



Università degli Studi di Modena e Reggio Emilia
Dipartimento di Economia Politica



Materiali di discussione

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Technical and Vocational Education and Training in Italy: Structure and Changes at National and Regional Level

di

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January 1999

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Paper prepared for «Learning now/an international symposium on skills for the information economy»,
Chapel Hill, North Carolina (December 14-15, 1998)

Acknowledgements

We wish to thank Roberta Pinelli and Giuseppe Fiorani, for the helpful comments and discussions on previous versions of this paper, and Tim Keates who allowed us to make changes until the last minute. More than usual, Mauro Solmi and Giovanni Bonifati and our children Matilde, Michele and Lidia have supported us making possible our collaboration in writing this paper. We are conscious that our thanks to them is only a faint sign of our personal feeling, but the only one appropriate here.

Abstract

Even though the institutional framework is strongly centralised, Italy displays important territorial differences in the education system. Historically, such differences are interwoven with territorial differences both in economic and social development. This is the background of our analysis of technical and vocational education and training in Italy.

In particular, in Section 1 we shall characterise the national education system; in Section 2 we shall outline the process of reform that has led to the present system of technical and vocational education and the main features of the regional vocational system. Within this framework, we shall present our main thesis – namely, that the system of technical and vocational education is also influenced by action undertaken at local level by the social actors who promote and fuel economic and social development.

It is not possible to describe the several territorial specificities which ought to be taken into consideration if one is to speak of Italy as a whole: this because there are no systematic data to enable such analysis to be performed. In this paper, we shall therefore consider only the case of Emilia Romagna (Section 3), which is representative of areas of the Centre North having a highly developed local economy. In this context, we shall concentrate on three points: the role of technical and vocational education in the diffusion of the skills that encouraged the development of small and medium enterprises in the 1950s; the transformations in the last twenty years and, eventually, the process of adjustment of the training system within the changes both in the productive structure and in the composition of the population (age, origin).

The last section draws together the threads of our interpretation of the system of technical and vocational education in Italy. Our analysis highlights three goals for a reform of the Italian education system: (1) to revise the meaning of primary literacy; (2); to fuel a social tendency towards technical and vocational education and training; (3) to bridge territorial differences in the education system. The first goal implies an education policy opposing the tendency to limit the possession of knowledge merely to a narrow minority of the population. The second goal considers technical and vocational education an essential element for activating a virtuous circle of growth, starting with a nucleus of knowledge learnt at school that thereafter is diffused and filters down in the tissue of technical and social relations. The last goal in our list calls for policy measures stressing the importance of the interweaving of social and economic sphere and education and training system

The attainment of these goals requires sweeping changes involving several fronts of political, economic and social action. With regard to this, we argue that a necessary condition for a convincing start of the process of change is the redistribution of competences between the State and the local authorities. This implies redefining the role of teachers and directors of the individual schools, and the role and competences of the local authorities.

Classification-JEL: I21; J24; I28; O31; R58

Keywords: Analysis of Education; Education Policy; Regional development policies; Innovation

INTRODUCTION

The presentation of the essential features of Italian technical and vocational education and training poses two basic challenges. The first regards the necessity of stressing the relevant territorial differences in the education system, even in presence of a very centralised institutional setting. The second challenge is the difficulty in providing an up-to-date analysis of a process, still ongoing, carrying on large changes in the education system.

In this paper we try to capture these challenges by illustrating, first of all, the general characteristics of the education system within which we shall outline our analysis of technical and vocational education and training in Italy. In particular, in Section 1 we shall characterise three aspects of the national education system: (a) the normative picture of the education available in Italy; (b) structural data characterising the education system; (c) the model of government and functioning of the education system in Italy. This overview allows us to introduce, in Section 2, the peculiar technical and vocational education and training system in Italy, with regard to (a) the process of reform that has led to the present system of technical and vocational education and (b) the regional vocational system. Within that framework, we shall present our main thesis – namely, that the system of technical and vocational education is also influenced by action undertaken at local level by the social actors who promote and fuel economic and social development.

We propose to adopt the interweaving of economic and social action and education system as one of the reading keys to help us in explaining the large territorial differences in the education system. Unfortunately, it is not possible to describe the several territorial specificities which ought to be taken into consideration if one is to speak of Italy as a whole: this because there are no systematic data to enable such analysis to be performed. In this paper, we shall therefore consider only the case of Emilia Romagna (Section 3), which is representative of areas of the Centre North having a highly developed local economy. In this context, we shall concentrate on three points: (a) the role of technical and vocational education in the diffusion of the skills that encouraged the development of small and medium enterprises in the 1950s; (b) the transformations in the last twenty years; (c) the process of adjustment of the training system within the changes both in the productive structure and in the composition of the population.

The last section draws together the threads of our interpretation of the system of technical and vocational education in Italy and our conclusion highlights three goals for the ongoing process of reform of the Italian education system and the measures needed to achieve them.

1. THE EDUCATION SYSTEM IN ITALY

In this Section we shall illustrate, first and foremost, the education available in Italy with reference to the training of children and adults. We shall then go on to examine the structural data that characterise this system, with special focus on compulsory education and upper secondary education. Lastly, we shall describe the pattern of government and working of the education system.

a. The education available in Italy: the normative picture

The education offered in Italy divides in two distinct parts: the first is addressed to children and young persons from ages 3 to 23-26 years, the second also to adults requiring literacy or continuous training. In this paragraph, we shall analyse first the structure of the education offered to children and young persons and, then, the features of adult education.

Education of children and young persons

In order to describe this system, we shall refer to Fig. 1 which shows the main components of the state education system, regional vocational training and enterprise base training, how the various education levels are articulated, their duration and the possible training paths. The figure shows, but only for the state system, the relative weight of the different types of upper secondary education with respect to the numbers attending¹.

The education system is structured with a period of eight years of compulsory schooling from ages 6 normally to 14 years. Not until 1999 will compulsory education be increased by one year, and it is planned to make school attendance compulsory up to age 18. Compulsory education is divided into two stages: primary school, lasting 5 years, and lower secondary school, lasting 3 years. No alternatives of compulsory education are available, and all children follow the same path and the same program.

Currently, compulsory schooling is preceded by two distinct periods: the crèche from age zero to 3 years (considered in the statistics as a non-educational service, but having the character of assistance directed towards families) and the pre-school education from age 3 to 6 years.

As from 1972, schools are also attended by handicapped children, who are placed in ordinary classes. To make this possible, the State pays specialised teachers who assist the class teachers. In cases where a child is unable to follow the normal school program, the times and contents of the program are altered, but with the child always remaining in the class. This situation is envisaged for all education levels, from the pre-compulsory ones up to the completion of the upper secondary school².

On finishing compulsory education, children can choose from among the following limited range of options:

- upper secondary school (liceo, art school, technical institute) in order to gain a diploma ('diploma di maturità') leading to further education;
- upper secondary school (vocational school) to gain a short diploma after three years ('diploma di qualifica') with the opportunity to proceed to the 'diploma di maturità' after five years;
- vocational training courses (first level) within the regional authority scheme;
- an apprenticeship period, lasting on average two years and including short periods of formal education.

No constraint is placed upon students or their families in the matter of choice, they are merely advised by the lower secondary school teachers, but this advice is generally not very professional, not deeply considered, and families tend to follow it little or not at all.

During upper secondary school attendance, it is possible to change orientation, but this usually entails a lag

¹ Data refer to 1991 and are given in Tab. 3.

² The change in the law in 1992 introduces the right to university education and commits the State to facilitating continuation of studies with, if necessary, the presence of persons to give assistance to the handicapped students.

of at least one year in studies. Upper secondary education appears as a set of quite distinct pathways that must be followed from the start to the finish. There is only one halfway exit for those who have attended at least three years of vocational education: they gain a ‘diploma di qualifica’.

On completing lower secondary school, children may decline to enter upper secondary school if they intend to go straight into the jobs market. There are two opportunities: either to attend courses offered by regional vocational training, or direct access to work through special types of contract involving a few formal education periods in the classroom.

Generally, those who follow training, in regional training courses at first level, or as part of training and work contracts, are destined for jobs with a low professional content. Moreover, young people who take these courses do not manage to get recognition of their training credit, corresponding to acquired skills, and hence find it hard to return to the state training system.

The various streams and specialised branches of technical and vocational institutes equip students to enter the job market in semiskilled positions, both blue- and white-collar, depending on branches. In addition, students who gain the ‘diploma di maturità’ can enrol at university in the subject of their choice.

University education accounts for almost all tertiary education. There are two possible paths, though they differ according to subjects and specialisations: the university diploma after 3 years, or the traditional degree after a minimum of 4 and a maximum of 6 years of study. The university diploma, together with the research doctorates — confined to those taking the degree — have been recently introduced, at last representing an expansion in university education.

On the other hand, the other possible forms of non-university higher education are having much difficulty in being defined. There has been a long argument at national and local level on who should be responsible for promoting, organising and controlling second-level professional training. Currently, the courses of this type are activated by the state technical institutes (in a very limited way)³ and the private vocational training centres controlled by the region.

In this paper, we shall disregard any consideration of primary and tertiary education, focusing instead on secondary education with special reference to technical and vocational training.

Adult education and permanent education

Let us now briefly examine the Italian situation in relation to certain aspects of adult training.

