



Dipartimento di Economia Politica



Materiali di discussione

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**Education systems facing the challenges of
technological, organizational and social changes:
US and Italy in a comparative perspective**

MIQUA project_Improving the quality of the pre-university education system

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January 2012

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ISSN: 2039-1439 a stampa
ISSN: 2039-1447 on line



Abstract

Education systems in developed countries have faced many important changes over the past two decades changing only partially their structure and the way they operate. New educational needs became noticeable because of the variation in the population's composition in almost all countries, due to both natural balance and especially to migration balance. At the same time, the need to consolidate the basic education of the entire youth population, as well as the need to consider new and broader educational needs of adults and elderly is widely recognized. Serious reconsideration is needed for more effective vocational education. A rather important challenge concerns the training of professional technicians and their employability by industry, in consideration of the need to support companies in innovation. How to combine maximum fairness and equal opportunities and the efficient use of resources is the common issue of many reform measures, especially in pre-primary, primary and general secondary education system. The focus on US and Italy shades light on the main issues facing education policy in the two countries.

JEL Classification: I21; J24; I28

Keywords: Analysis of Education; Education Policy; Human Capital, US, Italy

This paper has been prepared for the international research project "MIQUA_Improving the quality of the pre-university education", funded by the University of Modena and Reggio Emilia and the Fondazione Cassa di Risparmio di Modena.
We wish to thank David Lane, Sander van der Leeuw and Federica Rossi for discussions on the topics presented in the paper.

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Innovation in education systems: research issues

Paola Mengoli* and Margherita Russo**

Introduction

Education systems in developed countries have faced many important changes over the past two decades changing only partially their structure and the way they operate. New educational needs became noticeable because of the variation in the population's composition in almost all countries, due to both natural balance and especially to migration balance. At the same time, as a result of the expansion in the amount of available knowledge, the need to consolidate the basic education of the entire youth population, as well as the need to consider new and broader educational needs of adults and elderly is widely recognized. Serious reconsideration is needed for more effective vocational education, especially for young people entering the job market a few years after the end of compulsory school attendance. A rather important challenge concerns the training of professional technicians and their employability by industry, in consideration of the need to support companies in innovation. How to combine maximum fairness and equal opportunities, namely the extension of universal participation in the education system, and the efficient use of resources is the common issue of many reform measures, especially in pre-primary, primary and general secondary education system. Actions to reshape the goals and the sequence of stages of education processes have been frequently undertaken.

Structural changes in education systems are not easy to make, since many elements must be considered and the analytical framework is often fragmented and poorly defined. Growing evidence shows that mere participation in the education system does not produce significant effects for people, when not associated with concrete results in terms of knowledge and skills. Organizational

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models for schools, available training tools, ways to select and promote the teaching staff must be studied as central elements in order to understand the effects of the reforms and the relationship between the increase in the available resources and the qualitative changes which have occurred. Over the past two decades the reform processes have often relied on a review of governance models of education systems to support their qualification and efficiency. The governance model defines the ways in which the amount, use and accountability of resources are decided, as well as the distribution of responsibilities with respect to the organization and the results of teaching and learning processes. The relationships between the different governance models, the effectiveness of education systems in training young people and the capacity of education systems to keep pace with the advancement of knowledge and with changes in technology and organization, need in-depth analyses which may benefit from the comparison between different national situations. Some warnings are yet necessary.

First, whatever the governance model, one must consider the amount of material and professional resources available to schools. If attention is focused on the governance model of an education system, the risk of incorrectly considering only the relationships between actors operating within the education system is high. On the contrary, the relationships between those within the educational system and the environment which surrounds schools, and the agencies and educational institutions, are very important in order to understand their efficiency and effectiveness as well as their ability to maintain a high rate of innovation. The economic, social and cultural features of certain areas, as well as the ability to influence action by the institutions that govern schools, are the most important elements in order to interpret the work of individual schools, both in the context of a centralized model and in the context of institutions enjoying the utmost organizational, educational and cultural autonomy. Analyzing the functioning and performance of the education system could lead to the underestimation of the intangible assets which can support the work of the schools and which are the result of favorable or unfavorable conditions of their environment. Some examples to clarify: to initiate and support the necessary changes in the training of teachers and managers, as well as in their concrete commitment to innovation, it is

necessary that the context in which they operate is able to conceive effective relationships with schools, with their functioning and their management. It would be highly unusual for motivation, needed by staff to initiate and support change, to develop in a context in which, according to public opinion, school has a secondary role in determining personal success and in which teachers are considered a protected and privileged category, without a positive effect on the community. In the same vein, it seems highly unlikely for high quality professional training of young people to emerge, if companies deem that they have no direct responsibility in the teaching and learning processes. Irrespective of what level is considered as the context surrounding the schools - local, regional or national levels, in connection with a centralized or decentralized model of governance - it is clear that the relations between the characteristics of the social and cultural context and the type of implicit and explicit demands that it makes of the educational system, as well as the tangible and intangible resources that are provided, affect the likelihood for the innovation processes of the education system to be launched and to be successful. The situation is complex because the characteristics of the social and cultural context are changeable since they are determined by available technology, by the prevalent organizational models, and by the professional and economic resources that communities have at their disposal or that they need to solve their problems.

Some interesting elements suitable for unraveling the complex analysis of this issue emerge from the comparison between the U.S. and Italy. The institutional features of national education systems diverge from each other: little or very limited areas of central decision making in the U.S. versus a centralized structure in which almost everything is defined at the national level in Italy. Nevertheless, the problems concerning the activation of effective processes of innovation and qualification are very similar and reform paths are comparable. In both countries the minimum educational standards which must be uniformly guaranteed in the different areas are under discussion. The debate focuses on how changes in contents and methodologies can be prompted and promoted. Both countries discuss on how to integrate secondary and tertiary levels learning with productive organization and learning that occurs in the workplace. The similarity of the

debate and, in some respects, of the decisions taken, given the presence of highly different institutional governance modes, open up possibilities for an in-depth reflection on what is crucial for promoting innovation and qualification of education systems.

If on the one hand, promoting universal access, adapting workforce training to the changing needs of businesses and building the skills needed to live in heterogeneous communities are common elements of education policy in the U.S. and Italy, on the other hand profound differences emerge between the two countries. When in the United States, the qualification requirements of the national education system have produced a common base, almost unquestionably accepted by both the two main political forces, in Italy the same needs, although commonly accepted, encounter difficulties in being put into coherent long-term actions, and reforming interventions suffer any change in the government majority.

This paper introduces some issues dealing with the functioning, the policy and the challenges that the national education systems are facing. The comparative analysis occurred during the years 2009 and 2010 and has seen the participation of scholars from the Arizona State University, USA, and the University of Modena and Reggio Emilia, Italy, promoting the research project. “MIQUA: Improving the quality of the pre-university education system”¹. The issues discussed, the information collected to build the comparison and the considerations that have emerged from joint work represent a good example of comparative analysis that explores the elements for the analysis of education policies in developed countries. The research project has been enriched by the contributions of experts on the national assessment of education (Piero Cipollone former president of INVALSI, Italy, and Donatella Poliandri, researcher at INVALSI) and on the institutional setting of the Italian education system (Annamaria Poggi, University of Turin, Italy).

¹ The web site www.miqua.unimore.it contains the interim reports and information on the project.

Below we summarize the main considerations that have emerged with the aim of connecting the three essays which are further presented. The first, by Eugene García and Dali Ozturk, analyze the education system in the U.S., the second and third – respectively by Piero Cipollone and Donatella Poliandri, and by Annamaria Poggi - investigate two issues relevant to the transformation of the Italian education system: the shaping of the national assessment system and the process of decentralization of the education system in Italy. To integrate the contents of the two essays on the education system in Italy, a summary of the main characteristics of the system is proposed, with reference to year 2008, in the Annex.

USA and Italy: comparison issues

The most important issue that draws the attention of researchers concerns the difficulties in the implementation of education reforms, both in the case where the model of governance is highly centralized, and in the opposite case where the model is highly decentralized. In neither case, the top-down or bottom-up processes thus initiated seem to be able to spontaneously produce the desired changes. In both situations, the contributions made by actors and institutions at local and regional levels (including universities) to schools in a local area are highly significant. At the same time, both situations present similar problems which limit the effectiveness and even the setting up of an evaluation system that could support the reforms with real facts.

In the U.S., what, for how long, which and how many resources and what methodological features are implemented in the K-12 (or K-20) system or in pre-university education system, is largely determined by individual states and even more by individual schools. There is no national regulatory body. So far, the debate on national standards has not produced any concrete result. Thus, each state evaluates results based on its own standards. The problem of ensuring an appropriate and mutual level of learning, arises not only from obvious reasons of equity and equality of opportunity, but also from the need to ensure internal transparency and clarity in the recruitment of personnel. The past two decades have also seen an increase in the sensitivity to the comparison between the skills

and knowledge that young people acquire and the skills produced by education systems in competing countries or potential recipients of U.S. investments. In a centrally governed system, with a strong presence of private schools and not always engaged in public finance and controls, the differences in quantitative and qualitative results of learning in schools are hardly influenced. The problem concerning the difficulties of acquiring and sharing a wide knowledge of the system's functioning is fully highlighted in an essay by García and Ozturk (below). Moreover, without an institutional framework outlined it is difficult to affect the processes of innovation needed to qualify the system. The profound demographic changes that the U.S. has dealt with over time, particularly over the past two decades, point to - among other things - the need to innovate the teaching and learning processes for young people whose mother tongue is not English. How is it possible to induce processes of innovative contents, methods and therefore the results of learning for young people, when schools are not institutionally obliged to take into account the needs of the community? The experience of Arizona State University draws attention to the role that state universities can play deploying the skills necessary not only to train new generations of teachers and administrators, but also to support the work of those who are in service and to introduce changes and innovations in a process of "action-research". Universities can also play a catalytic role for local actors who are interested in innovation in the education system as a whole, both because they are institutionally responsible for education and social policies, and because they are interested in the qualification of the labor force. The joint contribution of different actors, with different methods and tools, can be supported by project proposal and investment to promote pilot actions. When pressures for innovation are too feeble or simply nonexistent, this might hamper the innovation process with negative effects in the long-term on productivity, competitiveness and economic welfare.

