, incentives, and accountability (see Figure 1.10 in Chapter 1). High quality information can help to *improve the quality of inputs and processes*, including pre-primary education, teachers, school leadership, curricula, learning materials and equipment, and school facilities through an examination of what works best, how, and in what circumstances, and through adjustments and changes in inputs and processes as needed. Good data is also needed to design and implement effective incentives, monetary as well as non-monetary, to encourage better teaching and learning. And last, but not least, information can support increased accountability for improved outcomes by giving voice to students, parents, teachers, school leaders, and communities at the local level as well as policy makers and the public at the national level.

63. Figure 5.1 shows how the collection, analysis, and use of information can encourage quality improvement through dissemination and discussion of data and necessary changes. Information can provide pressure to improve quality in a variety of ways, through better understanding of what is happening in the education system, what is working and what is not, shedding light on a problem, helping to build support for needed changes, and creating accountability mechanisms. If it works well, this process includes a continuous learning process and feedback loop and would occur at the classroom, school, system and policy levels. Without information, it is almost impossible to work on improving the quality of education since specific areas needing improvement and the effects of changes remain unknown.

64. An education system that encourages the collection and use of data at all levels of decision-making—at the classroom, school, provincial and national levels--can support a more efficient and equitable system with improved student learning outcomes. Parents, students, teachers, school directors, community leaders, researchers, policy makers and others, such as the business community, can help bring about change if they are informed about what is happening.

65. Information is needed at three levels in the education system— the student level, the school level, and the provincial and national level—to provide the information needed for students, parents, teachers, school directors, researchers and

Figure 5.1- Using Information to Improve Quality



policy makers. At the student level: students, parents and teachers need to be informed about the strengths and challenges of the individual student and what is needed to help him or her perform better. At the school level: students, parents and community members need easy access to accurate information about local schools to make informed education decisions. Teachers and school directors need to be able to work with colleagues to support and learn from each other on what works best in improving teaching and learning at their schools and to make adjustments or take corrective actions as needed. At the provincial and national level: policymakers need to be able to identify which programs are making the biggest difference for students and teachers and use that information to inform policies, implementation approaches and funding decisions. In addition, dissemination and discussion with other stakeholders, including the public at large, would generate better understanding of Turkey's education system and help to create consensus on needed reforms.

66. The development of an Education Management Information System (EMIS) is a necessary step in order to collect the needed data. Developing an EMIS has typically been more complex, challenging, labor intensive and expensive than anticipated. An EMIS is a system for the "collection, integration, processing, maintenance and dissemination of data and information to support decision making, policy-analysis and formulation, planning, monitoring and management at all levels of an education system. It is a system of people, technology, models, methods, processes, procedures, rules and regulations that function together to provide education leaders, decision makers and managers at all levels with a comprehensive, integrated set of relevant, reliable, unambiguous, and timely data and information to support them in completion of their responsibilities" (Cassidy, T. (2005), p. 25). While much effort is often spent on strengthening technical skills to build, maintain and use the data collection system, not as much is spent on how to ensure data quality or on building the skills of data analysts, evaluation specialists, education planners and others to use the data more effectively in their work. A systematic approach to EMIS development is lacking in many countries that are trying to incorporate improved data collection and use into their education systems. Box 5.2 presents good-practice examples from both developed and developing countries.

B. What is the status of information in Turkey?

67. Recent initiatives in Turkey to start collecting and using information suggest an interest in moving towards better data and more use of such data to improve the education system. For example, Turkey participated in an OECD study that examined basic education in the country (OECD 2007b) and in several international tests of student learning (PISA 2003, 2006, 2009 and 2012; TIMSS 1999 and 2007, and PIRLS 2001[47]). Turkey also recently carried out its first national standardized assessment of student learning, which will be released shortly, and plans to continue carrying out these national assessments on a periodic basis.[48] Continuing to participate in international tests of learning outcomes and carrying out additional national assessments are important initiatives for Turkey to understand the level and distribution of student learning outcomes over time and to benchmark Turkey's system against other countries.

68. MoNE also launched the E-School Database (ESD), an integrated database for all levels of education in May 2006 to support the process of achieving information-based education policies. The ESD, which will connect all schools and education institutions on the web once it is fully fledged out, aims to gather all school-level data in one main database so as to enhance the degree of coordination between the Ministry units and the different institutions under its scope (provincial and district branches of the Ministry, regular and special education schools, adult education institutions, etc.) (See Box 5.3). The goal of the ESD

[47] TIMSS stands for Trends in International Mathematics and Science Study and PIRLS stands for Progress in International Reading Literacy Study. Both types of assessment are administered by the Lynch School of Education at Boston College. For further details see http://timss.bc.edu/.

[48] MoNE has an established tradition of assessing learning outcomes at the national level. Ever since 1994 a national Student Achievement Assessment Test (Öğrenci Başarılarını Değerlendirme Sınavı - ÖBBS) has been held every three years or so for grades 4 through 8 for evaluating Turkish, Math, and Sciences. These tests, however, measure what students learn in each class level and what they lack, rather than what they know. For a description and statistics on the ÖBBS, see http://earged.meb.gov.tr/earged/Ol%C3%A7me/tanitim_devam.html.

Box 5.1: Education Management Information Systems (EMIS): Good Practices Across the World

Bangladesh: Bangladesh has a long history of successful data collection since the early 1990s with the implementation of the first school census. A significant proportion of work in this area has been supported by donor aid, enabling the country to build up a significant amount of analytical data to measure the quality of educational inputs (physical facilities, materials, numbers and training status of teachers) and also the internal efficiency of the education system. In Bangladesh a pilot project has been implemented to support decentralized education planning in 20 sub-districts across the country. This involved each sub-district to collect accurate and up-to-date information from each school over a basic set of indicators. On the basis of these data a list of challenges was drawn up and a set of objectives developed. The benefit of this approach is that it involves identifying local issues and local responses (Powell 2006, p.16).

Colombia: Among promising examples of the use of EMIS is the case of the Bogotá municipality's collection and use of school census and student-level data to optimize the allocations of students and teachers to schools. It is hard to imagine a more persuasive example of the potential for good data to inform and support decision-making. The Bogotá experience is rich in that it offers an example of the use of data that yielded a more equitable distribution of resources and equality of opportunities for learning for students, and also an example of the power of good data when used as part of a transparent decision-making process. The fact that the quality of these data has helped the government achieve considerable financial savings makes it an even more interesting example (Cassidy 2005, p.31)

Ghana: The EMIS unit in Ghana plays an important role in helping the government to formulate operational plans and also to monitor progress. Prior to the preparation of the annual operational plan a preliminary sector performance report is produced and a review meeting is held in order to obtain inputs from stakeholders and donors. Moreover, the EMIS is also beginning to play an important role in supporting the process of decentralization. The outputs from the EMIS are being used to support the development of operational plans and budgets at the district level. It is expected that this will help improve operational efficiency, promote responsiveness and improve service delivery. Under these changes district offices will now have more autonomy in developing their plans, as well as some discretion over spending their annual budgets (Powell 2006, p.16).

