

Chapter 4

La Buona Scuola and the Italian education system: Elements to foster the alignment between education and labour market needs

This chapter discusses the reform of the Buona Scuola and other elements of the Italian education system with a view to understand how the reform is addressing the long-standing skills imbalances in Italy. The chapter discusses the renewed incentives spurred by the reform to create bridges between education providers and the world of work and how these can play a fundamental role in reducing skill mismatch and shortages. The chapter also discusses the responses that the Italian Government put forward to reinforce the alignment between the supply of skills and its demand in Italy more broadly. Bottlenecks and barriers to the implementation of the reform are also discussed with a view to provide recommendations on how Italy could fully reap the benefits of these recent policy efforts.

In July 2015 the Italian Government approved a comprehensive set of new education measures which go under the name of “*La Buona Scuola*” (the Good School) reform. The objective of the reform was to radically transform the Italian education system by addressing several of the long-standing issues that are at the core of the low level and quality of Italy’s skills pool.¹

A national plan of EUR 1 billion for the “*Digital School*” was promoted to strengthen the ICT skills of both teachers and students and to provide schools with new physical and technological infrastructure and internet connectivity. Resources for the operation of schools were also increased substantially and a new national recruitment process led to the hiring of around 90 000 new teachers in 2015. Performance-based components for teachers’ salaries and stronger elements of school autonomy for principals to manage resources were also at the core of the reform.

Importantly, the reform had also the explicit objective of spurring stronger linkages between schools, students and the world of work so as to promote a smoother transition of Italian youth from education to jobs by providing students with better tools to develop those skills that are required by Italian firms.

Alternanza Scuola-Lavoro: The Italian way to build stronger links between education and the labour market

The *Alternanza Scuola-Lavoro* (ASL) is probably one of the most remarkable traits of the *Buona Scuola* reform as it introduces, for the first time, compulsory internship periods and work-based learning not only in technical and professional secondary schools² (e.g. *istituti tecnici* and *istituti professionali*) but also in the “humanistic and scientific gymnasium” – the *licei* – where the linkages between the education providers and employers have been traditionally extremely thin and sporadic.

The establishment of 400 hours of compulsory work-based learning for students in vocational education tracks and of 200 hours for students in general education gymnasium – *licei* – represents the core of the Italian ASL. The internships periods can take place either in the private sector or in the public administration and should be, at least in principle, well integrated in each specific education programme.

Introducing a strong work-based learning element into Italy’s curriculum design has certainly the potential to contribute to reduce skills imbalances and, as such, the reform is moving in the right direction. Several implementation challenges have, however, the potential to hinder its full realisation and to hold back the reform’s positive impact as a tool to reduce skills imbalances in Italy. These challenges are discussed below.

The ASL reform unfolds within a difficult context

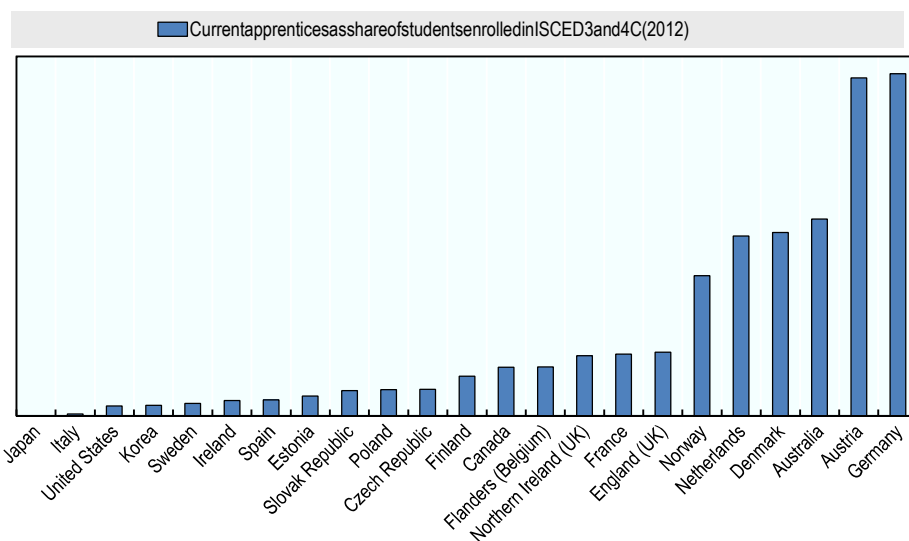
The ASL represents a substantial change to the Italian education system and traditions which brings interesting novel features especially in the Italian *licei*. In the case of Italy, it is particularly important to discuss the design of the ASL reform and place it within the current institutional framework and the (lack of) traditions of co-operation between education providers, firms and employers.