Generally, training available for adults consists of:

- study courses substantially identical with those for school students, but organised in evening classes;
- short specialist vocational training courses, generally aimed at employed people or unemployed people looking for a job.

³ As from next academic year, it is intended to start, as an experiment, some 80 courses in a like number of state technical and vocational institutes, with co-operation by schools, universities, vocational training centres accredited in the regional training system, and local enterprises. The experiment originates from an initiative from the Ministry of Labor as part of the policies aimed at containing unemployment. The idea is to set up state technical and vocational training centres, similar to the polytechnics in the other main European countries. Parallel to this, university diplomas should become the first level of the degree, enabling the student to proceed to other, higher levels of university education.

We focus attention on the first type of courses: for a long time they were the only training available for adults, but in most recent years they have shown a very marked decline.

It must be borne in mind that the internal organisation of the upper secondary school is scarcely up to date: division of subject teaching by modules (with the exception of the vocational institutes) is not generally envisaged and, most important, there is no system of evaluation and acknowledgement of training credits. Hence, the organisation is a «closed» one, hardly capable of meshing with others. A crucial change will be the recognition of training credits in order to guarantee the opportunity of entry to upper secondary education in the intermediate years instead of, as is currently the case, only at the start of the cycle. This will lend more elasticity to the entire training system.

Furthermore, the upper secondary school provides a certificate of attendance to those who have followed the courses, but this document is not valid for enrolment at the labor office. The only study certificates fully recognised by law are the certificate of the general exam results at the end of the first three-year period of the vocational institutes, or on conclusion of the five-year period at the technical institutes. However, attendance throughout the upper school course can satisfy the demands of only a part of the adult population. The majority would need, instead, to attend shorter and more specialised courses.

This is why the number of adults attending the evening classes has been falling over time, to the point of becoming almost insignificant, and adult training has in effect moved outside the state education system. An inversion of this tendency has recently been represented by the vocational institutes, followed by the technical institutes, which have managed to redesign their evening courses, introducing modules, recognising outside training credits and beginnings to certify the intermediate results.

The institutional rigidity of the education system has also hindered the integration of adult migrants, whose first need is to learn Italian and then to modify or update their previous training in order to fit in with the new institutional and cultural environment. The local authorities have organised courses to teach migrants Italian, but so far no one has sought to facilitate their vocational training.

The great problem, in the Italian education system, of recognising training credits also affects a part of the migrants, above all those coming from countries outside the EU: East Europe, Africa, Far East. If compared with other European countries, the recent influx of migrants includes persons holding secondary and higher (university) education certificates, awarded in their countries of origin but not recognised in Italy. Not infrequently, newspapers feature accounts of secondary school teachers doing cleaning or engineers employed in unskilled jobs (this while there are firms unable to find qualified engineers).

b. Structural characteristics: quantitative and qualitative aspects

In this paragraph we shall consider some data and indicators that describe the Italian education system from the quantitative and qualitative points of view. However, something must first be said about the statistical sources used.

Although statistics regarding the education system in Italy have increased in recent years, the data are not always of high quality and those supplied by the various institutional sources (Ministry of Education, ISTAT and local authorities) are not always comparable, since they are collected at different moments, in different ways and

for different uses. This can also be seen in the OECD publications, where some indications relating to Italy are absent⁴.

Enrolments by type of school

That said, the Italian public education system involves some 8 million students, about 2.6 million of whom attend upper secondary schools. Almost 1.5 million children go to private schools, which in Italy are mostly concentrated in the pre-school school education (see Tab. 1). Regional vocational training as a whole, in 1997, involved about 350,000 persons⁵ (see Tab. 2).

The public education system is territorially spread in a homogeneous way, bearing in mind the density of population. The individual schools are of fairly limited size, above all at the compulsory level, and the individual classes total an average number of students that varies according to the level: from a minimum of 17 to a maximum of 23 in the pre-school education (see Tab. 3).

Technical and vocational education accounts for nearly 60% of upper secondary education, with a clear prevalence of technical over vocational. Over time, enrolments in the technical and vocational schools have been falling because, above all since the mid-1980s, families and students have shown a preference for humanities and science subjects (the *licei*) (see Tab. 4).

Changes have also been ongoing in the relative weight of specialisations within technical and vocational education: enrolments in the institutes (technical and vocational) that train people for the service sector and, in general, for administrative and commercial activities, within the enterprises, have diminished over time. The reduction has, however, been smaller as regards the training of technicians for industry (see Tab. 4).

The composition by gender of the school population in upper secondary education largely reflects that of the economic sectors and the professions: females are involved in studies aimed at training for service personnel – commercialisation, administration, management, or personal services (assistance to small children and the elderly, health services, etc.). Males are predominantly concerned in training for industrial and agricultural jobs, and are more involved in the knowledge of production processes and the new information technologies.

School net enrolment

The Italian state education system does not function homogeneously throughout the territory, in spite of the fact that, institutionally, its structure is regulated by a single body of norms in which the possibility of local

⁴ With regard to the OECD publications, the major source of comparable data on education and training, it is worth noting that data on Italy are not available on several crucial topics, such as the enrolment rates by individual year of age, teachers' age, gender and teaching experience, qualitative indicators on students' activities outside school, and students' achievements.

Until 1995 there was an important source of information and analysis on education and training in Emilia Romagna, but unfortunately, for political reasons, the regional administration reduced its funding to the Regional Labor Market Observatory (Osservatorio del Mercato del Lavoro), which then ceased data collection and analysis on education and training topics. The processing of data on education, performed by the leading Italian social studies agencies (CENSIS and ISFOL), often features contradictions or lack of clarity concerning the methodology of calculating the indices. The data must therefore be used with some caution.

⁵ Cf. ISFOL Report 1997. Some changes with respect to the previous situation have been noted – namely, more diversified courses offered and a smaller number of first level courses as against those aimed at persons already in work.

variations is only minimally envisaged.

As regards compulsory education, only the children of the most disadvantaged classes, or those belonging to split families, go into work directly after compulsory schooling; but this phenomenon is markedly subject to territorial variations. Although there are no very reliable statistics, the largest percentage of children who do not continue school after the compulsory period occurs in the regions of South Italy – i.e. in the regions with greatest unemployment⁶ and where, often, there is a link between truancy and juvenile crime or the entry of young persons in the criminal job market. That said, however, it must be emphasised that even in the developed areas of the North East, where the tensions on the labor market are very high, because the enterprises cannot find people willing to be employed, many young males prefer to accept a job near home, fairly well paid, though at a low level of skill, rather than continue their education.

In upper secondary education, the school net enrolment⁷ of the young population shows important differences if one compares the large areas into which the country is divided (see Tab. 5). Whereas the national average school attendance for upper secondary students (14-19 years) rose from 47.5% in 1973 to 75% in 1993, in the southern Italian regions this rate stood at 43.2% in 1973 and reached a mere 69.9% in 1993. Generally speaking, the post-compulsory education net enrolment has always been higher in the Centre-North than in the South and the islands. But the differences may also be significant between the regions making up a large area, as suggested above when comparing the North-Eastern with the North-Western regions.

Besides the differences by geographical areas, the net enrolment for young females has definitely overtaken that of males, with no territorial differences, starting from the beginning of the 1980s (see Tables 5 and 6).

Entries to and exits from the education system

The net enrolment is closely connected with the drop-out phenomenon that affects the national education system in all regions of Italy, most seriously in the southern areas.

Taking the national data for 1995/96 (see Fig. 2), out of every 1000 students enrolled in the first year of the lower secondary school, 214 do not gain the diploma (not even the vocational qualification) and leave before completing lower secondary school or during upper secondary education⁸.

The high drop-out rate is due to various phenomena concerning the characteristics of the education available⁹, the demand for training¹⁰ and the labour demand¹¹.

⁶ Data published by the Bank of Italy show that in July 1998 the average unemployment rate in Italy was 11.9%. This figure hides wide territorial differences that it is useful to disclose here: while unemployment rate was 4.6% in the North East, 6.9% in the North West and 9.5% in the Centre, in the South and Isles it was 22.5%. (cf. Banca d'Italia, 1998, p. 29).

⁷ The school net enrolment is calculated by setting as numerator the number of students attending a school class, and as denominator the resident population of corresponding age.

⁸ National data on the drop out phenomenon appear unreliable. The different sources (CENSIS and ISFOL) are not comparable (see footnote 4). Since 1997, ISFOL, which first collected and processed data on entry to and exit from the education system, has measured drop-outs in a more accurate way, taking account also of students falling behind regular keeping-up studies.

⁹ There seem to be two factors, in particular, affecting the number of drop-outs: (a) upper secondary school lessons are of a highly theoretical character, such that students disadvantaged by social or economic causes do not succeed in achieving positive results; (b) there are no individualised orientations capable of taking account of the different learning times of the students.

¹⁰ As will be seen below, the school career is often seen as not very important, unnecessary for obtaining

Of those who drop out of the upper secondary school, some enter regional vocational training at first level. Here, the teaching methods differ from those used at school and achievement is often easier. The attendants of those courses are generally socio-culturally disadvantaged young persons who have exited from upper secondary education in order to acquire a qualification in the short term.

Through the 1990s, the number of drop-outs from secondary education seems to have been falling, to judge from the increased rate of diplomas gained by 19 year-olds, from 55.3% in 1992 to 66.7% in 1996 (see Tab. 7). It is hard to say why this drop-out rate is falling, but it may have to do with some change in the education available.