USA: The United States has a developed state-based EMIS structure. One of the good examples is Ohio's EMIS. Established in 1989, it provides the architecture and standards for reporting data to the Ohio Department of Education (ODE). School districts, data processing centers operated by Information Technology Centers, and other EMIS reporting entities are linked for the purposes of transferring data to ODE. EMIS is the statewide data collection system for Ohio's primary and secondary education. Staff, student, district/building, and financial data are collected through this system. Demographic, attendance, program, course, and test data are submitted to ODE at the student level. General school district and school building data, including financial data, are also reported through EMIS. The source data for Ohio's accountability and funding systems are the EMIS data files (Ohio State Department of Education 2009, p.3).

Box 5.2: E-School Database Basics

The key data loaded on the E-School Database (ESD) are accessible via the Internet (at www.e-okul.meb.gov.tr) to school authorities (principals, teachers) as well as parents. Both need a username and a password to enter the system. The visible types of information are of two types: a) about the particular school, which is entered by principals, and b) about the students attending that school, which is entered by the students' own teachers for parents and authorities to see (see Table A12 in the Annex for further details).

School administrations have to make sure that each class is recorded with the accurate list of students. They are responsible for the accuracy and timeliness of all information recorded within the student operations. They also need to store recent pictures of students in the system as well as keeping a daily record of student absenteeism (with or without excuse). Exam dates and results are uploaded in the system by teachers. Principals are responsible to supervise this implementation and make sure every teacher gets a password for this.

Currently all public and private primary schools, pre-primary schools and special education schools are using this ESD's Module System. In the near future, it is expected to be expanded to secondary schools as well.

Source: MONE (2009a)

is to improve the efficiency of the current system in collecting and updating data so as to increase the managerial capacity of the Ministry in running a sizeable education system and in responding in a timely fashion to the dynamics of daily challenges.

69. The ESD is an excellent tool for education policy making in Turkey, and while it has kept improving since its launch in 2006, it still faces challenges. The main requirements for a successful EMIS design are timely and reliable production of data and information, data integration and data sharing among departments, and effective use of data and information for educational policy decisions among others. The World Bank recently analyzed parts of E-school database to help MoNE develop targeting criteria for the School Development Program that was launched in 2010. Undertaking this analysis highlighted some of the gaps in data. A next step for MoNE is to match the reality of the E-school database to its enormous potential.

70. More needs to be made out of this wealth of information if the data and studies are to be truly effective in helping to bring about support for change and improvement in Turkey: it will require a cultural change. Hua and Herstein (2003) argue that establishing a data and information system is not enough, instead actual emphasis should be made on nurturing a new data management culture. Turkey does not have a culture of disseminating, discussing and using information to educate the public, parents, and students on the educational outcomes of individual schools or of the school system as a whole. For example, the OECD study on basic education in Turkey (OECD 2007b) highlighted key steps for education reform and could have been used as a starting point for discussions on next steps in Turkey's agenda to improve the quality of basic education. The same holds for PISA results. Turkey is to be commended for participating in PISA and continuing to participate even when results were poor. But the next step---discussing and using the results to motivate change--has not occurred, for the most part. These reports could be used to educate the public on Turkey's educational outcomes and to build support for reform.

71. Countries that have embarked on significant reform and expansion of education usually do so through reports on education and public discussion. For example, as illustrated in Tables 5.1 and 5.2, Ireland began its reforms in the 1960s through many key reports highlighting issues and needed reforms and continued this through the 1990s with an unprecedented level of consultation on education reforms (Coolahan, 2008). Another example is Chile, which began reforms to improve quality and equity in the 1990s, and undertook an OECD study in 2004 to examine the impact of the reforms and needed course corrections (Cox, 2008).

Table 5.1: Some Key Reports in Ireland in the 1960s

- Investment in Education, 1965
- Commission on Higher Education, 1967
- OECD, Review on Science/Technology, 1964
- Report on Education of Mentally Handicapped, 1965
- Steering Committee Report on Technical Education, 1967
- Report of Teachers' Salaries Tribunal, 1968
- Report on Teacher Education, 1970

Table 5.2: Consultation in Ireland in the 1990s

- Regional Seminars, Dissemination Conferences
- National Education Convention
- Roundtable on R.E.C's
- National Conference on School Management
- National Forum on Early Childhood
- Adult Education Forum
- National Consultative Forum on Teaching Career

C. Policy Options

72. Encourage public discussion on education through the production of an annual report on the state of basic education in Turkey. Such a report would help to provide a picture of the health of Turkey's education system as a whole and to document changes over time. The Condition of Education, published each year by the National Center for Education Statistics at the U.S. Department of Education, is one example of such an annual report.[49] *The Condition* summarizes important developments and trends in education using the latest available data and is available on the Department's web site as well as in printed form. Having been developed over many years, the Condition is very comprehensive, including data and analysis on the status of 46 indicators in five areas related to education in the United States - for example, enrollment trends by age, status of early development of children, knowledge and skills of young children, and expenditures by district. An area of special analysis is also included each year - for example, international assessments in 2009 and mobility in the teacher workforce in 2005. Analyzing, publishing and discussing data on Turkey's education inputs and outcomes would help to generate and action on policy changes needed and would help policy makers to monitor the system performance and evaluate efforts to improve quality, making adjustments as needed. There is a need, however, for coordinated conversation and consultation on the findings, and a willingness to discuss problems candidly.

In beginning to develop an annual report Turkey would start with a smaller and less ambitious set of indicators and analyses, focusing initially on the areas of highest priority in Turkey as well as areas for which data are available. Publishing the annual report on MoNE's web site would allow stakeholders across the country easy access to the data. In addition, disseminating and discussing the report with workshops around the country and with different stakeholders would provide a forum for discussion, consensus building, and action on policy changes needed in Turkey, as discussed in the example above where Ireland held extensive consultations. Over time the breadth and coverage of Turkey's report could expand. A unit in MoNE could be established to support the preparation and discussion of such an annual report with high level government engagement in dissemination and discussion.[50]

73. Make information on individual schools, including inputs and outcomes, widely available to the public through the creation of school report cards for basic education. Report cards would analyze, publish and discuss data on education inputs – e.g. availability of learning materials, teacher qualifications – and outcomes – e.g. graduation rates, results of achievement tests, improvement from year to year – at the school level providing more voice to students, parents and communities to exert pressure on local schools for needed changes. The data could also be used to target extra assistance to schools with poorer outcomes to help them improve their performance, allowing the schools to determine their greatest needs, take steps to address the issues, and measure change over time. Such an approach could help to alleviate the effect of the substantial differences in learning outcomes by type of school, which need to be addressed in Turkey in order to raise overall quality of education and to reduce inequities. If over time school performance did not improve other steps could be considered.

