

The World Bank

Turkey Education Sector Study:
Finding Sustainable Pathways to an
Equitable, Effective and Efficient Education System

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List of Acronyms and Terminology

ECD	Early Child Development
GDP	Gross Domestic Product
HSET	High School Entrance Test
MoNE	Ministry of National Education
NGOs	Non Government Organizations
NUTs	National Units of (Nobody Knows)
OSYM	Student Selection and Placement Center
OBBS	Student Achievement Determination Study
PEIR	Public Expenditure and Institutional Review
PIRLS	
PISA	International Student Assessment Program
TIMSS	Trends in International Mathematics and Science
Primary Education	
Lower Secondary Education	Grades 1-4
Basic or Compulsory Education	Grades 5-8
Secondary Education	Grades 1-8 Grades 9-11 or 12

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A. Introduction: Background and Objectives

The purpose of the present study is to provide policy makers comprehensive information and clear recommendations for policy change. Turkey currently faces a watershed moment in its history, as the European Union moves to accept Turkey to its list of potential members. In the face of the dramatic changes that are sure to alter the landscape of Turkey's labor markets, the Government has asked for assistance from the World Bank in developing a strategy for improving its education system in order to better prepare the next generation of Turkish citizens. This strategy must present a financially sustainable program of policy reforms to raise the productivity, equity, relevance, and effectiveness of education and training. Specifically, this strategy must provide policy solutions and recommendations to the following questions:

1. How can Turkish citizens develop the knowledge, skills, attitudes, and values that could help Turkey successfully integrate and compete with Europe and also generate sustainable social and economic development at home?
2. What policies and steps are needed to ensure that every school in Turkey provides the same quality learning opportunities for all students, regardless of where they live and what their social and economic conditions are?
3. What steps can the Government take at the central, provincial, local, school, and classroom level, in the short and medium term, to provide the conditions and support for teachers and students in every classroom to achieve at the highest level?

To this end, the present World Bank has commissioned a series of analytic reports and has promoted policy dialogue around these reports as instruments leading to development of the strategy and its supporting reforms. The studies include the development of a systematic flow-of-funds analysis for education and training, designed to examine the levels and sources of financial resources (public, private and household, and external sources) flowing into and through the system, and the uses of these resources across the provinces, levels of schooling, institutions, and functions. Other reports include analyses of the equity, quality, performance, and outcomes of education and training. The ultimate objective of this effort is to link the findings from these studies with the flow-of-funds model to assess the productivity, and the internal and external efficiency of the sector, and assess the financial viability of Turkey's developmental policy objectives. The culminating product of this study, the present Education Sector Report, is an integrated set of recommendations for the development of a comprehensive, medium-term sector strategy and a corresponding financing plan that will help Turkey improve the efficiency, quality, and productivity of its education and training system and the competitiveness of its workforce.

Each year, Turkey's developmental prospects grow more and more reliant upon the economies of both its European neighbors and those of countries in other regions. Likewise, opportunities for youth and young families in Turkey are becoming progressively more dependent upon market conditions and demands of the global labor market, which is requiring ever higher levels of schooling and abilities from entering workers. While domestic and global markets alike are increasingly demanding workers able to think creatively, adapt, work in teams, learn on their own, and use knowledge, the

education system in Turkey is still struggling to assure that all youth acquire even the most basic competencies. The typical worker in Turkey's labor force today has only about 7 years of schooling, whereas his or her counterpart in European and East Asian countries has 10 years, or 8 years, respectively. This limitation not only undermines opportunities for Turkish workers, but the nation's competitiveness as a whole. The gap in learning achievement, and the knowledge component of that education, continues to widen as many of the highly industrialized countries invest heavily in elevating the quality of their work force through reforms and improvements of their schooling and training systems. The gap is already being translated into an increasingly powerful demand by Turkey's youth for access to good quality secondary and postsecondary education. This demand is stimulated by returns to secondary education and postsecondary education that continue to rise and diverge further from basic education.

Turkey has achieved remarkable progress on education system coverage in recent years. After the eight-year compulsory Basic Education Law (Law No. 4306) was signed into law in August 1997, Turkey embarked on an unprecedented expansion of public schooling. This Basic Education Program entails a broad range of actions, financed largely by Government revenues, but also by major private enterprise contributions and international loans and grants. Total annual expenditures for the Basic Education Program are on the order of US\$3 billion annually. These outlays include investment outlays for the construction of new schools and the renovation or expansion of existing ones, a massive provision of computers, educational equipment, and educational materials, recurrent spending on the remuneration of teachers and other educational staff, and on new recruitment, and additional staff training to expand the provision and quality of schooling.

These investments have contributed to a dramatic increase in coverage. Specifically, whereas total basic education enrollments had declined during the six years prior to the Basic Education Law, enrollments increased by 1.5 million after the law became effective. According to official figures, this increase raised the net enrollment ratio for eight-year basic education from 76 percent to 95 percent in 2002. Girls' enrollments in rural areas made the swiftest gains. In sixth grade classes located in rural schools, the enrollment rate of girls increased by 162 percent in the first year of the Program, and has continued to make sharp gains since. There are few cases in the history of any national education system that can compare with the initial achievements of Turkey's Basic Education Program.

Nonetheless, improvement on other measures of educational performance, such as learning achievement, secondary school access and completion, and school-to-work transition rates, are not commensurate with the gains in access. New international assessment results, such as TIMSS and PIRLS, and other comparative measures, place Turkey well behind most of its counterparts on student learning achievement. Comparing other education indicators with those of its European neighbors demonstrate that Turkey's schools enroll and graduate significantly fewer secondary school students, resulting in an adult population characterized by an appreciably smaller proportion of secondary school graduates, dramatically so for women. Additionally, the recent Turkey

Public Expenditure and Institutional Review (PEIR) concludes that the equity and efficiency of public expenditures on education and training are significantly behind Turkey's counterparts in Southern and Southeastern Europe, not to mention the established members of the European Union.

Labor market analysis indicates that there are serious problems in the transition from schooling to work as well. Even considering the fact that labor force participation rates in Turkey are low (49 percent for men and 25 percent for women), actual reported unemployment rates for recent school graduates are quite high (53 percent for 8th grade graduates in the 20-24 year age group, and 23 percent for upper secondary school graduates in the 25-29 year age group). Graduates who are just five years older experience substantially lower levels of unemployment. Although the reasons for this spike in unemployment rates is not understood, the data strongly suggest that an extremely high proportion of school leavers face years of unsuccessful job search before they can secure regular employment.

Turkey's Government has clearly recognized the risks the country faces with respect to growth and social equity, and has responded with an ambitious agenda of far-reaching, modernizing policy reforms across the entire education and training sector. These proposed reforms, some of which are stated in the Eighth Five-Year Plan, and others which are included in the new Government's Emergency Action Plan, include, *inter alia*, increasing educational equity to eliminate regional, gender, and other demographic disparities; raising access and quality of preschool education and development; modernizing secondary school programs to improve quality, increase efficiency, and streamline the curriculum; and upgrading learning standards and outcomes for all students.

Policy analysts from the public and private sectors alike recognize that any attempt to realistically improve the effectiveness, relevance, equity, and internal and external efficiency requires a comprehensive economic analysis of education and training in Turkey, which would be essential for policymakers to adequately translate stated policy objectives into a prioritized, coherent, practicable, and financially sustainable strategy for transforming today's array of education and training programs and institutions into an effective, just, productive, and affordable system. This World Bank Education Sector Study is an attempt to meet this objective, and is supported by the government and academia alike.

This report proceeds as follows. Section B documents the methodology for developing the sector and study and the accompanying dialogue that was fundamental to the development of the report. Section C summarizes key findings of the commissioned papers, while providing integrated conclusions and challenges for reforming Turkey's education system. Section D details the potential policy options for each challenge and outlines a roadmap for next steps. Annex 1 provides a matrix of key sector challenges, matching each one with potential policy solutions. Annex 2 summarizes each of the commissioned papers in detail, while Annex 3 includes summaries of other papers and a brief review of the literature.

B. Methodology

As mentioned above, available evidence suggests that Turkey's education is not fully developing the competencies students need for succeeding in a competitive global economy. Government tends to focus nearly exclusively on the task of providing schools, equipment, didactic materials and teachers (with little systemic monitoring and evaluation of the sector's performance) and appears satisfied with producing graduates who have acquired a narrowly defined set of content and skills for further education or for immediate employment. To meet the needs of the new economy, the education system needs to undergo a fundamental transformation. In particular, schools and institutions of higher learning in Turkey need to be redesigned to develop citizens who approach learning as problem solving, think creatively and take risks, know how to access information and knowledge from all its sources, can work effectively in heterogeneous groups, can apply critical thinking and core knowledge in real world settings, and can adapt to constantly evolving conditions in labor markets and more generally in society.

For the reasons discussed above, Turkey's Government will require considerably more than research, advice, and exhortation to take this huge leap. First of all, to recognize the need for change, Government technical experts and policy makers must be encouraged and enabled to collaborate with external specialists in preparing a comprehensive and state-of-the-art analysis of the education system's equity, effectiveness, and efficiency at all levels of education. Second, Government officials need to be provided with opportunities, examples, and comparative cases from Europe and elsewhere that cause them to challenge their own paradigm and open their minds to the kinds of changes they need to make to transform today's narrowly focused education program into a modern, progressive, world class education system. Third, to overcome their fear of public consultation and dialogue, and to help them break down philosophical barriers between Government officials and stakeholders, Turkey's education sector leaders need facilitated dialogue regarding research-based policy solutions.

As discussed above, the primary objective of this report is to provide policy makers in Turkey with concrete policy tools based on up-to-date empirical research by specialists in the field. To do this the Bank first examined the literature and identified those gaps in the field that needed further attention, commissioning more than a dozen studies to address these research needs. The commissioned research, the primary source of information for this report, also serves to establish a baseline for future studies. The papers cover a broad range of topics, from pre-primary enrollments to opportunities for graduates in the labor market, providing a comprehensive outlook on the current state of basic education in Turkey as well as insight into historical trends and implications for future policy directions. Each of these papers is reviewed in turn in Annex 2, while summaries of the key findings are found in the next section.

A second goal has been to promote a paradigm shift in how Government officials dialogue regarding solutions to the challenges of Turkey's education system. As in most countries, there is little communication between researchers and policy makers; those in

government do not view academic research as being timely, useful or relevant to their needs. Thus the organizing methodology for the present report has been to promote policy dialogue between researchers and MoNE officials at every step of the process. Numerous workshops have been held with Government, the academic community, civil society representative, NGOs and other stakeholders, to promote discussion and encourage policymakers to adopt a financially viable strategy for the education sector. Topics of the workshops include: (XXX INSERT SUMMARIES OF WORKSHOP TOPICS HERE—I DO NOT HAVE THESE, I LOOKED). In addition a draft of this report will be the subject of intensive dialogue and debate when a broad array of education sector actors and agencies meet to discuss its content in May 2005. To a large extent, these opportunities for dialogue have been met with enthusiasm and overwhelming interest from all participants.

Nonetheless, this sector study is only a first step on a road that encourages policymakers to transform the country's education system. As is well known, promoting behavioral change requires three steps: new knowledge, new attitudes, and new practice. To stimulate Turkey's leadership to transform the education program into a modern, equitable, and forward-looking system capable of adequately preparing the nation's children and youth for productive employment, lifelong learning, and participation in a global knowledge society, the World Bank will assist in this process of policy transformation in two additional ways. First, the Bank will help Turkey's education policymakers participate in additional collaborative analytic work on topics of particular interest and relevance that cannot be completed without the results of the present sector study. Second, the Bank will take the time to establish a technical dialogue with Government leaders by means of policy-simulation modeling, workshops, and capacity building activities.

C. Key Findings and Integrated Conclusions

Each of the studies prepared for this report provides a detailed analysis of the current structural failure of the Turkish education system to provide equitable learning opportunities to all youth through an efficient and effective service delivery system. The authors document the strides that have been made over the last decade: from expanding compulsory education from five to eight years, to improving outcomes for all students. With the recent announcement of plans by the EU to proceed with Turkey's request for membership, reexamination of the education system takes on even greater significance, as much remains to be done for Turkey to be competitive in the new global economy as a fully integrated member of the EU.

The following pages synthesize the critical conclusions according to the issues highlighted in the research, while the next chapter provides potential policy solutions. These issues can be divided into four key policy challenges, as follows: unequal opportunities for learning, absence of good teaching and learning practices, inadequate support for school improvement and ineffective financing for promoting equity and quality.

1. The Incomplete Reform Agenda:

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2. Unequal Opportunities for Learning

The empirical evidence accumulated in the annexed reports (Metec 2004, Hosgor 2004, among others) demonstrates that there are significant disparities in education access and inputs between genders, social and economic classes, education institutions and regions. These disparities have resulted in unequal opportunities for learning, which has important economic and social implications, principal of which is the large share of Turkish youth who have been denied the chance to fulfill their potential. As a result Turkey has failed to generate sustainable human development and increase international competitiveness, lagging behind many EU and OECD countries (UN 2003, OECD 2003).

For example, insufficient access by girls at the basic and secondary levels translates to under-representation of women in the labor market and a reduced tax base: obtaining a university diploma increases the labor force participation rate by 50 percent for women (Tansel 2004). Indeed, one of the critical lessons learned from the East Asian “Tigers” is that investment in human capital and policies promoting women’s participation in the labor force were major driving forces of social and economic development. The following pages characterize each of those aspects that continue to retard Turkey’s progress towards creating an equitable education system that allows all of Turkey’s citizens, regardless of place of residence, economic class or gender to achieve their potential.

a. Enduring Disparities in Access to Schooling: the challenge of educating girls and the poor

While aggregate education statistics indicate that three percent of Turkish children in the compulsory age group (6 to 14) are currently not enrolled in school, a large share of these would-be students are concentrated among two populations: girls and the poor (Metz 2004). The age distribution of children who are not attending rules out the possibility that many of these students are simply late enrollers: those aged nine or older make up more than 90 percent of all children who are primary-school age but who are outside the schooling system. More than 70 percent of the children who are not enrolled in primary school are female, and more than 55 percent have illiterate mothers. These children tend to reside in rural areas (67 percent) and they tend to be poor (53 percent).

Girls particularly are underserved by the Turkish education system. Female participation rates in basic education are lower than those for boys, while only two-thirds of girls are enrolled in secondary schools. Within the total illiterate population, four out of five are women. The reasons for this underinvestment are numerous and complicated, and we will not repeat them here (for additional information see Metz 2004, [World Bank 2005b](#)). But the problem has profound and long term implications for Turkish society. First, educating girls is an investment in the education of the next generation. Children of literate mothers are healthier, more likely to obtain an education, and less poor. Second, the lack of participation of women in the labor market reduces Turkey's capacity for economic development. Low labor force participation rates of women means that this whole segment of the population is not earning income, and therefore not generating tax revenue for social services and other investments.

The remaining poor population outside of school can be counted among the truly miserable, located in difficult to access mountainous areas and among the Kurdish population. Distance to the school may be one explanation for non-enrollment; this issue is especially relevant in rural areas for girls, even if transport to the nearest school is arranged by the local authorities. A secondary indicator of non-enrollment is parents' education: if one focuses on fathers with no schooling, in almost 1 out of 10 cases a child who does not attend school would be identified; similarly, nearly 13 percent of girls not attending school have mothers who did not complete primary school. A systematic intervention that reaches all mothers and fathers without primary schooling would identify roughly 70 percent of children who should attend primary education but who do not. If these children attended school, the primary enrollment rate would increase from 97 percent to 99 percent (Metz 2004).

With regard to non-compulsory schooling, again the excluded groups are those most in need of additional opportunities. Enrollments in pre-primary education are woefully low for a country of Turkey's income level: in the 2003-04 school year only 13 percent of children aged 4 to 6 were enrolled in pre-school education. Three-fourths of these children were enrolled in formal MoNE-run nursery schools attached to public primary schools (which accept children beginning at age six) (Kaytaz 2004). Expanding this supply from 13 to 25 percent, with special targeting for disadvantaged children, is one of the objectives of MoNE; in areas where demand exceeds supply, children from poor families are to be given priority. How this will work in practice (waiting lists, means test,

etc.) is unclear from the research. Currently the debate over pre-primary schooling is whether to continue the gradual expansion of pre-school enrollments through a targeted focus on disadvantaged children or move towards a more diversified, universal (compulsory) program; MoNE has not yet determined the best approach for this (or how to finance the expansion).

In the case of secondary schooling, access to quality academic schooling is strictly controlled through a highly competitive Anatolian High School entrance examination administered at the end of eighth grade. While this examination-based selection is frequently the subject of criticism, the system itself has important positive features. Perhaps most important is the basic characteristic that the same questions are asked of all students, and the evaluation is undertaken in a consistent and centralized manner (rather than other, more political or direct social class criteria). Having said that, selective educational systems have been shown to cause significant inequality in other developing countries (Mete 2004). In the Turkish case, the solution to the inequality of access problem may have more to do with increasing the enrollment of poor children in *quality* public basic education and general (academic) secondary schools than with completely redesigning or eliminating the examination.

Nonetheless, as discussed further in detail in the finance section, below, there are serious equity implications surrounding the exam system. Families with economic means enroll their children in private tutoring courses to assist them in scoring well and obtaining a place in one of the prestigious Anatolian, Science and other types of elite high schools (enrollments in these account for only 10 percent of the age cohort). Those who do not take the exam, or who fail to achieve high marks are relegated to low prestige vocational schools with almost no opportunity for further schooling. Economic status is not the only dividing line: gender differences in enrollment at the secondary level are quite high (one-third of girls do not attend high school, the largest gender gap among EU or aspiring EU countries). At the end of high school, academic track students sit for yet another high-stakes test, the University Entrance Examination, designed to limit access to the next level; again parents pay considerable sums for cram schools and test preparation, with the highly coveted, fully-paid University vacancies going to the best-prepared (and most-advantaged) students, some 30 percent of test-takers. Thus household income seems to play a large role in determining access to all levels of pre-university schooling.

b. Continuing Inequality in the Provision of Educational Resources

Despite decades of intense effort, extensive policy reform and considerable investment from a centralized education authority wielding nearly complete control of the distribution of resources and equipment at all levels of schooling, substantial inequities in schooling resources and inputs among regions and schools still exist. One of the principal goals of a centralized education system should be to ensure the establishment of equity between schools, irrespective of location and income level. Yet Turkey has not yet made regional equity a priority in education. Currently there are no observable standards for school quality at the inputs level and investments are not reaching those targeted populations that need it most. Sizable differences in inputs among primary schools were recorded in the accompanying reports (Kuitunen 2004; Sahin 2004); differences in

resources for secondary schools (especially by type—vocational, general, Anatolian, etc.) are already well known.