Differently from other countries, in fact, in Italy the very much needed links between schools and firms have not emerged spontaneously in the recent past. If anything, instead, Italy suffers a profound lack of dialogue and trust between schools

and firms. The status of TVET tracks is affected by a severe negative social stigma and education tracks built on links with the world of work have been traditionally perceived as leading to low-quality education. In Italy, the share of apprenticeships programmes is, for instance, extremely low if compared to other countries (Figure 4.1).

Figure 4.1. Current apprentices in programmes leading to upper-secondary or shorter post-secondary qualifications

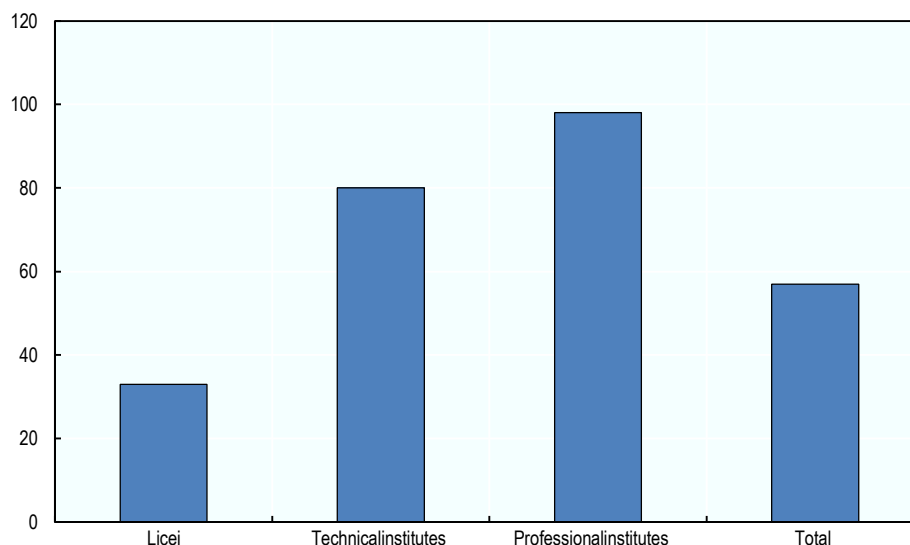
Share of all students enrolled in ISCED 3 and ISCED 4C, 16 to 25 years old, 2012



Note: In Ireland, Italy, Japan, Korea, Spain, Sweden and the United States, the estimated share of current apprentices is not significantly different from zero.

Source: Kuczera (2017), *Survey of Adult Skills (PIAAC) Database*, 2012, 2015.

Recent evidence from a study by Almadiploma (2016) shows marked difference in the extent of co-operation between education providers and employers in fostering dual education paths across different fields of study (Figure 4.2). The lack of co-operation is especially marked in the *licei* where two-thirds of students have not been involved in any work-related activity in 2015. Professional and, to a lesser extent technical, institutes are more intensively engaged in work-based learning as expected and given their specific nature.

Figure 4.2. Percentage of graduates who declare to have carried out any type of work-based learning activity by type of institute

Source: Almadiploma (2016).

Data from Excelsior (2016) in Table 4.1 show also an heterogeneous participation of students and firms to the ASL in 2015 and 2016 across regions as well as across firms of different sizes. Around 11% of firms in the north-west of the country have hosted (or plan to do so) students within their premises in internship activities linked to the ASL. This share, already relatively low, decreases in firms operating in the centre and south of the country in 2015 (8.5 and 4.4% respectively).

Table 4.1. Firms hosting ASL students by geography and size

	Have hosted ASL students in 2015					Plan to host ASL students in 2016				
	Total	1-9 empl.	10-49 empl.	50-499 empl.	500+ empl.	Total	1-9 empl.	10-49 empl.	50-499 empl.	500+ empl.
North West	10.9	8.6	15.7	29.8	31.7	11.5	8.7	17.1	32.9	43.6
Nord Est	12.3	9.30	19.6	34.0	34.6	12.8	9.5	19.8	37.4	46.5
Centre	8.5	6.60	14.4	24.9	31.5	9.5	7.6	14.1	27.0	42.2
South and Islands	4.4	3.50	7.4	15.2	27.4	5.7	4.6	9.5	18.5	37.7

Source: Excelsior (2016).

Against this backdrop – and with the aim of spurring the creation of linkages between the labour market and education providers – the Italian Government has opted to take a *top-down approach* by creating of a new regulatory framework (e.g. the compulsory work-based learning modules for all students) that provides a set of incentives, tools and financial resources to carry out the ASL and, with it, spurring the creation of linkages between schools and firms.