A number of countries, such as India, Australia and the United States, have school report cards that are available on a state-by-state basis in report form as well as on the web. For example, a web site maintained by The National University of Educational Planning and Administration in India provides school report cards for more than 1.25 million schools by state, district, and school.[51] As there

[49] For further information on this report, see http://nces.ed.gov/programs/coe/.

[50] In December 2007, MoNE created a new Internal Audit Unit (IAU), following the national law #1508, in an effort to increase accountability, financial transparency, and functioning of the public management structure. The Unit produced its first report in 2009 and focused their analysis on the day-to-day management of MoNE. This is a commendable effort since such an annual report is an essential tool for the management of the education system. The upcoming IAU's report for 2010 will focus on some of the areas highlighted in this document, most notably, pre-primary education, dershanes and private schools, and organization and publication of statistical information. For further information on the work of this unit, see http://icden.meb.gov.tr.

[51] For India, see http://schoolreportcards.in, for Australia, see http://www.myschool.com.au/. In the case of the United States, each state develops its own website for school report cards. A good example of these websites is the one for the State of Ohio (check http://www.ode.state.oh.us/GD/Templates/Pages/ODE/ODEDetail.aspx?page=279).

are substantial differences in the characteristics of students, available resources, and the level of learning outcomes by type of school, the analysis of school-level data needs to examine the resources at the school as well as the socio-economic status of the school. This is important in Turkey where the income distribution of students in Turkey varies by school type and is highly correlated with school performance. In fact, one study shows that Turkey is the OECD country with the second highest index of separation between schools indicating that a high degree of sorting of 15-year-olds from different socio-economic backgrounds into different schools (Field et al., 2007). The specific data to be provided on the socio-economic status of the students would vary according to the country and the availability of data. For example, the India reports discussed above provide information on the number of students receiving scholarships or subsidies for books or uniforms.

74. Improve the coverage, quality and availability of data on basic education through improvements to the *E-School Database.* The ESD has good potential for documentation and analysis of education at the school level as well as the system level if the quality and comprehensiveness of the database are improved and gaps in coverage are eliminated. With comprehensive and complete data, the E-school database can then be used to develop the annual report on education and school report cards as well as measure and evaluate progress in educational outcomes. As discussed, the World Bank's recent use and analysis of certain parts of the database indicate problems in the comprehensiveness and quality of the data that hamper its current function. If MoNE and the Turkish Statistics Institute continue to cooperate according to international standards and classifications, the data collected in this database can ideally cover the outputs of educational institutions, the policy levers that shape educational outputs, the human and financial resources invested in education, structural characteristics of education systems, and the economic and social outcomes of education. The database would not only produce and publish indicators and analysis on the evolution and impact of education, but it would also guide policy makers in the right direction to improve the overall quality and equity of basic education by clearly specifying the gaps in education in Turkey.

Chapter VI: Conclusions

75. Although Turkey has significantly expanded access to basic education in the last decade, important challenges await on two interrelated fronts: quality and equity. Turkey's educational system is currently of low quality relative to the growth and competitiveness ambitions of the country and is also significantly more inequitable than most other OECD countries. Table 6.1 summarizes the expected impact of each of the policy options---pre-primary education, teachers, financing, and information--on the quality and equity of basic education.

Table 6.1: Summary of Policy Options and Expected Impact on Quality and Equity

Policy Area	Policy Options	Expected Impact
Pre-Primary Education	o *Modify the next stages of MONE's roll-out of the pre-primary education expansion program to ensure the country is able to meet its goal of universal access to kindergarten by 2014/15*	• Increased enrollment rate for 5-year-olds across the country and higher rates of return to education for the most disadvantaged provinces.
	o *Develop a quality assurance framework for public and private provision of early childhood education*	• Clearer goals for staff-to-child ratios, new requirements for early childhood educators, and the creation of a new quality rating system.
	o *Expand the information campaigns about the importance of early childhood education*	• Increased parents' desire for their children to start school earlier.
Teachers	o *Support and hold accountable new teachers in the first few years of teaching*	• Better environment for the teaching profession as a whole.
	o *Create new incentives — monetary and non-monetary — to attract and retain high-quality teachers*	• Better-remunerated, more highly motivated and more skillful teacher corps.
	o *Improve teacher training, aligning in-service with pre-service training, and establish school-based teacher training strategies*	• Better trained teachers and a less unequal distribution of skills across the teacher force, enhanced cooperation across teachers, and larger peer effects.
Financing	o *Introduce a new system for financing public education that uses formula funding arrangements based on capitation principles*	• Higher levels of inputs to improve the quality of the most disadvantaged schools.
	o *Increase targeting of public resources towards the groups with the greatest needs and the highest returns to education*	• Higher rates of return to education from the investment in those groups (e.g. lower levels of education, most disadvantaged regions, and girls).
	o *Overhaul the current system of secondary and tertiary education entrance exams*	• Reduced reliance on private funding for private tutoring or re-investment of these funds into the public system for quality-enhancement activities.
Information	o *Encourage public discussion on education through the production an annual report of the state of basic education in Turkey*	• Improved knowledge and understanding of the performance of the education system; more discussion and support for education reform.
	o *Make information on individual schools, including inputs and outcomes, widely available to the public through the creation of school report cards for basic education*	• Improved transparency and accountability at the school level; empowered parents and students.
	o *Improve the coverage, quality and availability of data on education through improvements to the E-School Database*	• Better data for education policymaking and for decision-making by parents, students, teachers, and administrators.

76. The various policy options face trade-offs in terms of their expected impact and the risks associated with carrying them out. The latter is a broad term as it encompasses risks linked to the political economy of these undertakings, the expected financial costs, and the technical and logistical knowledge and capacity to carry out such changes. Not surprisingly, a positive correlation exists between the degree of risk and the degree of likely impact.

77. The rest of this chapter discusses the expected impact and possible risks for each of the four policy areas. An assessment of the financial costs for each of the suggested options would help sorting through the trade-offs among options, however, this is beyond the scope of the paper. The discussion focuses instead on "orders of magnitude" for the complexity of the task at hand, so that the Government of Turkey may have a better grasp at what the main challenges and constraints are vis-à-vis potential expected benefits.

Pre-Primary Education

78. The three pre-primary initiatives go hand in hand and are best implemented in a coordinated way. This would encourage Turkey to have a system that is aligned with international standards of quality as well as greater coverage and higher equity in access.

79. Modifying the next stages of MoNE's roll-out of the expansion of pre-primary education to focus next on the provinces with the lowest pre-primary enrollment rates and to provide everyone with a year of kindergarten would increase the immediate impact by getting students in the neediest areas into kindergarten sooner. Evidence shows clearly that the benefits of earlier education are largest for those most in need. The short-term risks of successful implementation could increase a bit due to the higher costs of expansion in these areas, including possible construction. At the same time, these costs will have to be faced sometime in the next few years if the goal of universal access to kindergarten is to be achieved by 2014/15 and it is better to focus on the needs and required planning sooner rather than later. MoNE does not seem to have a fully-costed plan for the expansion needed to meet its stated goals; without such a plan the likelihood of successful achievement of MoNE's ambitious goals in a short period of time is low.