These inequities in the distribution of both human resources (teachers) and physical inputs have further deepened differences within the education system. At the primary level, there are substantial differences in resources and inputs (teacher and principal experience, school equipment and facilities) between rural and urban primary and lower secondary schools (Sahin 2004; Mete 2004). This gap in service delivery is captured by the 55 percent of parents who reported problems with their rural schools, compared to only 32 percent of urban parents. Furthermore, these differences are aligned not only on the rural/urban dichotomy but by income level. Wealthier households are much less likely to report problems with their child’s school. Complaints about lack of books and supplies decline drastically as household wealth increases. Complaints about facilities also decline with wealth, which may suggest preferential treatment to schools located in wealthier neighborhoods (also worrisome, it may also be a result of higher informal contributions from wealthy families to the school). While complaints about poor teaching remains constant at around 10 percent for all wealth groups, complaints about “lack of teachers” declines with the wealth of households (Mete 2004). There is also considerable distribution in the distribution of teaching processes (a product of teacher inputs and training) that will be discussed in detail in C3.

Differences in primary school quality have direct implications for access to secondary school, and ultimately tertiary education. As mentioned above, at the end of eighth grade students sit for the Anatolian High School entrance examination, which determines their placement among the roughly eighty different types of public high schools, distributed across five main groups (in order of prestige): vocational, general, Anatolian, science and military. Primary schools are thus increasingly evaluated by parents based on the share of students that perform well on the eighth grade exam. For years it has been the implicit policy of the Ministry of Education to direct middle and lower performing primary school graduates towards less valued vocational education, while at the same time expanding vocational schools and hiring additional teachers (Mete 2004). Those who are not selected into the elite group are left behind in lower quality secondary schools with fewer opportunities for further education. In defiance of this plan, an ever growing share of Turkish youth have sat for the high school entrance examination for the elite group of high schools, a direct ticket to the highly coveted vacancies in the public universities (access to which is controlled by yet another high-stakes exam).

Differences in school quality among secondary schools are not only present, they are a source of pride; the Anatolian and Science high schools are a sacred component of the Turkish education system (frequently referred to as the jewel in the crown). Rather than improve the chances of general and vocation students to go on to university, continuous policy efforts have exacerbated differences among high schools: every time demand for the Anatolian High schools increases, MoNE responds by creating a new type of high school, most recently the “Super-Lyceum”. This development of new school types has created another layer of management, administrative resources and testing demands.

c. Persistent Failure to Assure that the Majority of Students Acquire the Basic Competencies

Turkey has so far failed to assure that all of its citizens have developed core competencies and foundation skills that would enable them to succeed in their personal, professional and social life and contribute to the social and economic development of the country. Based on results from international and national assessments and confirmed in the research accompanying this report, most Turkish students fail to develop basic language, math, science, problem solving and critical thinking skills during the first eight years of schooling. For example, more than a third of student performed in the lowest quartile on the Student Achievement Determination Study (OBBS 2002). The challenge is thus to assure that all students develop not only basic numeracy and literacy skills, but a broader set of competencies that are needed for the new knowledge economy, especially critical thinking, citizenship and decision-making skills.

One of the interesting conclusions from the PISA results is that Turkey is an outlier in terms of the distribution of student achievement results. Among participating countries, Turkey has the greatest amount of variation between high school achievement scores (i.e. there was much greater variation between schools than within schools). It is important to note that PISA was administered at the end of the ninth grade, following only one year of study at the high school level, implying that not all of these abilities would have been acquired in one year of schooling. Rather, distribution of students among high schools in Turkey, more than any other country that participated in the exam, is entirely based on the abilities and knowledge acquired in primary school and tested on the eighth grade exam. These high-stakes exams succeed in selecting out the small percentage of students who master the tested skills by the end of eighth grade, and permit only an elite group of students to acquire additional learning opportunities in high quality secondary schools (about ten percent of the age cohort currently attend the elite high schools). To fully develop the potential of its youth, Turkey needs to diversify, not limit opportunities for young people. Every path needs to have a second chance in case students change their minds, or develop new directions for succeeding in life.

Another result of the PISA that merits reflection is that fact that Turkey has a sizable share of students performing at the highest competency level in mathematics (a higher proportion than that of most EU and OECD countries and the US—2.4 percent vs. 2.2 percent). On the other end of the spectrum, more than half (53 percent) of Turkish students performed below the level two benchmark, compared to only 26 percent of OECD students (Sahin 2004)¹. These results point to the fact that while there is substantial knowledge about how to provide good quality education, at least for the highest level students, the majority of students are not acquiring the skills they need. A system that produces only a small number of excellent students, leaving the vast majority with few skills or resources, is neither equitable nor sustainable. At some point, this disaffected young population will demand better opportunities; to head off a catastrophe,

¹ According to the OECD report of PISA results for mathematics (2004), level two competency means that students are able to interpret and recognise situations in contexts that require no more than direct inference, extract relevant information from a single source and make use of a single representational mode, employ basic algorithms, formulae, procedures or conventions, and make literal interpretations of results.

the government will need to decide if it prefers the majority of its young population to be an asset or a liability.

Foundation skills and core competencies are important not only for initial employment but also for career growth in Turkey. Moreover, foundation skills are prerequisites for further on the job training and life-long learning. Even with respect to specific job-related skills, the system is failing to achieve its objective of preparing vocational graduates for employment. First, vocational high school graduates are no more likely to be employed after high school than general secondary graduates who work rather than go on to university after high school (Tansel 2004). Research shows that fewer than half of employed vocational high school graduates report that they have jobs that utilize the vocational skills they learned in school (Ogawa and Tansel 2004). In addition rates of return to vocational school for both men and women were slightly lower than that of university (Tansel 2004). The implications of these findings are that general skills obtained in a broad academic curriculum are rewarded in the labor market with higher wages as well as more relevant employment. The observation that an applied vocational education does not in fact necessarily lead to a job in the same sector will likely surprise Turkish policy makers. What is the point of a vocational education if not to encourage direct linkages between schooling and the labor market?

Unfortunately, government policy for the last 30 years has been to intervene in student choice of secondary school type, with the principal objective to increase the proportion of students going to narrow, applied vocational high schools organized along specific occupational categories (some 150 in all). Indeed, the government established 65 percent as the goal for the share of enrollments the vocational schools should absorb, an arbitrary target based on perceptions of needs rather than actual demand. In shunting the majority of students into terminal vocational schools central authorities have sought to squelch demand for higher education, rather than develop opportunities for all students at higher levels. The Turkish education system is thus one in which students are systematically tracked into different levels of school quality from an early age. This tracking system is designed to reduce opportunities through a series of tests that separate students by achievement differences and place them into schools designed to exacerbate those differences.

The implications of these findings, in combination with observations that vocational graduates are more likely to be unemployed and that vocational education is both more costly and has been the target of additional unneeded investment (teachers and classroom in this sector have increased, while enrollments have remained stagnant), are that policy makers should reexamine their priorities in both general and technical secondary education in Turkey. Furthermore, there is considerable unmet demand for tertiary education: demand exceeds supply by about two to one (only 35 percent of those taking the university entrance examination were able to obtain entrance to the university level). Currently, each step along the way of the education selection process leaves fewer and fewer students that benefit from a high quality education. Not coincidentally, these are the very students who started with the most favorable socio-economic background and conditions (OSYM 2003).

3. Teachers Do Not Make Use of Good Teaching and Learning Practices

The results of numerous student learning assessments undertaken in the last few years (including TIMMS, PISA, PIRLS, HSET and OSYM) point out similar findings: student achievement is low and is related to a variety of factors. School related factors are the easiest to improve in the short term, and Turkey provides ample opportunity for clear policy improvements that could generate learning gains across a number of subjects. The most critical area of policy improvement is teacher quality: teachers need to be more interactive in the classroom to be effective. According to the results of the research, an interactive teacher is one who explains rules and principles in the classroom, carries out class exercises, distributes and uses hand-out materials, uses instructional materials if necessary, gives demonstrations, uses an overhead projector and lets students use it and conducts student experiments in the classroom. Schools need to support these teachers, providing them with resources and allowing for specific professional development opportunities directly related to improving the quality of teaching and learning. The interactive teacher positively affects students' self-perception of success across subject areas, one of the most important predictors of the achievement measures (Berberoglu 2004).

Not all interactive teaching methods are related to improved student outcomes however. Some instructional practices and materials, popular with policy makers, do not seem to be contributing to academic success. For instance, pair or group work, long term student projects, and student-driven presentations and discussions are not positively related to improving learning achievement of the students in Turkey. As they are used today, personal computers are not improving student results in academic terms, likely due to the lack of instructional software and teacher training to take advantage of the computer as a teaching and learning tool (Sahin 2004 and Berberoglu 2004). The same observations are also true for other facilities at school, such as use of the library. The frequency of library use cannot explain school success by itself; rather it is how students and teachers use the library as an effective tool for learning that influences student outcomes. All of these policy suggestions can be implemented through targeted pre-and in-service teacher training.

Unfortunately, pre-service teacher training is one of the areas over which MoNE has very little control. One of the seemingly contradictory aspects of the Turkish Education system is that while the Ministry of Education has comprehensive authority over most of the determinants of teaching and learning (textbooks, school facilities, distribution of teaching staff), there are critical elements over which they have no influence, namely selection of individuals into the faculties of education, their academic preparation and training for the teacher profession and students' motivation.² As with all high school students entering universities, teacher candidates are selected principally via the high stakes entrance exam conducted by OSYM, an autonomous institution which develops the assessments. MoNE, the employer of the overwhelming majority of teachers in the

² All public employees have to take a civil service exam administered by OSYM. Also, tests conducted for the promotion of teachers are administered by OSYM, which has its own staff and design team for the creation of the selection exams.

country, has neither authority nor influence over the entrance exams and therefore is not involved in the selection process of its future employees. In addition, there are few mechanisms (and at present no dialogue) between these two institutions—OSYM and MoNE—to increase these linkages.

After the selection process into the universities, future teachers are trained by the faculties of education within the legal framework and according to policies established by the autonomous Higher Education Council. This pre-service training is dominated by largely theoretical concepts of cognitive development, with little time for developing the skills needed for conveying curriculum to students in an engaging and transformative fashion. In some instances, the curriculum has been known to include test preparation for the teacher placement/exit exam (Sahin 2005). Here again, MoNE has neither authority nor influence regarding the pre-service formation and training of its future professionals.

These flaws in the selection and pre-service training of teachers increase the importance of MoNE's responsibility for providing better terms and conditions of service for teachers while they are in the classroom. These include a career plan that provides incentives to recruit, retain, and motivate teaching staff (such as salary, benefits, and promotion), in-service training opportunities and continuous professional support, effective school leadership and management, and adequate quality facilities and equipment that facilitate their performance as teachers. MoNE has not historically been successful in this. MoNE also has no influence is the motivation that university entrance exams have over what students and their families pay attention to and want to learn. The most sought after exams (medicine, engineering, law) are those with the smallest number of vacancies in the universities, leaving pedagogy to the bottom third of the achievement distribution. Here again, OSYM comes across as a key player (if not the only player) in the game of determining the number of vacancies for each university specialty, yet, it is not responsive to the evolving curricular objectives of developing successful teachers.

In terms of how teachers perform once they arrive to the classroom, it is widely accepted by academics and policy-makers that traditional teaching practices that emphasize rote learning in the transmission of information from teachers to students is less effective than some other models in helping students develop problem solving, analytic reasoning, critical thinking skills, etc. Research in Turkey and elsewhere demonstrates the importance of involving students more actively in teaching and learning in order to cultivate these types of competencies. Accordingly, teachers in Turkey are experimenting with elements of a model that is more student centered and that engages students more in the learning process. However, recent research indicates that students who report that their teachers are using elements of student-centered approach (such as collaborative and group work) are learning even less than others as measured by existing assessments. (Although part of the explanation may be that the current assessments focus on rote learning rather than critical thinking skills, so that students who learn under the new paradigm are lower performs because the tests are inappropriate for their skills).

The underlying question is: why are teachers who attempt these new methods less successful than their more traditional peers in raising student achievement? Some

potential explanations are as follows. First, the new “interactive” model is characterized by changed relationships between teachers and students in the classroom – students participate more while teachers design programs and maintain responsibility for student learning. The research in Turkey indicates that on average, teachers who attempt to implement this model of student engagement do not maintain their responsibility for guaranteeing student learning. That is, in shifting to a more student-centered approach teachers also transfer much of the onus of learning to students themselves.

Another explanation is that new teachers, because of their economic and socio-cultural background,³ cannot fully understand or adapt to new approaches. Second, teachers may lack the know-how and experience to fully implement a learning-centered teaching model. They may understand that such a method is thought to lead to improved outcomes and critical thinking, but are not prepared for implementing as they never learned in such way or have been taught to value this approach. Third, teachers do not have access to in-service professional and intellectual development opportunities which not only provide them with skills and methodologies, but also could exemplify these types of methodologies. Furthermore, the models teachers have in their own instruction during pre-service training are also typically based on the same rigid modes of didactic instruction (“chalk and talk”) teachers are now being encouraged to phase out.

There are many complementary factors (such as assessment tools for new methodologies) needed to successfully transform traditional instruction into more effective student-engaged learning. The first step will be in realigning pre-service training to reflect the needed changes in instruction. Additional resources will also be required to address the shortage of tools, resources, and in-service training opportunities. Teachers also need to have access to instructional didactic aids such as supplementary reading materials, overhead projectors and other teaching and learning materials. An additional requirement is a supportive institutional environment in the school. Currently, school administration staff discourage teachers from actively engaging students, encouraging their participation in discussions, permitting debates and allowing students to challenge teachers as it is thought that such activities signify a lack of control in the classroom. Many parents (and students) are an additional constraint because they also have certain expectations with regard to how teachers should teach. Most expect that good teaching is characterized by drill and practice, especially related to test items for the high school and university entrance exams. These expectations, combined with the memorization and rote learning preparation required for the exams leave teachers with little room for using innovative and child-centered teaching methods.

³ According to Sahin (2005), teachers tend to come from the lower end of the socioeconomic spectrum and, until recently, are the poorer performers coming out of the education system (to the degree that OSS measures this). Moreover, a large proportion of teachers hired during the political crisis of the 1970s entered the profession without adequate training. As a result of this constrained socioeconomic and educational background, many if not most teachers themselves have underdeveloped critical analysis, problem solving, and creative thinking skills. As a consequence, the challenge of expecting teachers to provide their students with these competencies is daunting if not insurmountable in the short term to say the least.

4. Inadequate Systems for School Improvement

Legitimate, historical reasons—including issues of nation building, social unity, political philosophy and potential religious conflict—explain why Turkey has one of the most highly centralized education systems among middle income countries. Turkey’s pre-university education system is even more centrally controlled than the famously centralized French system, with nearly 100 percent of public expenditures derived from a central source (Gershberg 2005). According to OECD data for 1998, 94 percent of all education decisions were made at the central level (OECD 1998). In spite of this centrally controlled system, however, there are substantial disparities between regions and schools in terms of access, inputs and outcomes. This point merits reflection: had Turkey been interested in assuring standards for school quality across all primary schools, the existence of centralized Ministry would have been an ideal mechanism for guaranteeing equity of school inputs across a large territory. For example, the experience of many socialist countries, including Romania, Hungary and Poland, reflects the role of a centralized bureaucracy in guaranteeing equity of inputs across schools (Gershberg 2005). Instead the disparities described above are a direct result of the current structure, which relies on political rather than technical criteria to determine school upgrades and needs. This means that those disadvantaged groups with the least possibility of having a voice are the most neglected by the system. The structure of such a system is of course, inherently political; while the decision to decentralize is one that will require significant political change (and the will to change).

Currently, the Ministry of Education manages the operations of about 40,000 schools across 81 provinces, with limited or no authority in the hands of local administrators, who themselves report up to the Ministry. MoNE and its school inspectorates make decisions regarding the hiring and firing of principals and teachers, select and distribute textbooks and manage school rehabilitation and construction. MoNE also determines the salary and profile of each school’s teaching and administrative staff, and decides the term of each teacher’s position at any given school (many teachers in rural areas, for example are placed there on a lottery basis for a set period, typically early in their career). As is well known, teachers are the single most important factor in delivering instruction to children; thus if teacher management—including recruitment, evaluation, transfer, salary, and bonuses—are centrally determined, the community has little input into how their children learn. Furthermore, all in-service training for teachers and principals is centrally determined and implemented by MoNE, typically requiring substantial expense and travel on the part of far-flung school staff to a regional center. In this centralized policy environment, we would expect all schools to look similar, at least along the characteristics over which MoNE has control. Yet, as documented in the quality section, above, Turkey’s schools vary greatly in terms of the quality of both inputs and outputs.

The system is further characterized by ineffective local technical assistance infrastructure for teacher support and school improvement. The most frequent interlocutor between the school and MoNE is the School Inspectorate, which monitor schools in a very mechanistic way. Currently these agencies, located in medium to large cities within each province, directly oversee school functions and report problems back to the ministry. They serve a monitoring and control function through occasional whole-school

inspections, which follow a checklist strategy of monitoring of school inputs, rather than processes. Specifically, school inspections typically center around **verifying documents and compliance with Ministry regulations; very little, if any constructive suggestions for either school improvement or classroom pedagogy are conveyed by the inspectorates to the school.** In addition, the inspectorates are responsible for funneling inputs down from the Ministry and ensuring their delivery. Very little about the current structure is actually oriented toward responding to school needs or supporting schools in their endeavor to provide quality education to all children.

At the local level, schools and local administrations in provinces have no incentives for improving school quality or school outcomes, while there is no one agent responsible for the poor educational outcomes of the majority of Turkish students. In addition there is very much a provincial or feudal attitude of “we must wait for the Ministry to come fix this” in schools, especially in rural areas where resources within the community are scarce (and the Ministry can take years to respond) (Kuitunen 2004). In contrast schools in wealthier communities can rely on contributions of parents to augment the resources provided by the Ministry. In some cases these “voluntary” contributions become compulsory, with little accountability of schools to report back to parents what they have accomplished.

To reorient the Turkish education system to respond both to school needs on an individual basis and equity across the entire system, two important changes will need to occur: first, school inspectorates will have to see themselves primarily as agencies of support to schools, from both a technical development and quality assurance perspective. In this respect, inspectorates could aggregate school needs for training and pedagogical support for schools and act as a clearing house for school improvement. Second, MoNE will have to decentralize much of its direct responsibility for schools through the development of a per capita financing scheme, while assuring equity to those schools that cannot rely on local authorities to generate additional resources for their school. In this way local councils can hire the administrative and teaching staff to best respond to their local needs. While improving resource flows and providing plenty of technological and pedagogical capacity development and support to the education sector may be useful to school improvement, a necessary condition is that bureaucracies and schools are held accountable for using the inputs they are provided in an effective manner (Gershberg 2005).

5. Education Financing is Ineffective in Promoting Equity and Quality

Education financing is a fundamental component of a nation’s social mission to improving both equity of opportunity (especially for poor students) and guaranteeing a standard of quality across schools. Turkey has made significant progress in improving equity of financing in recent years, especially through the expansion of compulsory schooling from five to eight years. After the implementation of 8-year compulsory schooling, the distribution of public funding became more in line with the experience of other countries at about the same level of economic development: the proportion of public expenditures going to the highest quintile decreased from 23 percent in 1994 to 17 percent in 2004, with a commensurate increase going to the lowest quintile (from 13.5 to

19 percent). Similarly, the share of resources going to primary school is relatively high: 49 percent of all education expenditures support this level of schooling (Mete 2004). Nonetheless, the total amount of resources devoted to education is on the low side for a country of Turkey's income level (about 3.5 percent of GDP), therefore the education system suffers at all levels.