At first sight the situation in Italy is quite different. What, for how long, which and how many resources and the methodological features of teaching in primary and secondary schools are largely determined by the central state, despite the introduction of school autonomy since 1998 and despite a process of

decentralization which influenced the distribution of tasks between the government and local institutions (regions, provinces and municipalities). Despite the Italian education system being controlled and managed as a unit, evidence shows that the actual situation is by no means homogeneous neither in terms of materials and professional resources available, nor in terms of quantitative (rate participation) and qualitative (quality of learning) results. The most well-known differences concern the "performance" measured by the results of standardized tests on learning conducted by OCSE_PISA. The average performance of schools in the South of Italy were always significantly lower than the international average. In contrast, schools in the North were always in line with international averages, and even better. In addition to these differences, further and more detailed analyses of the results of standardized tests on learning, bring out an even more interesting situation. At the same location, with the same type of school, and taking into account the social and economic status of families, Italian students achieve very different results (up to 100 points on the PISA scale) in relation with the specific school they attend. Cipollone and Poliandri (below) show that in Italy there is a major problem at the micro level of organization, not only at the macro area. There are schools that work well within the general rules and the distribution of resources of the government, and schools that are dysfunctional in the same territory and with the same type of students for the same program of study. The professional characteristics of teachers, managers and other unexplored factors related to the characteristics of the context can positively influence the performance of some schools and not others, all other conditions being equal. Thus, there is the need for a closer examination that calls into question theoretical and interpretative tools which have not yet been considered.

The Italian situation is characterized by a strong division among the formal political positions on the education system reform. The need to make school attendance compulsory for the initial period and the opportunity, or futility of increasing this period up to eighteen years has been widely discussed. In addition to this also the possibility, introduced by a law passed by parliament in late 2010, to complete the compulsory initial school attendance with apprenticeships is discussed. Nevertheless, in Italy, apprenticeship does not provide effective

integration between vocational schools and businesses, so learning is possible only in the workplace. The current government (2011) has reduced the annual school timetable in primary schools, lower secondary schools and secondary schools and it has reduced the presence of more than one teacher in classrooms, especially in primary schools. The main motivation of these reform measures is the reduction of state expenditure, and especially the reduction in the number of teachers. These are the most significant changes that have taken place in the last two decades, since other changes introduced by one government have been deleted by the next. Even the teaching content and methods have been modified by national governments who took turns in doing so, but unfortunately it is not possible to describe the specific changes, or their effects on the quality of learning or reduction of early school leaving. The national evaluation system is not yet able to provide appropriate tools for this type of analysis. The delay in the construction of the national evaluation system causes the debate on reform to be linked to ideal options rather than to concrete data on the situation.

Another area of concern on the road to qualifications and reform of the Italian education system is the process of decentralization of government powers, started since 1998 and brought to national attention by the referendum of 2001. The organization of the education system, although some foundations have been permanently changed, remains centralized. The margins of autonomy to regional and local levels, as well as in individual schools are limited by the impossibility of having the resources that continue to be managed centrally. Schools have teaching and research autonomy that fails to become effective because of the lack of suitable means, of appropriate skills and of poor ability to build appropriate relationships with the context and local institutions. Poggi, in the essay that follows, analyzes the regulatory framework limitations and potential and points attention to the path, which must still be undertaken, to adapt the laws and implementing the decentralization of state functions in education. Currently, regions can define the methods for providing initial training and can issue three-year and four-year qualifications. This is an important change, even though the different regions act in quite different timescales and ways. The risk to

differentiate even further the educational achievements of the younger generations seems to increase.

Education in the United States: Improving Education Equity & Quality

Eugene E. García* and Mehmet "Dali" Öztürk**

Changes to Educational Landscape

Education in the United States has changed dramatically in the last 20 to 25 years. Things that once were are no longer, and things that are now present did not exist previously. Discussing these changes is critical due to their potential to act as catalysts for future change—their potential to help the U.S. provide a quality education to all its citizens. First, the U.S. has experienced a radical shift in the demographics of its school-age population. Historically, the U.S. has been known as a nation of immigrants. However, only recently have we experienced immigration trends similar to what was seen in the 19th and 20th centuries. Currently, 26 to 28 percent of children educated in public sector schools are living in immigrant families (Garcia and Frede, 2010). These children themselves are often citizens, but they live within a context of migration and immigration.

Closely related to the topic of immigration is language. Approximately 170 languages are currently spoken in the United States with Spanish second only to English in prevalence (García, 2005). In 2007, infants whose mother did not speak English as her first language comprised one quarter of the U.S. birth cohort and according to projections, this number will increase to almost one-third in the next 5 to 10 years (National Task Force on Early Education for Hispanics, 2007). Understanding how immigration and linguistic diversity influences learning is therefore critically important if we are to improve equity and quality in the United States. Currently, we do not fully understand the educational needs of our English learners and therefore, these children are not granted full access to the educational resources that others who speak predominately English receive.

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Third, as a result of economic globalization, educators and policy makers have become increasingly aware of the competition our workforce faces as well as how our rates with relation to those of other countries. In the 1950s to 1970s, the U.S. was consistently ranked number one in virtually every indicator of academic achievement. Currently we are in the middle of the pack amongst developed countries (National Academy of Sciences, 2010). And we slip every year. Educators and policy makers are becoming increasingly concerned: As economic globalization continues, how are we going to compete? Before we can adapt, we must first come to terms with the fact that we are no longer number one.

Fourth, policy makers have been increasingly holding educators accountable for the achievements of their students. In 2002, the federal legislation “No Child Left Behind” (NCLB) was passed, ushering in an education platform focusing on standards-based reform. While NCLB was passed at the beginning of George W. Bush’s administration, many components of the legislation, particularly the notion that receiving federal dollars should be dependent on educational quality, were advocated and implemented during President Bill Clinton’s term in office. While elements of NCLB have been controversial, there seems unanimous agreement that holding educators accountable is necessary to affect meaningful change.

Fifth, basing programmatic decisions on empirical evidence has increased over the past two decades and will surely continue as we move forwards. Each year, the National Academy of Science meets to discuss topics of great national importance: nuclear energy, oil production and consumption, sustainable energy sources. Prior to the 1970’s, education was very rarely on their agenda. In the last decade however, the National Academy of Science has impaneled more experts on education than it has in its 100-year-old history; a report is now produced and circulated at least three times per year. They ask: What is good teaching? What is good learning? What factors lead to effective education in math and science? What should the public know about education? Twenty years ago, at least within the scientific community, discussions of this kind were rare. Their increasing frequency has spurred educators to think more about theory and research as they develop innovative programs or interventions.

Last, it is important to note that many changes have occurred as a result of the Obama administration's educational reform platform. Even with the U.S. suffering great economic losses and amid questions regarding our economic vitality, President Obama has pledged to invest extensively in education. With this support, the U.S. is striving to change its current educational climate through hard work, perseverance, and innovation. To do so, we need to understand the challenges we face. Only then can we examine what system designs need to be implemented and what actions need to be taken.

Challenges to Education Reform

We propose that challenges to education reform in the U.S. take four forms. The first are *structural*. In the U.S., the educational system is run primarily at the local and state level; with the federal government providing resources and oversight. Each of these levels of government operates under different, and often conflicting, policy agendas. Overall, this has led to a fragmented educational system, one that lacks integration, one not guided by a single national perspective. Children enrolled in grades 1-5 may be affected by different policies than those enrolled in grades 6-12 (Garcia and Frede, 2010). This creates artificial divisions in the educational experience, divisions created by policy rather than our knowledge of child development, cognition, and learning.

These structural difficulties become more problematic when issues of education finance are considered. Before implementing any educational reform, you must understand how it will be supported financially. With different financial systems in place at each level, this can be exceptionally difficult. For example, despite the massive collection of evidence on the importance of early education, the pre-K educational system is not adequately funded at the state level and structurally, not linked to later grades, making it an inefficient and ineffective system for delivering early educational support to all U.S. citizens. At the federal level there is an opportunity to integrate all sectors and view elementary, middle school, secondary, and postsecondary education as a fluid continuum. Doing so is the significant structural challenge we face.

Second, the U.S. faces *conceptual* challenges. With the passage of No Child Left Behind (NCLB), education moved directly into the use of standards-based assessment and standards-based instruction. However, despite our understanding that there needs to be one common set of standards, each of our 50 states currently maintains their own. A fundamental component of NCLB was that all children must demonstrate academic proficiency yet common curriculums regarding what concepts are taught and how they are presented to students do not exist. Consequently, our assessments evaluating student performance are different across states making meaningful comparison difficult. The primary concern here is equity. Are children in Mississippi receiving the same quality of education as children in New York? Whether they are or not is a national interest that is shared by every state. The bureaucratic challenge is this: how can we protect the right for individual states to govern their education while at the same time implementing a set of standards and an accountability system that ensures our goals as a country are being met? The conceptual difficulty we face is how to determine if local efforts meet state goals and then, determining whether these state goals align with those established at the federal level. For each level to operate as partners to move forward we will need to adopt a very different kind of thinking.

If all levels of government work together, how will we know what is working? This is a question largely associated with the production, maintenance, and interpretation of data. To answer it, the U.S. must address several *technical* challenges. First, we must determine what information is necessary to infer educational impact. Second, we need to accurately capture this information and develop a way to store it that enables progress to be viewed across a significant period of time. Unfortunately, in many ways, the U.S. is failing to meet these technical challenges. Although many states and school districts have excellent data systems in place, these systems stop at each sector (i.e., pre-K-K; K-12, higher education). Without integrating all the information we collect, we cannot interpret it in ways that impact policy decisions.