80. Developing a quality assurance framework for public and private provision of early childhood education is a necessary step to ensuring high-quality education choices, especially as a wide variety of pre-primary options including through centers, schools and kindergartens will be needed to meet Turkey's goals. This expansion of pre-school, which will require a significant degree of cooperation between the public and the private sector for provision and financing, can be carried out much more effectively if a quality assurance framework is in place. Thus the impact of a good quality framework is high and should be in place before or at the same time that a major expansion occurs rather than later. The costs of this option are moderate relative to other pre-primary options but the cost of not instituting a framework is high if poor-quality providers enter the system. It is harder to implement a quality assurance framework after the fact when poor-quality providers are already operating.

81. Expanding information campaigns about the importance of early childhood education is likely to have positive impacts, especially if focused on those areas where the needs are the greatest. The risks are also relatively low if the campaigns are carefully designed and carried out, although increases in demand for pre-primary education without concomitant increases in the supply of kindergarten spaces and affordable preschool options could present problems.

Teachers

82. The policy options to improve teacher quality could have a high impact on student outcomes but are also highly risky, some options more than others. If well-designed and implemented, new teacher policies would help to improve the quality of teaching and learning. The risks of the options are high, however, because the changes would challenge many aspects of the status quo and are likely to be costly given the large and growing number of teachers in Turkey. Some changes may stir up significant controversy not just within the sector, but for the society as a whole. At the same time, given the central role of teachers, the costs and risks of continuing as is are high.

83. Supporting and holding accountable new teachers in the first few years of teaching could have a significant impact on quality as the first few years of teaching—teacher selection, induction, and retention of good teachers—are so key to the long-run success of teachers. This approach requires much more attention and support for new teachers than is currently the case and would therefore increase the costs of bringing in new teachers. The pressure in an expanding education system for many new teachers each year makes it harder to implement longer and more intensive processes before teachers are teaching independently in the classroom. The necessary steps may well be short-changed to meet the needs of the moment thus increasing the risks associated with this option. Quality is often sacrificed when pressure for quantity is intense, as is the case in Turkey.

84. Creating new incentives—monetary and non-monetary—to attract and retain high-quality teachers could have a major impact on student learning through a better-paid and more highly motivated teaching staff. The changes may be risky, however, as they may generate significant controversy, especially for monetary rewards, including teacher pay where views on the adequacy of teacher salaries vary. Performance-based pay or bonuses frequently raise concerns among teachers and others about how to measure and reward performance in a fair and transparent way. The non-monetary incentives, such as new roles and responsibilities for teachers that reward their expertise without taking them out of the classroom or new deployment schemes to place the best teachers in the most disadvantaged areas, are likely to be less controversial and less expensive but may not have as large an impact on the teaching profession as a whole. A further issue for potential conflict is the extent to which these revisions to the teachers' compensation package can be achieved, at least initially, within a fiscally neutral environment in the education sector's envelope.

85. Improving teacher training, aligning in-service with pre-service training, and establishing school-based teacher training strategies would have a large impact if well-designed and implemented but the risks are also high. This option would require a fundamental rethinking of teacher preparation in Turkey, not an easy change to make in any country for political economy reasons as well as financial reasons. Coordination between MoNE and YÖK on in-service and pre-service teacher training and the required harmonization of policies could take quite a bit of time as they require many changes in the status quo. Establishing new school-based teacher training strategies like the creation of cluster leaders or peer-to-peer feedback networks, although challenging in terms of setting a different mindset for the system as a whole, might not be as difficult to implement and could reduce costs of training, especially over time as it occurs at the school level rather than at a teacher training institute.

Financing

86. To improve the efficiency and equity of education expenditures in Turkey and thereby support better educational outcomes requires changes in the financing system. These changes are likely to have a very positive impact but they are also risky if they change the status quo and redistribute resources, with winners and losers.

87. Introducing a new system for financing public education that uses formula funding arrangements based on capitation principles is of moderate impact and risk. Although there may be challenges associated with the creation of the formula itself, many countries throughout the region and world have implemented such systems. The benefit from such a change comes from more appropriately allocated resources per student and resources per student that adequately adjust for factors that affect the cost of education The categorization as moderate risk rather than low risk comes from uncertainty about the degree to which accompanying measures of school autonomy, school-based management, and capacity building would be well-designed and implemented and the extent to which there is a significant degree of redistribution of resources within the education sector envelope.

88. Increasing targeting of public resources towards the groups with the greatest needs and the highest returns to education would have a positive impact on educational opportunities across the country. There are a series of trade-offs, however, the most important being the determination of the groups and the size of these special programs. If the overall level

of funding is fixed, increases for one group or one level of education comes at the expense of others, making this a somewhat risky area for political economy reasons, as discussed in previous option.

89. Overhauling the current system of secondary and tertiary education entrance exams is very much needed in order to reduce the regressive impact of private spending by households and thereby improve the distribution of educational opportunities across population groups and across the country. It is highly sensitive area, however, and thus fraught with risk. Initiating reforms in this area is essential for improving the equality of opportunity for education in the country, however, moving away from a 50-year-old selection system might encounter lots of resistance across a wide range of stakeholders (high-quality schools, students from higher socio-economic background, private tutoring centers) thereby jeopardizing any (potentially high) impact derived from implementing these measures.

Information

90. The three information options are relatively low risk from a technical point of view but to be effective they require a culture change in Turkey to collect, use, disseminate and discuss data. Recent information initiatives suggest an interest in Turkey to move towards better data and more use of such data to improve the education system. If a culture change occurs, the possible impact of the information options is high. This requires a coordinated conversation and consultation on the data, analysis and findings, and a willingness to discuss problems candidly.

91. Encouraging public discussion on education through the production of an annual report on the state of basic education in Turkey is relatively low risk, if appropriate technical and financial resources are devoted to ensuring the quality of the data are good. If Government pays careful attention to using, disseminating and discussing the findings on the state of education, the impact would be magnified through the design and adoption of needed policy changes in the Turkish education system. In addition, an annual report can help policy makers and the public to monitor the system performance and evaluate efforts to improve quality, making adjustments as needed.

92. Making information on individual schools, including inputs and outcomes, widely available to the public through the creation of school report cards could have a large effect on the quality of basic education through increased pressure from stakeholders (parents, students and educational authorities). However, teachers and principals may resist the publication of such information, especially if their school does not look good, increasing the potential opposition to such an initiative. The analysis of school-level data needs to examine the resources at the school as well as the socio-economic status of the school. As a result of these factors, this option is categorized as moderate rather than low risk.