Unfortunately, private resources in education present a serious challenge to the social goal of ensuring equity: Turkey has the one of the highest shares of private out-of-pocket financing of education in the world (35 percent, compared to 32 percent for Korea and 19 percent for the United States). The largest source of private expenditures go to private tutoring schools (*dersane*): parents and students pay considerable sums to a diverse sector of schools (the number of *dersane* almost equal the number of high schools in Turkey) to help improve their chances on the high school and university entrance exams. Furthermore, access to private tutoring is clearly income driven, with 61 percent of families in the highest income quartile reporting paying for private tutoring, compared to just 10 percent of households in the lowest income quartile (Tansel and Bircam 2004).

The large share of private resources going to education is the direct result of the limited number of higher education opportunities provided by the Ministry. As described above, access to the state-funded (free) tertiary level is controlled by both the Anatolian High School and University Entrance Exams, success on which can determine a student's future career, salary and even lifestyle. The high rate of return to university schooling compounds the effect, such that parents who can afford it will pay for private primary and secondary schooling in the interest of improving their child's chances on the university entrance exam. Increasingly, even primary school quality is measured on the basis of the success of students on these exams, while schools themselves have reoriented their mission towards preparing student for tests, rather than developing the whole child (Sahin 2004).

There are serious equity implications to this distribution, not least of which is the idea that those who can afford to pay for high quality tutoring are those who are most likely to gain entrance to the publicly funded high quality university system (and would have likely scored well on the exam anyway). Private tutoring plays a key role in determining who attends what type of university, as acknowledged by 89 percent of the undergraduate students who view private tutoring as necessary for success in the university entrance examination. About 78 percent of all undergraduate students report receiving private tutoring (almost 90 percent of those through taking preparatory courses in private tutoring centers). As the main reason for not participating in private tutoring, 57 percent of the surveyed undergraduate students mentioned lack of economic resources, 23 percent mentioned availability of high-quality education in secondary school, and 5 percent mentioned absence of private tutoring in their neighborhood. Thus, the poverty linkage is revealed explicitly by the emergence of the lack of economic resources as a prevalent response, but also by the fact that the other common response is "availability of high-quality education at secondary school," which is unlikely for poor children.

D. Options and Road Map

The main goal of any education system should be *to provide equal opportunities for all students to achieve their potential*. As described in the previous pages and in the research commissioned for this report, the current strategy of Turkey's education system has been to select students through an ever finer system of filters to determine access to limited, but high quality, schooling. Turkey is proud, and has every right to be, of its high quality elite system of schooling. Nonetheless, in today's changing economy, with ever greater emphasis on developing all workers for the knowledge economy, the strategy of training an elite few while denying the remainder of the population the chance to achieve their potential is no longer an option. Instead, Turkish society needs to develop a fair, equitable and transparent education system that recognizes differences in student development, talents and interests.

Of course there is no single, magic bullet for transforming the education system. *Instead, change requires an array of targeted policy solutions, each directed at improving critical system failures*. Additionally, not every challenge can be resolved with a single solution: some issues will require a battery of creative policy approaches. For example, improving access, especially to lower and upper secondary for girls, will require changes both at the demand level and the supply level. Based on the key findings and integrated challenges of the preceding pages, this section provides policy strategies and research-based experiences for achieving the overall goal of a sustainable, equitable, effective and efficient education system.

1. Expanding Early Childhood Education

One of the first steps towards guaranteeing equal opportunities for education success and reducing poverty is through the provision of targeted early child development (ECD) programs to the poor. Benefits to expansion of pre-primary education in Turkey are estimated to be more than three times the cost (Kaytaz 2004). A diverse array of experiences in other countries, including Sweden, Finland and the United States (Head Start, see Box 1, below) have demonstrated that guaranteeing young children a safe, and healthy education environment can have significant and positive results for child development and learning capacity, among other social goals. Recent World Bank reports evaluating progress in the sector have shown that “children who participate in well-conceived ECD programs tend to be more successful in later school, are more competent socially and emotionally, and show higher verbal and intellectual development during early childhood than children who are not enrolled in high quality programs. Ensuring healthy child development, therefore, is an investment in a country's future workforce and capacity to thrive economically and as a society” (World Bank, 2005a).⁴ Research in the United States has demonstrated that high-quality preschool programs can have long-term positive effects on student achievement, high school completion, college attendance, and earnings. Such programs can also help to reduce crime rates and reliance on welfare subsidies. A well-known study of one high-quality program in the state of Michigan found that preschool attendance had positive impacts on children that were still

⁴ A broad array of programs and research can be found at www.worldbank.org/children

measurable after the participating children reached the age of 27. Moreover, available evidence indicates that economically disadvantaged children benefit more from developmental preschools than children from wealthier families (Currie, 2001).

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

As discussed above, currently only 13 percent of children aged 4 to 6 attend pre-primary education. To provide equal opportunities for success in life, Turkey needs to immediately expand access to early childhood education. *To achieve this objective, MoNE should attempt cost recovery from wealthy families wherever possible, including at the university level.* In response to the inevitable complaints regarding identification of families who can afford to pay that are sure to arise from this recommendation, we suggest charging tuition to university students who attended private high schools and using these funds for public pre-school education for the poor. Diversification of supply options is also important, including through private-subsidized providers, home-based services, and community pre-schools. These private-public partnerships can be seen as a short-term measure for providing pre-school spaces, at least until government revenues increase to the point where the system can afford to support a universal pre-school system. In the interim, targeting is critically important to promoting equity.

BOX 1. HEAD START IN THE UNITED STATES

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

Source: Currie, 2001

2. Equal Access for All: Conditional Cash Transfers for Girls and the Poor

The Turkish Government has attempted to increase compliance with the compulsory schooling law by providing financial support to the poorest households who cannot afford to send their children to school — under both ad hoc social assistance and as supported by the World Bank under the conditional cash transfer component of the Social Risk Mitigation Project. In addition to providing larger grants for girls than for boys, the government has also sought to fine parents who might be unwilling to send their children to school for one reason or another (including unwillingness to send girls to school in rural areas, or the desire to supplement household income through child labor, etc). *Expansion of this conditional cash transfer program, currently set at about US\$15 per child, with specific targeting to rural regions would help to guarantee that the remaining three percent of students not attending primary school would be provided with every opportunity for success.* Turkey should also analyze the benefits of expanding the program for girls to the secondary level, with a financial bonus at the end of the secondary cycle for those girls who graduate. Research in Bangladesh comparing different types of incentive programs has shown that maintenance scholarships have been quite successful in increasing high school completion rates for girls (Arends-Kuenning and Amin, 2004). In this way, parents might see the economic benefits of allowing their daughters to attend, rather than marry them off immediately following completion of compulsory schooling.

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

BOX 2: THE PROGRESA PROGRAM IN MEXICO

In 1998, the Mexican government began to provide cash grants to mothers of poor children in grades three to nine, on the condition that the children attend at least 85% of school days. The amount of the grant was substantial—in 2003 the average monthly transfer was \$35 per family—and included a bonus for families of girls enrolled in grades seven through nine. Transfers were also adjusted to account for inflation every six months. Various evaluations of the PROGRESA program have found that the program has had positive effects on school enrollment rates and has reduced the gap in enrollment rates between poor and more advantaged children in grades four to six. The program has also been successful in reducing dropout rates between primary and secondary school, as well as reducing the incidence of child labor among participating boys and girls. The largest impact of the program occurred among secondary level girls, whose enrollment increased from 67% to 75% between 1998 and 2000. Finally, the program succeeded in reaching Mexico's poorest families, with more than 80% of transfers going to the poorest 40% of Mexico's citizens. The success of the program ensured its continuation despite a change in government in

2000. Due to the randomized nature in which PROGRESA benefits were administered, researchers have greater confidence in these results than in the results of programs where benefits are distributed based on political or other factors.

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

Other potential policy solutions to under-enrollment by girls include social mobilization campaigns and enforcement of existing laws. *Social awareness campaigns advising parents of the benefits of educating their girls have been successful in other countries facing similar enrollment obstacles.* In addition, enacting and enforcing gender parity laws for wages in government and private sector positions will ensure that women view education as worthwhile, and receive adequate returns on their investment. At the local level, schools face challenges in overcoming cultural barriers in rural areas for allowing girls to attend school. Success has been achieved by schools that work closely with their communities, earning the trust of respected elders and demonstrating the school is a safe, clean and positive environment for girls. Furthermore, results of the beneficiary study conducted in preparation for this report suggest that providing resources for chaperones or parents to accompany their daughters to schools of significant distance may help to increase the chance that parents will allow their daughters to attend high school. Many girls also indicated that were secondary schooling compulsory, their parents would allow them to attend.

3. Assuring All Students Acquire Foundation Skills and Core Competencies

Currently there is a low level of alignment and little connection between the Turkish national curriculum and the exams that determine a student's place in both secondary schools and universities. Both the curriculum and exams should be reexamined to guarantee that the goals and objectives of each reflect the core competencies and foundation skills that Turkey wishes its graduates to obtain. *To correct this disconnect between the curriculum, exams, and the skill sets needed for success in the new economy, MoNE should hold consultative workshops regarding primary and secondary curriculum reform, ensuring that all participants and stakeholders (including students, teachers, parents, curriculum specialists, and future employers) come to an agreement as to the focus and objectives of a unified curriculum and testing scheme.* Part of this process will include reflection on the general skills and competencies students need to have for the new economy, as well as greater consensus on topics such as citizen formation through civics education.

This misalignment of national standards, curriculum, and assessment can send confusing messages to young people about the skills and knowledge they need to succeed in future education and the workplace. A recent study of secondary-to-university transitions in the United States found that when universities ask for one type of knowledge and secondary schools demand another, students often leave secondary school poorly prepared for university studies. By failing to provide students with consistent and appropriate standards, "fractured" educational systems can undermine the university aspirations of young people. The authors of this study recommend, among other things, making standards and curriculum more compatible across different levels and providing all

students, parents, and teachers with appropriate information about courses that will help prepare students to succeed at the university level (Kirst & Venezia, 2004).

Problems resulting from misalignment of educational goals and practices at various levels have led to an international movement toward standards-based reform. The idea of standards-based accountability is to develop a comprehensive set of well-defined standards based on broad societal consensus and then align curriculum and assessments to these standards. Standards-based reform is often coupled with accountability programs that assess schools based on how well they teach core skills and knowledge to their students. This success is generally measured by the performance of students on standardized tests. While there is evidence that accountability systems lead to higher student test scores, there is also concern that they encourage teachers to “teach to the test” rather than teach a broader and perhaps deeper curriculum (World Bank, 2003). The lesson is that whenever stakes are attached to the test, teachers are likely to feel pressure to spend time preparing students to take them. For that reason, it is important that tests be aligned with the actual skills and knowledge that the nation demands of its young people.

Recent research demonstrates that the most effective approach to aligning curriculum and assessment to standards is to use curriculum-based exit examinations. For example, a study analyzing the results of several international assessments found that, controlling for a country’s wealth, students in countries with curriculum-based exit examinations performed better than students without such exams. Such examinations can motivate students to work harder in academic subjects and can also encourage schools and teachers to improve curriculum and instruction (Bishop, 2001). One promising example of the use of curriculum-based examinations is the International Baccalaureate (IB) program. The IB program was founded in 1968 and currently operates in 1,485 schools in 119 countries. The IB secondary diploma program features a rigorous course of study leading to examinations that measure whether students have mastered a well-defined set of skills and knowledge. Because the assessment of students is aligned with the program’s standards and curriculum, exams encourage high levels of instruction and achievement. Due to the high quality of the standards and assessment in IB programs, students graduating with an IB diploma have access to the world’s leading universities. Although it would be difficult to replicate the IB program’s success at a national level, the IB example demonstrates the possibility of developing tests that are worth teaching to (Rothman, 2002).

4. Bringing New Practice to Pre-Service Training

Many of the skills a teacher will carry with her throughout her professional career are developed during pre-service formation. It is widely acknowledged that in Turkey, as in many countries, pre-service education for teachers provides a strong grounding in education theory, but few practical tools for how a teacher should actually teach once they are in front of a class. *Though it is unlikely that MoNE can hope to change this structure without considerable effort, they should endeavor to cooperate with the National University Council by providing all pre-service teacher certification programs with the nationally selected textbooks used in public schools.* Though not a new idea, the use of school textbooks during pre-service teacher training is a surprisingly rare method

in university and normal schools. At the very least, delivery of the national textbooks, together with teacher curriculum guides to pre-service institutions would provide interested teachers-in-training access to materials for developing demonstration lessons in their area of interest. In order to encourage the use of these textbooks, MoNE should work with OSYM to develop an oral demonstration lesson component of the teacher certification exam.

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

Turkey is not alone in the challenges that it faces in reforming pre-service education: a common complaint among teachers in many countries is that their pre-service training relies too heavily on theory, failing to prepare them for the realities of the classroom. As noted above, a change as simple as providing student textbooks to teachers-in-training can help teachers develop knowledge of the curriculum and the best ways to teach it. The key is that teacher pre-service training must be based on the realities of the schools and students teachers will be serving. For example, in Cuba, which outperformed other Latin American countries in student performance on the 1997 OREALC/LLECE examination, both pre- and in-service training are based in local schools and rely heavily on the national curriculum, which makes training more relevant to the needs of schools and students and builds relationships between schools and teacher training institutes. Additionally, school directors are trained at the same time as teachers so that they too become familiar with the process of developing teachers (Gasperini, 2000).

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

teacher preparation colleges. Generally housed at education schools within universities, professional development schools are modeled after teaching hospitals in their methods and objectives. Teacher candidates who are trained at professional development schools receive a combination of academic preparation and clinical training in real-world settings under the supervisions of experienced teachers. After teachers complete their training and are hired as teachers, an experienced mentor supervises them closely during the first year of teaching (Darling-Hammond & Sykes, 2003).

5. Developing an Equitable and Effective Teacher Selection, Assignment and Support Policy

It is clear from much of the research presented above that improving teacher performance is crucial to improving student outcomes. Turkey, like most countries, suffers from lack of consensus, collaboration and communication among the trinity of institutions that help to shape a teacher's development (Higher Education and Teacher Training Institutions), selection (OSYM and the Teacher Entrance exam) and career (Ministry of Education and Schools). *One of the first critical steps to improving the situation of teachers is through the creation of a consensus-based Teacher Development and Career Plan which lays out the strategy for supporting a teacher from her initial formation, through the selection process, and throughout her career in schools.* How to do this has been the subject of much controversy (see the experiences of the United Kingdom, Brazil, Mexico and Romania) requiring considerable debate and compromise among the relevant parties, including teachers, parents, students, and the triangle of teacher development actors (Higher Education and Teacher Training Institutions, OSYM and the Ministry of Education).

The following are sample components of such a teacher career policy solution (and countries that have enacted programs with these characteristics):

- increase the role of school principals in selecting teachers (United Kingdom),
- assign more experienced teachers to early grades and disadvantaged groups (Cuba),
- develop mentor teacher and peer-coaching programs (USA),
- increase support during the induction period (California, USA),
- encourage teacher involvement in decisions which directly affect the classroom, including the development of the national curriculum and textbook selection (Brazil),
- strengthen teacher professionalism through the creation of a Professional Teaching Society as a complementary institution to Teacher's Unions (Peru), and
- provide for teacher input into in-service training needs, including allowing schools to "purchase" their own training programs (Brazil).

A recent report by the OECD concludes that, of all policies available to schools, raising teacher quality is the intervention most likely to improve student performance (OECD, 2004). Additionally, recent research has found that access to effective teachers can help to raise the achievement of disadvantaged students and help to close the persistent gap between less and more advantaged students (Hanushek, 2002). Yet studies have also found that teacher quality varies tremendously both across and within schools, often at

the expense of the disadvantaged students who need good teachers the most. For example, research in the United States has found that the highest quality teachers tend to sort into schools with the most advantaged and highest achieving students, leaving disadvantaged students with lower-quality teachers (Lankford et al., 2002).

In addition to the international examples outlined above, the 2004 OECD report—which was developed in collaboration with 25 countries with varying educational contexts—offers several recommendations for developing a comprehensive approach to teacher policy.

- Countries should emphasize quality over quantity of teachers by upgrading criteria for selection of teachers into training institutes and schools, ensuring on-going evaluation throughout teachers' careers and providing teachers with the resources and support they need to meet increased expectations.
- Educational policy makers should develop “teacher profiles” that include clear statements of what society expects teachers to know and be able to do and provide a vision of what constitutes effective teaching. Such a profile could help to assess whether teacher development programs are actually preparing the types of teachers that Turkey needs.
- Teacher development should be viewed as a continuum, with clear connections between initial teacher education, induction, and professional development. Additionally, there should be greater attention placed on supporting teachers during the initial phases of their careers, particularly through the improvement of teacher induction programs.
- Teacher education should be more flexible: options should be available for non-education tertiary students to enter teaching preparation programs, and for people from other careers to enter teaching. Greater flexibility would provide more routes into teaching, identify people with a strong commitment to teaching, and increase the overall pool of qualified professionals willing to enter the teaching profession.
- Teaching should be transformed into a “knowledge-rich profession,” in which teachers actively analyze their own practice and engage in ongoing professional development. This professional development should be based on both evidence-based practices of effective teaching and teachers' own developing conceptions about what works in their own classrooms.
- Schools should have greater responsibility for the selection, working conditions, and development of teachers. To avoid inequalities in the resources and capacity of schools to manage these responsibilities, schools should also be measured against externally determined performance standards (OECD, 2004).

6. Providing Transparency of Information to Parents

One of the challenges highlighted in the previous section is unequal distribution of both inputs and outputs at the primary level. *A potential method for improving school and inspectorate accountability for distribution of inputs is by guaranteeing parents access to information about their child's school through yearly reports on progress toward achieving school objectives.* These school report cards could include information on both inputs and outputs. On the outputs side, the report card would include key indicators such as student progress toward learning objectives, passing, drop-out, and repetition rates,

parent satisfaction indices and student absenteeism. On the inputs side, the report card would assess progress on a series of objectives (identified in the School Needs Assessment, see strategy 7, below) for upgrading the physical inputs or improving school facilities: for example, replacement of windows or installation of a new telephone line for internet access for existing computers. In this way parents can both assist and pressure schools to achieve their objectives. This would also create an additional layer of transparency for the operations of the school inspectorates, which, despite existing regulation requirements, do not currently respond adequately, promptly or equitably to the needs of schools.

This strategy, if enacted and implemented in a broad set of circumstances, will also have substantial secondary or “spin-off” effects, including the development of civil society through increased dialogue as to what a “good school” should look like. Currently, much of the discussion surrounding the overall goal of a school centers on increasing passing rates for the Anatolian High School Examination (Sahin 2004). Further reflection on school climate, community-school partnerships, greater social accountability, governance, values, and the development of core competencies should also be an integral part of the school report card and subsequent dialogue. Similar experiences can be found in the Autonomous Schools (Nicaragua) and School Development Plans (Chile and Brazil).