The increase in the rate of diplomas gained is certainly positive, but significant territorial differences must be taken into consideration. The Centre and North regions show a rate almost ten percentage points above that of other regions (see Tab. 8).

This rate differentiates the Italian situation from that of other European countries, where the percentage is much higher: almost 90% in Germany and France, with the OECD average at 84% (see Tab. 9). On the other hand, in Italy the rate of specific diplomas concerning technical and vocational education is equal to that of France and not far from the OECD average, though still much below that of Germany (see Tab. 10).

Calculation of the percentage of diploma-holders out of the same-age population is subject to some distortions, the most important regarding students who achieve the diploma after the legal date when studies should be terminated. This phenomenon is particularly serious in Italy; the total of diplomas taken could only be held reliable if the percentage of students taking their diplomas after the legal date remained constant.

Some indication of this phenomenon of delay may be gathered from the fact that in Emilia Romagna, in 1992, out of 100 18 year-old males, 42.2 no longer attended school, only 37.4 were enrolled in upper secondary education and were regularly studying, and a little over 20 were attending school, but were one or more years behind in the course (see Tab. 11).

The percentage of students behind as compared to the total and the net enrolment differs not only by geographical area but also by gender. The situation is better for females: not only is their net enrolment higher, but half of them keep pace with the course (see Tab. 11).

Indicators of quality of available training

The high number of students who complete upper secondary education late (taking more than 5 years and thus finishing after age 20), and the relatively low net enrolment, bear witness to the low efficiency of the education process.

Even in the absence of a national evaluation system, some other indicators suggest that, in recent years, the overall quality of secondary education, lower and upper, has been declining. Almost half the students who complete lower secondary education gain a certificate with minimum pass mark (see Tab. 12). Moreover, the 'diploma di maturità' exams, with a pass rate of nearly 98% show an average mark of only 44/60. And less than 4% of students attain the full mark, while more than 10% pass with the minimum pass mark, given to those who

a job or for gaining other personal advantages.

¹¹ It is worth recalling that, in some areas of Italy, there are strong labour demand pressures on young people, for them to accept low-skill jobs, without necessarily earning too low wages.

might otherwise fail altogether (see Tab. 13).

Characteristics of school staff

In Italy, in 1994, 97% of expenditure on public education was current expenditure, of which 91% accounted for staff salaries (see Tab. 14). Some 900,000 persons are employed in the state education system. Of these, nearly 750,000 are teachers, 140,000 perform administrative functions or are involved as cleaners, caretakers, janitors, etc., and 15,000 are directors (see Tab. 15). The teaching profession is more and more confined to women, at all levels, and this feature distinguishes Italy among OECD countries in general (see Tab. 16). The teachers comprise primary, lower and upper secondary teachers, and specialist teachers for classes including handicapped students. There is an institutional absence of other staff figures with special skills, medical, psychological, social counselling, which can be found in the schools of other countries. The lack of staff members assisting teachers in their work, together with the decision to place handicapped students in ordinary classes – even those with serious and very serious pathologies – explains why, in Italy, the teacher works with an average number of students lower than that of the OECD countries (see Tab. 17).

Within the individual school structures, the ongoing organisation model is an extremely simple one: a single head directs the entire staff, with no effective intermediate head, and deals with all decisions, didactic, administrative and accounting. Some heads of institutes manage schools with over 1500 students and about 200 staff. But this may represent an adequate model in a situation where everything is top-down and any deviation from the norm is discouraged. If the intention is, however, to shift skills from the centre to the periphery, then such a model cannot conceivably be efficient.

Like all state employees, state school staff have a permanent contract (lasting throughout their working life), with a weekly timetable shorter than that of other state employees and with about two months of holiday, to which should be added the various public holidays throughout the year. The job has a special regulation of working time. There is a ‘controlled’ time, 18-25 hours per week for teaching in class, about 80 hours per year for activities with colleagues (meetings, etc.), and about 17 hours per year for update courses that are substantially compulsory. To this should be added some ‘self-regulated’ time (homework correction, lesson preparation, update study) to fit in with the teacher’s other commitments (in some cases, generally for female teachers, this can be fitted in with time for looking after home, elderly family, children; in others, generally for men, with freelance activities).

The reward for this is a low salary and a mechanism of negligible incentives. Starting pay for a primary school teacher is 17,605 dollars, below the OECD average of 18,702 dollars¹².

Owing to the fact that new hirings have remained blocked over a number of years, the Italian teaching staff has a high age – in 1996/97 the largest section of teachers were of ages between 45 and 54 years¹³. This situation occurred even though the second half of the 1990s has seen a real exodus from the system on the part of teachers, following the drop in student numbers and the decision by several teachers to exploit the opportunity of early retirement. Total teachers have dwindled by more than 35,000 and the trend is likely to continue (see Tab.

¹² The values are expressed at parity of purchasing power, making them comparable in terms of purchasing power, in OECD, 1997, p. 207.

¹³ Cf. CENSIS, 1997.

18), so that hiring of new staff is envisaged to replace part of these retirements, and this may encourage a generational turnover, though a limited one.

c. The model of government and functioning of the education system in Italy (management bodies, finance sources and decision-making centres)

The majority of educational institutions are directly managed by the State. Local authorities govern a small proportion of schools. In particular, in North and Central Italy some local governments manage pre-school education and a few vocational training centres within the regional vocational training. A few provinces and town administrations, above all in Emilia Romagna, manage technical and vocational institutes. The regional authorities, on the other hand, play an important role and oversee the funding of vocational training, delegating the running of courses largely to private bodies.

A very small number of private firms are involved in the direct management of educational institutions. Private education is, indeed, largely composed of schools and institutes (mainly infant and primary schools and vocational training courses at first and second level) run by religious (Catholic) bodies.

As in other countries, private institutes receive state funding, that in some cases covers their entire budget.

The education system is financed by substantially public funds (municipal, provincial, regional, national and EU). As compared to the OECD average (see Tab. 19), in Italy the portion of public funding managed at local and regional level is much smaller. Government funding at national level predominates (80%).

Up to now, the system has been governed by a single national decision-making centre (Ministry of Education), to which the decisions of the individual educational institutions are subordinate, and the role of local administrations is confined to a few elements of organisation and administration (buildings, recruitment and management of non-teaching staff).

The Ministry of Education operates through an authority in each province (*Provveditorato*) which is responsible for transmitting ministerial decisions to individual schools. There is a great variety of regulations: laws, decrees, circulars, ordinances. Each event, each act, is reviewed, studied, and collocated in the normative context, the watchword of the entire system being: «Anything not envisaged by the law is not feasible». This restricts the discretionary powers of the peripheral operators (directors and teachers), who are enabled to teach «freely» on the basis of programs defined in detail and in a time framework decided at national level.

The model has thus allowed the nation-wide diffusion of a system that aims to guarantee parity of treatment and cultural homogeneity among the different areas of the country. However, markedly from the beginning of the 1990s, there has been pressure for this centralised, rigid structure – in no way differing from the rest of the Public Administration – to be revised in favour of a more flexible model, one above all more open to local cultural and economic demands.

Ongoing for two years now is a deep process of transformation of the Public Administration, aiming to shift to local level several decisions and competences hitherto confined to central government. This process also involves the state education system, and the individual schools will be allowed independently to take a number of decisions, e.g. fixing optional study subjects and arranging the timetable through the year, month and week. Local authorities are widely involved in the reform, and will have the task of co-ordinating the schools in their

territory. The State substantially retains the task of defining the general features of the curricula, creating a national evaluation system as well as training, and selecting and managing the permanent teaching staff.

This process will introduce some notable changes that should facilitate a qualitative improvement of the entire national education system. The new motto will be: «Whatever is not prohibited by law is lawful». However, some questions still remain outstanding, especially as regards the role played by school staff.

Staff are subject to a very particular contractual regime, as we said above. The conditions of such contract cannot be understood without bearing in mind that, as from the 1950s onwards, school staff have represented the ideal type of electoral base for the party with the relative majority, dominating Italian political life, since 1945 until mid 1980s. It was the tradition that, before resigning, governments increased teachers' salaries or passed some law concerning non-permanent teachers. Over the last twenty years, a more general process of social and political transformation has included a slackening of the link between that electoral base and the relative majority party. As regards teachers, their decline in social status has certainly not been of secondary importance, along with a considerable fall in their relative salaries as from the 1980s. This situation has increased their demotivation, and makes them especially reluctant to become involved in processes of change whose achievement would require their active participation.

As in other sectors of the Public Administration, so in education, the guarantees hitherto given to public employees are sometimes in contrast with the legitimate interests of the users. In particular, the service offered to education users would improve if the teachers were able to benefit from training and updating interventions. But in order for this to happen, teachers would have to accept an increase in the «controlled» part of their working time.

2. TECHNICAL AND VOCATIONAL EDUCATION

As discussed in Section 1, the cornerstones of the technical and vocational education and training in Italy are essentially two: the education offered by technical and vocational institutes of the state system and the education offered by the regional vocational training system. Since the two education supplies have different structures and basic characteristics, we shall present them separately. In this Section we shall describe, first, the present technical and vocational education in the state system and, in particular, we shall highlight the strengths and weaknesses of the reform of technical and vocational institutes introduced in 1995. Then, we shall outline some considerations on the present characteristics of the regional vocational education and training system.

a. The reform of the technical and vocational institutes

Since the 1950s, Italian education has undergone no substantial changes. Over the years the compulsory part has been reformed, but the overall structure of the system and the basic organisation of upper secondary education has remained essentially the same. There have been plenty of official discussions about the need to reform the system as a whole and, in particular, the upper secondary part, but very little has changed at the normative level.