93. Improving the coverage, quality and availability of data on basic education through improvements to the E-School Database is a prerequisite for other policy options such as the annual report on the state of education, school report cards, and implementation of a new financing approach. Such improvements would also help to measure progress in achieving goals, such as pre-primary participation across regions and provinces, and to evaluate reform efforts and make adjustments as needed. Thus the long-tem benefit of high-quality comprehensive data is high through its potential impact on other policy options but the cost and risks of collecting the data are relatively low. While the risks are low, it is important that an EMIS system, including the e-school database, be developed carefully in terms of both data quality and data usage. As the World Bank's recent use and analysis of certain parts of the e-school database indicate, the reality of the database does not yet match its promise or potential.

Final remarks

94. Turkey faces significant challenges in improving the quality and equity of basic education in the near future, but reforms in pre-primary education, teachers, financing arrangements, teachers, and the provision and use of information are key to jumpstart this process. Bold reforms in these areas will be needed if Turkey wants to enhance significantly the set of skills with which the average student leaves the education system and if the country intends to reduce the existing inequality across

provinces, districts, schools and students. The current configuration of the 2010 system appears to endanger the growth and competitiveness prospects of the country as well as its social cohesion. Unfortunately, with the exception of a few policy options that entail low levels of overall risk, most of the options spelt out in this document will have moderate or high levels of associated risks. The pay-offs for undertaking such initiatives are expected, however, to have a moderate-to-high impact on the educational system and can signal that Turkey is capable of implementing such groundbreaking reforms like it did in the past (e.g. with the 1997 Educational Reform that added three years of education to compulsory primary education). It will be challenging, but it will be worth it. And the costs of simply continuing current policies without any change are high.

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ANNEX

Table A1 – Pre-Primary Education Programs in Turkey

Responsible Institution	Policy Options
MONE	Kindergartens Kindergarten Classes within Primary Schools Application Kindergartens Mother-Child Education Program (ACEP) Family-Child Education Program Mother-Father-Child Education Program
General Directorate for Pre-Primary Education	Early Childhood Education Project "Transition to Primary School" Project School-Parent-Child Education Program Mobile Kindergarten Project Summer Schools
Social Services and Child Protection Agency (SHÇEK)	Day-Care Centers Day Nurseries
Association for Supporting Contemporary Life (CYDD)	In-Service Training for Pre-Primary Teachers Mother-Father Education Direct Education for Children Financial Support for Developing ECD Supporting Pre-Primary Education Decorating Kindergartens
Mother-Child Education Program (AÇEV)	Pre-Primary Education Programs "7 is Too Late" Campaign Mother Support Program Mother-Child Education Program Family Letters Project Father Support Program Pre-Primary Parent-Child Education Program
Foundation for the Support of Women's Work (KEDV)	"Women-Child Centers" Project

Source: World Bank compilation of sources

Table A2 – Pre-Primary Education Statistics in Turkey 2010/11 (Absolute Values and Percentages)

Institution Type	Schools	Students			Teachers			Classrooms
		Total	Boys	Girls	Total	Staff	Under Contract	
Independent Pre-Primary Institutions	**2,506**	**224,314**	**117,720**	**106,594**	**9,374**	**6,789**	**2,585**	**9,954**
Public	1,452	184,545	96,651	87,894	7,901	5,316	2,585	6,854
Private	1,054	39,769	21,069	18,700	1,473	1,473	0	3,100
Pre-Primary Classes within Primary Schools	**23,397**	**844,780**	**437,934**	**406,846**	**30,799**	**17,570**	**13,229**	**31,224**
Public	22,813	824,070	427,022	397,048	29,758	16,529	13,229	29,843
Private	584	20,710	10,912	9,798	1,041	1,041	0	1,381
Institute of Social Services and Child Protection	**1,585**	**39,948**	**21,170**	**18,778**	**7,608**	**7,608**	**0**	**4,663**
Institutions opened in accordance with Law No. 657, art. 191	**118**	**6,776**	**3,472**	**3,304**	**549**	**549**	**0**	**495**
TOTAL	**27,606**	**1,115,818**	**580,296**	**535,522**	**48,330**	**32,516**	**15,814**	**46,336**

Institution Type	Schools	Students			Teachers			Classrooms
		Total	Boys	Girls	Total	Staff	Under Contract	
Independent Pre-Primary Institutions	**9.1%**	**20.1%**	**20.3%**	**19.9%**	**19.4%**	**20.9%**	**16.3%**	**21.5%**
Public	5.3%	16.5%	16.7%	16.4%	16.3%	16.3%	16.3%	14.8%
Private	3.8%	3.6%	3.6%	3.5%	3.0%	4.5%		6.7%
Pre-Primary Classes within Primary Schools	**84.8%**	**75.7%**	**75.5%**	**76.0%**	**63.7%**	**54.0%**	**83.7%**	**67.4%**
Public	82.6%	73.9%	73.6%	74.1%	61.6%	50.8%		64.4%
Private	2.1%	1.9%	1.9%	1.8%	2.2%	3.2%		3.0%
Institute of Social Services and Child Protection	**5.7%**	**3.6%**	**3.6%**	**3.5%**	**15.7%**	**23.4%**		**10.1%**
Institutions opened in accordance with Law No. 657, art. 191	**0.4%**	**0.6%**	**0.6%**	**0.6%**	**1.1%**	**1.7%**	**0.0%**	**1.1%**
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**

Source: World Bank on the basis of MONE (2011).

Note: Law No. 657, art.191 states that "child nurseries and day care centers can be installed for civil servants when needed". The principles and procedures of the organization and operation of these are determined by the general regulations of State Personnel Presidency in cooperation with the Ministry of Finance and Customs.

Table A3 – Previous Early Childhood Teacher Education Curriculum (1998)

	Course	Credit		Course	Credit
Semester 1			***Semester 2***		
C	Principles of ECE	3	C	Maternal and Child Health	3
GE	Turkish I: Written Expression	2	C	Motor Development and Education	3
GE	Principles of Kemal Ataturk I	0	GE	Turkish II: Oral Expression	2
GE	Computer	3	GE	Principles of Kemal Ataturk II	0
GE	Foreign Language I	3	GE	Foreign Language II	3
TP	Introduction to Teaching Profession	3	C	Play in ECE	3
C	Human Anatomy and Physiology	3	C	Maternal and Child Nutrition	3
C	Child Development and Psychology	3	C	Practicum I	3
Total Credits		20	Total Credits		20
Semester 3			***Semester 4***		
C	Music Education I	3	C	Music Education II	3
C	Language and Concept Dev.	3	C	Mental Health and Adaptation Disor	3
C	Mathematics Teaching	3	C	Science Teaching	3
C	Teaching Computer Literacy	2	C	Physical Education and Games I	3
TP	Development and Learning	3	TP	Planning and Evaluation in Teaching	4
GE	Speaking and Writing I	3	GE	Speaking and Writing II	3
Total Credits		17	Total Credits		19
Semester 5			***Semester 6***		
C	Physical Education and Games II	3	C	Teaching Methods I	3
C	Visual Arts I	3	C	Visual Arts II	3
C	Children's Literature I	3	C	Material Development in ECE II	3
C	Material Development in ECE I	3	C	Drama in ECE	3
C	Children with Special Needs	2	C	Children's Literature II	3
C	Parent Education	3	C	Practicum II	3
GE	Teaching Tech. and Material Dev.	3	TP	Classroom Management	3
Total Credits		20	Total Credits		21
Semester 7			***Semester 8***		
C	Practicum III	3	TP	Guidance	3
C	Elective I	3	C	Student Teaching	5
C	Creativity and Creative Activities	3	C	Elective III	3
GE	Elective II	3	GE	Elective IV	3
C	Teaching Methods II	3			
Total Credits		15	Total Credits		14