While wonderful, our cultural diversity poses significant challenges to the use of data in educational decision-making. As mentioned previously, a large percentage of children in the U.S. do not speak English fluently before they enter

formal schooling. We refer to these children as English Language Learners, or ELLs. The assessment tools we currently use to infer academic achievement in these students need to be evaluated to determine if they elicit valid scores. The same holds for our children with disabilities. Whether these measures “work” for these populations is a critical question to ask in a data-driven, standards-based education system. It is a critical question to ask if we are to ensure equity and quality throughout our diverse population. None of these technical challenges are insurmountable. However, overcoming them will require considerable time and effort.





The last set of challenges pertains to *resources*. Currently, there are significant limitations and inequalities in the way we fund our educational programs and infrastructure. By infrastructure, we refer to factors such as access to technology, data systems, and the strategies we use to prepare teachers. The relevant questions are: who pays and where does the money come from? In other words, who bears the financial burden for educational improvement: the local community or municipality, the state, or the federal government? Moving forward, what role should each of these agencies have in providing citizens access to resources? Ensuring equal access is essential to creating an unbiased national accountability system. However, decisions on how to allocate resources fairly in the U.S. are extremely difficult because they must consider the circumstances of a diverse population scattered across large, often dissimilar geographic areas. For example, a principal or teacher working in a rural area may have very different needs than a principal or teacher in an urban area. Further, two teachers working in the same city will have different needs depending on the demographic composition of their classroom. How does one account for these differences when allocating resources?

Proposed System Design

The framing beliefs guiding our work are ones that the educational system in the United States already embraces. They are bipartisan in nature, neither Democratic nor Republican, neither left nor right. The first is this: Applying an egalitarian perspective is vital to education and education is the key to our future

prosperity. Second, educational programs should be held accountable to performance standards and quality. Third, assessments of program quality and their impact on student outcomes should inform our policy decisions. In the U.S. our task will be to use these fundamental principles to design a system based on partnerships among federal, state, and local entities, all of whom will play a significant role in the education of our children.

Figure 1.

System Design				
Infrastructure				
Learning and Program Quality Standards	Program Implementation and Innovation	Professional Development	Data Management and Reporting	
				
Assessment/Program Improvement/Innovation Approaches				
Approaches	I. Child population	II. Program Population	III. State Program Evaluation	IV. Local Agency Quality
Core Question	How well are all children progressing in learning and development?	What is the quality of all early childhood programs?	What is the quality and how well are children progressing in specific state programs?	What is the quality in local agencies/schools?
How Data is Used	<ul style="list-style-type: none"> - Oversight of state investments/initiatives - Planning new investments/initiatives - Baseline information for education planning. 	<ul style="list-style-type: none"> - Oversight of state investments/initiatives - Planning new investments/initiatives - Baseline information for education planning. 	<ul style="list-style-type: none"> - Program-wide improvement efforts - Refining standards/policies - Appropriations decisions. 	<ul style="list-style-type: none"> - Technical assistance - Awarding incentives and recognition for program improvements/innovations
Pre-K-20 Alignment and Linkages				

As shown in Figure 1, our system begins with developing infrastructure. This infrastructure will provide the foundation for a high-quality, equitable educational system and will be composed of the following: quality standards for learning and

programs, program implementation and innovation, professional development, and data management and reporting.

First, standards will be developed for student learning and program quality. These will, in turn, help establish and define our expectations regarding what students should know, what they should be able to do, and to what extent programs should improve these skills and abilities. Creating these standards at every academic level, from pre-K all the way through college and graduate school is critical. Equally important will be aligning them to form a meaningful continuum on which to base student proficiency and progress.

We will also commit to developing, implementing, and evaluating programs throughout the education pipeline. Program improvement and innovation requires making massive changes to the current system. With so many challenges, and with our educational system continuing to lose ground globally, we can no longer afford to move slowly, in small steps. We must be innovative to affect these changes; we must learn to think about education in different ways.

Additionally, these changes to the system cannot take place without people working from the inside—teachers at the schools, policy makers, and personnel from educational departments and agencies. These people must be trained to understand the challenges we face and also be willing to act on them. We must develop a workforce that understands that learning is an on-going process and also knows how to teach to this process. Therefore, professional development will be an important investment moving forward.

Last, we must close our data gap. The ability to conduct comprehensive analysis of information useful to educators and policy makers is of the utmost importance. A goal of the Obama administration is to ensure that fiscal investments will not be used solely on programming but also on technology and the integration of data systems so student data is consolidated and available at the federal level. This connection is vital to understanding what is happening with our children, programs, and workforce. If we are not able to achieve it, our reform efforts will be disjointed and largely ineffective. To do so, we need to implement a unified child identification system to track how students progress and develop within society. We need to know how they joined the workforce, what role they

are playing, how they have generated new opportunities for the U.S. Perhaps most importantly, we need to be able to link this information back to what we learned about them while they were in school.

Developing this system will not be easy. A balance will need to be struck between obtaining vital data and protecting an individual's right to privacy. Finding this balance will require precision and careful planning. It will also require substantial investment—it is likely that a third of the investments made by the Obama administration will be allocated to support methods of securing data on children as they become students and students become productive members of the workforce.

Action steps

First, we need to ask state legislators to provide adequate funding for educational programs. After states develop plans for program improvement, innovation, and accountability, federal legislators then provide resources and policy guidance. Based on this support, state agencies must then implement their policies and strategies so that programs can move forward. To date, over a hundred billion dollars in stimulus funds has directly supported states, state agencies, and federal programs in the United States. In order to receive these funds, states were required to maintain their current efforts to support education. In other words, states could not cut their education budgets and simply fill the gap using stimulus funds. President Obama talks frequently about responsibility. States understand that one of their responsibilities, with the assistance of the federal government, is to improve and support innovation in their schools.

In addition to funding, we need to create a robust and positive culture for accountability, improvement, and innovation. Those of us who study systems understand that in order to create sustainable change, you must invest in efforts that build culture. Across the World, it is understood that reform initiatives will fail unless they are integrated and aligned with culture, that any gains will be lost when the next president or administration steps into office.

What is the role of the University? Secretary of Education Arne Duncan recently called for universities to become engaged with society by forming

partnerships, sharing resources (intellectual or otherwise), and considering what improvements and innovations are needed within our system.

What role should the federal government play? We believe that the role of the federal government should be to harmonize or balance the various systems of information and policies at the various levels of administration (i.e., local, state, federal). If we are working towards a national goal, we need an arbitrator to ensure that the education children receive in Georgia is equivalent to the education children receive in Mississippi, Connecticut, and so on. Essentially, the federal government must ensure that all 50 states are all moving forward on issues of equity and quality.

Under the Obama administration, 125 billion dollars will be invested into the education system within the next few years. This is going to profoundly change the landscape of education in the U.S. We want to support and foster additional long-term investments and over the term of Obama's presidency we would like to see an overall funding increase in funding of five or even six hundred percent. Why? Because we believe you simply cannot build the infrastructure and you cannot achieve lasting changes to the system without massive long-term investment. For over two decades, we have promised our families and children that the educational system in the U.S. would be the best in the world. We have yet to fulfill that promise. Can we do so? Yes we can

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The national evaluation system in Italy as a support tool for quality

Piero Cipollone* and Donatella Poliandri**

This paper aims at illustrating the conditions under which the establishment of a national system of evaluation is to be considered as a support tool for the quality of education. The authors, in line with the international literature and the results of comparative surveys on knowledge levels and students' skills, analyze and discuss the major strategies implemented to improve services and courses offered by schools and illustrate how these are involved in the construction of a national evaluation system.

A system of evaluation: what for?

What are the reasons why policy makers, researchers, schools and the public are all reflecting on the need to establish an evaluation system for education in Italy? First of all, the reasons are historical and political. In fact, numerous changes occurring in all major industrialized countries require education systems to face relevant issues for which solutions need to be found: the growth of schooling and the consequent increase in education expenditure, the increased heterogeneity of the school population and the difficulty in achieving integration of vulnerable groups, as well as the expansion and diversification of courses offered. Italy is affected by all these issues: the first attempt to respond to the issues described above was the introduction of school autonomy², which allowed individual institutions greater independence in their decision-making processes, both in the implementation of the school curriculum, and in the organization and

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² For a review of the reasons that led the majority of European countries to introduce school autonomy from the 1990s onwards, see the comprehensive framework proposed by the Agnelli Foundation (2009).

management of education services. In this sense, the establishment of an evaluation system is needed as a tool to understand what actually happens within self-governed institutions and to monitor the service offered at different levels³ (overall system, regions or local schools).

In addition, in the last ten years many countries have begun to consider the results of international comparative research on the knowledge and skills of students. In Italy, since the earliest surveys of the Programme for International Student Assessment (PISA) promoted by the Organization for Economic Co-operation and Development (OECD), the results have shown significantly lower national averages compared with OECD average scores in the proficiency tests took by students. The PISA surveys allowed us to understand how the study of average results in each area of competence (reading, mathematics, science) is not sufficient to build effective interventions aimed at improving the different education systems. In fact, further analyses revealed very different situations among the countries participating in the survey, indicating completely different paths of institutional and technical support. For example, the processing of data of the 2006 PISA report concerning maths, science and reading skills of fifteen-year-old students showed differences in the performance of Italian students in relation to the schools they attended, even if they attended the same courses of studies (Giangiacomo, Palmerio, 2008) and strong regional disparities (Barbieri, Cipollone, 2007) highlighting lack of uniformity in the Italian education system. If the students' skills level is considered as a parameter measuring the quality of each educational institution, it emerges that, unlike other countries, Italy is not able to provide substantial uniformity of service quality in its territory. Moreover, many of the countries whose students achieve high performance are also those where there are the smallest differences among schools, suggesting that there is no contradiction between these two objectives (Losito, 2008). From a policy

³ For a different view cf. Bottani, N. (2003). Sul filo del rasoio: giustizia in bilico nelle riforme della autonomia scolastica. L'antidoto della valutazione (abstract of the report presented at the National ADI convention "Autonomia e Valutazione: un binomio indivisibile" Bologna 28-29 febbraio 2003). <http://ospitiweb.indire.it/adi/Convegno2003_R/Bottani_abs.htm> [Last accessed: December 2010].

perspective, this information becomes crucial to design interventions aimed at improving educational opportunities, service costs, training quality and innovative changes in regulations (Sykes Schneider, Plank, 2009) both at the system level and within each school unit.