Everyone acknowledges the need for reform, but it appears to be a lengthy, highly complicated process,

owing *inter alia* to the plethora of decision-making centres at national level. In fact, notwithstanding the centralised, hierarchic system, decisions to be taken involve the Ministry of Education, the Government, Parliament, and a by no means secondary role is played by the top functionaries of the Ministry, who are career civil servants, not political appointees.

Without going too far into detail, we may recall, for example, the situation existing in the second half of the 1980s, when the government (then led by the Socialists) decided to block the reform of upper secondary education. There were actually two proposals, originating respectively from the parliamentary commission, responsible for preparing the text of the law, and from the leading functionaries of the technical and vocational education divisions of the Ministry of Education¹⁴.

Following the Government's political decision to block the reform, as from the mid-1980s, upper secondary schools were empowered by the Ministry to experiment with the new curricula (those proposed by the parliamentary commission and those coming from the Ministry). As from 1995, the Ministry of Education, with a positive evaluation of the experimentation of its new curricula, decided to extend this structure to all Italian schools, thus replacing the former curricula for technical and vocational education.

As a result of this decision, the technical and vocational institutes have reduced the hours dedicated to practical/manual activities in simulated work places and have increased those devoted to basic skills (mathematics, comprehension of texts, foreign languages, literature).

Programs and organisational structure have changed in the vocational rather than in the technical institutes. Currently, their timetable consists of 40 hours weekly attendance¹⁵ and is made up of three parts: half the time is dedicated to general basic education, one third to basic vocational training, and the remainder, about 4 hours, is devoted in the first three years to trying to reduce drop-outs and, in the last two years, to specific vocational training, including *stages* spent in enterprises.

The novelty in this division of the timetable lies in the introduction of contents to be decided by the individual school in accordance with the students' needs and the local economic context. Although confined to one tenth of the timetable, this change has enabled the adoption of new teaching methods, the introduction of new contents, and the comparison and acquisition of experiences gained in the world of enterprises.

Another important result of the reform of the vocational institutes has been the reduction from 103 to 17 specialisations, in line with changes introduced in other European countries. This decision responds to the need to simplify and homogenise study qualifications at national level, and makes for better acknowledgement of diplomas in union bargaining and in the definition of salary positions of people holding a qualification.

In some parts of Italy, vocational orientations had been set up with close links to the local economy (e.g. the textile schools at Biella, Piedmont region) and there were actors concerned with maintaining the tie between the specific nature of the school and the local economy. In these cases, the specificity of the curriculum was recognised, and thus the number of curricula actually implemented rose to 39.

Unification of the curricula at national level has had negative results where it has dispersed experiences

¹⁴ The most dynamic sectors within the Ministry are those responsible for technical and vocational education, since they are under pressure from the economic and social forces. This was why the Ministry did not produce a general proposal for all types of upper secondary school.

¹⁵ The technical institutes have a 34-36 hours weekly schedule.

closely linked with the local economic situation, which could not be justified at national level, or found no actors able to understand the importance of specific local training for economic and social development of the particular area.

One example is the 'Ferrari' vocational institute at Maranello, Modena province. This school was founded by Enzo Ferrari in the early 1960s, to train specialist staff for work in the factory making competition and sports cars.

When the State took over the school in 1975, ties with the firm had weakened, the Ferrari company had started training its own technicians, with a solid in-house training, and the school was changing, at least partly, the content of its training in favour of skills more suited to a car repairer than a production technician. Starting from the early 1990s, a group of teachers at the institute began an experiment, involving the students, that concerned the application of alternative energy sources to transport vehicles. This experiment sparked off relations between the school and some mechanical enterprises; its funding is supported by Modena administration and also by the European Community.

Since at least the 1980s, the institute has attracted students from elsewhere in Italy, with its evocative name, owing to the relatively high quality of its courses, and because of the lack of similar courses in the rest of the country. When the reform was definitively introduced, the specific professional figure of motor mechanic was not included among those recognised by the law. There seem to be many reasons for this: scant motivation on the part of the institute's head, who was approaching retirement, lack of pressure from the motor companies in the area (Ferrari, Lamborghini, Maserati, Bugatti) who merely sent the head some letters to say they were interested, and the unwillingness of the local authorities to seize the opportunity, in view of these companies' presence, to construct a training centre specialising in the motor sector.

These are the factors that enabled a reform established at national level to cancel the uniqueness of the professional profile offered by the school that, with all its limitations, made available a very particular vocational curriculum — one that could have been exploited to the advantage of a number of local enterprises, but also to the benefit of firms providing car repair services. Today, this institute resembles many others, but it continues to attract students from other regions by its name and its experimental projects, which have also been reported in some national daily newspapers.

The example of the Ferrari school provides an opportunity to remark on the intrinsically delicate nature of the relation of school and territory: for, while this link may be a strong one in certain stages, it needs support if it is to endure. We said that the reform envisages filling a part of the school timetable with subjects taking account of specific local situations. In this way a possibility has become institutionalised, but in order to create an effective tie between school and territory, it is vital to construct and to fuel a relation among a plethora of actors (school, institutions, public and private enterprises, associations, local authorities).

b. Regional vocational training system

No detailed analyses are available on the regional vocational education system and, in particular, data on two fundamental aspects are lacking: the quality of the teachers and the amount of funding of the training centres. As regards the quality of the service offered, only in November of this year has the Cabinet given its approval to the

discipline for accrediting teachers employed in the regional vocational education system, and that for promoting public competitions to assign posts for teaching these courses. These instruments will contribute towards ensuring the quality of training. Concerning funding, it should be recalled that the Law of 1987 on vocational education, recently modified in 1996 (by the 'Treu package') laid down that only non-profit firms could compete for public funding; these firms present accounts only for individual projects, instead of company balances from which the financial solidity of these centres could be gauged.

Even though detailed data are lacking, there are by now authoritative pronouncements regarding the regions of the South. In commenting on the situation in training, the Minister of Labor, Antonio Bassolino, has actually stated that training in South Italy involves a great waste of resources, a national scandal¹⁶: there are problems of corruption and the feeble productive system has failed to stimulate the local authorities, nor has it pressed for keeping the regional system of vocational education efficient.

But although the conditions are different and quality is certainly higher, even in Emilia Romagna, as in other regions of Central and North Italy, the efficiency and effectiveness of the regional system of vocational education are hard to ascertain. In these regions, the resources earmarked for vocational training are employed in a situation of concerted activity by a variety of actors: the main workers' unions, the associations of entrepreneurs, religious associations, but also those of the Chamber of Commerce and several town administrations. These actors have their own vocational education centres, financed largely out of public funds (national and EC) obtained through the Regions, which perform a role of supervision and mediation among the different interests. Though in the absence of balances it is hard to demonstrate, it is well known that the funds earmarked for the courses have also been used to cover the running costs of these associations. The latter, to be sure, have provided training services, but it cannot be ruled out that the objective of upgrading the available training may have been relegated to second place by the need of all these associations to tap a constant flow of financial resources.

Decentralisation of powers in running the training system will thus make it necessary to review the legislative instruments that will enable greater transparency in the operation of this mechanism and the possibility of ascertaining the effectiveness and efficiency of the educational services delivered. But an increase in the overall quality of this part of education will also be enabled by greater controls imposed by the European Community (compulsory quality certification¹⁷ for centres requesting funding and accreditation of their teachers), which is the largest source of finance for regional vocational training.

3. VOCATIONAL EDUCATION AND ECONOMIC DEVELOPMENT IN EMILIA ROMAGNA

Several times, the picture so far sketched has highlighted that in order to analyse the education system in Italy it would be necessary to proceed with a more disaggregated analysis, at least at regional level. Moreover,

¹⁶ Reported by the business newspaper *Il Sole-24 Ore*, 24 November 1998.

¹⁷ Some state secondary schools, too, are beginning a process of self-assessment of quality, in order to achieve official European quality certification. Up to now, only three technical institutes in North Italy have received this certification.

such analysis would require an interpretation taking into account the interweaving at many levels among economic and social sphere and education system. But there are no studies of this type. However, even though there are no systematic investigations adopting the view we propose, the case of Emilia Romagna region allows us to present some considerations relevant in an analysis of the technical and vocational education.

Emilia Romagna is a region representative of areas of the Centre North having a highly developed local economy. In the last thirty years the historical analyses of the social and economic features of this region have offered some leading contributions to the debate on industrial districts. It is within that debate that we want trace back some considerations on the peculiar characteristics of the technical and vocational education and training of Emilia Romagna.

In this context, we shall concentrate on three points: (a) the role of technical and vocational education in the diffusion of the skills that encouraged the development of small and medium enterprises in the 1950s; (b) the transformations in the last twenty years; (c) the process of adjustment of the training system within the changes both in the productive structure and in the composition of the population.

a. The Emilian model: local production systems and training orientations

The particular productive and social structure that has come to be known as the ‘Emilian model’¹⁸ provides the background for our analysis. Here we recall two aspects of that model: the characteristics of the local systems of small enterprises, and the role of technical and vocational education in promoting and sustaining local development.