Total Number of Credits: 146

C Content and early childhood teaching methods course; *TP* Teaching profession courses; *GE* General education courses

Source: Atay-Turhan et al., 2009

Table A4: Current Early Childhood Teacher Education Curriculum (since 2006)

	Course	Credit		Course	Credit
Semester 1			***Semester 2***		
C	Introduction to ECE	3	C	Maternal and Child Health & First Aid	3
GE	Turkish I: Written Expression	2	GE	Philosophy of Education	2
GE	Principles of Kemal Ataturk I	2	GE	Turkish II: Oral Expression	2
GE	Computer I	3	GE	Principles of Kemal Ataturk II	2
GE	Foreign Language I	3	GE	Foreign Language II	3
TP	Introduction to Education Science	3	GE	Computer II	3
C	Human Anatomy and Physiology	3	TP	Educational Psychology	3
C	Psychology	2			
Total Credits		21	Total Credits		18
Semester 3			***Semester 4***		
C	Maternal and Child Nutiriton	2	C	Child Development II	3
C	Child Development I	3	C	Children's Literature	3
C	Creativity	3	C	Teaching Mathematics	3
C	Elective I	3	C	Child Mental Health	3
C	Play	2	C	Drama	3
TP	Instructional Principles and Methods	3	GE	History of Turkish Education	2
GE	Sociology of Education	2	TP	Instructional Technologies and Material Dev	3
Total Credits		18	Total Credits		20
Semester 5			***Semester 6***		
C	Physical Education and Games	3	C	Methods of Teaching II	3
C	Music I	2	C	Music II	3
C	Visual Arts	3	C	Material Development	3
C	Teaching Science	3	GE	Scientific Research Methods	2
TP	School Experience	3	TP	Special Education	2
TP	Classroom Management	2	GE	Community Service Practices	2
TP	Methods of Teaching I	3	TP	Measurement and Assessment	3
GE	Statistics	2	GE	Interpersonal Relationships	3
Total Credits		21	Total Credits		21
Semester 7			***Semester 8***		
C	Parent Involvement and Education	2	C	School Readiness and Trasition to Elementary Sc.	2
C	Elective II	2	C	Research Project II	2
C	Research Project I	2	C	Elective III	2
TP	Field Experience I	5	C	Elective IV	2
GE	Elective I	3	TP	Turkish Education System and School Management	3
TP	Guidance	3	TP	Field Experience II	5
Total Credits		17	Total Credits		16

Total Number of Credits: 152

C Content and early childhood teaching methods course; *TP* Teaching profession courses; *GE* General education courses

Source: Atay-Turhan et al., 2009

Table A5 - OECD TALIS Results, 2009 – Key Characteristics of the Teacher Pool in Turkey and Comparison with

		Turkey	TALIS Average	Ratio
Gender distribution	Female Teachers (%)	52.0	69.3	0.75
	Female School Principals (%)	8.8	44.6	0.20
Age Distribution of teachers	Teachers aged under 25 yrs. old (%)	10.1	3.0	3.37
	Teachers aged 25-29 yrs. old (%)	33.8	12.1	2.79
	Teachers aged 30-39 yrs. old (%)	35.0	28.0	1.25
	Teachers aged 40-49 yrs. old (%)	14.7	29.6	0.50
	Teachers aged 50-59 yrs. old (%)	6.2	23.5	0.26
	Teachers aged 60 yrs. old or more (%)	0.1	3.9	0.03
Educational attainment	Post-secondary non-tertiary or lower (%)	0.0	3.4	0.00
	Tertiary education - Less than bachelor's degree (%)	6.0	12.9	0.47
	Bachelor's degree (%)	88.2	52.1	1.69
	Master's degree (%)	5.6	30.9	0.18
	Doctoral degree (%)	0.2	0.7	0.29
Employment status	Permanently employed (%)	88.3	84.5	1.04
	Fixed-term contract longer than 1 school year (%)	4.6	4.6	1.00
	Fixed-term contract shorter than 1 school year (%)	7.0	11.1	0.63
Job experience	2 years or less (%)	18.0	8.3	2.17
	3-10 years (%)	50.7	29.2	1.74
	11-20 years (%)	19.4	26.9	0.72
	20+ years (%)	12.0	35.5	0.34

Source: OECD (2009a), Tables 2.1 to 2.4, pp.41-2.

Table A6 - OECD TALIS Results, 2009 - Key needs for professional development of the teacher pool in Turkey and comparison with TALIS average, lower secondary education schools, 2007-08TALIS Average, lower secondary education schools, 2007/08

		Turkey	TALIS Average	Ratio
Teachers who wanted to participate in more development than they did in the previous 18 months, by different characteristics	All teachers (%)	48.2	54.8	0.88
	Female teachers (%)	51.3	56.3	0.91
	Male teachers (%)	44.8	51.7	0.87
	Teachers under 40 yrs. old (%)	51.2	57.5	0.89
	Teachers aged 40+ yrs. Old (%)	37.2	52.4	0.71
	Tertiary education - Less than bachelor's degree or lower	26.2	48.1	0.54
	Bachelor's degree	48.8	55.4	0.88
	Master's degree or higher	58.8	56.6	1.04
	Teachers in public schools	48.4	54.9	0.88
	Teachers in private schools	41.6	53.3	0.78
Teachers' high professional development needs (proportion of teachers indicating that they have a "high level of need" for professional development in the following areas)	Content and performance standards (%)	9.8	16.0	0.61
	Student assessment practices (%)	9.2	15.7	0.59
	Classroom Management (%)	6.7	13.3	0.50
	Subject field (%)	8.9	17.0	0.52
	Instructional practices (%)	9.0	17.1	0.53
	ICT Teaching Skills (%)	14.2	24.7	0.57
	Teaching special learning needs students (%)	27.8	31.3	0.89
	Student discipline and behavioral problems (%)	13.4	21.4	0.63
	School management and administration (%)	9.3	9.7	0.96
	Teaching in a multicultural setting (%)	14.5	13.9	1.04
	Student counseling (%)	9.5	16.7	0.57
	Overall index of development need (Maximum = 100)	43.0	53.0	0.81

Source: OECD (2009a), Tables 3.3 to 3.4, pp.83-84.