Creation of a school report card is a fundamental step towards increasing the voice of parents in their children’s education and part of a greater strategy to achieving accountability within the education system. As the World Bank’s 2004 *World Development Report* observes, educational accountability consists of four relationships between government and society: the voice of citizens, compacts between the public and service providers, management within organizations, and the client power of citizens to increase accountability of schools and school systems. Strengthening accountability and the provision of educational services requires a mixture of these four relationships in the context of a coherent system. An important component of this system is the provision of high-quality information: if parents do not have access to timely and accurate information about their children’s schools, for example, increasing their power will not necessarily lead to increased accountability or educational performance (World Bank, 2003).

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

In addition to demanding school report cards, parents can take a more active role in making schools more accountable by participating in school development plans. In the Brazilian state of Minas Gerais, for example, parents collaborate with teachers and

principals to define goals for their local schools, create school development projects, and manage financial resources to achieve these goals. In Chile, schools undergo a similar process and submit their school development plans to the Ministry of Education, which rewards funds on a competitive basis (Winkler & Gershberg, 2000). As discussed below in the context of Policy Option 13, increasing the participation of communities in school reform not only strengthens school accountability and parents' access to information, stronger community involvement may also be associated with improved student outcomes such as achievement and attendance.

7. Helping Schools Identify Priority Needs for Achieving Learning Objectives

During the beneficiary assessments conducted for a prior World Bank project, teachers, principals and students in several schools indicated that teacher training for the use of computers was neither adequate nor appropriate for their needs. They also reported that the school was not consulted regarding their training or resource needs. In some cases, the distribution of inputs was not adequately considered; schools were provided with computers and other equipment when they did not have the infrastructure (e.g. secure classrooms, adequate power supply) to guarantee their appropriate use. *One potential solution to this challenge is through the creation of a School Needs Assessment. Developed and prioritized at the school level by a committee of parents, students and school staff, the School Needs Assessment is designed to encourage the school to develop a list of needed resources and inputs and document the relationship between these inputs and desired learning outcomes.* For example (drawing again from the beneficiary assessment), schools could request repair of windows and a new heating system, on the grounds that cold conditions in the classroom were related to a increase in student absences. The resulting ranked list of needed school inputs would then be passed on to the local school inspectorates for future targeted investment plans. As part of this process, the MoNE should establish a definition of a minimum standard for school inputs, in order to focus resources on those schools that do not meet the definition of a quality school. By establishing a baseline for physical and human resource inputs (e.g. schools in need of additional physical plan investments, teachers in need of additional training) and taking into consideration those areas of interest indicated by schools as part of the School Needs Assessments, MoNE can make transparent policy decisions for investment in school quality in the coming years.

International experience in this area is still small, but growing. In 2003, an international coalition of 20 European school inspectorates, the Standing International Conference of Inspectorates (SICI) issued a report based on a two-year study of effective school-evaluation in Europe.⁵ One of the central conclusions of the report was that schools must take responsibility for their own quality assurance by evaluating their own performance, making appropriate plans for improvement, and implementing these plans effectively. At the center of this process is the individual child, while the goal of self-evaluation must be to ensure access of all students to a high-quality education. The role of external actors such as school inspectorates in this process should be to ensure that schools receive adequate support and pressure to change. The report cites several case studies of effective

⁵ For additional information about the organization please see <http://www.sici.org.uk/>

support of school self-evaluation, including the work of the Education and Training Inspectorate (ETI) in Northern Ireland. The ETI provides schools with student data to use for benchmarking purposes, as well as material to help schools evaluate and implement improvement strategies. For example, the ETI offers a school improvement pack, which includes information on case studies, effective school development procedures, and advice on how to set improvement targets. ETI also provides schools with quality indicators in specific subjects to use for measuring improvement (SICI, 2003).

Another example of a successful school needs assessment program in a different context is the World Bank-financed Education Quality Improvement Project in Cambodia, which served almost a fourth of the country's primary school population. Local school communities first met and identified their needs and then made proposals to the Ministry of Education for necessary funds. Once the proposals were approved, the Ministry of Education delivered the funds directly to local school clusters to distribute to schools. The project also involved district-based "animators" who monitored the school quality improvement grants and advised the government on ways to improve education policies. According to a World Bank assessment, the project resulted in increased dialogue about school reform at the school, cluster, and administrative levels. As a result, changes began to take place in teaching and learning practices and school and local administrators became increasingly more responsible for improving their local schools (World Bank, 2003).

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

8. Improving School Management: Certification and Mentor-training for School Principals and Inspectors

It is abundantly clear that school principals are among the most important actors in the functioning and improvement of schools. Studies on school effectiveness have found a strong relationship between high student achievement and strong administrative leadership. Effective principals can also have strong positive effects on student attitudes and social behavior (Cotton, 2003). Moreover, principals are among the most powerful of

local school actors. A recent study by the OECD found that principals in most OECD countries had greater responsibility for personnel and financial resources management than school boards, department heads, or teachers (OECD, 2005).

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

To gain and hone their leadership skills, prospective and practicing principals have also increasingly turned to principal training centers. In the United States a network of 150 principal training centers—many modeled after the Principal Training Center at Harvard University—have developed to offer support, mentoring, and collaboration for prospective and current principals seeking to improve their leadership skills or knowledge. Principals in these centers can also share best practices across national borders through relationships with an international network of principals’ centers (Fenwick & Pierce, 2002). Similarly, school inspectorates can find best practice examples through the Standing International Conference of Inspectorates (SICI), discussed above in Policy Option 8. SICI’s report on effective school self-evaluation stresses the importance of highly trained inspectorates responding to the needs that schools identify through their own self-evaluations. According to the report, one of the keys to successful school evaluation is strong external support for self-evaluation. Additionally, the report concludes that the role of school inspectorates should not only be quality control, but also quality assurance (SICI, 2003).

Available evidence on the qualifications and distribution of school principals in Turkey indicates that there is significant need for improving the ability of principals to advocate on behalf of their schools to obtain additional resources. *Turkey can assist its principals by establishing a principal certification program, complete with an exam oriented toward management skills, human resource management, and problem solving as part of a strategy to professionalize school management.* New and a designated share of existing school principals would be required to pass the exam, following a training course. Another potential way to improve principal management skills is through the creation of information exchange by way of mentoring. Similar to the teacher mentor program describe below (see 8), school principals could be paired together in order to exchange

experiences, challenges and solutions they have faced in their schools. In reward for sharing their time and experience with one another, principals would receive funding for a school-based project or need identified in their School Needs Assessment (see 7, above).

In a similar fashion, school inspectorates should be reoriented to deliver their services based on the demands of the school. Inspectorates are the long-neglected meso-level of education administration; no one can quite figure out what they do, but neither can they determine how to get rid of them. By first developing the capacities of education inspectorates, including through a certification and training program, then giving them the chance to respond to the needs of schools, MoNE can better determine the role of these agencies in shaping school improvement.

9. Developing Local Inspectorates into Knowledge Network Centers

Currently, School Inspectorates in Turkey serve mainly as an arm of the Ministry of Education in managing physical school improvements and distributing materials such as textbooks. *In fact, to better serve schools, Inspectorate Offices will need to be trained to respond to the needs of schools by reinventing themselves as centers for knowledge exchange, while reorienting their budgetary support to reflect this new role. This means identifying good practices and communicating them to others, as successfully implemented in the United Kingdom.* School Inspectorate offices can best achieve this role by offering opportunities for mentoring and knowledge exchange among teachers. Rather than organizing all in-service teacher training in the large provincial cities or even the national capital, demand-driven module courses and opportunities for the exchange of ideas can take place at the inspectorate level. Under this scenario, inspectorates will aggregate both training needs and mentoring abilities from teachers in their coverage area. Teachers (and their principals) who are especially competent in delivering engaging and dynamic science lessons, for example, can offer model lessons to other teachers of science who are interested in gaining new insight and methods. The mentor teacher in this case would receive a small bonus for teaching the class, while participants would be compensated with a transportation stipend. In this way the School Inspectorate office will become a dynamic center for knowledge exchange, while responding to the local needs of its schools.

The recent report by the Standing International Conference of Inspectorates (see Policy Options 7 and 8 above) concludes that each country must develop school monitoring and support structures that correspond to and build on its own distinctive culture, history, and traditions. At the same time, all inspectorates need to reflect on the role that inspectorates should play in national systems. It is clear from international research that external monitoring is a key to school success. For example, the German Ministry of Education commissioned a survey of six countries on the factors that they attributed to their performance on the 2001 PISA. These countries identified the importance of educational monitoring and evaluation, including school inspection. Other important factors included nationwide support for education, high esteem for teachers and the teaching profession, school autonomy, and the use and existence of school networks (Doebert et al., 2004). These conclusions support the role of Turkey's local inspectorates as monitoring

agencies, but also underscore another needed function that the inspectorates can and should take on: a support system and venue for teachers from different schools to share ideas and best instructional practices.

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

10. Offering Choices for Change: Modules for School Improvement

One of the key conclusions described above is that schools do not received adequate support for school improvement, and in fact often do not know where to begin. Yet the ministry and its inspectorates may not be the most appropriate (or the only) agencies for providing innovative approaches for school improvement. Instead, one potential source of school models may be found in the entrepreneurial sector, through private-public partnerships in the development of strategies for school improvement. One such a program that has been successful in promoting school improvement is that of New American Schools (NAS), established in 1991 in the United States. According to the NAS website (www.naschools.org) the underlying idea of the program was to identify and replicate effective, evidence-based school improvement strategies. With support from the federal government and the private sector NAS selected 11 "designs" from among almost 700 proposals from across the country, providing start-up grants to each "design team" to offer their services to schools and districts.⁶ *As a result of the effort of New American Schools, public schools gained access to proven research in best practices of teaching and learning, and private industry moved beyond charitable giving in education toward genuine, and long-term, commitment to and investment in America's students.* A recent evaluation of NAS by the RAND Corporation found that one of the program's key strengths was its explicit emphasis on educating consumers about school reform. NAS has embraced external evaluation of its efforts and has promoted quality insurance through the creation of an Education Quality Institute. RAND also concludes that the NAS approach of providing venture capital along with specific goals can be used in the future as a policy instrument to promote innovative approaches to school reform (Berends et al., 2002).

Another example of private-public collaboration in school reform is the Business Roundtable in the United States (www.businessroundtable.org). The Business

⁶ Example programs include the Accelerated Schools Project, ATLAS Communities, Co-nect Schools, Different Ways of Knowing, Expeditionary Learning Outward Bound, The Leonard Bernstein Center for Learning, Modern Red Schoolhouse, The National Institute for Direct Instruction, Turning Points, and Urban Learning Centers; further information about each of these programs can be found at the NAS website.

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

11. Expanding Opportunities for All Students

To ensure sustained economic growth, Turkey needs to work hard are providing opportunities for all youth to achieve their potential; it is the responsibility of the state to ensure that everyone can get the competencies they need in the changing economy. To date, Turkey has instead sought to reduce expectations and demand for higher education by channeling substantial portion of students into narrow, obsolete and dead-end programs. Unfortunately, the idea of leveling the playing field unfortunately often carries with it the idea of diluting quality at the elite level. Improving opportunities for the least advantaged, however, does not require a reduction in quality of the upper end of the schooling spectrum. Countries that have been successful in blurring the lines between vocational and academic high schools with no evidence of a loss in school quality—for example Malaysia, Singapore and the United Kingdom—have found that both systems can learn from one another. *Transforming vocational schooling into high quality general skills academic education means developing a solid foundation for lifelong learning, and teaching of key competencies and basic skills.* Decades of inaccurate “manpower planning” studies and the inability of such research to forecast the needs of the information technology revolution are evidence that Turkey cannot hope to determine today the narrow training needs its vocational graduates will require in a decade hence. In other words, the 65/35 goal of vocation/academic ratios for enrollments needs to be eliminated.

Accordingly, these new set of skills every student acquires should be independent of whether the student is enrolled in a vocational or Anatolian high school. One way to do this is to expand the current system to include a final year of schooling in general and vocational schools to include a test preparation course for the higher education entrance exam. This would of course require diversification of opportunities at the tertiary level beyond the elite public and lower quality private institutions (for example, through the creation of an intermediate junior or community college system—see forthcoming Tertiary Education Discussion Report). Another possibility is to develop elective courses in specific areas within the general academic schools, so that students could gain certification in job-related skills. One highly relevant and high demand example is that of specific software training or computer courses, whereby students would participate in modules that would eventually earn them a certificate of completion recognized by their future employer. The content of these courses should be developed together with employers and special care should be taken to ensure parity across schools in the level of delivery of the courses.

Additional diversification of the traditional academic curriculum can also be achieved through the creation of specialization courses through a 2+2 plan. This means a diversified system whereby everyone completes a general academic high school curriculum focusing on core competencies during grades 9 and 10, followed by more specialized courses centered on advanced competencies (either academic, vocational or mixed) in grades 11 and 12. Finally the weight of the University entrance exam as the main determinant of entrance to the tertiary level should be reduced, balancing this with student achievements in school, opportunities to learn the curriculum, and success of the student beyond a purely academic structure. In this way, Turkey can make great strides towards ensuring equality of opportunity for all of its citizens.

Cross-country analysis of student performance on international assessments suggests a positive relationship between equity and student performance. For example, in a recent analysis of data from the 2001 PISA, the OECD found that in 11 of 13 countries with low equity among schools—as measured by the variation in student background due to differences across schools—student performance in reading literacy is statistically significantly below the OECD average. Another important conclusion of the OECD’s report is that the composition of a school’s students explains much more of the variation in student performance than school resources or school policies. In other words, if less advantaged students are concentrated together in schools, they will have little chance of performing well in school and making it to high-quality universities. The OECD report concludes that this result underscores the importance of heterogeneous contexts for disadvantaged students and the need for selection policies that control school composition, such as set quotas for students of various backgrounds. Additionally, the strong effects of school climate on student performance indicate the importance of school policies that improve school disciplinary climate and foster a strong sense of belonging among students (OECD, 2005).

The OECD’s study finds other evidence that countries that differentiate and separate students according to background tend to be less equal and perform more poorly in reading literacy. For example, in countries that implement early selection policies (before the age of 15) to place students in different academic tracks, mean performance is lower than in countries where 15-year-olds have not been selected into tracks at the time of the test. There is also evidence of a negative correlation between the prevalence of vocational programs—where less advantaged students are often funneled—and student performance: a common pattern among participating countries is that students enrolled in vocational programs perform significantly worse than students in general programs. The OECD report suggests that these results provide evidence that integrated, comprehensive school systems are the best model for both increased equity and student performance. Although opponents of systems with a single academic program often argue that one program does not offer adequate opportunities for high and low performing students, the report argues that single program systems can offer many educational choices to students and sometimes even allow students to take examinations at different levels. In fact, the organization and flexibility of single program systems often allow for the possibility of highly individualized programs for students (OECD, 2005).

Perhaps the best example of the connection between equity and excellence is Finland. Scoring highest in reading literacy among 32 participating countries in the 2000 PISA, Finland is also one of the most equal of the participating countries. For example, it ranks among the five lowest countries in inequality among schools in terms of both student background and performance. Additionally, Finland is one of 14 participating countries not to apply tracking criteria to students 15 years old and less. Finland also emphasizes general academic programs and has one of the lowest percentages of students in vocational education programs (OECD, 2005). An analysis of Finland's performance on the 2000 PISA suggested that the country's success was due to the combination of several factors, including the structure of the education system, the system of teacher education, school practices, and a comprehensive pedagogy. One of the most important factors contributing to both equity and excellence is the Finnish tradition of a non-selective system of schools in which all students have access to the same type of comprehensive schooling regardless of background. As the researchers observed, "the Finnish comprehensive school system is for each child and hence, has to adjust to the needs of each child" (Valijarvi et al., 2002, p. 40). Knowing that no child can be sent to a different school or be tracked into a program with lower expectations, Finnish teachers must learn to work with heterogeneous groups of children. This approach also encourages flexibility in the curriculum and recognition of children's individual needs (Valijarvi et al., 2002, p. 40).

12. Improving the Equity of Education Finance: Scholarships and Cost Sharing

Though described as a merit-based system, Turkey's education structure currently implies that students of higher income families have more merit than those of limited resources. How to correct these persistent inequities? First, though politically unpopular, Turkey needs to set an example and charge tuition on a sliding scale to those university students who can afford to pay for their schooling. Some countries have been successful in creating loan and scholarship programs for students, including Chile, (which also continues to provide free university schooling to the top 20,000 students on the national university entrance examination). Second, Turkey should use its centralized system to distribute these resources to support students both at the University level and lower levels of schooling through scholarship and other need-based programs. *As mentioned above, one easy way to target those who can afford to pay for university education is by identifying those students who attended private high schools. If these families can afford to pay for private schooling for secondary, what is so strange about charging them a tuition fee for university education?*

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

percentage of the highest performing students from all secondary schools. Such plans currently operate in the states of Florida, Texas, and California. In each state, students who graduate at the top of their high school classes have guaranteed access to public universities in that state. States differ according to the percentage of students eligible and range of university options available to them: for example, in Texas, students in the top 10% can choose *any* public university in the state, while in California, students in the top 4% are only ensured access to *one of* the universities in the state system (Horn & Flores, 2003). Nonetheless, the objective of plans in all three states is to increase diversity in public universities and to base university admissions on merit rather than students' access to high-quality schools or teachers. This type of policy insures that, even if disadvantaged students are concentrated in schools with few resources and low-quality teachers, their efforts to perform well in school can still be rewarded with the dream of university enrollment. However, such admission policies must also be combined with scholarships or low-cost loans to ensure that this dream becomes a reality for economically disadvantaged students.

13. Introduce Gradual Steps toward a Coherent Decentralization Policy

Decentralization is not a goal itself, but rather a part of an overall strategy for improving the ability of the education system to respond to local needs, achieve greater agility, and improve efficiency in delivering education outcomes. Of course decentralization is a very complex process that involves decisions about hundreds if not thousands of activities, each of which can potentially be given to as many as six or seven different stakeholders at different levels of government, communities and schools. Despite the large number of decisions for policymakers intent on decentralization, international experience suggests *a few key indicators or decisions that seem more critical than others*. These indicators can be expressed in terms of questions:

- Who determines marginal changes in teacher compensation?
- Who makes the decision to recruit or transfer a teacher to a specific school?
- Who selects the headmaster?
- Does the school community or local government partly finance the school?
- Who decides how to allocate the school's annual budget?

So what does all of this mean for Turkey? As in most things, a fine balance must be achieved: too fast and the system may spin out of control, too slow and beneficiaries may grow frustrated with the lack of progress. Numerous examples of quick and dirty, but failed decentralization programs line the highways of policy reform. First and foremost, MoNE should work closely with all levels of education in initiating gradual and closely monitored progress. One of the biggest historical mistakes has been to eliminate or marginalize the meso-levels of education (in the case of Turkey, the School Inspectorate System). In fact, as outlined above, this meso-level should become even more important under a decentralized schooling system, as they will provide direct support to schools, consolidate needs among schools to increase purchasing power, and ensure equity and consistency of national goals between all of the schools under its charge. Second, if Turkey is to proceed with the transfer of finances to the local level, then an important goal should be to ensure equity of budgetary resources across regions through the establishment of a floor for per-student expenditures. Those regions that do not collect

sufficient tributary resources to meet this per student floor would receive enough resources to guarantee this per student minimum. Finally, the role of the MoNE should be reexamined, with priority given to establishing a greater emphasis on setting and disseminating standards, developing a culture of evaluation and assessment, and ensuring equity across regions.