The Italian approach differs substantially from that of other countries where pathways of work-based learning have proven to be extremely successful (e.g. Germany) and where the linkages between firms and schools have emerged through a *bottom-up dialogue*, with little intervention from the government.

The efficacy of the approach proposed in Italy (*vis a vis* that in other countries) will need to be monitored. It appears important, however, to stress the difficult initial context that the Italian ASL had to face. An assessment of the ASL (which will need time to fully develop) and the remarks on its design and implementation should be, in fact, contextualised to the Italian case. The difficulties of putting forward a top-down ASL reform are, in fact, evident, but so are the reasons for the government to proactively spur the creation of better links between education providers and the world of work with a top-down approach in a situation where, historically, these linkages have not emerged when needed.

Schools need additional support to adopt and adapt to the ASL...

Given the breadth and especially the novelty of the ASL reform, its “*implementation phase*” becomes particularly important as the risk of finding the key stakeholders unprepared can be substantial. In Italy, schools and employers are slowly adapting to the introduction of the ASL and much still needs to be done for the ASL to be fully operational and for the relevant stakeholder to be ready to absorb the policy change.

At the moment, schools (especially the *licei*) find it difficult to integrate the ASL in their curricula and to create the necessary synergies between academic programmes and the vocational content of the internship periods.

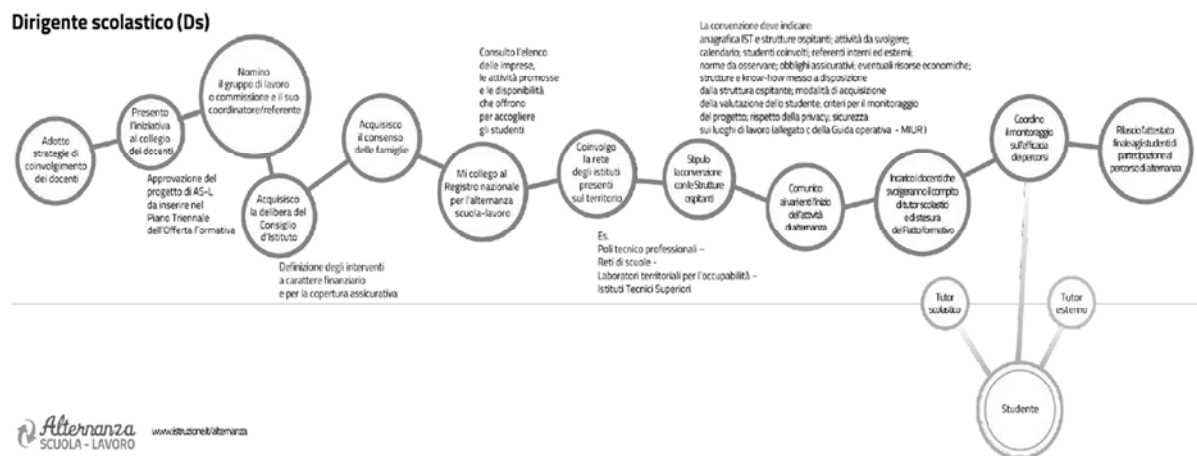
Differently from the experience of other countries where the planning of the academic and vocational programmes is a shared responsibility between education providers, firms and employers, in Italy the ASL reform gives little indication on the specific role of employers in identifying learning goals. Much of the burden related to the implementation of the ASL is, instead, left to schools.

The guidelines for the implementation of the ASL reform³ developed by the Ministry of Education and Research (MIUR) suggest that a major role should be played by schools and school principals in: first, the analysis of local labour markets’ skill needs (carried out through the use of the available skill needs information⁴); and, second, in the establishment of linkages (i.e. *convegni* or *protocolli d’intesa*) with firms in the territory so as to satisfy those local skill needs and create bridges with firms.

Recently, the decree 219 of 25 November 2016 identified in the network of Italian Chambers of Commerce a key partner to regions and the National Agency for Active Labour Market Policies (ANPAL) to strengthen the involvement of firms in the ASL. As an example, the chambers of commerce will provide assistance in the management of the national registry of ASL’ firms (*Registro Nazionale Imprese-Scuola Lavoro*) as well as in the activities related to the certification of the skills and competences developed at the end of the ASL internship. More broadly, the chambers of commerce are called to play an important role in the identification of local and national skill needs and in strengthening skill matching across the whole territory through the support to the ASL.