Table A7 - OECD TALIS Results, 2009 - Key characteristics of the professional development of the teacher pool in Turkey and comparison with TALIS average, lower secondary education schools, 2007-08

		Turkey	TALIS Average	Ratio
Participation of teachers in professional development in the previous 18 months	Teachers who undertook some professional development (%)	74.8	88.5	0.85
	Average days of professional development taken (mean across all teachers)	11.2	15.3	0.73
	Average days of professional development taken (mean across all those who participated only)	14.9	17.3	0.86
	Average percentage of professional development days taken that was compulsory (%)	72.8	51.0	1.43
Average number of days of professional development undertaken in the previous 18 months, by different characteristics	Female teachers	13.6	17.5	0.78
	Male teachers	16.2	16.9	0.96
	Teachers under 30 yrs. old	16.9	20.9	0.81
	Teachers aged 30-39 yrs. old	13.6	18.9	0.72
	Teachers aged 40-49 yrs. old	14.4	17.4	0.83
	Teachers aged 50+ yrs. old	10.6	14.4	0.74
	Tertiary education - Less than bachelor's degree or lower	10.6	17.6	0.60
	Bachelor's degree	15.0	17.0	0.88
	Master's degree or higher	19.3	19.3	1.00
	Teachers in public schools	15.0	17.5	0.86
	Teachers in private schools	14.9	16.6	0.90
	Teachers in schools in a village	15.1	17.2	0.88
	Teachers in schools in a small town	17.4	17.7	0.98
	Teachers in schools in a town	14.9	17.2	0.87
	Teachers in schools in a city	14.4	17.4	0.83
	Teachers in schools in a large city	15.8	22.1	0.71
Types of professional development undertaken by teachers in the previous 18 months	Courses and workshops (%)	62.3	81.2	0.77
	Education conferences and seminars (%)	67.8	48.9	1.39
	Qualification programs (%)	19.2	24.5	0.78
	Observation visits to other schools (%)	21.1	27.6	0.76
	Professional development network (%)	39.4	40.0	0.99
	Individual and collaborative research (%)	40.1	35.4	1.13
	Mentoring and peer observation (%)	32.2	34.9	0.92
	Reading professional literature (%)	80.6	77.7	1.04
	Informal dialogue to improve teaching (%)	92.8	92.6	1.00

Source: OECD (2009a), Tables 3.1 to 3.2, pp.80-82.

Table A8 - Teachers' Salaries in OECD Countries, 2007

		Primary education				Upper secondary education			
		Starting salary/ minimum training	Salary after 15 years of experience /minimum training	Salary at top of scale /minimum training	Ratio of salary after 15 years of experience to GDP per capita	Starting salary/ minimum training	Salary after 15 years of experience /minimum training	Salary at top of scale /minimum training	Ratio of salary after 15 years of experience to GDP per capita
OECD countries	Australia	32 259	44 245	44 245	1.17	32 406	44 942	44 942	1.19
	Austria	28 172	37 307	55 852	1.01	29 863	41 469	61 170	1.12
	Belgium (Fl.)	29 680	41 605	50 744	1.17	36 850	53 233	64 007	1.50
	Belgium (Fr.)	28 369	39 885	48 774	1.13	35 260	51 195	61 674	1.45
	Czech Republic	21 481	29 127	35 551	1.21	22 798	31 119	38 208	1.29
	Denmark	35 691	40 322	40 322	1.12	35 011	49 264	49 264	1.37
	England	30 172	44 507	44 507	1.26	30 172	44 507	44 507	1.26
	Finland	28 201	36 578	46 003	1.06	31 846	43 040	55 778	1.24
	France	23 640	31 800	46 920	0.97	26 294	34 454	49 711	1.05
	Germany	43 387	53 345	57 630	1.56	51 512	62 372	71 546	1.82
	Greece	26 326	32 107	38 619	1.13	26 326	32 107	38 619	1.13
	Hungary	11 216	14 515	19 309	0.77	12 855	18 110	24 358	0.97
	Iceland	22 443	25 227	29 304	0.71	25 389	32 251	33 828	0.90
	Ireland	31 977	52 972	60 025	1.17	31 977	52 972	60 025	1.17
	Italy	24 945	30 174	36 765	0.99	26 877	33 778	42 179	1.11
	Japan	27 284	48 742	61 627	1.45	27 284	48 742	63 296	1.45
	Korea	31 717	54 798	87 745	2.21	31 590	54 671	87 617	2.20
	Luxembourg	49 902	68 720	101 707	0.86	71 883	89 864	124 898	1.13
	Mexico	14 006	18 420	30 579	1.32	m	m	m	m
	Netherlands	34 272	44 410	49 541	1.13	35 858	63 169	71 738	1.61
	New Zealand	19 236	37 213	37 213	1.36	19 236	37 213	37 213	1.36
	Norway	32 148	36 298	40 163	0.68	34 336	38 684	42 325	0.72
	Poland	m	m	m	m	m	m	m	m
	Portugal	21 304	34 876	54 698	1.52	21 304	34 876	54 698	1.52
	Scotland	30 366	48 436	48 436	1.37	30 366	48 436	48 436	1.37
	Slovak Republic	m	m	m	m	m	m	m	m
	Spain	34 250	39 912	49 466	1.26	39 367	45 786	55 779	1.45
	Sweden	27 498	31 996	36 750	0.87	29 554	35 005	39 813	0.96
	Switzerland	41 998	54 339	66 906	1.32	56 166	72 990	86 732	1.78
	Turkey	14 063	15 693	17 515	1.21	14 063	15 693	17 515	1.21
	United States	35 907	43 633	m	0.96	34 672	43 966	m	0.97
	OECD average	***28 687***	***39 007***	***47 747***	***1.17***	***32 183***	***44 782***	***54 440***	***1.30***
	EU 19 average	***29 518***	***39 610***	***48 506***	***1.14***	***32 946***	***45 513***	***55 600***	***1.29***
Partner countries	Brazil	m	m	m	m	m	m	m	m
	Chile	10 922	12 976	17 500	1.11	10 922	13 579	18 321	1.16
	Estonia	10 459	9 419	13 015	0.46	10 459	9 419	13 015	0.46
	Israel	14 099	16 466	23 009	0.62	14 099	16 466	23 009	0.62
	Russian Federation	m	m	m	m	m	m	m	m
	Slovenia	27 190	31 754	33 630	1.19	27 190	31 754	33 630	1.19

Source: OECD (2009d). See Annex 3 for notes (www.oecd.org/edu/eag2009). Please refer to the Reader's Guide for information concerning the symbols replacing missing data (m).

Table A9 - Main trends in educational expenditure in OECD countries between 1995 and 2005

Key question	Top three trends
How much is spent on education?	1) Education expenditure as % of GDP ≈ 6% (weighted average)
	2) Between 1995 and 2005, growth in educational expenditure (42% in 10 years) outpaced GDP growth.
	3) The share of educational expenditure on total public expenditure also increased (11% to 13%).
What is the role of private spending?	1) The bulk of educational expenditures (86%, on average, for all levels of education combined) is financed by the public sector
	2) Private funding tends to be concentrated, specially, at two levels of education: pre-primary and tertiary.
	3) The share of private spending on pre-primary education education is about one-fifth (20%) of the total expenditure on pre-primary education; the same indicator reaches more than one-quarter (27%) in the case of tertiary education.
What are education funds spent on?	1) More than 90% of education expenditures at the non-tertiary education levels is spent on recurrent expenditures
	2) Staff salaries account for about 80% of the recurrent expenditures at the non-tertiary education levels
	3) Spending on research and development (R&D) in universities and higher education institutions accounts for about one-quarter of total expenditures at that level.