While any decentralization process should be undertaken with careful planning and caution, there is evidence that countries that successfully achieve decentralization of certain key decisions reap rewards in terms of improved student outcomes. For example, recent analysis of data from the 2000 PISA data finds that schools with higher average school autonomy perform significantly better on measures of reading literacy than schools with lower levels of autonomy. A closer look at different domains of decision-making reveals that performance tends to be higher in schools with more responsibility for personnel management. Autonomy in other domains did not show as strong of an association with school performance. Studies based on TIMSS data also provide evidence that autonomy is more effective in certain domains while greater centralization may be important in others. In particular, systems that combine relatively strong centralization of curriculum and assessment with less centralized process dimensions tend to outperform other types of systems (Wößmann, 2000). Gershberg (2005) gives the example of France, which is often characterized as a highly centralized system; in fact, many decisions are taken at the school level, such as current expenditures and resource use. According to the World Bank's 2004 World Development Report, "discretion and decision-making power need to be delegated to those with the relevant information and professional skills. Centralized control of teacher assignment and assessment can cause bureaucratic paralysis. But making schools autonomous in curriculum design, examinations, assessment, and finance can lead to excessive variability across schools" (World Bank, 2003, p. 122).

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

14. Creating Transparency of Financing through a National Education Account

[Add in language from Chawla's paper](#)

E. References

- Arends-Kuenning, M. and S. Amin (2004). "School Incentive Programs and Children's Activities: The Case of Bangladesh." *Comparative Education Review* **48**(3): 295-317.
- Berberoglu, G. (2004) "Student Learning Achievement." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- Berends, M., Bodilly, S. J., & Nataraj Kirby, S. (2002). *Facing the Challenges of Whole-School Reform: New American Schools After a Decade*. Santa Monica, CA: RAND.
- Bishop, J. (2001). A Steeper, Better Road to Graduation. *Education Next* 1(4), 56-61.
- Buhlar, H. (2004) "ICTs in Education: Global Experience and Model Practices, with Implications for Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- Business Roundtable. (2003). Using the "No Child Left Behind Act" to Improve Schools in Your State: A Tool Kit for Business Leaders. Washington, DC: Business Roundtable.
- Chawla, M. (2005) "National Education Accounts in Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- Cotton, K. (2003). *Principals and Student Achievement: What the Research Says*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Currie, J. (2001). A Fresh Start for Head Start? *Brookings Institution Children's Roundtable No. 5*. Washington, DC: The Brookings Institution.
- Darling-Hammond, L. & Sykes, G. (2003, September 17). Wanted: A National Teacher Supply Policy for Education: The Right Way to meet the "Highly Qualified Teacher" Challenge? *Education Policy Analysis Archives*, 11(33). Retrieved April 15, 2005 from <http://epaa.asu.edu/epaa/v11n33/>.
- Doebert, H., Klieme, E., & Stroka, W. (2004), *Conditions of School Performance in Seven Countries*, Waxmann, Münster.
- Fenwick, L. T. & Pierce, M. C. (2002). Professional Development of Principals. *ERIC Digest*, ED477731. Washington, DC: ERIC Clearinghouse on Teaching and Teacher Education.
- Fox, E. (2004). Report Cards Provide More, or Less, Data. *Education Week* 24 (15), S20.
- Gasperini, L. (2000). *The Cuban Education System: Lessons and Dilemmas*. Country Studies: Education Reform and Management Publication Series, Vol. I , No. 5.

Washington, DC: The World Bank.

General Teaching Council for England. (2005). Continuing Professional Development: Partnership Projects of Local Education Authorities, 2004-2005. Accessed April 15, 2005 at http://www.gtce.org.uk/cpd_pages/lea.asp.

Gershberg, A. (2005) "Towards an Education Decentralization Strategy for Turkey: Guideposts from International Experience." *Turkey ESS: Commissioned Paper*. (World Bank, Mimeo).

Hanushek, E. A. (2002). Teacher Quality. In L. T. Izumi & W. M. Evers (Eds.), *Teacher Quality* (pp. 1-12). Stanford, CA: Hoover Institution Press.

Horn, C.L., & Flores, S.M. (2003). *Percent Plans in College Admissions: A Comparative Analysis of Three States' Experiences*. Cambridge, MA: The Civil Rights Project at Harvard University.

Hosgor, S. (2004) "Status and Trends in Education." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).

International Food Policy Research Institute. (2002). *Progres Mexico: Breaking the Cycle of Poverty*. Washington, DC.

Karoly, L. A. & Bigelow, J. H. (2005). *The Economics of Investing in Universal Preschool Education in California*. Santa Monica, CA: RAND.

Kaytaz, M. (2004) "Cost Benefit Analysis of Preschool Education in Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).

Kirst, M. W. & Venezia, A. (Eds.). (2004). *From High School to College: Improving Opportunities for Success in Postsecondary Education*. San Francisco, CA : Jossey-Bass.

Kuitunen, H. (2004) "Rural Development Strategy in Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).

Levine, A. (2005). *Educating School Leaders*. Washington, DC: The Education Schools Project.

Lankford, H., Loeb, S., & Wyckoff, J. (2002). Teacher Sorting and the Plight of Urban Schools: A Descriptive Analysis. *Educational Evaluation and Policy Analysis* 24(1), 37-62.

Mete, C. (2004) "Education Finance and Equity in Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).

- Ogawa, K. and Tansel, A. (2004) "Transition from Education to Labor Market." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- OECD. (2004). *Teachers Matter: Attracting, Developing and Retaining Effective Teachers: Executive Summary of International Conference*. Paris, France: OECD.
- OECD. (2005). *School Factors Related to Quality and Equity: Results from PISA 2000*. Paris, France: OECD Publishing.
- OECD (1998-2003) *Education at a Glance*. Paris, France: OECD Publishing.
- OECD (2003) *World Competitiveness Report*. Paris, France: OECD Publishing.
- Rothman, R. (2002). A Test Worth Teaching To: The IB's Course Guides and Exams Make a Good Marriage. *American Educator*, 26(2), pp. 28-36.
- Sack, J. (2004). School Report Cards to Add Data in California. *Education Week*, 24(12), 20.
- Schwartz, W. (1995). Opportunity to Learn Standards: Their Impact on Urban Students. ERIC/CUE Digest Number 110. New York, NY: ERIC Clearinghouse on Urban Education.
- Standing International Conference of Inspectorates. (2003). *Effective School Self-Evaluation*. European Commission, Directorate-General for Education and Culture.
- Sahin, A. (2004) "Qualitative Assessment of the Quality of Turkish Elementary Schools." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- Tansel, A. (2004) "Education and Labor Market Outcomes in Turkey." *Turkey ESS: Commissioned Paper*. Washington, DC: The World Bank (Mimeo).
- Task Force on Higher Education and Society. (2000). *Higher Education in Developing Countries: Peril and promise*. Washington, DC: The World Bank.
- United Nations Development Program (2003). *Human Development Report: Millennium Development Goals: A compact among nations to end human poverty*. New York: Oxford University Press.
- Valijarvi, J., Linnakyla, P., Kupari, P., Reinikainen, P., & Arffman, I. (2002). *The Finnish Success in PISA--And Some Reasons behind It: PISA 2000*. Jyvaskyla, Finland: Jyvaskyla University Institute for Educational Research.
- Wilson, S. M., Floden, R. E., & Ferrini-Mundy, J. (2002). Teacher Preparation Research: An Insider's View from the Outside. *Journal of Teacher Education*, 53(3), 190-204.

Winkler, D. R. & Gershberg, A. I. (2000). *Education Decentralization in Latin America: The Effects on the Quality of Schooling*. Washington, DC: World Bank Human Development Department, LCSHD Paper Series No. 59.

Wößmann, L. (2000), *Schooling Resources, Educational Institutions, and Student Performance: The International Evidence*, Working Paper No. 983. Kiel, Germany: Kiel Institute of World Economics.

World Bank. (2003). *World Development Report 2004: Making Services Work for Poor People*. Washington, DC: The World Bank.

World Bank (2005a). Early Childhood Development. Accessed April 20, 2005 at <http://www.worldbank.org/children>

World Bank. (2005b). Girls Education Fact Sheet. Accessed April 10, 2005 at <http://www1.worldbank.org/education/girlseducation/factsheet.asp>.

Annex 1: Matrix of Integrated Conclusions and Policy Solutions

Policy Option	Integrated conclusion(s) to which option applies					
	2a	2b	2c	3	4	5
1. Expanding Early Childhood Education	√√√	√√√	√√√			
2. Equal Access for All: Conditional Cash Transfers for Girls and the Poor	√√√	√√√	√√√			√
3. Assuring All Students Acquire Foundation Skills and Core Competencies	√√	√√√	√√√	√	√	√√√
11. Expanding Opportunities for All Students	√√√	√√√	√√√	√√		√√√
12. Improving the Equity of Education Finance: Scholarships and Cost Sharing	√√√	√√√	√√√		√	√√√
5. Developing an Equitable and Effective Teacher Selection, Assignment and Support Policy	√√	√√	√	√√√	√√	
4. Bringing New Practice to Pre-Service Training		√		√√√		
9. Developing Local Inspectorates into Knowledge Network Centers				√√√	√√√	
7. Helping Schools Identify Priority Needs for Achieving Learning Objectives		√√		√√	√√√	√√√
13. Introduce Gradual Steps toward a Coherent Decentralization Policy		√√			√√√	√√
8. Improving School Management: Certification and Mentor-training for School Principals and Inspectors		√√			√√√	
6. Providing Transparency of Information to Parents			√√		√√√	
10. Offering Choices for Change: Modules for School Improvement					√√√	
14. Creating Transparency of Financing through a National Education Account					√	√√√

Key: √√√=extremely relevant; √√=very relevant; √=relevant

Annex 2: Summaries of Commissioned Papers

A. Status and Trends in Education by Seref Hosgor

Turkey's most recent demographic transition started in 1980.⁷ The population growth rate was 2.49% between 1980 – 1985, then 2.17% between 1985 – 1990, 2.0 in 1990 and 1.5 in 2003. Importantly, Turkey's population began its “aging stage” after 2000. And also it is important to point out this in the educational plans for 2005 and after. It means the age group population of pre-primary and primary education will be stable for 10 more years and start to decline after that, if sufficient school and teacher investment can be completed up to 2005. For these two educational levels, Turkey will not need to invest in additional infrastructure after 2005.

Between 1970-2003 the illiteracy ratios have decreased from 29.69% to 4.63% for males and 58.20% to 16.76% for females. The gender differences gap has increased from 1.96 to 3.62 in same period showing that the increase in female literacy has a slower pace. Adult literacy rate has increased from 71.0% to 94.9% for males and 35.6% to 80.5% for females. The gender differences gap of the adult literacy ratio has closed from 0.50 to 0.85 during the 1970-2003 period. Net enrollment ratio in pre-primary education has increased from 1.0% to 8.27% for males and 0.30% to 6.98% in the 3-5 age group. A similar increase has been recorded from 1.62% to 15.39% for male and 0.48% to 12.99% for female children in the 4-5 age group between the years 1980-2003.

In the 1970-2003 period the net enrollment ratio in primary education has decreased from 96.38% to 93.24% for males and increase from 74.38% to 86.71% for female pupils. In this period the policy for primary education has changed two times, once in 1973 and in 1996, from a formal request to compulsory enforcement, and also compulsory education was increased from 5 years to 8 years.

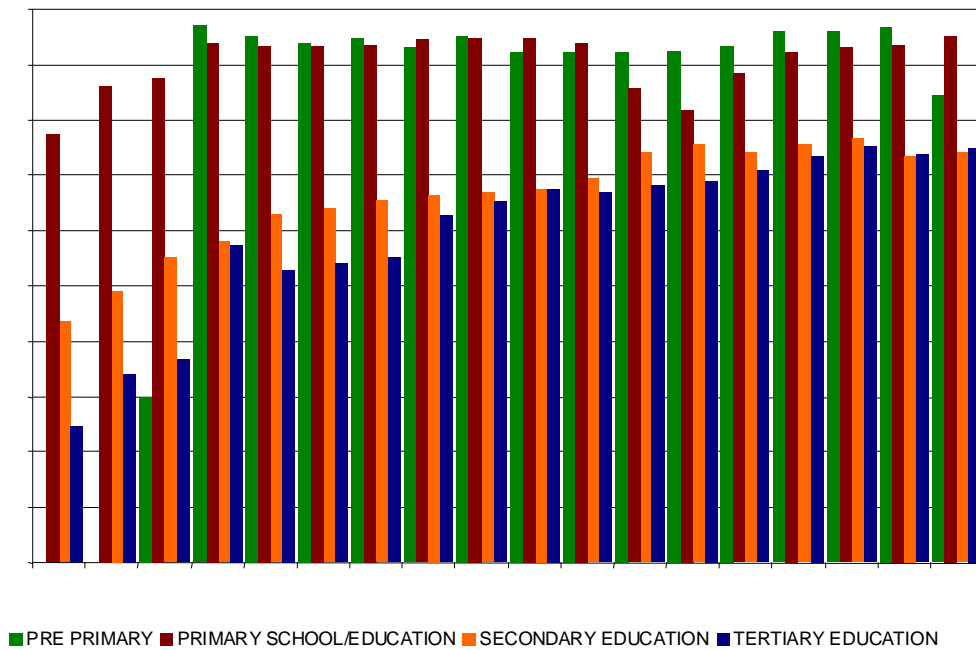
Gross enrollment ratio in secondary education has increased from 35.04% to 95.98% for male and 15.32% to 71.19% for female students. Similarly, the net enrollment ratio in secondary education has increased from 30.98% to 89.78% for males and 13.54% to 67.13% for females between 1970-2003. Both enrollment ratios have shown a very sharp increase after 2001 due to the effect of compulsory education graduates.

Tertiary education's gross enrollment ratios are 7.29% for males and 1.81% for females during the year 1970. In 2003 they have been increased to 33.80% for males and 25.36% for females. Also, the net enrollment ratios in tertiary education have increased from 3.93% to 17.15% for males and 1.16% to 14.89% for females in same period of time. Gross enrollment ratios in tertiary education (excluding distance education) have increased from 7.29% to 22.83% for males and 1.81% to 16.49% for females; these

⁷ In the first stage, from 1923 to 1955, fertility had increased significantly from around an average of 5.5 children to 7.0 children per woman, rather than having decreased following the decline of mortality, which was characteristic of many countries. The second period of Turkey's demographic transition took place between 1955 and 1985, and started with a population growth rate at 2.8% per year. Fertility began to decline during this period, but did not initially overtake the falling mortality rates. This period was also characterized by rapid urbanization, which reinforced the decline in the fertility rate.

increased from 3.93% to 15.44% for males and 1.16% to 12.44% for females between 1970-2003. Distance tertiary education started to produce graduates in the 1980s.

Gender ratios for 2003 are 84.4% for pre-primary, 95.2% for primary, 74.17% for secondary and 75.03% for tertiary education levels during the year 2003. That is, for every male enrolled in pre-primary education, there are 0.84 females enrolled. These ratios have increased from 30% for pre-primary in 1980, from 77.21% for primary, from 43.72% for secondary and from 24.83% for tertiary educations in 1970. Figure A.1 presents the gender ratios for each education level over time, demonstrating the dramatic increases in the ratio between girls and boys enrollment, attaining near parity (above 80 percent) levels in all but secondary and tertiary education. One area of concern that requires further study is reversal of the improvement of the gender ratio for pre-primary education, which reached a high of about 95% in 2000, but has since regressed to 85% in



In 2003, aside from primary education, all levels of education have an acceptable number of students per teacher at national level. In primary education the number of students per teacher was just over the accepted interval of 20-25%, it is 27.29 in 2003. Primary and secondary education levels need seriously investment of classrooms or school units, the average number of students per classroom are 27.19 for primary, 31.74 for secondary educations in 2003.

During the 2000-2001 school year, four NUTs regions have less than 90.00% net enrollment ratio for males and seven regions for females, Middle Anatolia, East Black

Sea, North-East Anatolia and East Anatolia have the same structure of differences for both sexes. North-East Anatolia, East Anatolia and South-East Anatolia are the most problematic regions in gender differences in primary education.

The highest gross enrollment ratios in secondary education are recorded in East Marmora region for males (80.34%), West Marmora region for females (68.51%) and the lowest gross enrollment ratios are recorded in South-East Anatolia region; these are 43.72% for males and 20.70% for females. In general, excluding the Istanbul region, all regions have gender differences in secondary education levels in 2000-2001 school years.

In 2001-2002, for males five regions, for females two regions have more than 50% net enrollment ratio in secondary levels instead of 12 regions during 2000-2001 school year. Istanbul had 103.21% gender ratio in favor of female in same school year. This may be due to the fact that males do not continue to secondary education to obtain additional income to their family after compulsory education. Excluding Istanbul, Marmora and West Anatolia, in all regions gender differences are below the 90.00% in net enrollment for secondary education.

In the 2000-2001 school year, excluding the Central Anatolia, West Black Sea, East Black Sea, North-East Anatolia regions had more than 25 students per classroom in primary education level. For secondary education, no regions have sufficient number of students per classroom.

Regarding teacher-student ratios, all regions seriously need pre-primary education teachers. Sufficient number of teachers can be found in Western Marmora, West Black Sea, East Black Sea for primary education level. All regions have sufficient number of students per teacher in secondary education during the 2000-2001 school year. The 2001-02 school year show similar conditions with the 2000-01 for all educational levels.

In general, Turkey increased all educational indicators in last 33 years in spite of political and economic instability. Turkey has the potential and ability to adapt in new policies and promote the education. For rapid development in education in order to catch European averages.

- a. The following development strategy should be initiated for four important regions for all educational levels; these are the East Black Sea, North-East Anatolia, South-East Anatolia and East Anatolia.
- b. By taking into account the availability of financial resources and the need to invest in quality in the existing levels, the fifth age group of pre-primary education and secondary education must be included in compulsory education and also primary class should be added to secondary education increasing it to four years. On the other hand, the education system should be renewed according to the needs of country and European Union membership perspective.

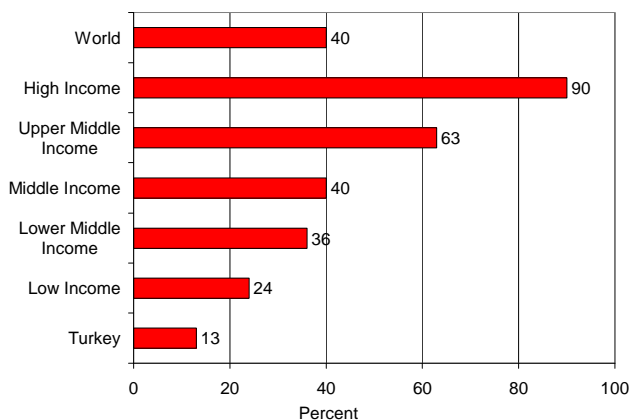
B. A Cost Benefit Analysis of Preschool Education in Turkey by Mehmet Kaytaç

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

International research evidence shows that quality interventions in early childhood services (including day care, preschool, home visits by trained professionals, health and nutrition services, and parental education) are small investments that yield very high returns to child, family, society and economy. This investment brings particularly high returns if children at risk are targeted. Children who participate in quality interventions tend to be more successful in later school years, are more competent socially and emotionally, and show higher verbal and intellectual development during early childhood than children who did not participate in early childhood services. Investment in early child development is also an investment in a country's future workforce. Human development is closely linked to early child development (ECD); it includes the same dimensions—education, health, social development, and growth—but on a larger scale. So investing in ECD is the starting point for investing in human development.