Despite the efforts put forward by the government and other actors to assist schools in the adoption of the ASL, the tasks of school principals remain extremely challenging and complex (see Figure 4.3), especially given the lack of specific training on labour market issues of many of school principals in Italy.⁵ This situation can lead to the heterogeneous quality of the work-based learning activities both across different education institutes and geographically across regions in Italy.

Figure 4.3. The complex task of the school principal



Source: Attività di Alternanza Scuola-Lavoro. Guida operativa per la scuola. MIUR (2016).

The lack of effective co-operation between schools and employers in the definition of internships' goals is confirmed by the fact that many students have, so far, participated to the ASL's internships periods at the end of the academic year when courses have already been taught at school. The experience at the workplace has been often detached from students' studies and, while still valuable in most cases, it does not seem to robustly constitute an integral part of the students' education and learning paths.⁶

As a solution to the difficulties faced by school principals in establishing contacts with employers, schools are encouraged to create networks among them in order to rationalise their efforts in the analysis of local labour market information and of Skill Assessment and Anticipation⁷ (SAA) results. The mechanisms and the incentives under which such collaboration should take place are, however, not clear and in most cases their creation is left to the organisational capacity and leadership of school principals.

To mitigate these implementation challenges, the MIUR's guidelines explicitly identify the *Poli Tecnico Professionali* (Technical and Professional Poles,⁸ see Box 4.1), as key actors that can help schools create linkages with firms. Their effective involvement in the implementation of the ASL reform should be closely monitored and, if anything, strengthened further given the difficulties of many schools to adopt the ASL.

All in all, the implementation of the ASL reform requires more clarity on the division of tasks of stakeholders involved and greater support should be provided to schools and school principals in developing the adequate skills that are key to a successful implementation.

Noteworthy, within the *Buona Scuola* framework, the government committed to an ambitious plan to upskill teachers and school principals for the years 2016-19.⁹ The implementation of this retraining plan, which is currently ongoing, comes with a considerable lag with respect to urgent needs of Italian schools. It is, however, very much needed and a step in the right direction. These efforts should be carefully monitored as they represent a crucial element for the overall success of the *Buona Scuola* and ASL reform.

Box 4.1. Technical and Professional Poles as the platform for education and world of work to collaborate

The Technical and Professional Poles are networks of technical and vocational schools, vocational training centers and accredited companies that are designed to promote the development of technical and scientific knowledge and to spur the employment of young people. They represent, therefore, key learning platforms in applied contexts that can help co-ordinate the creation and use of knowledge, technologies and professionalism.

The Guidelines for the Implementation of the Poles highlight how these constitute the functional interconnection between education providers and enterprises. The interconnection should ensure the integration of professional resources, logistics and human capital coming from technical and vocational schools, businesses, educational institutions accredited by the regions and technical colleges, universities and research centers. Noteworthy, the Pole's flexible organisation should favour their establishment at the regional level as a tool to address local skill challenges and imbalances.

Source: INDIRE.

...and firms should be given sufficient incentives to absorb the ASL

Italian employers are also generally unprepared to fully absorb the ASL reform. While their role in identifying the pedagogical contents of the internship periods is not clear, other challenges exist that are related to the practicalities of the ASL reform's implementation.

If, on the one hand, schools are in charge of informing students about their *twin-status* of student-worker (*doppio status di studente e lavoratore*) and of the rules regarding safety, hygiene and health in the firm, employers, on the other hand, are usually in a difficult position when accepting minors within their premises as these need to be monitored constantly and their safety ensured.

Differently from other countries where firms are provided with clearer incentives to offer internship places, firms and employers in Italy have little incentives, if not disincentives¹⁰ in some cases, to participate proactively to the ASL reform. In many cases firms participate within their *corporate and social responsibility initiatives* and the work-based learning activities, therefore, lack a clear bound with the firms' productive activities.

The difficulties to adopt the ASL reform are also linked to the size and geographical distribution of firms across the national territory. It is well known that the Italian productive fabric is based on small and micro enterprises and that a profound divide between the north and the south of the country exists. These aspects lead to very heterogeneous possibilities to establish internships programmes across the whole territory.

In the South, a sparsely-populated geography of small firms makes the task of establishing linkages with employers particularly difficult for school principals. Similarly, small firms that do not belong to larger networks and that work in low value-added productive activities may find it especially difficult to absorb students and minors within their premises, in most cases due to the lack of personnel to supervise and monitor them.

The implementation guidelines of the ASL reform foresaw this situation and contemplate the possibility, whenever linkages with firms cannot be established directly, to use "simulated enterprises" at school. These are laboratories that mimic the

work done in a real firm and the tasks of workers. While the simulated enterprise is an experience from which students can potentially learn several hard and soft skills, they fundamentally remain a second-best option as students are not always directly confronted with the, sometimes unexpected, challenges of real production (see Box 4.2).