Source: World Bank's adaptation from OECD (2009e), pp.49-65.

Table A10 - Equity in education financing: Evidence and main policy recommendations

Key area	Evidence	Policy Recommendations
Priorities for financing education	1) High rates of return to equity from using public resources to counterbalance deficit in socio-economic background (e.g. grants to poor families to reduce drop-out rates).	1) **A certain portion of needs-based funding for the poor needs to be implemented**; do not tie this funding to merit-based requisites, this may run contrary to the desired goal (e.g. of preventing dropout rates).
	2) Education expenditure shifting between sectors in many countries, sometimes in a regressive manner (e.g. prioritizing tertiary education where private resources can usually be tapped)	2) Countries charging **fees for early childhood education** and not for tertiary education need to urgently review their policies (regressive).
	3) Good quality and affordable early childhood education is critical, especially for disadvantaged children (biggest "bang for the buck")	3) **Early childhood education (ECE) is the highest equity priority.** If fees are charged at this level of education, they should be remitted fully for the too poor to pay.
Targeting (especially those students and regions most in need)	1) Within countries, regional autonomy in spending may cause disparities in the level of provision, unless it is balanced by mechanisms to redistribute resources to poorer regions.	1) Countries need **adequate mechanisms to redistribute resources and minimize regional inequities of provision**, so that minimum standards are met everywhere.
	2) Many countries have special schemes to direct additional resources to schools or school areas serving disadvantaged students.	2) **Extra resources need to be channelled through schools to help disadvantaged students.** Avoiding "labelling" these resources may help reduce the degree of stigma around the school or the students themselves might feel.
	3) Usually, the less experienced teachers are the ones working in the most "difficult" schools.	3) **Experienced teachers are the most important resource for disadvantaged schools.** Create a system of incentives for teachers to work on these schools (*new teacher compensation scheme* **s**).
Accountability (use resources as a policy lever to improve outcomes)	1) A number of countries have adopted numerical targets for equity in education.	1) Countries should adopt **a small number of numerical targets to measure equity in the financing of education** (e.g. reduction in the number of early school dropouts)
	2) National testing of individual student performance on basic skills have become a fundamental tool to measure the performance of several elements of the education system.	2) Education systems need to plan carefully the implementation (and continuation across time) of **national assessments of student learning** and prepare annual reports with the results.
	3) Many countries believe that the publication of results at school level is desirable or politically and/or legally inevitable.	3) Countries need to **plan carefully the dissemination of school-level test results and give strong support to the weakest schools** by using the data to help bring all schools up to a desired level.

Source: World Bank adaptation of Field et al. (2007), pp.20-24.

Table A11 - Total per Student Education Expenditure in OECD countries, by level of education (US Dollars of 2006 of Purchasing Power Parity (PPP) value)

OECD Country	Annual expenditure per student			Relevant cost-of-education ratios		
	Primary education	Secondary education	Tertiary education	Secondary / Primary	Tertiary / Primary	Tertiary / Secondary
Luxembourg	13,676	18,144	n/a	1.3	n/a	n/a
United States	9,709	10,821	25,109	1.1	2.6	2.3
Norway	9,486	11,435	16,235	1.2	1.7	1.4
Iceland	9,299	8,493	8,579	0.9	0.9	1.0
Denmark	8,798	9,662	15,391	1.1	1.7	1.6
Switzerland	8,793	13,268	22,230	1.5	2.5	1.7
Austria	8,516	10,577	15,148	1.2	1.8	1.4
United Kingdom	7,732	8,763	15,447	1.1	2.0	1.8
Italy	7,716	8,495	8,725	1.1	1.1	1.0
Sweden	7,699	8,496	16,991	1.1	2.2	2.0
Belgium	7,072	8,601	13,244	1.2	1.9	1.5
Japan	6,989	8,305	13,418	1.2	1.9	1.6
Netherlands	6,425	9,516	15,196	1.5	2.4	1.6
Ireland	6,337	8,991	11,832	1.4	1.9	1.3
Australia	6,311	8,700	15,016	1.4	2.4	1.7
Spain	5,970	7,955	11,087	1.3	1.9	1.4
Finland	5,899	7,533	12,845	1.3	2.2	1.7
France	5,482	9,303	11,568	1.7	2.1	1.2
Germany	5,362	7,548	13,016	1.4	2.4	1.7
Portugal	5,138	6,846	9,724	1.3	1.9	1.4
New Zealand	4,952	6,043	9,288	1.2	1.9	1.5
Korea	4,935	7,261	8,564	1.5	1.7	1.2
Hungary	4,599	3,978	6,367	0.9	1.4	1.6
Poland	3,770	3,411	5,224	0.9	1.4	1.5
Slovak Republic	3,221	2,963	6,056	0.9	1.9	2.0
Czech Republic	3,217	5,307	7,989	1.6	2.5	1.5
Mexico	2,003	2,165	6,462	1.1	3.2	3.0
Turkey	1,862	4,362	9,747	2.3	5.2	2.2
Canada	n/a	7,774	22,810	n/a	n/a	2.9
Greece	n/a	n/a	n/a	n/a	n/a	n/a
OECD average	**6,437**	**8,006**	**12,336**	**1.2**	**1.9**	**1.5**

Source: Own elaboration on the basis of OECD (2009f), p.50 and calculations from Chawla et al. (2005), Annex 2, Summary Tables 6, 7, and 9

Note: Countries are sorted in descending order of their annual expenditure per student in primary education.

Table A12 - Main Contents of the Turkish E-School Database (A Review of the E-School Manual)

Type of Information	Main Content
School Information	Address, phone/fax number, website information, type of school
Student Information	Nationality, ID number, name, father/mother name, place/ date of birth, sex, civil status, responsible parent, grade/class, school number as well as more detailed records on who the student resides with, whether the house is rental/owned, whether the student has his/her own room, heating type of the house, how the student comes to school, if the student works, who lives in the household besides the core family, the accidents/surgeries the student had, any serious/chronic illnesses that the student had/has, any prosthesis/device/medication the student might be using permanently, height/weight, number of siblings, income level of family, whether he/she is the son/daughter of war veteran/martyr, whether the student is attending a boarding school, scholarships students hold, whether or not the student is within the scope of bussed education, etc.
Parent Information	Nationalities of parents, ID numbers of parents, is the father/mother alive, occupation of parents, education level of parents, contact information of parents, income level of parents, etc.

Source: World Bank on the basis of MONE (2009a)

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