Turkey has one of the lowest levels of preschool education coverage of any lower-middle income country. In 2003 only about 360,000 children were enrolled in ECE services. The government, aware of the importance of ECD tried to increase enrollment during the last ten years. Currently the target for 2005 is a 25 percent enrollment rate, which will mean almost doubling the 2003 rate of 13 percent. Even when Turkey reaches this target, the rate will still be lower than in lower-middle income countries where the average rate of enrollment is 36 percent (see Figure B.1).

FIGURE B.1
GROSS PRESCHOOL ENROLLMENT, 2003



This study uses benefit-cost analysis of preschool education to demonstrate the importance of expanding ECE services. The benefits expected from ECE services are restricted to an increase in the level of schooling and hence an increase in productivity and earnings. Simulations are based on modest increases in enrollment rates for each level of schooling: preschool attendees are assumed to have a 1 percentage point increase in completion rates for primary, secondary and higher education over their non-attending peers. The benefit-cost analysis indicates that expansion of ECE services in Turkey is highly desirable from an economic point of view. Even with these limited benefits the calculated benefit-cost ratios range from 1.12-3.43; this means that total benefits exceed total costs by more than a three to one ratio.

Although the assumptions about the impact of preschool education on schooling are very conservative, the benefit-cost ratios are relatively high. If other benefits of ECE were included they would be still higher. Potential benefits are widespread, and include both individual and social level. Children who receive ECE services are healthier, more successful in school, and later in life they are more productive. The benefits of ECE also spillover to the rest of society. Workers with higher productivity make those working with them also more productive. Since their incomes are higher they pay more taxes which are necessary for an efficiently running social and economic infrastructure. More tax revenue means more expenditure on social infrastructure providing more equal opportunities to all children. The benefits of better health also spillover to all society since many cost components of poor health are met by public expenditure.

Most parents in making their decision do not take these larger societal benefits into account and correspondingly may purchase fewer ECE services. There is a wide spectrum of parents with regard to how much they value the education of their children. Some parents may want to spend to such a level that no public subsidy may be necessary. On the other hand some parents either cannot afford to trade off other household expenses or place a low value on their children's education and welfare; in this case public spending will be more productive. The existence of these externalities calls for expansion of public spending on ECE services. The high benefit-cost ratios are not the only reason for the expansion of ECE services. The existing state of children in Turkey, poverty and various inequities make education and particularly ECD important issues which government and society have to face and deal with.

The desired expansion of reaching 25% enrollment rate will require considerable additional resources. These resources can be generated through some cost recovery programs for families who can afford to pay for preschool and other early childcare services. The Government should also support targeted and flexible programs. The benefit-cost ratios for these programs will be much higher than a non-targeted program. For these programs to retain their high benefit cost ratios, the government will need to heavily subsidize or provide free of charge ECE services targeting the poor.

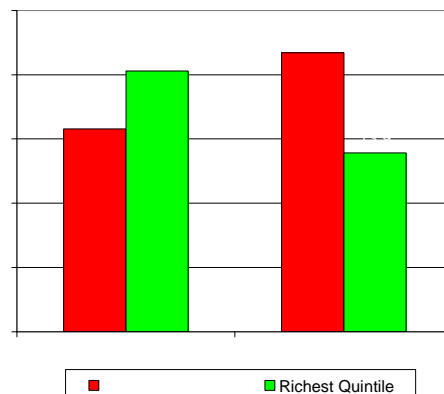
C. Education Finance and Equity in Turkey by Cem Mete

From humble beginnings, the Turkish education system has developed rapidly, expanding by 2002 to include a system of some 16.3 million students, from pre-primary to university. A small private sector (1.6 percent of primary and 3 percent of secondary enrollments) serves more religious minded and wealthier students. As mentioned above, the most dramatic change in enrollments followed the enactment of Law 4306, which expanded compulsory education from 5 to 8 years, furtherer triggering a 5 percentage point increase in secondary enrollments.

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

The expansion of compulsory schooling to eight years had the immediate effect of improving the distribution of public education spending across poor and rich households, at least at the primary level, where the share of expenditures for the lowest quintile of households increased from 15.8 percent in 1994 to 21.7 percent in 2001 (see figure C.1).

FIGURE C.1
SHARE OF PUBLIC SPENDING ON PRIMARY EDUCATION, BY QUINTILE



Nonetheless, secondary schooling continues to pose an equity challenge: only 13 percent of secondary school expenditures reached the poorest 20 percent of the population in 2001 (an improvement from the 8.7 percent in 1994), while the richest quintile captured the highest share, 24.2 percent.

Student-teacher ratios and classroom expansion rates are also important indicators for education financing, demonstrating the ability for the system to keep up with the demand for access. In response to an increase in total primary enrollments the government

expanded both the number of classrooms and the number of teachers, resulting in a decline in the student-teacher ration from about 45 students per class in 1998 to 37 in 2002. While total secondary enrollments have also increased in recent years, the government has not responded fully to this increased demand, as demonstrated by a sharp increase (from 27 in 1998 to 44 in 2002) in the number of students per classroom. Conversely, with vocational enrollments remaining stagnant, the government has allocated more classrooms and more teachers to this level, reducing the student/classroom ratio to 15.

Breaking down these macro system numbers, both females and poor children suffer the most from inadequate public education funding. With 97 percent of the relevant age group (ages 6-14) enrolled in school, the remaining 3 percent left out of schooling are those who require the most attention. Recent government strategies have included a conditional cash transfer program and fining parents for not sending their children to school. To achieve universal primary education and break the cycle of inter-generational illiteracy and poverty, Turkey will need to develop a new paradigm for attracting the non-attending population, characterized as follows: 72 percent female, 67 percent rural, 53 percent poor and 56 percent with illiterate mothers. Barriers to schooling for this population include access (some 12 percent of households indicated they did not have a primary school in their area) as well as child labor issues and family norms (reluctance to send girls to school).

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

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

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

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

Indicators of access alone, however, fail to tell the full story of differences in educational equity. Households with students in public, rural schools are more likely to report problems with the school, lack of books/supplies and poor teaching (and lack of teachers). These complaints decline with wealth (and access to private schooling). Underinvestment in quality schooling is not just a problem for those stuck in low quality schools, but clearly has implications for economic growth and investment in human capital. To finalize his analysis, Mete provides Mincerian estimations using 2002 household survey data. He finds that males earn 45 percent more per hour than females of similar characteristics, with the returns to schooling increasing for each level of education attained. One important finding: women are underrepresented in those reporting non-zero earnings in the survey month, accounting for only 15 percent of those surveyed. These findings lend further support to the arguments that educating girls has high private and social returns, especially when it comes to the linkages between a mother's schooling and children's health and education.

D. National Education Accounts in Turkey by Mukesh Chawla (NEED PAPER)

E. Qualitative Assessment of the Quality of Turkish Elementary Schools by Ali E. Sahin

Using methods drawn from effective schools literature, the author examines the construct of a “good school” in urban Turkey, identifying practices and characteristics of a small sample of elementary schools along five elements: inputs, processes, products, outputs and outcomes. Based on results from the 2002 Student Achievement Determination Test (administered by the Turkish Government to 541 elementary schools) four schools with average clientele and resources were selected from the top quartile of schools. Each school was assigned a pseudonym (Ankara, Antalya, Samsun and Ordu Central Elementary Schools (CES)) for the purposes of the study. Table E.1, below describes the characteristics of the school and the results for the SADT exam. The school average scores on the SADT place these schools among the top 20 in Turkey.

TABLE E.1
SUMMARY OF SAMPLE SCHOOL CHARACTERISTICS

SCHOOLS	SADT AVERAGE	NUMBER OF STUDENTS	AVERAGE CLASS SIZE	NUMBER OF ADMINISTRATORS	NUMBER OF TEACHERS	OTHER PERSONNEL	TYPE OF EDUCATION
ANKARA CES	0.5489	856	47	1 Principal	44 (sufficient)	1 officer	Double shift
				2 Asst.Principals		3 cleaners	
ANTALYA CES	0.6546	450	36	1 Principal	19 (sufficient)	No officer	Normal
						2 cleaners	
SAMSUN CES	0.6097	1611	35	1 Principal	66 (sufficient)	1 officer	Double shift
				4 Asst.Principals		4 cleaners	
ORDU CES	0.6196	1670	45	1 Principal	64 (sufficient)	1 officer	Double shift
				4 Asst.Principals		4 cleaners	

Each school was then visited and evaluated (using focus groups, observations and structured interviews) to assess their characteristics along the five key elements described above, with corresponding results levels for products (micro), outputs (macro), and outcomes (mega). The author concludes from the in-depth study of these four schools that each of them has a macro level (outputs) quality focus. That is, each school is primarily concerned with producing graduates who go on to attend one of the prestigious Anatolian or Science High Schools. Although no school was able to present a formal vision statement based on the focus group meetings with teachers, parents, students, and administrators, the following was found as the informally (or hidden) shared ideal vision in these schools: “There will be no student who fails to graduate and everyone will get accepted into Anatolian High Schools and Science High Schools or other preferable high schools through the High School Entrance Test (HSET).” This shared ideal vision identifies students and parents are to be the primary client and beneficiaries of the schools.

Quality is what the client wants, can use, and should have. The four schools of this study deliver what their students and parents want: to be accepted into Anatolian High Schools or Science High Schools. In 2003, 600,289 eight grade students took the HSET and only 10% of them were placed into these prestigious high schools. However 35% of Ankara CES students, 69% of Antalya CES students, 46% of Samsun CES students, and 51% of the Ordu CES students were placed based on HSET results. Thus, these schools have a

very good public reputation regarding results. Parents prefer to send their children to these schools and as a result of this achievement and client satisfaction, the contribution and participation of parents are very high.

The mega (outcomes) level quality focus was not found in any of these schools. It is difficult to state that these schools view education as a means to societal ends. Because of a highly competitive environment the schools ignore the mega level results and only focus on the micro and macro level of quality. But passing courses or achieving HSET does not assure a desirable society for people. The research shows that in spite of the limited resources such as poor physical facilities, overcrowded class size, and poor educational technologies the participating schools are similarly successful in getting micro level results (passing courses, daily attendance, zero dropout ext.) and macro level results (transition to upper level education, success in HSET etc.). How do they achieve these results despite all these input related difficulties? To answer this question the processes in these schools should be examined.

At the process level there are some common practices observed in the schools and these practices are consistent with their informally shared vision. The learning-teaching process is mainly teacher centered and teacher-led methods are used a lot more. In addition to this the learning and teaching activities are mainly focused on pencil and paper. Considering the existing resources, crowded class sizes, and informally shared ideal vision which focuses on HSET, these in-class activities are not surprising. Using the teacher centered approach, teachers save time, increase on-task behaviors, thus, cover all the objectives of heavily overloaded curriculum. Beside these, extra assignments and homework prepare students for HSET. At this time, there are no complaints from students, teachers, principals, and parents because they have a shared vision. Furthermore, teachers were found to be very dedicated and caring about students. Therefore, they are well-respected by students and parents. The school climate is described very positive by the students, parents, teachers, and the school administrators.

The practices of these schools mentioned above can be seen very traditional or old-fashioned but it is obvious from the results that these practices serve to deliver macro-level quality. However, the students sacrifice a lot to achieve macro level results. After a long school day, usually from 9am to 4:30pm, they go back home and have to spend 3 to 5 hours test solving and doing homework. More assignments are given for weekends. If students do this, they have a better chance to be successful in HSET, if they don't they not only fail in HSET, but also jeopardize their chance to continue education at the university level in the future because Anatolian High Schools graduates and Science High Schools graduates are more successful than the other school graduates.

Based on the results of the study the author makes the following recommendations. First, given the broad social objective of guaranteeing literacy for all citizens, society is the primary client for elementary education. Therefore, schools should select mega-level (outcomes) quality because this level focuses on societal usefulness and consequences of education. Furthermore, the rigid and highly stratified structure of the high school system should be re-examined and the high-stakes HSET should be eliminated. To move from

macro level quality to mega level quality class sizes should be reduced and a working curriculum for society that promotes literacy and flexible competencies for all of its students should be developed.

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

The emphasis placed on developing ICT policy in education varies from country to country. Some countries piloted ICT use in schools and trained teachers without having ICTs integrated in their Education Policy. Other countries have found it important to have a policy to serve as a framework and guide. However, the enabling environment and restrictive regulations (e.g. censorship laws, legal and regulatory framework for internet) dealing with ICT use in education need to be considered in detail. A diverse range of policies and strategies have been developed in several countries so as to better integrate ICTs into schools. The following four main points are drawn from these experiences:

(i) The key critical factor in successful integration of ICTs in schools across countries in Europe, North America and Asia is the creation of a responsive education system. A receptive education structure is one that is open to the evolving technological changes. To make the education environment more responsive to the needs of the knowledge based society, several changes are suggested. The first is a change of direction based on creating new knowledge and information rather than on rote learning. Up until recently, the main function of school education has been to deliver to students the knowledge that has been accumulated throughout human history. But in a knowledge-based society, information is increasingly being developed and delivered by all members of society. For as long as schools maintain a learning system based on transmission of information, it will be difficult to develop the kind of intelligence essential for a successful knowledge based society. The second change is to orient the education system to focus more on individual students. Currently, standardized textbooks and identical teaching methods are used in educating students who have different aptitudes and learning habits. In a knowledge-based society, the main focus of education is the individual student, which requires a differentiated approach to teaching and learning that vary according to the learning needs and interests of each of the students. The third change is the introduction of more creative and self-directed education methods. The new kind of learning needed for the knowledge-based society is related to knowledge that takes in to account real life situations and problems.⁸

(ii) To optimize the value of new technologies in schools, it is important to give opportunity and resources directly to teachers and students to find new ways to use the technology. As technology advances, unless it brings with it an attitude shift towards learning, computers can not be properly used to enhance education quality. The traditional methods of teaching and learning are not optimized for the integration of ICT in education. To get maximum value from new technologies, there has to be a shift in the attitudes governing education. Educators and teachers have to figure out new ways to

⁸ Some of the schemes used worldwide are Project work (Singapore), Learning Paradigm Shift (South Korea), eLearning Commission (European Union).

take advantage of the fast evolving technology. It is imperative that policymakers give decision space and resources directly to teachers and students to find innovative ways to use the technology. A good model of this is the Network of Innovative schools in Canada (see below).⁹

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

(iv) In the face of intense competition, countries can no longer rely on the accumulation of capital and labor to sustain economic growth. The capacity of the workforce to generate new knowledge has to be continuously encouraged. The ICT in Education Policy should be planned to complement other development strategies. ICT education policy should not be formulated in isolation. It should be considered and implemented to complement and support other development strategies.

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

Sometimes integrating ICT in schools can mean just distributing computers, learning software and audio-visual aids to schools. The ICT is merely attached to the existing teaching and learning activities without any change in the traditional curriculum or learning objectives. The teaching strategies and student learning activities in the classrooms remain more or less intact. While the learning medium may change from the textbooks to web-based books/software or from presentations in class to presentation via the Internet, the learning paradigm remains the same. For example, the learning paradigm adopted for certain concepts in the classroom is associated with the transmission of knowledge. The paradigm remains the same whether the concept is taught from a textbook, software or via the Internet. Although ICT may make easy independent self-paced learning, the potential of ICT is not optimized if there is no shift in the learning paradigm. In addition to change in the learning paradigm, ICTs provide possibilities for changing the way children learn and teachers teach. The next three points present an ICT strategy based on lessons learned from the above experiences.

(i) Create ICT Vision and Strategy in Schools

The vision and strategy for ICT in schools should not be created by a single person or through a top-down process starting from MOE. Sometimes schools do not have their

⁹ Network of Innovative schools (NIS)- Initiative of Canadian Federal Government. Details in section 3.

own ICT vision and plan as the ICT infrastructure and training are generally directed and given by the Ministry. The school-level vision and plan (if any) are usually established by individual school principals. The school board takes all decisions on the purchase of ICT tools, a procedure that is usually met with some resistance from the teachers as they do not always share the same vision as the principal or the ministry nor do they feel a sense of ownership of the plan. It is crucial to involve those who have a stake in the outcome, including teachers, parents, students and the community, and allow them to assist in the creation of the strategy and ICT Plans by contributing their skills, knowledge and positive attitudes. An ICT vision that is accepted by all becomes a shared vision, which is critical to successful implementation of ICT in a school setting.¹⁰

(ii) Putting together an ICT Integration Plan

Once the vision has been successfully created and accepted, the next step is to put together an ICT integration plan, detailing how the teachers are expected to integrate technology in their lessons (Strudler & Wetzel, 1999). An ICT integration plan provides a detailed blueprint of the steps and methods needed to translate the school ICT vision into reality. Developing ICT integration plans is no doubt a complex and time-consuming task, but they are usually worth the time required to put them together. Most schools have ICT integration master plans¹¹ that have been customized for their own school culture and environment.

a) To promote use of ICT in schools, the MOE should set guidelines without necessarily imposing these as rules or regulation to be adhered to. Rules stifle creativity and lead to a technology-driven approach to ICT integration. School leaders should be given autonomy to decide on how to implement rules and guidelines based on their analysis of their schools' readiness. Furthermore, an increasing number of school leaders have realized over the last three years that ICT should not be integrated in the curriculum for ICTs' sake. Instead, they believe that teachers should explore ways by which to integrate ICT in the curriculum to enhance the learning experiences of the students.

b) To promote ICT usage in schools, school leaders should initially adopt strategies that make ICT a part of the daily routine or tasks of the teachers. These methods may include using email as a mode of communication among staff, accessing the Intranet to download forms and using a word processor to complete lesson plans for submission. The aim is to increase teachers' familiarity with ICT in education. For example, as different technologies mature, there are new ways to integrate appropriate and available technology into the curriculum delivery process as seen in the case of Khanya Project (see box) in South Africa¹².

(iii) Give schools some autonomy to select ICT resources that are most suitable to the needs of their teachers and students. Every school is different and each one should be given autonomy to select ICT resources that are most suitable to the needs of teachers

¹⁰ Details regarding ICT vision and strategy created by individual schools in Singapore in Section 1.1.

¹¹ Section 1.2

¹² Khanya Project (South Africa) section 1.6

and students. ICTs should not be put into place just for sake of using newer or latest technologies. Schools should be provided with basic technology infrastructure and given the autonomy to decide on the kind of ICT resources and tools that they should acquire, based on their vision and analysis of their students learning needs. This allows the schools to have independence and flexibility in using ICT funds. By recognizing that every school is different, better ICT integration in the school curriculum is ensured.