The first of these aspects concerns the productive structure with its medium and small enterprises and large number of artisan firms that have operated with a highly efficient and dynamic productive system. A large part of these firms arose in response to productive outsourcing by large metal-engineering enterprises present in the region. In a majority of cases, former employees of the latter set up independent entrepreneurial activities, using machinery obtained by bailment, from the firms where they had previously worked, and relying on technical skills acquired partly through vocational training and partly through their prior work experience. The technical possibility of breaking down the production process, the low minimum efficient size of the individual stages of the production process, the guarantee of a demand initially sufficient to commence the entrepreneurial activity, were decisive elements in the birth and development of many firms specialising in one or more stages of production of automatic machines, packaging machines, transport vehicles, tractors and agricultural machines. This mechanical production was accompanied by parallel development of other production strongly localised in certain areas in the region, such as the food production in Parma, ceramic tiles in the Sassuolo-Scandiano district, and knitwear in the district of Carpi.

These systems have enjoyed high rates of productivity growth, an intense innovative dynamic and an increasing presence on the international markets that characterise the economic structure of Emilia Romagna¹⁹. Case studies show that in these areas the learning processes are embedded in the network of economic and social relations which are a hallmark of the system. In such analyses, it is this network that operates to transmit what is

¹⁸ Cf. Brusco (1982).

¹⁹ Cf. Brusco and Paba (1997), and Russo (1997).

largely tacit knowledge, whose diffusion relies on the possibility of comparing work experience²⁰. An ample literature has developed around the analysis of the birth and growth of the industrial districts and, more generally, the local productive systems present in the region; this has enriched not only the theoretical debate on local economic development²¹, but also that on the most suitable policies for promoting and sustaining growth²². In that debate, an important part is played by the discussion on the role of technical and vocational training acquired both in work experience in large and medium enterprises, and in the formal training offered by the technical and vocational schools present in the region²³. This is the other aspect of the Emilian model that the analysis in this paper wishes to focus on. An emblematic case of the role of vocational training is the Aldini-Valeriani school, set up in Bologna in the last century, which has been a landmark for much of the training of whole generations of entrepreneurs, technicians and skilled workers in Bologna's mechanical industries²⁴, but other vocational schools²⁵ have played a similar role in the region, even though not with the same authoritativeness or to the same extent as the Aldini-Valeriani²⁶.

The intermingling of formal skills learnt in vocational education and those learnt in the work place is obviously important for anyone concerned with the way theoretical and practical knowledge can effectively be put to use in the sphere of production. One point, however, receives less attention: in order for that intermingling to be effective, it must be fuelled by a social texture in which its importance is recognised as a training. In the experience of many small and medium enterprises and artisan firms, the training of various members of the family nucleus has involved technical and vocational education interwoven with working experience in the summer, assisting father, uncle or some relative working on their own account. The theoretical and practical skills learnt at school had to some extent to be tried out in the workshop, in order to verify one's own ability. Up to the end of the 1960s, this was the main educational and vocational training of the entrepreneurs and skilled workers in a large part of the metal-engineering firms in Emilia Romagna.

Alongside these enterprises, others in the region attained a primacy at national level: namely, those specialising in production of knitwear and in ceramic tiles.

In the knitwear firms, vocational training provided by schools had a decidedly marginal importance. Studies on the Carpi knitwear district show how the birth and development of several firms can be retraced to a different

²⁰ Cf. Russo (1996a), Bellandi (1998).

²¹ For a review of the main contributions on this subject see Russo (1996a).

²² This is the trend of the contributions collected in the volume edited by Cossentino, Pyke and Sengenberger (1996).

²³ Suffice it to recall that a distinctive element in the indications for industrial policy proposed by Sebastiano Brusco has always been that of vocational training and education in general. To the point where it is suggested that the competences of the regional authority for industry include those of the regional education authority.

²⁴ Cf. Capecchi (1990).

²⁵ For example, at Imola the Istituto Alberghetti was founded in 1881 and in Modena the Istituto Corni in 1921.

²⁶ The Aldini-Valeriani was founded in 1839 as a municipal school for vocational education, on the model of the French technical schools. The municipality of Bologna has always had great interest in this institution, supporting initiatives such as the setting up of a school museum and a periodical 'Scuola-Officina' that receives high-level contributions on the subject of vocational education and technological innovation.

vocational training. Above all, whereas in mechanical enterprises both the entrepreneurs and the skilled workers are largely male, in knitwear production they are predominantly females who did not attend vocational schools but exploited the skills related to weaving and makeup (of garments) that in an agricultural society were delegated to women and were transmitted within the family. On this basis, women learnt professional skills within a few medium size enterprises active in the 1940s and 1950s and, above all, in the network of tiny firms and home-working that has characterised the area since the proto-industry of the XVI century²⁷.

In ceramic production, the skills of ceramic technology were learnt by attending the vocational school at Faenza²⁸: this training was typical for many chemists hired by the firms in the district; but many technicians, intermediate cadres, managers and even entrepreneurs had acquired a rich heritage of knowledge by working in a medium-sized firm, Ceramica Veggia, situated in the heart of the Sassuolo-Scandiano ceramic district. After that firm failed, many former employees set up new firms, while a large part of the remaining skilled work force was available to cover the medium-high technical levels in those and other new firms²⁹. In the ceramics industry the majority of jobs were unskilled and tiring: no vocational training for them was required and then, as now, they were filled by workers migrating from the southern regions of Italy.

Immigration is a crucial point in the analysis of the growth of this region, and of all North Italy in general. As regards Emilia Romagna, in the 1970s (when the population had a positive growth) immigration enabled the increasing demand for labor to be satisfied, not only in the ceramics industry but also in mechanical enterprises, especially in many heavy or dangerous production stages (e.g. metal founding).

b. Transformations in the last twenty years

The 1980s witnessed some changes within this model: growing international competition led the enterprises to strategies of readjustment with modifications in technology and the internal and external structure. In addition, regulations in matters of taxes, environment and industrial relations became more restrictive, and these factors, together with others more strictly technical, contributed to determining a large firm size than in the 1960s and 1970s.

As regards the effect of the advent of electronic and computer technologies, it may be remarked that the process of learning new skills has been less dramatic than was feared in the 1980s. For electronic knowledge has succeeded in being grafted on to the widespread mechanical skills, and this has been made possible partly by the vocational and technical schools, but above all thanks to training provided by the producers of numerical control and cad-cam machines. These firms, generally situated outside the region, or outside Italy (Germany and Japan), have organised specific training for the electronic programming of their machines, thus contributing to the diffusion of skills lacking even in vocational curricula. Enrichment of computer skills has been possible precisely because a widespread, solid technical training was already present. Workers who today program numerical control machine tools or work-centres generally obtained their professional experience by working on

²⁷ Mengoli (1993), and Cigognetti and Pezzini (1994).

²⁸ Although located at more than 100 km from Sassuolo, this school lies in an area of ancient tradition in the production of artistic ceramics (suffice it to recall that in both French and English 'faience' is used to mean porcelain).

²⁹ Cf. Russo (1998).

traditional machines, which make it easier to understand how operations performed by machines function. One should note that the process of learning new skills occurred over a period of about ten years, during which the new professional figures were able to work alongside the traditional ones: a phenomenon that did not quantitatively involve the entire work force employed in the mechanical sector but only the more limited number of workers occupied with programming.

Another effect of the changes occurring in the 1980s was the transition from a situation where the organisation of the firm substantially involved the management of production, to a situation where that organisation has made it necessary to have skills in other areas such as logistics and sales, but which also requires a finer knowledge of outlet markets (which are very changeable) and the ability to interact with the public sector (what with the large mass of tax and regulation problems that a firm has to face, and the exploitation of services and possible sources of financing).

In this framework, education has had a less incisive role than previously. On the one hand, the changes in contents of the teaching have become less specific, even in technical and vocational schools. But, on the other hand, there has been a change in the strategies of families as regards their children's study orientations: families have one, maximum two children, and the number continues to grow of those who have income sufficient to put their children through education right up to university level. This is why enrolments at the *licei* have increased, especially for girls who are supported in studies that may be lengthy and continue after upper secondary school³⁰. The school has thus not provided adequate skills, but the family, too, has played a less important role. In the past, it acted as a vocational and entrepreneurial model, and a model of the ways the generational turnover in the management of the firm took place. Matters became complicated with the advent of a generation with an averagely higher degree of education than its predecessor, with much ampler basic knowledge, but with decidedly vaguer ideas that were less targeted on any particular vocational or entrepreneurial career. Analysts generally focus on the reduced motivation of young people today, as compared with their parents or grandparents, who were often the founders of firms that these young people are supposed to take charge of. To be sure, the higher income has accustomed them to a greater ease, which often means that they dirty their hands less often in the workshop. However, our intention is not to deal with personal motivation, but rather with the more difficult choices that many young persons now find themselves facing. There is the traditional difficulty of pitting themselves against their parents: the problem of assessing their own ability to act independently. But when their parents decided to start up an independent enterprise, they had the advantage of having to pit themselves only with their own ability to perform, to produce — one might almost say «with their own hands». Today, one must choose one's challenge on a variety of fronts: not only technical abilities, but also skills in management, organisation, sales.