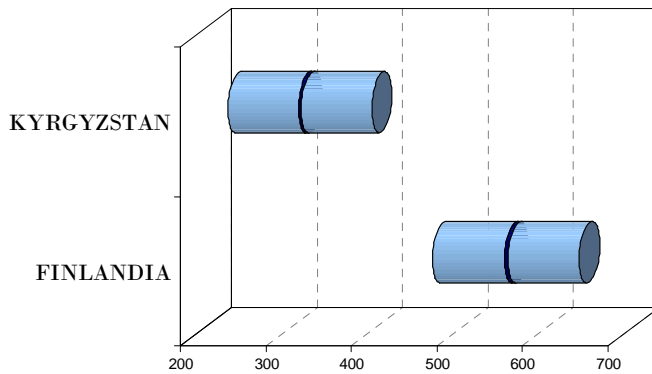
To better explain the concepts discussed so far, we report below some graphs constructed using data from PISA 2006 and representing contrasting situations.

The first graph represents, as an example, the national average scores obtained in the PISA scientific literacy survey in two countries' (Finland and Kyrgyzstan). Figure 1 shows the average score (highlighted in blue) and the variability of results obtained by the schools.

Figure 1 highlights a significant difference between the averages obtained by the two countries while, in both cases, the variability of results around the national average is much lower. This means that there is something common to all schools, both within the country enjoying a high average level of skills in scientific literacy – that is, Finland - and within the country that suffers a lower average, that is Kyrgyzstan.

To understand what kind of policies are suitable in order to identify the most appropriate instruments to support the quality of the education service, the little variability among scores - whether high or low – can be interpreted as follows: Finland has probably launched actions to allow a general improvement of all its schools, reaching higher average scores. In Kyrgyzstan the entire school system has not been able to achieve overall good results. Thus, improvement interventions in this country should be addressed at the system level, rather than at individual school units.

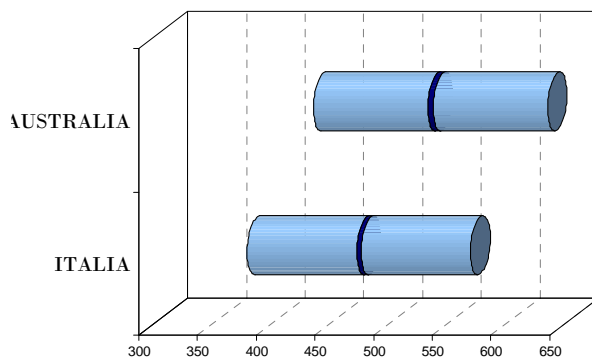
Figure 1. Example 1: National average scores and their variability



Source: Reworking of OECD PISA 2006 data

The opposite situation is exemplified in Figure 2. It shows, in the first instance, a difference between the averages of the two countries concerned (Australia and Italy). However, when observing the entire distribution of schools scores it becomes clear that there is a great dispersion of results: the scores obtained by some schools in Italy are very close to those achieved by the best schools in Australia. This case would require very different policies than those proposed for the previous situation: many Italian schools are able to facilitate high-quality learning, while others require supportive actions. Therefore improvement interventions should be implemented at the level of individual educational institutions (micro policies), rather than at the system level.

Figure 2. Example 2: National average scores and their variability



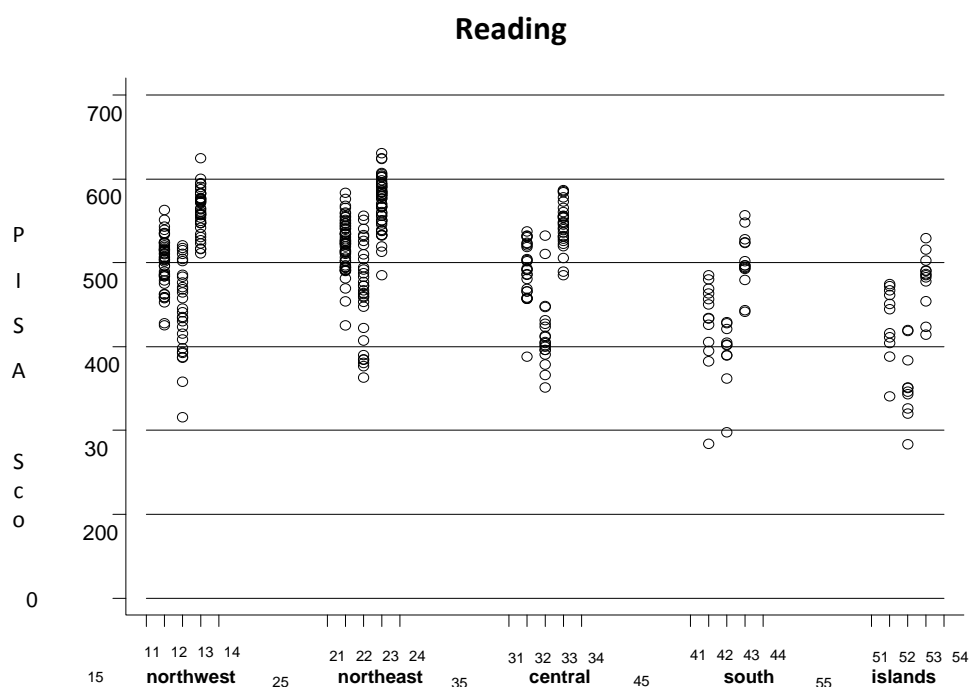
Source: Reworking of OECD PISA 2006 data

It is important to distinguish the two cases because they lead to very different kind of intervention policies.

Figure 3 shows five sets of data representing the different macro areas of Italy: North-West, North-East, Centre, South and islands. Each group is further subdivided in order to illustrate the different types of schools surveyed (i.e. technical schools, vocational schools and high schools). Each dot represents the average score of a school.

The results of PISA 2006 in reading, presented in Figure 3, shows that, for each type of school and / or each geographic area, there is a huge dispersion between the groups and within the groups represented.

Figure 3. Average scores of Italian schools by type and macro region

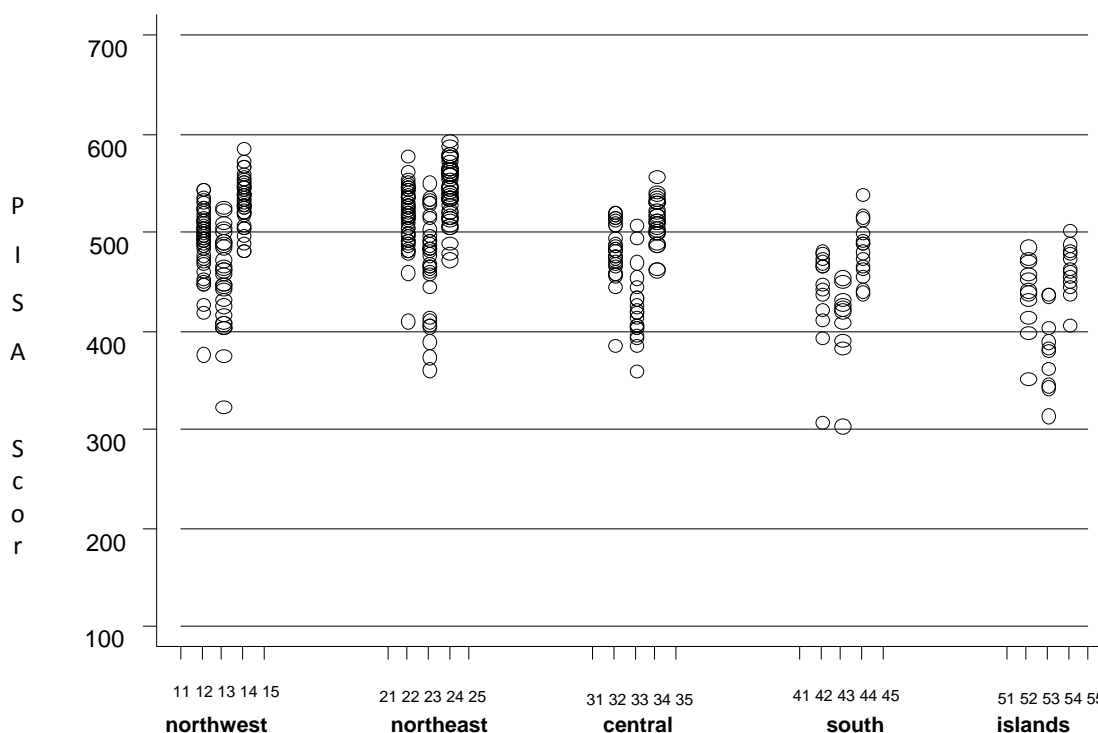


Source: Reworking of OECD PISA 2006 data

It is obvious that this pattern is repeated for all geographic areas. Therefore, this situation not only shows critical elements of schools in the South in contrast with schools in the North, but also shows significant differences within each

macro-area, even stripping the results of the scores obtained in proficiency tests of the so-called contextual data⁴ (Figure 4).

Figure 4. Average score of Italian schools by type and macro-regions, net of social-economical condition of families.



Source: Reworking of OECD PISA 2006 data

In conclusion, once we have controlled for type of school, geographic and socio-economic conditions of the families of students tested, the variance between the performances of schools can be slightly reduced, but the problem remains. In Italy, the critical issues do not seem to pertain to the system level, but rather to the

⁴ The Programme for International Student Assessment (PISA) develops an index of socioeconomic status and cultural variables on the basis of the following: the International Index of the socio-economic and employment status (ISEI), the highest level of education attained by one of the two parents of the student converted into years of schooling, the PISA index of family wealth, the PISA index of home educational resources, and the PISA index of assets related to "classical" culture in the house of the family of PISA tested students (Organisation for Economic Co-operation and Development, 2002).

individual schools' level. It is necessary to draw on the pool of experience, technology and capabilities that is present in the Italian education and training system.