Lastly, one major theme that emerged across countries is the need for strong, committed leadership to support the goals of technology integration. While virtually all administrators tend to voice their support for technology integration, it helps to have believers in high places – leaders whose knowledge and commitment goes well beyond the rhetoric of support. At the core of informed leadership is a person who has internalized the complexity of effective technology integration and who exercises his or her influence to ensure that the various enabling factors are in place or being addressed. Champions¹³ are dedicated persons who are motivated by the sense of satisfaction of contributing to the enhancement of student learning. They build a culture of innovation and encourage ICT use in teaching and learning. Champions can be identified at all levels and appointed officially. Their roles and responsibilities should be clearly stated. The role of champions in ICT in education programs is important and they should have the support of their superiors and peers. However, there is also a need to ensure that the long-term success of a program does not depend solely on the abilities and actions of a few individuals. Care must be taken to ensure continuity in leadership.

¹³ Lessons from Exemplary Colleges of Education: Towards a Model of Technology Integration. Neal Strudler and Keith Wetzel.

G. Rural Development Strategy in Turkey by Hannu Kuitunen

Recent student assessment results for Turkey reveal disappointing results with important implications for Turkey's primary schools. Turkish students are not as prepared as their counterparts in other countries to start school, a result which is in turn reflected in lower average test scores (Table G.1). The reality Turkish schools face, where more than a third of students tested on the recent PIRLS came from homes with low literacy levels and low parent-child interaction in literacy promotion activities, generated the following question: how are some schools achieving positive results in spite of these challenges?

TABLE G.1
DISTRIBUTION OF AVERAGE ACHIEVEMENT SCORES BY EHLA CATEGORY

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

Source: PIRLS 2001

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

This study is a small scale examination of those rural and urban Turkish schools with median resources which have shown better success than other schools with similar resources. To answer the above question, nineteen good performing schools with median resources and student populations were visited. Results from the visits were compared with information on "normal" schools obtained from recent evaluation studies and used to develop effective models for schools.

Both "good" and "normal" schools share similar constraints, including curriculum, competition and testing, resources and their allocation, gender issues, and schooling in sparsely populated areas. In "good" schools there was a typically a strong and democratic leadership, and principals and teachers were goal oriented, competent, motivated and committed to their work. Relationships between students, teachers and the principal were open. Schools cooperated with the local society and parents, who donated their time and had high expectations for the school. Students behaved and studied properly, completed their homework and often had extra courses either privately or from their teachers.

During a visit to a school that recently had started receiving students via bus from rural areas, the principal explained the school's lower performance saying: "We would do even better and we would be more effective if we wouldn't have the bussing students." This was not the only place where a statement like this was made. According to these principals, the academic results of the school had declined because bussed in students from rural schools were not on the same academic level as the local students. In the new situation teachers and the principal were putting in at least the same amount of effort as before, working but the average test score gains were not as high and thus concerned the

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

The basic, commonsense definition of an effective school is roughly the same as a 'good' school, a school that achieves its goals. If the good result is achieved as cheaply as possible, the school is efficient. In other words an efficient school is an effective school that does its work with a minimum cost. Schools differ in performance in terms of student achievement. We can compare schools by assessing pupil achievement and say that one school is more efficient than another. This leads to the very interesting question: "What makes the difference?" Efficiency is a causal concept. If the cause for better performance can be identified, it can probably be used elsewhere, too.

The potential users of efficiency models are those interested in grass root school development, like principals, teachers, and parents. By using a relevant efficiency model they have a tool for self assessment. On the other hand, if they use an efficiency model that does not fit their situation, or an inappropriate model is used to evaluate their efficiency, they may become frustrated. To choose and succeed with an appropriate efficiency model can mean emancipation and empowerment for the school staff. They can feel that their work really makes a difference. When speaking of school efficiency we must think of the basic task of the school, which includes community development in a larger sense. For example, if a school succeeds in improving the level of development of a village by encouraging girls to continue their studies or organizing the building of water pipes, this can also be evaluated as a successful endeavor.

After having visited a variety of schools in different areas, with different resources, personnel, socio-economic backgrounds of students, schools which are serving a homogeneous urban settlement or a poor rural village or both of them, which are working in one or two shifts, it became obvious that one efficiency model did not adequately describe the different modalities of school operation. For this reason, three models were developed, as described below.

i. *The Economic Model: School as production unit.* In a simplistic economic effectiveness model of a school there are three basic elements: inputs, process and outputs. Inputs include students with their characteristics and financial and material aids. Outputs are pupils' attainment at the end of schooling. Two kinds of effectiveness can be recognized: Technical effectiveness refers to outcomes that can be seen at the end of schooling (short term effects), while social effectiveness refer to society level (long term effects). A strict interpretation of the economic model of effectiveness raises many issues. What are the desired outputs of the school? These can include the number of students obtaining their school leaving diploma, grades achieved in different subjects, passing rates for the entrance exam to secondary schooling, the level/type of secondary school the student has entered, cognitive processes, social skills and attitudes attained. It is difficult to

determine the monetary value of inputs and processes, and there is lack of clarity on how the production process operates. As the major cost of schooling comes from teacher salaries, the time invested in learning is a major factor in evaluating efficiency. This in turn may lead to rejecting class repetition or into methods and processes that favor learning on a superficial level.

ii. *The Organic System Model: School in Symbiosis with its Surroundings.* The organic system model is based on the analogy between an organization and a biological system. In order to survive and grow schools adapt to their environment. Characteristic to this approach is that the organizations interact openly with their surroundings and can actively influence it. Concepts like rural development and parental involvement are closely related in adapting this model to Turkish schools. Principals at schools which adhered to this model spent many days meeting with groups, institutions and private citizens to garner support and resources for the school. In order to obtain donations or non-material support, principals must have a good relationship with their surroundings. In another school teachers worked extra hours every day in order to adapt themselves to the parents' requirements. A small village school helped farmers in finding new plants to grow and in turn received assistance for renovating the school building. When the village leader is the first who has ever sent his daughter to secondary school this changes the attitudes among villagers. This can be achieved only if the school has adapted to its environment and villagers trust the principal. School with an organic approach can have a better chance of making an impact in rural areas and enacting sustainable change and development.

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

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

If we accept the view that school is a part of students' and teachers' life, this model supports the aspects that make school life good. And we must add here the view that school may be part of the life of the whole society as in a rural village, where the school acts a part of the society, teachers feel like mothers for the

children and villagers contribute to the practical aspects of school life like employing heaters for the school and preparing costumes for school celebrations.

During school visits the author often heard statements like: “We are like a family”, “We love each other”, “We are like mothers to the children”, “I love my teachers”, “Peer students are like my sisters” “Love is something I would not change in 100 years” to describe the harmonious well being in these schools. Of course the aim of the school is not to be harmonious place only; these schools achieve results measured by student achievements, too. The human relations approach alone does not cover the schools’ basic aim but it adds something very essential to the concept of efficiency.

In developing these three models and examining their application in rural Turkey, the author identifies good performance in schools with median resources and median clientele to address both effectiveness and (productive, short term) economic efficiency. The challenges currently facing Turkish schools, including dramatic changes in clientele (e.g. bussing students) and the increasing enrollments for girls, must be tackled in accordance with local school conditions and aims. Use of the above models, the author posits, can assist schools in facing these dynamic challenges for educating Turkish youth in the coming decades.

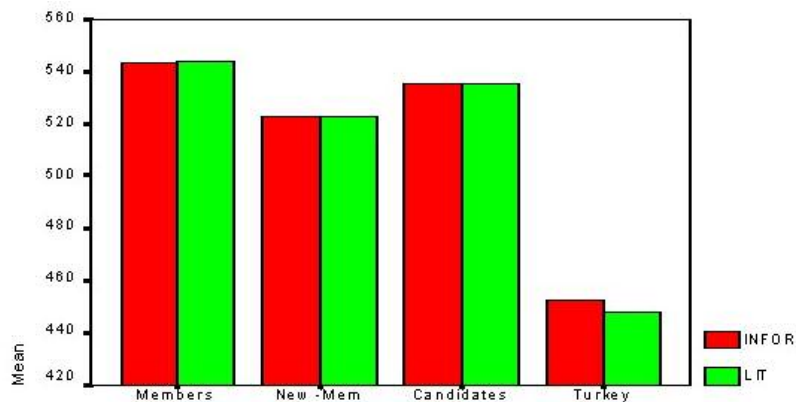
H. Student Learning Achievement by Giray Berberoglu

Using existing education data collected in primary and secondary schools in Turkey, the author examines the achievement level of students in different subject areas by region, gender and school type, monitoring the changes over time and identifying factors which influence the achievement level of students. The following pages summarize the findings of the report.

Findings related to gender and regional comparisons

In general students learning achievement is very low all over the country in all subject matter areas and grade levels. In the basic education level and at the university entrance examination, the learning achievement of the students are all below 50% success level in terms of number of correct responses, and below 40% in science and mathematics. These results are also supported by the international comparative projects such as TIMSS and PIRLS where Turkish students are almost one standard deviation below the averages of the European Union member states (see Figure H.1).

FIGURE H.1
COMPARISON OF EUROPEAN UNION STUDENT ACHIEVEMENT RESULTS AMONG MEMBERS, NEW MEMBERS, CANDIDATES AND TURKEY, PIRLS 2001



When private schools, boarding schools and basic education schools are compared at grades 6, 7 and 8 with respect to Turkish, social sciences, mathematics and natural sciences, no difference was observed between the boarding and basic education schools, but private schools indicated a remarkable difference in all the subject matter areas. On the other hand, gender differences were not observed in the comparisons. Similarly at the university entrance examination, there are differences across the school types. High achieving schools include private schools, Anatolian High Schools and Science Lycee as expected.

When mathematics and science achievement are considered across the regions and gender groups, significant differences were found in favor of the Marmara and Aegean regions in the basic education program, but the differences are not very wide, since there is a general tendency of lower achievement in all of the regions compared. The regional differences indicated the same tendency when the university entrance examination is concerned. Gender is not a significant factor explaining learning achievement,

nevertheless when controlling for socio-economic variation on the mathematics and science program results in the east and southeast, girls improved their means more than the other regions compared to boys.

When factors affecting student learning achievement are analyzed in the national assessment program data, it was observed that when teachers use instructional materials in class, distribute handouts, and carry out class exercises, students become more successful in different subject matter areas. These activities are labeled as teacher-centered didactics; however, the content of the questionnaire items also indicates a more interactive teacher model. In terms of classroom activities, as the students and teachers discuss the course topics in class, students present the course topics and they carry out group work and project work in class, they are less successful in all the subject matter areas. These activities could be classified as student-centered didactics in general. The evidence found in this analysis indicated that these sort of classroom activities were negatively related to student learning achievement in different subject matter areas. In terms of out of school activities, reading and studying habits outside the school positively related to learning achievement, as well as the tutorial courses taken. On the other hand, frequency of homework assignment seemed to be one of the least effective variables for predicting school success in the basic education assessment program results.

When the socio-economic status is controlled in the LISREL models by considering parent's education level and number of books at home, the effect of tutorial courses and materials used in the school decreased, implying that these two variables are also indicators of the high socio-economic status of schools. When four socioeconomic levels are compared in terms of educational processes, in the wealthiest quartile, the use of technological equipment and proper instructional materials in the classroom, teacher presentations of the topics, and classroom exercises done by the teacher are observed more than the other quartiles. On the other hand, group work and projects, student's presentations of the topics are slightly less observed in the upper quartile compared to the others.

When the basic education schools, boarding schools and private schools were compared with respect to educational practices, it was observed that the frequency of tutorial courses taken in different subject matter areas, use of handouts in the classroom, use of technological equipments and proper instructional materials were observed more in the private schools than the other school types. On the other hand, student presentations and group work and projects were observed less in the private schools compared to other school types.

Findings Related to PIRLS

Turkish students reading achievement levels are below the international and EU countries averages. Use of library facilities and personal computers did not predict students reading scores in the PIRLS, while Turkish students who participated PIRLS have fewer books at home than counterpart countries' students. Most of the variables considered in the PIRLS predicted reading for information purposes sub-dimension of the reading tests where reading skills are assessed in line with the real life situations. The most important

predictor is the student reading habits outside the school and talking about the materials that have been read with the friends and parents. Silent reading activities positively predicted reading for information dimension. On the other hand, reading aloud is not a good practice to enhance students reading skills in Turkey. When compared with the EU countries, Turkish teachers reported that they have more reading aloud and fewer silent reading activities in the classroom.

Student-led activities such as picture drawing, acting in a play or drama, doing group projects with other students, taking quizzes or tests and writing something about what students read do not enhance students reading in information subscale. These activities have a negative relationship with learning achievement in reading. There is a slight positive effect of these activities on reading for literary purposes subscale. As reported by the students, compared to European Union countries student-centered activities in the classroom are more frequently observed in Turkey.

When the teachers participating to PIRLS are concerned, it is observed that teachers who believe that their school gives them opportunities for professional development have students with higher achievement in the information and literary experience subscales. As teachers interact among themselves to discuss and plan the reading curriculum, they interact with the parents, and they send students homework more often to the parents, students learning achievement seems to be higher in both dimensions of the PIRLS scales. There is a slight negative relationship between in-service training received by teachers and students reading achievement scores in the PIRLS.

Findings Related to TIMSS

Mathematics achievement in the TIMSS in different subject matter dimensions indicated similar results in the LISREL models studied. In terms of classroom teaching-learning processes, student-centered activities negatively related to learning achievement in all the sub-dimensions. On the other hand, teacher-centered activities have a positive impact on student learning in mathematics. Also, student perceptions of failure in mathematics and parent education level are two important variables predicting mathematics scores. In the models studied for the mathematics subtests, it was also observed that teacher-centered activities and parent education level are both important variables associated with low student perceptions of failure.

Science achievement in the TIMSS in different subject matter dimensions indicated the same results as the mathematics assessment. Different than the mathematics model, the impact of laboratory activities on student science achievement was also studied in different sub-dimensions of the science test. The frequency of conducting student experiments in science has a weak but positive relationship with earth and life sciences and a negative relationship with physics, chemistry, environmental issues, and the use of inquiry strategies. The laboratory experiments as described by student experimentation can not explain learning achievement in science per se.

In order to understand the impact of the instructional materials used on student learning achievement in science and mathematics the TIMSS data were analyzed so as to include

students who use computers at school in the science and mathematics classes. In this restricted data set, for the mathematics subscale, the use of overhead projector by the teacher and students in the class has positive relationship with achievement in mathematics and students perception of failure. On the other hand, the use of computers in mathematics classes indicated a negative relationship with achievement and student perception of failure. In the science subscale teacher demonstrations in the laboratory together with the student experiments indicated a positive impact on science achievement. It was also seen that the use of an overhead projector by the teacher and students in the classroom is an effective strategy to enhance learning achievement in science. These two variables are also effective tools to decrease the perception of failure of the students in science. The use of computers in science classes has a negative relationship both with achievement and perception of failure of the students. Even though the relationship is very weak, as expected, students who believe that memorization is a desirable methodology to use in order to be successful in science and mathematics are the ones with lower learning achievement. In this group, it is also observed that the negative impact of student-centered activities still continues in both subject matter areas, while the effect of teacher-centered didactics decreased in mathematics, non-significant in science. The impact of instructional materials used by the teacher such as overhead and demonstration experiments became very obvious in the models studied, implying that an interactive teacher model is still successful in enhancing learning achievement in both subject matter areas.

As teachers feel more prepared for the different subject areas of mathematics, their students indicate higher scores in mathematics. The classical short-term homework assignments in mathematics are an effective tool to enhance students understanding of mathematical concepts. Long-term group or individual projects do not help to enhance learning achievement in mathematics. These particular types of assignments are most likely to be used as a part of the student-centered activities, which have negative impact on learning achievement in mathematics. When the frequency of homework assignments and teachers corrections on homework assignments are considered in mathematics, it is observed that the Turkish teachers give less homework than the ones in the European Union countries in mathematics, and do not correct them as often as their colleagues in the European Union countries. When compared to European Union countries, Turkish mathematics teachers use the measurement results basically for the purpose of providing grades. The use of measurement results for the feedback purposes, and reporting the results to the parents are not common practices among the Turkish mathematics teachers compared to European Union countries. The Turkish mathematics teachers see mathematics as a set of rules and algorithms and computational skills slightly more than the European Union countries teachers. Range of student background, students with special needs, high student/teacher ratios, uninterested parents and shortage of instructional equipments are reported as limiting factors in teaching mathematics and science among the Turkish teachers. These factors are reported as limiting ones among the Turkish teachers slightly more than the teachers in the European Union countries. Among them students with special needs is reported as one of the most important barriers for a successful teaching in Turkey.

Turkish science teachers assign more homework than the EU country teachers, but they are more or less the same in terms of frequency of correcting and returning the homework compared to member states. Also, the Turkish science teachers favor memorizing the formulas more often than EU countries teacher in science classes. When successful schools are evaluated closely with respect to national assessment program results, they are characterized by a teacher who uses technology, equipment and instructional materials such as handouts in the classroom, and conducts student based laboratory experiments.

Findings Related to trend Data

When trends of success at the university entrance examination are considered, no remarkable difference was observed across 1999-2002 in the verbal and quantitative sections. From 1999 to 2002, the average correct response rate for the verbal subtest is 50 percent; for the quantitative subtest this same rate is 35 percent. When schools are compared across years, the order of success in both verbal and quantitative tests is as follows: Science Lycee, Anatolian high schools, private schools, state schools and vocational high schools. When the quantitative section is closely evaluated, vocational high schools and state schools did not indicate remarkable performance in the subtest levels. When trends in basic education are considered, there is no remarkable improvement observed in student performances across the years studied and different subject matter areas except a very slight increase in science and mathematics achievement in the year 2002. The average success level is around 50% in terms of average of correct response rate in science and mathematics. When the vocational schools are analyzed in depth, it is observed that Anatolian teacher training high schools and Anatolian high school for religious education perform better than the other school types considered. Even in these schools the performance of the students in the quantitative section is not higher than 20% across 1999 and 2002. There is a similarity between the basic education assessment results and university entrance examination results when regional comparisons and average success level are considered. Across years, regions, and subject matter comparisons both education levels indicated the same trend.

Key Conclusions

- Average student success level is very low in almost all the subject matter areas.
- There are gaps between the private schools and state schools in terms of success level, educational practices and instructional materials used.
- Across the years examined, low levels of achievement continue in the basic education and secondary education levels.
- When instructional processes are considered, student-centered teaching was found to be an ineffective teaching tool to enhance student learning achievement.
- An interactive teacher model, which uses instructional materials, allows students to use the materials in the classroom, conducts demonstration experiments, lets students carry out experiments, uses hand-out materials in the classroom, and frequently solves and explains problems was found to be an effective one to enhance student learning achievement.
- The use of personal computers in the class for the instructional purposes was found to be an ineffective tool to develop student learning.