And at this point the diversification of skills by gender counts for much. In the past, the accounts for the husband's, father's or uncle's firm were generally kept by the female members of the family. And the technical and vocational schools that taught those tasks were largely attended by women — those same schools that now contribute to commercial and management training. As seen above, the distribution of males and females among the different orientations in upper secondary education today shows significant polarisations. Courses in

³⁰ This trend links Emilia Romagna with the average of the other Italian regions.

mechanical, electronic and chemical subjects are almost exclusively attended by males, while females are almost the only ones to attend courses training qualified staff for tertiary activities and constitute the large majority in commercial courses³¹. As a result of the configuration of the education system, especially in the pre-university part, women obtain the necessary skills to manage service firms (commercial, marketing, personal) and males obtain skills linked to mechanics, electronics and the new technologies. This, too, does not facilitate the generational turnover or the birth of new firms.

Aside from these factors, it is worth recalling that, as well as the more stringent regulations that new firms must now face, in many manufacturing sectors, the birth of a new firm of minimum efficient size requires a very much larger initial investment than in the past. Take, for example, the case of mechanical production stages. Twenty years ago it was possible to undertake an independent activity, alone or with partners, where in a few years some dependent workers would come in. A small firm, with two or three working partners, might have only one or two traditional machine tools. Today, anyone wishing to start up a firm in this segment must dispose not only of traditional machine tools, but also numerical control machines and work-centres, costing ten times as much as the traditional machines. This entry barrier hampers the birth of new firms, even in the case of highly specialised activities like that of special mechanical production stages, and substantially alters the picture regarding the mobility among enterprises which was considered to be so important in the growth of this region³².

However, although this change occurs in several manufacturing activities, the situation is different in services (to firms and to persons) where the initial investment does not yet seem to be an entry barrier, but the relative ease of entry entails important problems of quality, which still lack appropriate devices for control and verification.

c. Demographic trends and growth

In general, as the productive structure is currently articulated, existing firms are capable of growing and new firms enter at a moderate rate. It can be envisaged that in the next few years the labour demand in this region will increase, though with a rate of growth lower than in the 1970s and 1980s and certainly with a different composition as regards the professional profiles required by the system of manufacturing enterprises and service firms. However, the economic growth of the region may find more of an obstacle in the supply of than in the demand for labour, in technological innovation or in investment.

The natural population growth in the region is negative³³. Demographic projections for the region show that over the next ten years a gap of about 6,000 units between labour demand and supply will have to be bridged³⁴. Quantitative projections of the professional profiles regarding the labour demand over the next decade are not available; but, notwithstanding the lack of precise data, one can be certain that the demographic aspects will have multiple effects that will have to be faced by the education and social policies.

³¹ A similar, if less sharp, polarisation is found in university attendance: engineers comprise more males, paediatricians more females.

³² Cf. Brusco (1982).

³³ Cf. Local authority for culture, sport, youth projects, training systems — Emilia Romagna region (1995).

³⁴ Even more pessimistic trends are suggested by demographic projections disaggregated at provincial level and for Modena's industrial belt. Cf. Fiorani (1997).

Let us call attention to two of these effects. The first concerns the large deficit of work force that would be needed to fill jobs with a fairly low degree of skill (dirty and heavy work). This gap, that may be bridged by migration from within Italy and from other countries (mainly extra-European) will necessitate a lot of social and cultural intervention, also in the field of technical and vocational education. The second effect is of less numerical importance, but no less complex. It concerns the generational turnover in family-run enterprises: the number of offspring has fallen and the growth of these firms is strongly dependent on the effective abilities of that offspring.

In the face of these changes in the economic system, it is not hard to see how the former harmony between certain technical and vocational schools and the local economic system has broken down. And it was that harmony that had started many of the virtuous circles in which the technical skills learnt within the school represented, in that particular social and productive structure, a fundamental element for knowledge to filter down through the entire productive tissue.

It is only over the last few years that the schools have begun organising training *stages* in the firms during the school year; but even when this happens, an effective inter-exchange of knowledge between the two environments is not always achieved. The *stages* are of much more assistance in enabling young people to observe how production is organised, than to acquire specific skills. It should not be forgotten, however, that in this region quite a large number of students still work in firms during the summer vacation³⁵, though that number may be falling. This experience, which in Emilia Romagna is facilitated and organised by various Provincial Administrations, is of great educational value for individual students, but does not manage to influence the ordinary running of education. Few teachers in the state system have had work experience inside the firms. Even teachers who have had a technical type of university education (engineers, architects, economists) do not necessarily know the local productive system. Some perform, or have performed, freelance professional work as consultants, but the gap between what they know and the actual reality of the firms remains a fairly wide one. For that matter, with a few exceptions, the relation between individual firms, or associations of firms, and the schools has broken down³⁶. Small entrepreneurs no longer apply to the school where they trained, in order to get some opinion or know-how about using some particular machinery. The result is that inside the school a self-referential mechanism has come into being, that renders the school detached from the real world around it. Entrepreneurs and their associations often do not know what actually are the contents transmitted and the disciplines studied in schools, and this makes it hard to understand what skills can be expected from a person holding a diploma or other qualification.

If we also take into consideration the growing amount of enrolments at the *licei* (which imply that education will be continued in the tertiary system), it becomes clear that less and less young persons choose to attend the technical schools with a mechanical and electronic orientation, because they reject the prospect of dependent

³⁵ Which in Italy runs from mid-June to mid-September.

³⁶ In Italy, there are associations comprising firms according to size. These associations are, in turn, confederations of associations of firms making the same kind of product. In particular, the main associations of artisan enterprises and small enterprises are CNA (Confederazione Nazionale del'Artigianato) and Confartigianato; the main association of industrial firms is Confindustria. The various associations generally have branches in the provinces.

employment in the factory and, as we said above, this working condition seems to have more difficult outlets in the direction of forms of self-employment (independent work or starting up small enterprises). This trend links Emilia Romagna with other strongly industrialised regions of the North. Over the last few years, the category associations, with the support of the local authorities of the region — above all, the central provinces of Modena, Reggio Emilia and Bologna — have conducted a vigorous campaign to divert enrolments in the mechanics and electronics direction, with some results but without reversing the trend. More and more frequently, in order to hire young persons holding the diploma of mechanic technician, the entrepreneurs of Emilia Romagna also apply directly to the technical schools of South Italy.

4. SOME REMARKS ON THE SYSTEM OF VOCATIONAL EDUCATION AND TRAINING IN ITALY: DECENTRALISATION OF DECISIONS AND PROCESSES OF ADJUSTMENT

In this Section we shall present some final remarks focusing on two points: (a) the goals of a reform of the technical and vocational education and training system in Italy; (b) the measures needed to support their achievement.

a. Goals of a reform of the technical and vocational education and training system

From the picture we have described, a reform of the technical and vocational education and training system should point towards three main goals that we shall illustrate in this paragraph.

To revise the meaning of primary literacy

The first goal concerns a problem that is, first and foremost, of ethical nature: it is necessary to revise the meaning of primary literacy and to oppose the tendency to limit the possession of technology-linked knowledge merely to a narrow minority of the population. As regards Italy, this means operating on twin fronts: acting against drop out from upper secondary education, but also raising the quality of education offered to all. In addition, measures should be taken to enable immigrants to exploit fully the social and economic possibilities the country can offer them.

To fuel a social tendency towards technical and vocational education

The second goal takes the argument on the formation of human capital and economic development back to the context of the discussion on the formation of social capital³⁷. The discussion on Emilia Romagna has provided an example of how technical and vocational education is an essential element for activating a virtuous circle of growth, starting with a nucleus of knowledge learnt at school that thereafter is diffused and filters down in the tissue of technical and social relations. It is therefore necessary to fuel a social tendency towards this type of education, and, to this end, to act against the drop in enrolments in the technical schools and to reconstruct the links between these schools and the firms in order to facilitate permanent training, the spread of innovations and, of course, the training of young persons, in an interweave of formal education and work paths.

³⁷ Cf. Burt (1992).

A number of factors must combine in order that the training system may respond to these demands: the normative framework must be reformed, didactic competences must be shifted from the centre to the periphery, an efficient system of national evaluation must be set up, plus a mechanism for students to pass or for their results to have official value; and, last but not least, there must be a real, verifiable change in the role of teachers and in their preparation for the profession.

Sweeping change is therefore necessary. In this connection, it is worth recalling that this was the commitment stated by Luigi Berlinguer, Minister of Education in the first government in which the ministry of education was run by a left-wing coalition. In a press conference held at the outset of his mandate, Berlinguer pointed out that, given the institutional organisation of education, he could at any moment of the day describe what was going on in any classroom in Italy. His hope was that at the end of his mandate this would not be so, as teachers, students and any other actors who might be involved in the education process, would be able to decide freely how to organise themselves, within the framework of some rules generally shared nation-wide.

This episode brings us to the last goal we would like to highlight: to bridge territorial differences.