It is therefore essential to understand the reasons why a school is not able to ensure that its students achieve certain learning levels and what are the factors that must be improved to achieve them. This way it is possible to reconcile equity and efficiency in a dual perspective. In fact, building specific improvement paths could lead to a double effect: on one hand it could increase the average level of learning by supporting the low tail of the scores distribution (this way benefitting the overall system); on the other hand, at the micro level, it could actually help those schools which face more difficulties.

Which strategies have been deployed?

Over the past twenty years, some countries, England first of all, have developed guidelines which led to specific legislative innovations introduced in different education systems. One of these was the promotion of a sort of "market" model even in contexts where public funds for educational institutions prevail.

Very briefly, the promotion of such a governance system ranks parents and students as 'consumers', schools as 'producers', and education as 'raw material', though there is no exchange of money (Bartlett, 1993). This model results in some assumptions that have been considered over the years as extremely important in order to enhance the school service: first, the benefits that parents derive from the possibility to choose the school their children should attend are considered a desirable goal in itself (school choice); this way, children are thought to have the opportunity to attend a school closer to their own interests and aptitudes. Second, at the school system level, it is possible to reward schools that succeed in attracting more users and increase their efficiency (Chubb, Moe, 1990) while, at the same time, the pressure of competition (Card, Dooley Payne, 2010) on the less popular schools should encourage them ('emulation effect') to improve or conversely it should justify their closure (Dobson, 2008). The choice made by the parents, the so-called school choice (Cobb, Glass, 2009) was thus considered as a powerful factor in improving standards. However, in order to offer this choice

opportunity, it was necessary to develop a system that would allow families to judge the performance and effectiveness of schools.⁵

According to scholars, having schools competing with each other should generate two effects: 'competition' and 'emulation'. The simultaneous action of these two mechanisms should solve the problems that emerged from national and international surveys about learning levels achieved by students, and should foster the improvement of educational institutions in terms of effectiveness and efficiency. Research on the effects of 'competition' both at the school and at the classroom level, has become a central issue in the current debate about which policies should be adopted in education to support the quality of schools (Thrupp, Lauder and Robinson, 2002) and about the ways in which these are judged (Lauder, Kounali, Robinson, Goldstein, 2010). Families receive information about schools and they realize that school B is better than school A, according to some parameters (most often knowledge and skills levels obtained by students who attend those schools). Relying on this information, parents choose to withdraw their child from school A and to enroll him/her in school B. Thanks to the 'competition' effect, i.e. the shift of the school population from school A to school B, the overall average quality of schools in the country considered should be improved.

The other process that got off the ground thanks to the introduction of a sort of "market" model in education is the so-called 'emulation' effect. The idea is that schools that lose enrolled students should be encouraged to improve and to compare themselves with the most popular educational institutions.

Scores of studies have shown that these mechanisms do not work as expected. The first critical element concerns 'student mobility': children who move from school A to school B for the reasons listed above are in fact the children of parents who are well-informed and / or those who can afford to take them to school in a different area than that where they live or work. Moreover, the

⁵ The preface to the document of the British Government's White Paper, High Standards, Better Schools for All (DfES, 2005) provides an example of how relevant school choice has been considered as a tool for innovation in the education system in England.

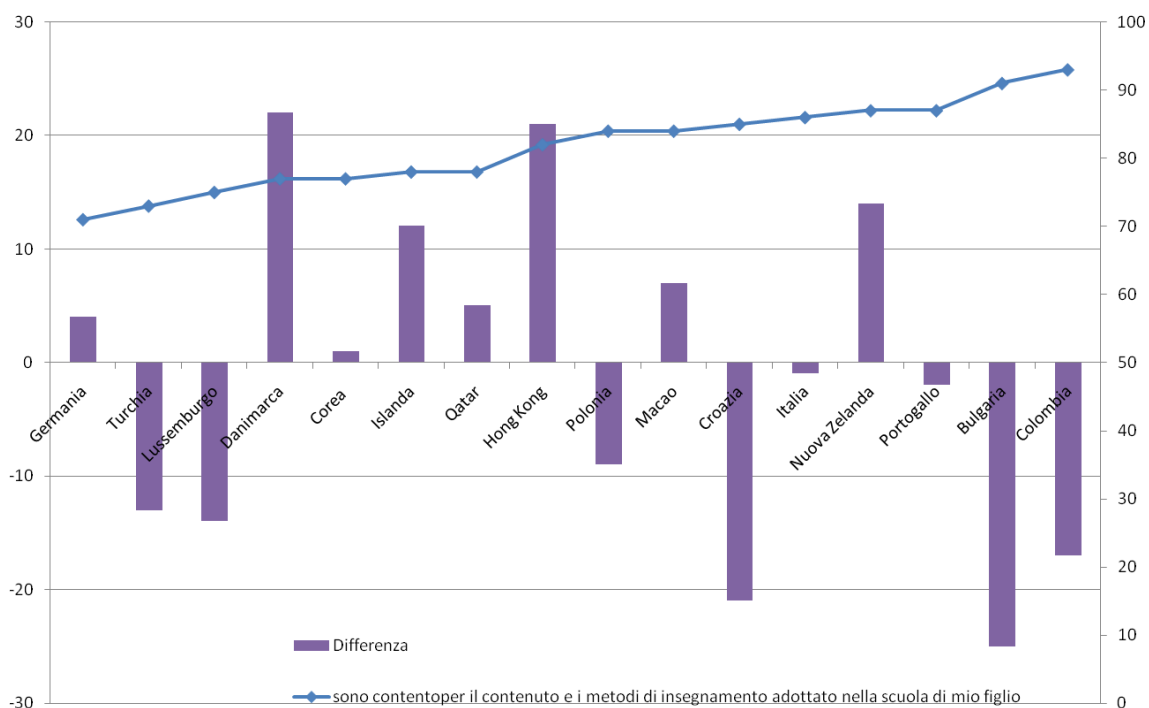
choice could be nonexistent. Withdrawing from the worst schools is not so random, but selective and limited. Besides that, contrary to what one would expect, in schools which suffer a high turnover there is often an overall negative impact on the results of remaining students and an increase in segregation (Finch, Lapsley, Baker-Boudissa, 2009). Even moving from one school to another can have unpredictable or even negative effects on the student's learning and/or on his/her participation in the classroom (Xu, Hannaway, D'Souza, 2009; Gruman, Harachi, Abbott, Catalano, & Fleming, 2008; Stranda, Demieb, 2007).

The basic assumption underpinning the 'quasi-market' model applied and studied in many countries around the world in the last twenty years is that, while increasing its student population, the intrinsic quality of the most coveted school should remain unchanged. Such assumption is another critical point of the model. In fact, people working in educational institutions experience that the kind of service level offered depends on the size of the school. The school which welcomes new enrolled students inevitably requires a major effort in terms of management, organization and reallocation of resources (Smith, Fien, Paine, 2008, OFSTED, 2002).

The last critical element deals with the reasons why a family chooses to enroll their child in a specific school. It is not at all certain that parents 'buy' levels of learning when choosing a school, or at least not only.

Figure 5 shows that many families of Colombian, Bulgarian and Italian students are happy with the choice they made, despite very low scores obtained in the PISA 2006 tests. More likely, parents base their choice on a variety of reasons and multiple dimensions. Consequently they 'buy' a lot of things at the same time, a package of services: social networks, positive relationships with teachers (Bosetti, 2004), proximity of the school (walking distance), amplitude of the school values, school curriculum (Buchanan, Fox, 2008), peer effect (O'Shaughnessy, 2007).

Figure 5. Parents' satisfaction concerning school choice



Source: Reworking of OECD PISA 2006 data

Table 1. The competition effect –analysis among non-conclusive countries on the performance level

	Effect on PISA score	
	<i>Background into account</i>	<i>Background ignored</i>
High-competition level schools	17,9	1,9
Schools which suffer strong pressure from families	11,2	2,0
Systems which foster competition among schools	3,1	6,7

Source: Reworking of OECD PISA 2006 data

Given the complexity of the reality under scrutiny, it is clear that, in order to provide a good service, automatic mechanisms are not sufficient to lead individual schools to improve their situation, just like learning levels achieved by students are not sufficient to fully describe quality. This is even clearer if one observes how little the 'competition' effect affects the PISA 2006 scores concerning

reading, especially when the background of the catchment area is taken into account (see Table 1).

No country in the world used learning levels of students identified through national and international surveys or the results of state examinations to determine the financial resources to assign to educational institutions, to identify forms of support or punishment, to reward teachers, or to decide whether or not to close down a school⁶ (see Table 2).

Although the metaphor of the market as a means to achieve innovation leading to the development of the education system still has a certain appeal, actually no school is closed for 'lack of customers'. Rather, many countries provide specific support to schools in order to enable them to make good use of information obtained through the evaluation, starting from the students' results.

The possibility for a school to be supported at a local and / or national level in implementing processes of improvement or support through direct intervention of experts and / or public officials, is offered via local or specific institutions. The more school systems show an attention to service quality, the greater is the need for direct intervention by an evaluation team which visits and observes schools (Cardone Muzzioli, Poliandri, Romiti, 2010). At times the evaluators are public servants, while in countries such as Netherlands, Denmark and Sweden they are independent experts. On other occasions, i.e. the English inspectors of the Office for Standards in Education, Children's Services and Skills (Ofsted), the evaluators are under fixed-term contract and do not coincide with the experts who support the schools in improvement processes.

In this sense, the decision to close down a school can only be the last resort of a very complex path. It is not - and could not be - the result of an automatic mechanism.

⁶ Closing down a school is always a complex and difficult action. Several studies have been conducted primarily in the United Kingdom and the United States to understand what happens to students whose school was closed down, and to the community where the school operates (Kirshner, Gaertner, Pozzobon, 2010; Consortium On Chicago School Research at the University of Chicago, 2009).