- Variables such as home and family background characteristics, and student perceptions of failure are two important variables related to learning achievement. Some instructional processes such as teacher-centered didactics and laboratory work, and use of instructional materials in the classroom also help to decrease failure.
- Some teacher related variables are also found to be related to student learning achievement such as teacher interaction with the parents and their self-efficacy measures.
- Students with special needs and high student/teacher ratio are two important barriers for a successful education in the classroom as reported by the teachers.
- Across Turkey and EU countries there are differences in teacher beliefs about science and mathematics education.
- Anatolian teacher training high schools and Anatolian high schools for religious education are the two vocational high school types, which are relatively more successful at the university entrance examination among the other vocational high schools. In the quantitative section, however, their success level is no more than 20%.

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

To what extent does education and training contribute to employment opportunities in Turkey? To what extent do knowledge and skills that graduates obtain from years of schooling and training relate to their jobs? One of the major issues confronting secondary and higher education in many countries is whether graduates can obtain jobs that relate to their education and training. For Turkey, the question is where do graduates acquire the occupational skills to perform well in the labor market in a way that would increase the probability of employment in the country. If formal education does not suffice to provide secondary education graduates with the knowledge or skills to perform successfully in the labor market, are there occupational measures such as apprenticeship training and course attendance programs that will bridge the gap? The results of the 1997 Formal and Adult Education Survey (FAES) in Turkey indicate that approximately 85 percent of university graduates obtained jobs that were related to their education in the period between 1980 and 1989 but the rate declined to 80 percent between 1990 and 1997. Among graduates who were employed at jobs not related to their education, 41 percent claimed that they were not able to find a job related to their education.

The focus of this study is twofold. First, the study tests the relationship between graduates' level of education and the job they presently hold by examining whether secondary school and university graduates are able to obtain jobs directly related to their education and training. Additionally, the study assesses whether the education obtained by secondary and university graduates has a favorable impact on their job performance. Second, the study examines the effect of apprenticeship training scheme on employment probability in Turkey. In some countries such as Germany and Switzerland, participation in an apprenticeship program plays an important role in the transition from school to work. The impact of apprenticeship programs on the school-to-work transition is analyzed in the context of Turkey.

The authors measure the correlation between secondary school/university graduates and job relatedness as well as the impact of apprenticeship training and course training programs on the probability of employment using the 1997 Turkey HLFS. The results suggest that the higher the level of education: i) the higher the probability that one believes that the educational department that he or she graduated from is related to his or her job; ii) the higher the probability that one thinks that one's education contributes to one's job performance; iii) the lower the probability that one cannot find a related job; and iv) the higher the probability that graduates rely on formal education for the acquisition of occupational skills. Using logistic regression analysis, level of education, controlling for gender, marital status, and age significantly predicts the contribution of education to better job performance.

These findings show that it is less likely for graduates from secondary vocational education in comparison with university graduates to find a job that is directly related to what they have learned in school. Additionally, in terms of job performance, it is more likely for the latter than the former that their education has helped them in their work. It is not surprising, therefore, that the study shows a greater reliance on on-the-job training for secondary vocational graduates than university graduates. The reason for this

discrepancy is probably due to the fact that the skills required in the labor market are not being taught at the secondary vocational school level. At the same time, secondary schools are not providing high quality education to meet the demand in the labor market.

In order to examine whether apprenticeship training and course training programs have a positive impact on employment, probit models of employment are estimated for the total, female and male samples. Apprenticeship training program is found to increase the probability of employment by about 22, 40 and 8 percent in the total, female and male samples, respectively. The course training program is found to increase the probability of employment by about 6, 2 and 5 percents in the total, female and male samples, respectively. All of these effects were statistically significant, and can be found in Table I.1, which gives marginal effects (the contribution of each variable makes to to the probability that the individual was employed).

FIGURE I.1
MAXIMUM LIKELIHOOD PROBIT ESTIMATES OF EMPLOYMENT STATUS, 1997

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

Notes: a: indicates dummy (0/1) variables. Table gives the marginal effects (for dummy variables this is the discrete change from 0 to 1). Regional comparisons have been excluded in the interest of space. Associated asymptotic t-ratios are given in parentheses.

Thus finishing vocational education contributes 27 percent to the probability that the individual would be employed, while completing university contributed 45 percent. From these results, we can conclude that government intervention in the labor market through programs such as apprenticeship training and course training seem to increase employment probabilities of both females and males in a significant way.

Nonetheless, this success in increasing the employment probability of the participants must be appraised against the cost. There is no study on the cost aspect of these programs. Further, increased probability of employment is not the only beneficial outcome of participation in the training programs. An important impact is to improve the wage possibilities of the participants. Data must be collected on wages to study this aspect of the training programs.

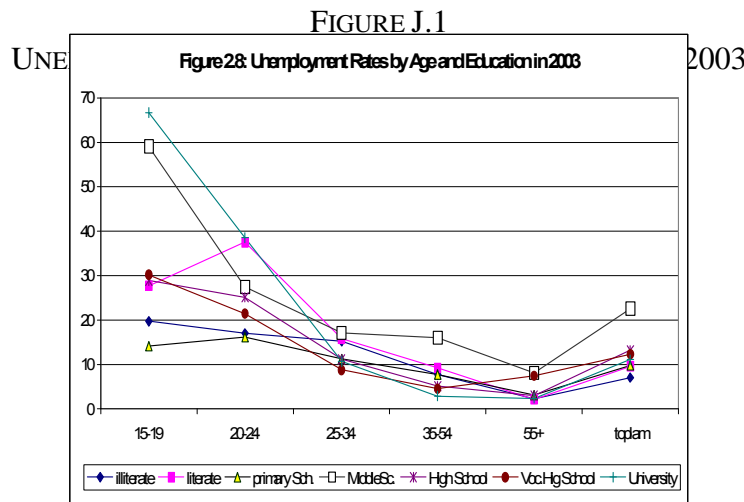
In terms of policy development, several implications follow from the above results. Ensuring that all graduates benefit from their education is a clear priority—the authors suggest that the government promote on-the-job training/apprenticeship program to students, especially at the secondary school level, and develop such a system between schools and prospective employers to further hone the skills of potential job candidates. Furthermore, areas such as relevance of curriculum and teaching (in terms of quality measure) should be reviewed, specifically in alignment with the labor market's demand.

J. Education and Labor Market Outcomes in Turkey by Aysit Tansel

In his report on labor market outcomes in Turkey the author presents a thorough analysis of recent trends in labor force participation rates, unemployment and education and earning relationships, and private returns to education. As in the case of most developed economies, the private returns to education in Turkey also increase with the level of education. That is, with the attainment of additional years of schooling (and the corresponding investment associated with that attainment) the individual earns higher wages, which brings a positive return to his investment in education.

Recent expansion of compulsory education from five to eight years has helped to fuel demand for higher education levels. Currently, there is excess demand for university education. Only 35 percent of those who took the university entrance exam in 2003 were awarded a place in some form of post secondary schooling: 12.5 percent in four-year programs, 9 percent in a two-year program, and 13.4 percent in the distance Open Education System. Those that do not win access to the tertiary system do not seem to be finding jobs either: unemployment rates are the highest for the two youngest age groups: some 19 percent for 15-19 year olds and 23 percent for 20-24 year olds.

When we examine the unemployment in terms of education attainment and other characteristics we find that graduates of general and vocational high schools have the highest unemployment rates. Comparing unemployment by both age and education characteristics reveals that the young, educated population is the group with the highest unemployment rates: for 20-24 year old graduates the rate is 30 percent (see Figure J.1).



Source: Taç (2004)

Vocational high school unemployment rates for 20-24 year olds are 22 percent, while middle school completers are nearly 30 percent. The high rates for 15-19 year olds likely indicates current enrollment. Many of these highly educated unemployed were first time job seekers; support through counseling and job-search strategies may help to reduce these rates.

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

In most of the world, female returns to education are higher than those of males. In Turkey, a 1987 study shows female returns to education are actually quite similar to those of men. Beginning in 2002, however, female returns to education outpace those of male. This reversal suggests an expansion of women's schooling. An expansion of vocational high school reveals similar results for private returns: returns to vocational high school education are significantly higher than the returns to general high school education for men. For women, the 1987 study the returns to vocational high school education are lower than those to the general high school education. This situation seems to have changed later in time. In the 2002 study we observe for both men and women higher returns to vocational high schools than to general high schools. A comparison of the returns to education for the wage earners and the self-employed leads to some mixed observations. For men in 1987 and 1994 returns to general and vocational high schools and the university education are higher for the wage-employed than for the self-employed while the reverse is true at the primary and middle school levels. With the 2002 data the returns are higher for the wage employed than for the self employed at all levels of schooling. For women, we observe higher returns for self-employed than for wage employed particularly at the university level. Similar to the world average, returns to education in the private sector where there is competition are higher than those at the public sector where the competition is limited. Results in Turkey are in concordance with the international evidence that returns to education are higher in the private than in the public sector.

The most critical issue to achieving a more equitable society in Turkey is narrowing the gender gap in both earnings and education attainment. First, both this and previous studies indicate that although schooling is an important determinant of earnings, it does not seem to explain earnings inequality between genders. Rather, discrimination against women in the labor market was found to be the most important factor explaining the male-female wage gap, which in fact widened over the period 1988-94 to 37 percent. Summarizing findings from the returns to education studies in Turkey, the author points out that education increases the labor force participation rate of both men and women, with the effect being higher for women than for men. For example a university diploma increases the labor force participation of women by 50 percent. For men, the highest marginal contribution is a vocational high school certificate. Given the gender gap in education in favor of men, it is essential to investigate policies aimed at encouraging families to devote more resources to the education of their daughters, so that they may play an important role in improving the quality of family life and education of their children.

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

In order to investigate the determinants of school attainment of boys and girls in Turkey a number of individual, household and community factors are considered. Schooling attainment is strongly related to household permanent income where higher incomes led to higher schooling attainments. This effect was larger for girls than for boys. The other important factor was parents' education. Higher levels of parent education led to higher schooling attainments. Again, this effect was larger on girls' than on boys' schooling. This result suggests less social mobility for girls than for boys. The effect of father being self-employed was to reduce schooling attainment in most samples implying that the work opportunity within the family business or the farm may be an alternative to schooling in particular for boys. Urban location was associated with significantly higher schooling attainments. Within an urban location, an undeveloped street or a squatter settlement (indicators of low school availability) were both associated with lower schooling attainments in most samples. The longer distances to the regional metro centers were associated with lower school attainments at the middle and high school levels. Distance to Istanbul was also associated with lower schooling attainment at the primary school level. These results suggest that easier migration possibilities increase the probability of school attainments. The greater the proportion of local employment in industry, the higher was the probability of schooling at the primary level. This suggests that households in the industrializing communities tend to better educate their children than households in the agricultural communities.

The final topic considered in this report was education and economic growth in Turkey. Estimation of an aggregate production function for industrial output pooling data across provinces of Turkey over the period 1980-1990 led to the following conclusions. The effect of an increase in average education level by one year was to increase industrial output by 34 percent with first differenced regression and by 43 percent with fixed effects model estimation. It is also found that for industrial output, the threshold effect of education starts at four years of average educational attainment and reaches its highest level at six years.

K. Towards an Education Decentralization Strategy for Turkey by Alec Gershberg

The paper focuses, in particular, on the decentralization of basic education functions and responsibilities from central government ministries to sub-national governments, to communities, and to the schools themselves. The author develops a typology of education decentralization and a conceptual framework for considering education decentralization in Turkey. The main objective of the study is to inform policymakers and other stakeholders of the issues, justifications, advantages, and risks of decentralizing or “deconcentrating” education management, service delivery, and financing from the Ministry of National Education (MONE) to local municipal governments, to local offices of the Ministry located in the Provincial Governors’ offices, or directly to schools themselves.

The *rationales for education decentralization* involve improving efficiency, effectiveness and democracy.¹⁴ Improved equity, too, is a rationale for decentralization, although it is also often acknowledged that because decentralization can make localities more reliant upon their economic and social endowments, some aspects of equity may suffer in the absence of adequate compensatory mechanisms. Thus the rationales are often categorized according to efficiency and effectiveness, democracy and equity, as follows:

i. Efficiency and effectiveness: Potential Factors for Improved Effectiveness from Decentralization & Participation¹⁵

1. More accurate fit of services to recipient demand.
2. Reducing bureaucracy and red tape;
3. Reducing leakage of resources;
4. Adaptation of standardized government programs to local conditions.
5. Reduced costs of communication with poor and rural populations on issues involving other government programs.
6. Increased sectoral resources through local resource mobilization, based on either self-help, user charges, or matching grant basis.
7. Gains in technical knowledge, both from and to local populations.
8. Better accountability and performance, derived particularly from better fit of services, increased resources and stakeholders acting as watchdog entity.
9. Lower costs through cooperation
10. It is often recognized, however, that strong central evaluation is a key for realizing these potential gains.

ii. Democracy: decentralization has the potential to increase the number and voice of stakeholders and incorporate democratic decision-making;

iii. Equity: the potential exists to worsen equity, especially inter-regional equity, if decentralization includes sub-national revenue generation and/or school fees; but equity

¹⁴ Here we discuss the rationale, as opposed to the political reason, for decentralization. Politically, decentralization may be pursued as a strategy to shift expenditure obligations to lower levels of government, to resolve ethnic conflicts by giving different language groups or tribes greater autonomy, etc.

¹⁵ Potential Factors for Effectiveness Adapted from Esman & Uphoff (1984).

can also improve if the poor receive better service delivery. Compensatory mechanisms designed and overseen by the Central Government are key.

There is no silver bullet: what is equitable may not be efficient, what is efficient may not be democratic, what is democratic may not be equitable. In practice, reform strategies must attempt to optimize the sometimes inevitable trade-offs between efficiency, equity, and democracy while seeking to improve on all three. The actual design and implementation of decentralization reforms are inherently political processes; thus, the decisions about making these trade-offs rightly occur in the political arena.

International experience with decentralization has motivated a by now well-known typology, first presented by Rondinelli (1981) and adapted to education by Winkler (1989). Most decentralization typologies begin with the requisite references to deconcentration, devolution, delegation, and privatization. This is particularly true when education decentralization is part of a general government decentralization—often also part of a public sector reform effort to improve democracy and the legitimacy of the state. Recently, attention has focused equally if not more on decentralization to schools and school management committees (commonly called school autonomy and school-based management, SBM) as opposed to decentralization to (or of) governments.

- *Education deconcentration* is the transfer of decision-making from the central government ministry of education (MOE) to either the regional/local offices of the MOE or the regional offices of the central government. This typically entails giving those offices increased autonomy both in terms of recruiting, evaluating, and promoting personnel and in terms of allocating and reallocating budgets. It also often includes the decentralization of payroll and other administrative matters for teachers and other school staff. It may include some degree of political decentralization, too. Sometimes the election of local and/or regional political officials is introduced at the same time that decision-making is deconcentrated to the MOE's regional or local offices. In this way, local politicians may gain some influence over local administrative decisions even though they have no direct authority in education.
- *Education devolution* is the transfer of decision-making from the central government to popularly elected regional or local governments. Key management decisions, including naming school principals and allocating regional/local education budgets lie with the governor and legislature or the mayor and city council. In some cases, these decisions may in turn be delegated to schools or school councils. In most cases, the revenues of the newly empowered regional or local governments are almost totally derived from central government transfers, thus limiting their fiscal autonomy. Fiscal autonomy and, arguably, fiscal accountability is higher when regional or local governments must raise a significant share of their own revenues. As with deconcentration, administrative and personnel functions are often transferred. Devolution can be part of political decentralization or a way for central governments to offload service responsibility.

- *Education delegation* is the reversible assignment by the central or region government MOE, or in rare cases the municipal department of education, to public school principals and/or (usually elected) school councils. The powers of these school officials vary greatly by country. In some cases, they do no more than maintain the physical plant, while at the other extreme school councils may name school principals, help prepare and approve school development plans, and approve school spending plans. It could also involve the transfer of resources and key decision-making control to a semi-autonomous non-governmental or religious organization.¹⁶
- *Privatization* is another key aspect of most education decentralization typologies. This usually refers to vouchers or sometimes to private management of public schools. This study will not deal with this form of decentralization since it does not appear to have policy relevance in Turkey

Turkey originally designed much of its local government sector based on the French system, emphasizing a strong role for central government with limited local autonomy. Note that while France is considered quite centralized, many decisions are taken at the school level including the school level use of resources for staff and some current expenditure.

Intergovernmental transfers: Under decentralization, sub-nationally provided education is largely financed through intergovernmental transfers. The first model is *block grants to local governments*, which may then decide on their spending priorities for education. For example, local governments in Hungary devote about 30% of their budget to education. This form of fiscal decentralization nearly always plays a role in educational decentralization to sub-national governments.

Many of the most radical reforms in education reform have sprung from crisis. School grants and direct formula funding of schools: School grants are becomingly increasingly common as a vehicle for transferring resources to school governing councils, as a means for ensuring minimum spending on non-personnel outlays, as incentives for school behaviors, and as a means of targeting schools serving the poor. With both school autonomy and the accompanying school grants, ministry-led strategies can prove helpful because the space for learning by doing allows for making changes to the regulations (e.g. the size of the school grants, the membership and powers of the school councils) as local capacity and tastes are revealed. There is by now a significant accumulated international experience with education decentralization. Efficiency and effectiveness are most likely to improve under decentralization when service providers—schools, local governments, or regional governments—are held *accountable for results* (i.e., they suffer the consequences of poor performance, or receive rewards for good performance). Accountability is arguably stronger when the local government or school community provides a share of school financing.

The clients of education—parents and citizens—need reliable and timely information on their school’s performance, and how it compares to national standards and comparable

¹⁶ e.g., Al Azhar schools in Egypt, which are funded but only loosely governed by the central government.

schools. Decentralization of real decision-making power to schools or school councils is a means of increasing the voice of education's clients and can significantly increase *parental participation* in the school; alternatively, school councils which are only advisory in often nature cannot sustain parental participation. High levels of parental and community participation are associated with improved school performance (El Salvador, Nicaragua). Decentralization of education to sub-national governments—a policy which is usually part of a larger reorganization of government—does not in and of itself empower parents and improve *school performance* (Argentina, Chile). Further decentralization to schools (school councils or school boards) or local communities—a policy which is often initiated within the education sector itself—can empower parents and can improve school performance, especially when changing the organization of education is simultaneously accompanied by attempts to improve teaching and learning (Memphis, USA, Minas Gerais, Brazil).

Most decentralization includes the transfer of financial resources to sub-national governments or schools. Formula-based capitation transfers ensure predictable revenues and can be designed to give schools serving the poor or disadvantaged higher levels of per student funding. Decentralization requires that national and/or regional *ministries of education* be restructured to provide the new functions which they should provide to sub-national governments and schools: diagnosis of problems and policy formulation, design of policies to ensure equity, student assessment, collection and dissemination of reliable information, training and technical assistance to those now responsible for delivering schooling. School construction is a good candidate for decentralized provision. France decentralized school construction while maintaining tight central controls in other areas. Many other countries have reaped efficiency gains by decentralizing aspects of school construction, which is also often well-suited to local government interests and capacity.

The single largest fear expressed by national education ministries is that sub-national governments, communities, and/or schools lack the *capacity to manage* education. Decentralization is a *long, evolutionary process*. Failed decentralization reforms (even if they do not represent true decentralization) taint any efforts in the future to decentralize. Experience with education decentralization around the world suggests an idealized model of decentralization consistent with schools effective in enrolling and teaching students.