To bridge territorial differences in the education system

We wish to emphasise the great difference between what ‘ought to happen’ and what ‘actually does happen’. As emerges from the data we have discussed, we are convinced that although the Minister may be right in a formal sense, he is wrong in substance — this because, in spite of the rigid normative situation, the Italian education system is very little homogeneous at national level, also as regards organisation. The reason being that the economic and social structure is able also to affect a centralised structure like that of Italian education. In the South, the education system, like that of the entire economy, has to come to terms with greater illegality, lesser efficiency of local authorities and a general waste of public resources. In the Centre-North regions, which are more industrialised and generally have higher incomes, there is a greater tradition of intervention by local authorities in social and economic issues, and this has also considerably influenced the local education system. Knowing the educational system at local level thus becomes essential in order to monitor and encourage the process of change in the national system with the most appropriate measures. Such knowledge requires the collection and processing of reliable data relating to areas that are homogeneous from a social and economic point of view; but, even today, we still have only data collected in a fragmentary fashion and not comparable with each other.

b. Measures supporting a reform of the technical and vocational education and training system

To fully understand Minister Berlinguer’s statement it is crucial to make precise the implications of the transition process towards what the Minister hopes: an education system where there are many actors who could play a role in the process, and could freely decide how to organise themselves within a framework of general regulations shared nation-wide. On this, *inter alia*, hinges the entire process of renewal of the Italian education system: the redistribution of competences between the State and the local authorities. We think, however, that in order to be sure of a convincing start to the process of change, it will be necessary, in particular, to redefine the role of teachers and directors of the individual schools, and the role and competences of the local authorities.

Role and competencies of teachers and directors of the individual schools

Redefinition of the role of teachers must envisage an exchange between improvement of their status and a better performance on their side. The process of generational turnover, which is already under way and will increasingly affect the corpus of teachers, marks a signal opportunity for redefining the functions and social role of teachers. One may hope that this process will help to overcome resistance to change by those already in the system and, at the same time, to seal a new agreement with those who have only just entered the system or are preparing to do so. The teachers, but also the directors of the individual schools, have hitherto been dependents of the Ministry. They were required merely to follow to the letter the ministerial programs and the rules laid down at central level, leaving creativity and innovation to voluntary effort and personal motivation. When the process of transfer to the schools of wide-ranging powers in didactic decisions is complete, there will have to be radical change in the function of those persons who will operate much more as professionals than as clerks, since they will be responsible for the educational planning and results.

This last factor represents a notable challenge – to change the way of doing lessons and the contents of the teaching. Right now, only a few cautious steps are being taken towards the construction of an effective training to prepare the teachers of the future, but it is not clear how the stock of those already teaching in school can be requalified. Somehow, the teachers must be able to select the contents to be transmitted, choosing them on the basis of local demands, but also on the basis of their educational worth, without letting themselves be paralysed by the wish to teach everything that can be known. But, above all, they will have to acquire the didactic methods that can help them to make their work more effective. Owing to the complex trade union situation and the profound demotivation of a great part of currently active teachers, involvement by the latter cannot be taken for granted; but if the national system of education is to improve, it can only be on the basis of such involvement.

Role and competencies of local authorities

Redefinition of the role of local authorities will demand greater efforts and fairly long adjustment times, in those areas of Italy where their involvement in the local training system has been marginal and mostly bound up with getting through administrative tasks. In other areas, like Emilia Romagna, where the local authorities have, for some time now, been engaged in running a part of the system, have assisted the schools by making their day-to-day operation easier, and have acted to make available better training in order to encourage growth, decentralisation of powers could render the entire education system more efficient.

However, such decentralisation does not possess intrinsic virtues that preclude it from inefficiency and waste. In this connection, it is worth recalling what we have mentioned with regard to the management of regional vocational training, where the local authorities (the Regions, especially) were involved with important responsibilities.

A reform of the technical and vocational education and training system, and of the education system as a whole, is the other face of the process of social and economic change that Italy wants to start with the project of “cento idee”. This project points at the identification of human, organisational and social resources already available in some vital areas in the South of Italy. “One hundred ideas” would then be the project that will

mobilise those resources with the goal of obtaining a sharp reduction of both unemployment and social degradation. This is the focus on which Italy is pitting her capability to provide a real contribution to the process of unification with the European community.

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Table 1. Number of full- time students in the state education system and in all schools. Italy.
Source: CENSIS, ISTAT and Min. Ed.

	State education system (a)		Total (b)		(a)/(b)%	
	1991/1992	1996/1997	1991/1992	1996/1997	1991/1992	1996/1997
Pre- school education	837.199	891.981	1.572.699	1.604.719	53,2	55,6
Primary school	2.771.685	2.597.907	3.005.015	2.742.688	92,2	94,7
Lower secondary school	2.049.592	1.792.676	2.150.767	1.893.069	95,3	94,7
Upper secondary school	2.597.197	2.516.178	2.858.221	2.643.129	90,9	95,2
Total	8.255.673	7.798.742	9.586.702	8.883.605	86,1	87,8

Table 2. Number of students and courses in regional vocational training. School year 1994/1995.
Source: ISFOL.

	Students (a)	Courses (b)	(a)/(b)
Italy	347.449	17.777	19,5
North	226.983	11.172	20,3
Centre	47.901	2.657	18,0
South	72.565	3.948	18,4

Table 3. Number of schools and number of classrooms. State education system.
Italy. School year 1996/1997
Source: Ministry of Education

	Schools	Classrooms	Students/ classrooms	Students/ schools
Pre- school education	13.738	38.110	23,4	64,9
Primary school	18.624	149.548	17,4	139,5
Lower secondary school	8.400	88.633	20,2	213,4
Upper secondary school	5.092	113.617	22,1	494,1

Table 4. Percentage of upper secondary students enrolled in the state education system,
types of schools (head count). Italy.
Source: CENSIS, ISTAT.

	1991/1992	1995/1996
Vocational Institutes	19,0	19,0
Technical Institutes	45,0	41,6
- <i>Industrial</i>		11,3
- <i>Commercial</i>		23,0
Licei	32,5	35,9
Fine Art Schools	3,5	3,5
Total	100,0	100,0

Table 5. Net enrolment in upper secondary education. Men and women.
Source: ISTAT

	1973	1978	1983	1988	1993
Italy	47,5	51,5	53,2	62,9	75,0
North	48,0	51,7	53,2	64,4	76,2
Centre	57,9	62,0	62,4	71,6	85,1
South	43,2	47,2	49,8	58,2	69,9
Isles	41,9	45,4	47,2	56,4	70,2

* percentage of students in upper secondary school per 100 same age (14/ 19 years old).

Table 6. Net enrolment in upper secondary education. Women.
Source: ISTAT

	1973	1978	1983	1988	1993
Italy	42,0	49,4	53,9	64,2	76,2
North	41,4	49,5	54,3	66,1	78,6
Centre	51,9	60,2	63,4	73,2	86,5
South	38,1	44,7	49,6	58,4	69,2
Isles	39,3	44,6	48,5	58,0	71,6

* percentage of students in upper secondary school per 100 same age (14/ 19 years old).

Table 7. Ratio of upper secondary graduates to population at typical age of graduation (times 100).
Source: CENSIS , ISTAT, Isfol and Min. Ed.

	Ratio of graduates
1991/1992	55,3
1992/1993	57,0
1993/1994	60,3
1994/1995	65,3
1995/1996	66,7

Table 8. Ratio of upper secondary graduates to population at typical age of graduation (times 100) within big areas.

School year 1993/1994.

Source: CENSIS, ISTAT, Isfol and Min. Ed.

North west	58,1
North east	61,7
Centre	69,2
South	58,0
Isles	55,3
Total	60,3
Emilia Romagna	67,1

Table 9. Ratio of upper secondary graduates to population at typical age of graduation (times 100).
Men and women. 1995.
Source: OECD, 1997.

	Total	Men	Women
Italy	67	64	70
France	87	86	89
Germany	88	89	87
Spain	73	69	81
Mean OECD	84	80	85

Table 10. Ratio of upper secondary graduates to population at typical age of graduation (times 100).
Type of schools. 1995.
Source: OECD, 1997.

	General	Technical and vocational
Italy	18	48
France	38	49
Germany	24	64
Spain	46	26
Mean OECD	43	41

Table 11. Index of 18 year-old students keeping up with the course in upper secondary education.
Emilia Romagna. School year 1992/93
Source: OML. Emilia Romagna Region (1996).

	keeping-up	falling behind 1 year	falling behind > 1 year	Not in school	Total
Males	37,4	14,6	5,8	42,2	100
Females	50,1	10,6	3,4	35,9	100

Table 12. Percentage of students obtaining lowest pass mark in final exam in lower secondary school.
School year 1995/1996.
Source: Ministry of Education

North	47,7
Centre	46,8
South and Isles	47,4
Total	47,3

Table 13. Results of final exams in upper secondary school. Italy. 1994/1995.
Source: CNEL survey published in Censis (1997)

	Total	Technical Institute	Vocational Institute
Diplomas/last year students	98%	97%	96%
Diplomas taken in regular time/diplomas	74%	70%	67%
Diplomas with maximum mark/diplomas	4%	4%	2%
Diplomas with minimum pass mark/diplomas	11%	12%	11%
Average marks (maximum 60)	44,3	44,2	43,9

Table 14. Composition of public expenditure on education in leading EU countries. 1994.
Source: OECD (1997)

	% current expenditure of total	% salaries of current expenditure
Italy	97	91
France	91	79
Germany	91	88
United Kingdom	96	71
Mean Oecd	93	81

Table 15. Staff in Italian education. School year 1992/1993
Source: Ministry of Education

	Directors	Teachers	Others*	Total
Primary school	4.753	267.272	19.813	291.838
Lower secondary school	6.785	234.571	62.322	303.678
Upper secondary school	3.736	242.766	62.521	309.023
Total	15.274	744.609	144.656	904.539

* office, reception, janitors and cleaning staff.