Table 2. Influence on school governance of the results emerging from the gathering of statistical data on learning and of the results of state exams

	Influenza degli esiti delle rilevazioni degli apprendimenti su				Influenza degli esiti degli esami nazionali su			
	budget delle scuole	altri premi o punizioni per le scuole	premi per gli insegnanti	decisione di chiusura delle scuole	budget delle scuole	altri premi o punizioni per le scuole	premi per gli insegnanti	decisione di chiusura delle scuole
Australia	Bassa	Nessuna	Nessuna	Nessuna	na	na	na	na
Belgio (p.fiammighe)	Nessuna	Nessuna	Nessuna	Nessuna	na	na	na	na
Inghilterra	Nessuna	Nessuna	Nessuna	Alta	na	na	na	na
Francia	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna
Ungheria	nd	nd	Bassa	Nessuna	na	na	na	na
Irlanda	na	na	na	na	Nessuna	Nessuna	Nessuna	Moderata
Italia	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna
Islanda	na	na	na	na	Nessuna	Nessuna	Nessuna	Nessuna
Corea	Nessuna	Nessuna	Nessuna	Nessuna	na	na	na	na
Lussemburgo	Nessuna	Nessuna	Nessuna	Nessuna	na	na	na	na
Norvegia	na	na	na	na	Nessuna	Nessuna	na	Nessuna
Portogallo	na	na	na	na	Nessuna	Nessuna	Nessuna	Nessuna
Scozia	Nessuna	Nessuna	Nessuna	Nessuna	Bassa	Bassa	Nessuna	Nessuna
Turchia	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna	Nessuna

Fonte OECD education at a glance 2008

Source: OECD Education at a Glance 2008

Aiming for an evaluation system focused on educational institutions

All of the elements identified so far have strong implications for the construction of an evaluation system in Italy, which should comprise two different, but closely related, actions. First, it should provide information, primarily but not exclusively, on the levels of knowledge and skills attained by students, currently recognized by the National Evaluation Service INVALSI (National Evaluation of the Education and Training). This way, each school could obtain benchmarks thanks to which it would be able to enhance learning standards, organize teaching in the direction of achieving successful training and observe its own progress. In the benchmarking perspective, a school can improve the quality of its service and its results to the extent that it is able to compare its actions with an external reference. It must however be noted that in most

industrialized countries⁷ the aim of the evaluation system is to identify not only statutory standard results (e.g. learning levels or rates of academic success) and inputs (mainly human and material resources) but also the statutory processes (organizational and management issues, education ...) within a given context. This second type of evaluation, assessing the educational processes taking place within the educational institution, requires detection techniques that integrate quantitative and qualitative tools, since there are different sources of information. Each educational institution can then be aware of its strengths and weaknesses and then act to improve its services, its outcomes and the competences of its operators.

This is the second action that should be provided within the national evaluation system: its ability to 'come back' to schools and rely on a team of experts able to conduct observation visits, starting from the analysis of results. In fact, the evaluation of learning and the evaluation of schools are closely linked. For example, using only the results of national standardized tests in core academic subjects may seem too simplistic to evaluate the quality of individual school units. On the contrary a complete interpretation of the national tests results is a key element of knowledge both for external evaluation and for the internal evaluation of each school. In short, the complexity of the school system cannot be captured solely through some learning measurement: instead, we must try to delineate the "web of meanings" that links the context to the inputs used, to the processes put in place and to the overall results achieved.

INVALSI operates in this field. In this regard, it has produced a reference framework for evaluating the education and schools system (INVALSI, 2010) that integrates the perspective of the system (or the local perspective, when the institutional level is put in charge of the evaluation) with that of the individual

⁷ INVALSI conducted an extensive survey and analysis of the evaluation systems in a large number of European and non-European countries (European countries: Austria, Flemish Belgium, Denmark, France, Finland, Germany, Greece, Ireland, Norway, Holland, Poland, United Kingdom, particularly England and Scotland, Slovenia, Spain, Sweden, Switzerland, United Kingdom. non-EU countries: Australia, China, New Zealand, USA). Documents have been translated from French, English, Spanish, and German. It built an online archive of the indicators for the evaluation of education systems used in different countries, available at: <<http://valsindpub.invalsi.it/archive.php>> [Date of access: December 2010].

educational institution: the two levels, school and system, in fact, undergo strongly intertwined dynamics. Moreover, a unitary framework⁸ allows us to understand the same information according to multiple keys: one that outlines the so-called macro perspective, useful for those interested in the general understanding of the school functioning, and another (micro perspective) centered on the individual school unit.

Although most of the indicators of education quality are reported at the national level, there is a growing body of information that is collected at the micro level (individual educational institution, classroom, individual), which can be detected by integrating quantitative techniques with qualitative ones⁹, at the same time enhancing the individual experiences of self-evaluation (or internal evaluation). In fact, the practical evaluation activities implemented by many countries show that the progressive integration of the two different perspectives of internal and external evaluation provides an opportunity for mutual reinforcement for each of them. The intent is to provide a working definition of school 'quality' through the identification of specific indicators, and to assign a value to each of them so that they can also be used as a guide for the construction of tools for the internal evaluation / self-evaluation of educational institutions.

⁸ Scriven defines a theoretical framework as : “a set of concept ranging up through refined metaphors to a taxonomy, in terms of which one can organize and often understand the data/results/observations/evaluations in an area of investigation. Unlike theories, conceptual schemes involve no assertions or generalizations (other than the miniscule presuppositions of referential constancy), but they do generate hypotheses and simplify descriptions.” (Scriven, 1991). Moreover “A theoretical framework should be developed to provide the basis for the selection and combination of single indicators into a meaningful composite indicator under a fitness-for-purpose principle” (Organisation for Economic Cooperation and Development, 2008).

⁹ INVALSI is leading the project 'Audit and accompanying' aimed at evaluation and improvement, testing operating procedures and tools for data collection on the field. For this purpose, two types of observers have been selected (one drawn from pedagogical education, the other from research) and data collection tools have been implemented (grids of classroom observation, a questionnaire on the overall functioning of educational institution, traces of structured interviews, document analysis, ...). The observations will be conducted in accordance with the collection of data in order to construct the indicators developed within the theoretical framework of the education and schools system evaluation (INVALSI, 2010). During March and April four-day visits will be conducted in about 85 schools of the convergence objective regions (Campania, Calabria, Apulia, Sicily). Further information is available on the web-page INVALSI <http://www.invalsi.it/invalsi/ri/audit/>

The framework takes into account four points:

1. The context in which schools are included (demographic, economic and socio-cultural boundaries in which the school is operating and which determines its users);
2. Inputs, or resources that school has at its disposal in order to provide its service (human, material, economic facilities);
3. Implemented processes, i.e. the activities of the school (courses provided, organizational and educational choices, styles of management);
4. The results, both immediate (pass rate, marks obtained in state examinations) and medium and long term (skills level, access to labor market).

The underlying model of the Framework is developed on the basis of the CIPP (CIPP: Context, Input, Process, Product) approach (Stufflebean, 1968): evaluation, in order to be relevant and correct, needs to take into account the connection among environment, inputs, processes and the consequent results. Although it is worth noting that there is a deterministic linear relationship which defines the results in relation to the environment, to the resources available and to the processes involved, the issues identified provide a logical framework of possible causes and relationships among the different elements. Therefore they cannot be ignored.

It is necessary to observe the processes involved in the school, particularly in relation to teaching and innovative actions that could increase learning and permit school autonomy (which is not widespread). Similarly, it is advisable to study the organizational school structure and to learn to manage complexity. Moreover, it is necessary to look at the results obtained by the Italian students in the labor market or in their further studies to see if the school they attended has provided them with the essential tools allowing them to move forward.

Some open questions remain: who is responsible, within the schools, for the achievement of certain learning levels? Who should monitor the overall improvement of the quality of the individual autonomous unit? What is the role of the headmaster? What is the role of teachers? At the system level, who is called

upon to monitor, inspect and if necessary seek improvement paths within each school?

School quality depends on the choices made by those who work within the individual school unit, and on how the behavior of external actors reflects on school. Likewise, the quality of a school system is not only characterized by school policies decided at the national level, but it also depends on how the service is actually implemented by the (autonomous) management.

Therefore, it is important to identify the level at which decisions are formed and who are the most involved actors, i.e. those who, although not directly involved in decisions about certain aspects, must be taken into account in order to take actions that impact the quality of the service offered. In particular, the individual school is often an involved actor because it needs to know about these issues and to take responsibility for them.

A type of evaluation which holds together all the aspects examined would allow schools (and individual operators) to be responsible and accountable for their actions. It should reflect a national evaluation system outlined according to the two actions identified: on one hand, the provision of useful information which allows the comparison with other educational institutions; on the other hand, the provision of guidelines which should help to transform the results of the evaluation in improvement actions.

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The “territorial” re-organization of the school system in Italy. The failure of the centralist administration

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The issues

One of the main causes of the crisis and backwardness of the Italian educational system at pre primary, primary and secondary level, is its inability to adjust to the Country’s economic and social development. The two main factors that have caused this delay are: the system’s excessive bureaucracy and centralization and the separation between the national education system and the general economic and productive context. Both issues have been dragging on since the 1990s, when some important reforms were introduced, driven by internal factors (among which the transformation of the labour market) and external factors (among others, the process of EU integration), in order to correct these two “peculiarities” of the Italian educational system.

As a result of these reforms, increased schools’ autonomy was implemented, the age threshold for compulsory education was raised, private (non governmental) schools were given equal status to public ones and the Constitutional Law review, dealing with the legislative and administrative functions pertinent to education and professional training, was produced. A process of redistribution of competencies on matters relating to the education system among the State, the Regions and the other local authorities began. However, all of these reforms have not yet been completely implemented and the hoped-for change in the Italian educational system still remains an illusion, as the reforms are still being delayed.

A further important issue refers to the total amount of financial and human resources assigned to the education system in Italy. Even though substantial

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financial resources have been invested as far as students' learning is concerned, the results are scanty, due to inefficiencies. What is even more surprising is that where more resources have been invested the results are even scantier, implying lack of efficacy. Apart from two small provinces in the Northern part of Italy, named "Province autonome di Trento e Bolzano", due to their different legislative competences and tax regime, in other areas the gap between resources (financial and human) and results of the teaching and learning activities is noteworthy. In other words, it is not true that better results are achieved where the State spends more (Bottani & Benadusi, 2006). The Northern Regions and half of the other Regions spend more per student than the national average. The amount spent by the regional and local authorities is a decisive factor, because these expenditures are additional to government funds (Ministero Pubblica Istruzione, Ministero Economia e Finanze, 2007). It must be considered that the State needs to assign greater resources to the poorer regions, in terms of GDP, in order to equalise. But this is a cause for deep concern, because the use of resources may not be effective. Up to now this assessment has not been carried out. Summing up, while government expenditure in education in Italy is not much lower than the average of the OECD (Organization for Economic Cooperation and Development) countries, its distribution among the regions is not optimal and many problems remain.

This paper analyses, in the first section, the main changes in the legal framework since the 1948 Constitutional Law up to the present reform. The aim is to deal in particular with the steps of the decentralization process. The main conclusion, presented in the second section, is that the interruption of an original and useful reform process is a cause of great concern. The financial crisis of the State, compelling to reduce public expenditure, has stopped the reform and the reduction in the resources at all level of the education system could produce unexpected effects.

The steps of the decentralization process since 1948

The weak choices of the 1948 Constitutional Law. The 1948 Constitutional Law carried out "weak" choices when dealing with the regional organization of the

school system. The last decision was to entrust local authorities only with legislative and administrative competences in sectors dealing with secondary issues in education, those for which administrative task were already being carried out locally. The aforesaid refer to: (i) school assistance, perceived as an activity outside schools and largely dealing with financial matters; (ii) vocational education for skilled handicraft where the low resources are mostly granted for training purposes. The main aspects of the Constitutional law, before the 2001 reform, were the following:

1. the National Government (State level) holds all the legislative and administrative competences with respect to basic-compulsory education, upper secondary general education, technical (pre-vocational) education and vocational education, with certificates valid all over the national territory;
2. the Regional Governments hold legislative and administrative competences with respect to vocational training, with certificates valid only in the region where the students attend the programme. Generally the Regional Governments transfer to the Provinces and the City Councils their administrative competences with respect to transportation, provision of textbooks needed by the primary schools, assistance for disabled children, school canteens.

The reform of the 90's: autonomy and subsidiarity. During the Nineties, the Ministers who took over responsibilities for Public Education were motivated by a strong interest in the issue of school reform, aiming to overcome one of the two main problematic issues: the excessive bureaucratization brought about by the centralization of functions¹⁰. The Government issued some legislative decrees to put into effect the new “school autonomy” with respect to teaching methods, organizational framework and pedagogic research. By introducing this autonomy a definite break away from the past was implemented. Clause 21 of law number 59, promulgated in 1997, completes the process of giving autonomy to school

¹⁰ The reference is Law n. 537 promulgated in 1993.

institutions, acquiring a juridical personality. This means that functions previously carried out by the State were transferred to school institutions.

At the same time the subsidiarity principle was introduced into Italian law: subsidiarity among State, Regions and other local authorities and between public territorial administrations (State, regions) and private individuals or bodies (pursuing public interests). This change had important consequences for upper secondary education. The State maintained only general legislation responsibilities and assigned many administrative functions to the Regions and to the other local authorities such as:

- territorial planning, that is decisions concerning the establishment of new schools and their appropriate location in the territory;
- implementation of auxiliaries services such as transportation, placement services, assistance for those with special educational needs.

This reform did not come into force, as the State did not transfer the necessary funds, and kept the control of all the human and instrumental resources. Many Regions began to carry out their functions and implemented their policies using their own resources.

The public –private schools reform. In 2000, the State law introduced grants to private schools and also the concept of the “public-private integration system”. This reform has not come into force and the State has not yet funded such schools as promised. Some signs of change could be seen and new processes will be implemented including the so called “school vouchers”. A significant sentence of the Constitutional Court in 1994 overcame its previous sentences and placed itself in an extremely different perspective with respect to the individual’s right to study. In particular, the Court changed, with respect to the past, its evaluation of the similarities and the differences between students of private schools and students of State / public schools, in order to promote the principle of equality. On the basis of the 2000 reform, many Regions introduced grants that were awarded to students attending private schools, covering school fees, textbooks, canteen and transportation services. The paradox is that private schools, belonging to the “public-private integration system”, must comply with the State law, although they do not receive the funds they asked for.

The 2001 reform of the Constitutional Law. In 2001, the Italian Constitutional Law underwent a reform. Paragraph 117 states that Regions have legislative and administrative competences as regards the “vocational training system”. Paragraph 118 states that all administrative competences have to be transferred from the State to the Regions, Provinces and City Councils.

The former competences, referring to skilled handicraft, vocational training and school assistance were replaced by four regulations. The second point of paragraph 117, up to letter N, reserves exclusive legislative competences to the State as regards the overall regulation of the education system. The same point, up to letter M, reserves to the State the competence to assess whether a basic levels of services, with respect to civil and social rights, is guaranteed nationwide. The third point of paragraph 117 assigns to Regions the competence to legislate on matters pertaining to the education system, except for subjects for which school institutions are themselves responsible, and for the competences assigned to the State. Last of all, the third point of paragraph 116 foresees that further forms, and special conditions, may be assigned to the Regions with special clauses into their Statute.

Therefore, at least three factors modernizing our school system emerge from the Constitutional reform Law. First: the education system and the vocational training system could be better defined and the former education model, based on two theoretical pathways in upper secondary school separated from the pre-vocational and vocational pathways, could be finally surpassed. The new model will be perceived as more appropriate in order to prepare young people for the workplace. Second: it will be possible to build a much closer bond among vocational training, pre -vocational upper secondary schools and the labour market. The labour market reforms take into account the needs of the education system and so it may be possible to implement meaningful ties among the education system, the business associations and the enterprises, surpassing old forms of apprenticeship toward new forms of links including training courses and school-work integration. The third factor concerns the fact that the European Union looks upon the improvement of the national education system and of the

vocational training systems as an engine that will drive social and economic cohesion.

The above mentioned features must be taken into account in order to complete the framework introduced by the latest Constitutional regulations. The contents, regarding the subject of education, assign new competences to the Regions and widen their exclusive competences on the education system and on vocational training. The meaning of the formula “general regulations of the education system”, assigned to the competence of the State, relates to the perspective of the creation of many differentiated regionalism. The latitude of the exclusive State competence on the fundamental and minimum level of services, with respect to the civil and social rights, guaranteed nationwide, and the impact on regional legislative power are to be observed in the next years.

Concluding remarks: The role of the Regions and the “essential levels of performance” issue

Starting from 2006 a project drawn up by the Regions is in progress. In October 2008 the final project was approved by the Regions and the aforesaid document was discussed by the Minister of Education, the Minister of the Economy and Finance and the Regions to with a view to implement the project by the end of 2010.

The final project pursues the following objectives:

- identify the time required and the necessary procedures in order to fully transfer administrative functions to Regions and other local authorities;
- define the time required and the procedures in order to transfer human and financial resources to the Regions;
- define the time required in order re-organize the Ministry of Education, which implies streamlining and transferring responsibilities from Rome to the Regions and to the other local authorities;
- define the time required to transfer control of the peripheral administrations of the Ministry of Education to the Regions;
- identify the financial activities needed to sustain access to education on the part of poor students, to provide assistance to young people with disabilities, to

support teachers' initial and in service training, to uphold family rights, in each individual territory;

- reorganize and manage Data Banks in order to link up both Regional Data and the Ministry's Data Banks.

All these steps require the Government to provide the essential levels of performance. An in-depth discussion is taking place among functionaries at national level, researchers and consultants from the leading parties or the Ministry of Education. The involvement of teachers and their organisations is based on the forum hosted on the internet web site of the "Agenzia Nazionale per lo Sviluppo dell'Autonomia Scolastica".

Two main groups confront their positions. The first thinks about the need to certify a common level of learning when students complete their course of study. The learning output will be measured through test and exams based on subjects, learning objectives, skills and competences defined by the law. The students will have to reach the objectives through the capabilities of their teachers, the curricula, materials, laboratories and so on. The national assessment body will assess the quality of the teaching-learning activities produced by each school. Every Region will have to organise its education systems in order to guarantee their citizens at least the learning level stated by the Government. This idea is designed to give the same opportunities to all young persons in order to use their school experience and enter the labour market with the necessary skills.

A first key of interpretation - which could be defined as output egalitarianism – might be that the basic level should be measured in terms of output, namely learning output. This way the aims (and therefore the evaluation and financing procedures) must be defined in terms of skills acquired by participants in the education system, through the teaching function and a good national system of learning assessment. In this context, to comply with the basic level in all regions means that the resources in different regions must be allocated in such a way that their efficient use guarantees all citizens to obtain a standard level of learning defined by central government.

This is an extreme interpretation of egalitarian perspective applied to education, where what matters is that all citizens are given the opportunity to

equally compete in the labour market. Since the possession of appropriate skills is one of the elements that contributes to the fulfilment of this condition, the result is a justification for the equalizing intervention of the government on education.

The opposite vision - which could be defined as input egalitarianism - concerns the State's duty to ensure that an equal set of educational services is guaranteed to any citizen. In other words, instead of requiring the equalization of learning levels, there is the mere request for the equalization of the main variables that influence learning.

The aspects that immediately come to mind, besides the allocation of teaching and non-teaching staff, are: the training of teaching staff, the building of infrastructures and technology, the allocation of financial resources earmarked for needy families which is directed at covering some of the costs of education, the support to disability and to hardships. In this perspective, the emphasis is not put on the outcome of the process (that is, learning), but on the process itself as the implementation of a functionalized outcome (learning).

At first the Italian legislature followed the first vision. The “Legge 53”, March 28, 2003 which empowers the government to issue legislative decrees for the definition of basic levels of performance in education and the legislative executive decrees (Legislative Decree No 59 of February 19, 2004, for the definition of general rules concerning nursery schools and the first cycle of education, the Legislative Decree 17 October 2005 for the definition of the general rules and the basic level of performance of the second cycle of Education and Training, the Legislative Decree No 76 April 15, 2005 for the definition of the general rules concerning rights and duties to education and training; the Legislative Decree No 77 April 15, 2005 for the definition of general rules about work-related learning) identify the basic levels merely in relation with the features that the service should have (schedules, routes, lessons, hours of lectures, etc..) rather than to the levels of learning.