Table 16. Percentage of women among teaching staff by level of education (1995)
Source: OECD, 1997.

	Primary and lower secondary	Upper secondary	Tertiary
Italy	84	55	32
Mean Oecd	64	43	29

Table 17. Ratio of students to teaching staff by level of education. State education system. (1995)
Source: OECD, 1997.

	Italy	Mean Oecd
Pre- school education	12,3	18,0
Primary school	10,6	18,2
Lower secondary school	10,0	16,2
Upper secondary school	9,7	13,5

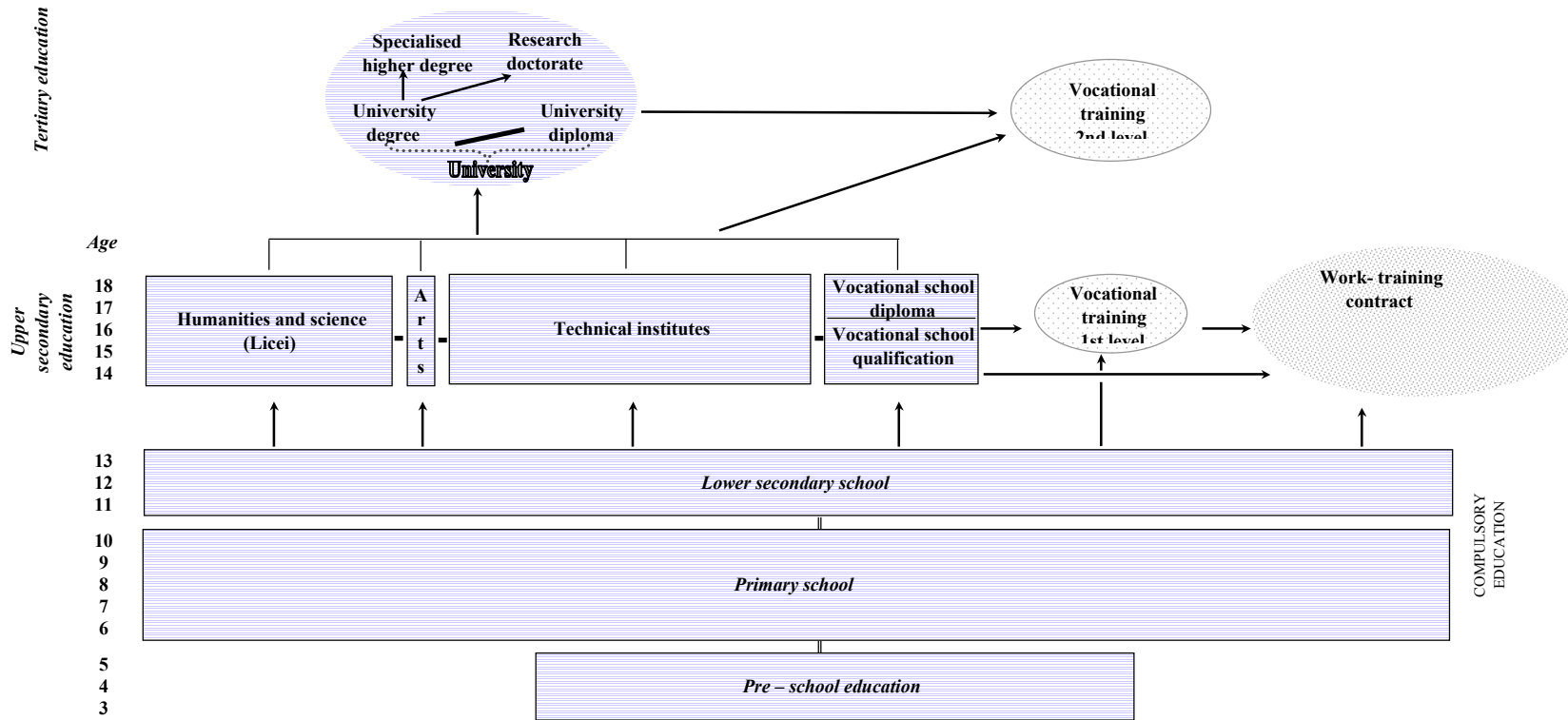
Table 18. Teaching staff by type of school. State education system in Italy.
Source: CENSIS processing of Min. Ed. data

	1993/1994	1996/1997	% Variation
Pre-school	73.836	75.840	2,7
Primary	257.481	249.619	-3,1
Lower secondary	223.384	201.550	-9,8
Upper secondary	246.032	237.194	-3,6
Total	800.733	764.203	-4,6

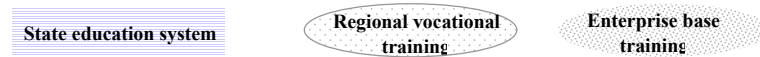
Table 19. Distribution of final purchaser of educational resources by level of government for primary and secondary education (1994).
Source: Oecd, 1997.

	Central	Regional	Local	Total
Italy	83	2	15	100
Mean Oecd	39	28	32	100

Figure 1. Structure of the education system in Italy



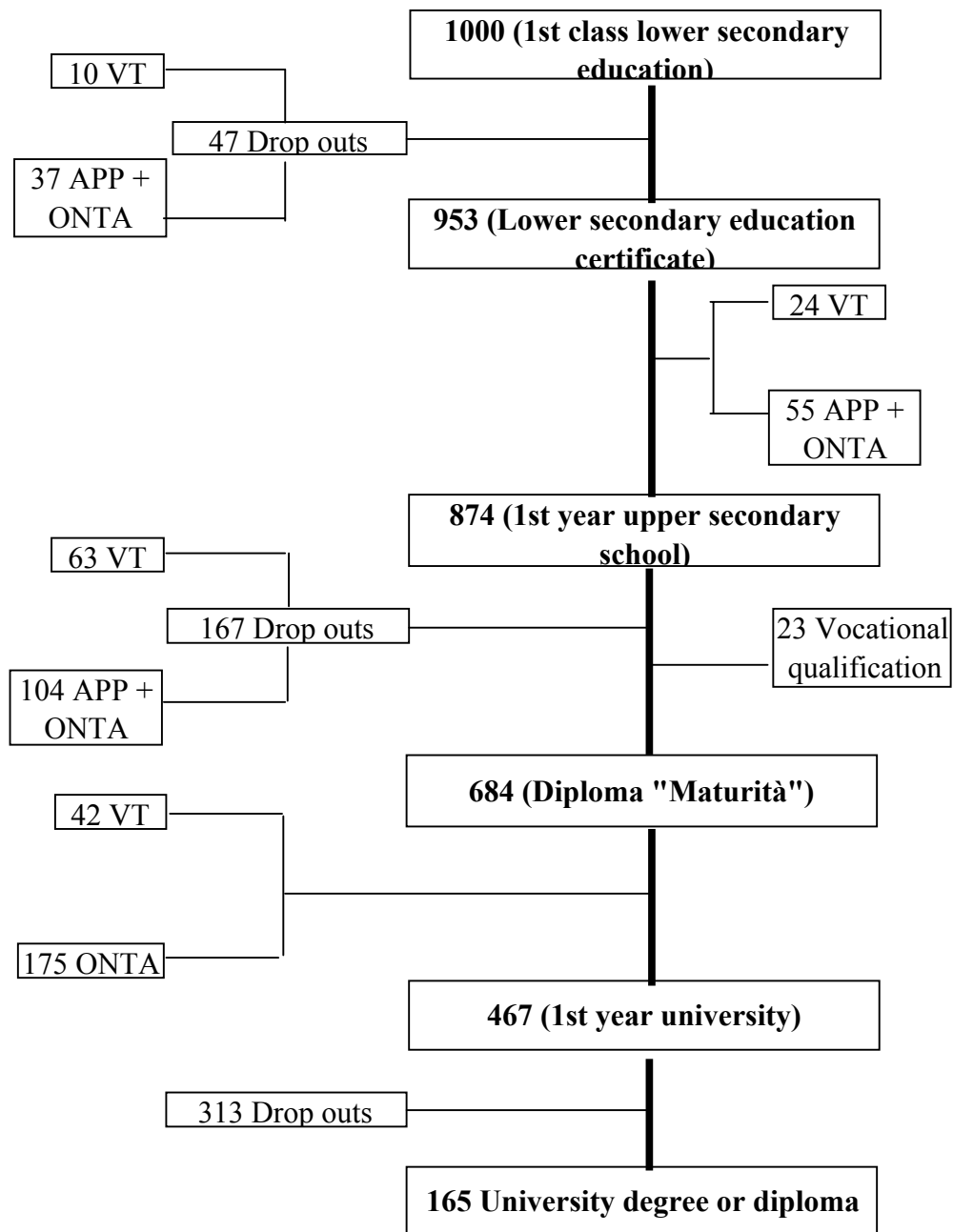
Key:



- compulsory passages
- allowed pathways, very penalized
- allowed pathways

The width of rectangular boxes is proportional to the share of students in each type of school in Italy 1991/92 (cf. tab. 3). The height of rectangular boxes is proportional to the duration of the school

Figure 2: Flows in the educational system in Italy. Men and women.



Key:

APP (apprenticeship), VT (vocational training), ONTA (other non training activities)

Source:

ISFOL data processing on ISFOL, ISTAT, ISCO data. School years 1994/95 and 1995/96.