On the other hand, this choice may be justified by the absence in Italy of an evaluation system of learning (except via exams). Afterwards, and mainly with the implementation of the law concerning fiscal federalism, the legislature seems to focus also on the second perspective. The implementation of Legge No 42 seems

to imply the definition of the input vector (mainly but not only teachers), a standard which has to be made available to all regions.

Probably, these two perspectives need to be put together but in order to do this is necessary to build a national evaluation system: evaluation of learning (which INVALSI already do), evaluation of schools (non-existent) evaluation of teachers (non-existent) and evaluation of management.

It is not possible to allocate more resources if at first it is not clear whether the poor results in terms of learning are related to difficulties in the environment or to a lack of prudent management of resources. Nor can schools, teachers and staff be rewarded in the absence of quality standards.

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Annex Organization of the Education system in Italy

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In this section we present some structural features of the Italian education system. The analysis of the main indicators of participation, as well as the results of international tests of learning will show that national average data withhold very uneven regional situations, despite the fact that the primary objective of the centralization of decisions and resources was to avoid territorial inequalities.

Currently, the Italian education system includes: kindergarten, not compulsory for children between three and six years old, a first cycle of education which is composed of the primary school, for those between six and eleven years old, lower secondary school for those between 11 and 14 years old. The second cycle of education includes two subsets: the first is the secondary upper school level and the second is made up of training centers accredited by the regions. Secondary schools admit young people between fifteen and nineteen years old divided into three major routes for a period of five years: high schools, technical schools and vocational schools. Compulsory education ends after ten years of school attendance or at the age of sixteen (both in secondary schools and in vocational training centers of the regions).

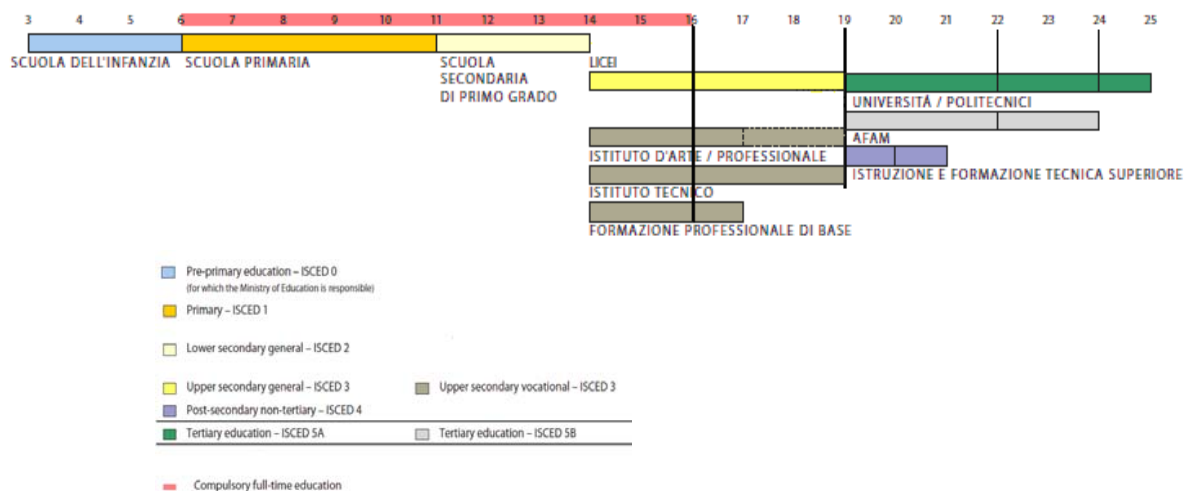
A recent law, passed in October 2010, provides for the fulfillment of the compulsory school attendance through an apprenticeship contract, which includes 240 hours of extra training work.

Access to university and access to training courses at tertiary level is granted to young people who are awarded a diploma after examination (organized by the State) that closes the upper secondary school degree. Training at tertiary level (not very developed in Italy) can be attended by those who do not have this degree, but have successfully completed four-year programs of training of the Regions. Higher education courses in art and music have entered the educational system, at the tertiary level, most recently (ISCED 5B).

In Italy, students attending state schools in 2008 were more than 7.7 million, approximately 13% of the total population of 60 million. About a million students attend private schools. Each year, the school population changes: a million students finish their studies and one million enter the system.

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Figura 1- Structure of the Italian education system (2008)



Source: Eurydice. http://eacea.ec.europa.eu/ressources/eurydice/eurybase/pdf/section/IT_EN_C2_4.pdf

Schools are about 42,000 and the staff of the State is about 1.1 million people including managers, teachers and administrative staff. Only 16% of teachers do not have a permanent contract. The average age of teachers is over 45 years and the majority of young teachers has a fixed term contract. On average there is one teacher for every 9.2 students, and this ratio is below the European average. Some important characteristics of the organization of schools explain this difference: (i) approximately one third of boys and girls attend primary school for 40 hours per week, with two teachers per class plus specialist teachers of foreign language, (ii) all young persons under eighteen years old and which are handicapped attend mainstream classes, without distinction based on the type and severity of disability and there is a special education teacher for every two pupils with disabilities. The learning support teachers in 2008 were about 90,000.

The number of schools and the number of classes are very appropriate to the very heterogeneous situation characterized by a few large metropolitan areas and many small communities scattered across the country. Transport in some mountainous areas of the country take a long time and the inhabitants of smaller towns are threatened with isolation. Such a large number of classes is also needed because, as mentioned above, all young people with disabilities attend mainstream classes, which usually should not exceed the size of twenty students each, to facilitate the integration of those who have difficulties.

There are three major problems concerning the functioning of the pre-university education system Italy. First, only 88% of 19-year-old people has reached the upper secondary level qualification (ISCED 3) against a European average of 90% in 19 countries (Indicator A2 OECD, 2008). Secondly, the results of learning tests of 15-year-old students are poor (OECD-PISA, 2006). Finally, there are huge regional gaps between the southern regions and islands and the northern and central regions of the country.

Table 1. Pre-university education system in Italy (school year 2008-2009). Schools , students and teachers in state school.

	Pre- primary school	Primary school	Lower secondary school	Upper secondary school	Total
Schools	13.624	16.031	7.146	5.193	41.994
Students	978.302	2.571.627	1.651.680	2.566.462	7.768.071
Which handicapped	12.882	64.576	54.269	44.051	175.778
Classes	42.419	137.095	77.645	117.787	374.946
Teachers with permanent contract	81.641	240.492	156.809	225.949	704.891

Source: Ministry of education. Teachers out of schools and R.E. teachers are not considered.

Table 2- Personnel in state schools (school year 2008-2009) by function, assignment and contract

	Teachers				Technicians and administrative staff	Principals	Teachers out of schools	Personnel tot.
	Full teachers	Learning support teachers	Catholic religious education teachers	Tot.teachers				
Permanent contract	654.293	50.598	14.123	719.014	169.437	10.630	5.091	904.172
Fixed-term	136.617	39.428	11.808	187.853	5.159			193.012
Total	790.910	90.026	25.931	906.867	174.596	10.630		1.097.184
<i>of which part time</i>				66.722	9.877			76.599

Source: Italian Ministry of Education

Table 3 measures the "productivity" of the upper secondary school degree. The first column, for each year, shows the difference between the number of students who are enrolled in the top class of secondary school (fifth year) and the number of students who had started attending upper secondary school five years before. It shows that, without significant changes over time, at least 1 over 3 students was awarded the diploma at the end of five years of upper secondary school. Manifold causes explain this huge difference. First, in Italy students have the opportunity to repeat the school year that ended in failure. Secondly, especially in some parts of the country there are many young people who leave school before turning 18 and without a diploma. Finally, unfortunately, the extent of this difference which is very important is the subject of study because the available statistics are not reliable. The large proportion of students who leave

upper secondary schools suffer learning difficulties and belong to low income, disadvantaged or more recently immigrant families. The phenomenon of early school failure is much stronger in the South compared with the Centre and the North, although some areas of the North, heavily industrialized, have fairly significant drop-out rates.

Table 3- Difference between the number of students in the top class in upper secondary schools and the number of the same students who began to attend the first class five years before: gross system productivity estimate

Year	Difference = Students in the top class (-) students who began to attend the first year class five years before	Difference / number of students who began to attend the first year class five years before
2000	216.805	37%
2001	206.020	35%
2002	188.628	33%
2003	168.470	30%
2004	183.512	31%
2005	191.207	33%
2006	196.285	33%
2007	203.713	33%
2008	203.161	33%
2009	189.245	31%

Source: Ministry of education (reworking).

The results of international learning tests reveal significant regional differences among the Italian macro-regions, particularly in math skills. Table 4 breaks down the differences between macro-regions (North, Central and South) by comparing the weight of individual and family factors, school resources, the use of school resources and the resources available in the local context. Nearly 10% of the difference between the performance of students in Northern and those in Central and Southern Italy, is explained by differences in the amount of equipment available at school level. A whopping 74% of the difference in performance between the North and Centre (only 25% of the difference between North and South) is explained by different use of resources at school level. Finally, as much as 61% of the difference in performance between North and South is explained by differences in resources available at the local level (neighboring areas). It is quite obvious that schools are largely influenced by the relative wealth or poverty of the context within which they operate. It is evident as well that the centralized management of resources model is unable to guarantee equitable distribution and to support situations where the need is greater.

Table 4- Analysis of the different results of tests concerning Math learning for 15-year-old students in 2003. Gathering OECD-PISA.

	Resources provided at individual and family level.	Resources provided at school level.	Efficient use of resources at school level.	Resources provided at local territorial level.	Total difference
Difference between northern regions and central regions average results	1,6%	10,9%	74,1%	13,4%	100,0%
Difference between northern regions and southern regions average results	4,0%	9,8%	25,1%	61,1%	100,0%

Source: Processing of data contained in Bratti, M., Checchi, D., Filippin, A. (2007)

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