Box 4.2. The SimuCentre: Giving more reality to a simulated experience

Simulated Enterprises are useful tools in contexts where the productive fabric is not well-developed and the establishment of co-operation between education providers and employers may be more difficult. They are, however, a second-best option as the skills and work experience that can be acquired through them is more limited when compared with the 360 degrees experience in a real firm. Trying to overcome this barrier, the ASL reform foresees that the set of simulated training enterprises can be linked together by a computer platform and network through a National or Local Central Office (SimuCenter). This system allows the virtual companies that are part of the network to simulate all the actions related to their specific areas and entrepreneurial activities in a more “real” and sophisticated manner. Similarly, the SimuCenter allows the simulated enterprises to connect to the real world through the Chambers of Commerce, the national Tax agencies and the national company register.

For the correct functioning of this part of the reform, resources should be allocated for hiring and internal tutor with the necessary skills within the school personnel, as defined by Law 107/2015, article 1, paragraph 63.

Source: MIUR, <http://www.istruzione.it/alternanza/allegati/L'Impresa%20Simulata.pdf>.

Tools exist to create bridges between education providers and employers

In the attempt to streamline and encourage collaboration between schools and firms the Italian Government created a specific web portal (*Registro Nazionale Imprese-Scuola Lavoro*¹¹) where firms can register to advertise their availability to propose stages and internships. At the moment of registering, firms need to provide information about the number of students they are capable of accepting as well as the period in the year when the ASL internships can take place. The National Register allows also sharing information related to the activity carried out by the firm and on the firm’s infrastructures, technology and organisational capacity. For school principals, the National register represents an essential tool to get insights into the characteristics of the enterprises (i.e. number of employees, turnover, net assets or its relationships with other operators) and to start planning the “contracts” for the ASL.

The WEGO tool

The geographical distance between schools, students’ residences and firms can represent a barrier for students to participate to work-based activities and it can potentially limit the establishment of contracts between schools and firms. The UPI (*Unione Province d’Italia*) and ANG (*Agenzia Nazionale Giovani*) developed an innovative tool (WeGO Italia) which provides geo-referenced information about the firms that are willing to establish collaborations within the ASL pathways. This is a new and very useful piece of information for school principals to start planning the collaborations with firms. Unfortunately, the web platform is, at the moment, only available for the metropolitan area of Milan in Lombardia but this example could be extended to other geographical areas, both in those where the geography of firms is sparsely populated (to provide a bird-eye view to principals of where the training possibilities are) but also in those where the number of firms is instead relatively high (to provide school managers with the necessary filters to choose only those firms that are geographically close to schools and discard others).

Certification of competences and skills in the ASL needs to be strengthened

The *assessment* and the *certification* of the work-related skills acquired during the ASL period are fundamental. The assessment of the acquired skills is important to monitor the quality of the training activities and the certification of qualifications is fundamental to allow students to use the acquired skills in the labour market across the whole national territory.

In countries where the dual work-based learning pathways are well-established, the certification of skills plays a fundamental role for students to signal their work-experience and so, to access their national labour market and be mobile within it. In Germany, as argued by Ballarino and Checchi (2013), the success of the dual TVET system does not merely reside in the establishment of internships periods in firms but, more essentially, on the fact that the ASL is i) co-managed by firms and schools and that the skills and competences that result from the internship periods are ii) fully recognised as trustworthy credentials in the labour market.

The ASL in Italy is still weak in both dimensions. On the one hand, as discussed above, the planning of the work-based learning component of the Italian ASL is only weakly integrated into the academic programmes of schools and firms do not yet play a fundamental role in shaping their contents. On the other hand, in Italy, firms also play a minor role in the assessment and validation of the skills acquired by students during the ASL.

While the ASL guidelines foresee the collaboration of firms and employers at the moment of assessing and recognising ASL qualifications, commentators of the Italian ASL reform¹² have been sceptical about the effective role played by the enterprise-tutor in the overall assessment of the competences acquired by students during the ASL (Box 4.3).

Much of the assessment is still done by school teachers¹³ who, in many instances, lack the adequate or specific work-experience to comprehensively judge on the work-related skills acquired by students. That being said, ANPAL, in collaboration with the MIUR recently launched a programme of co-operation aimed at helping schools in the selection of tutors so as to strengthen the implementation of the ASL as well as the certification of the skills acquired by students. As for now, the co-operation programme foresees the recruitment of around 1 000 tutors who should also work to identify job and training opportunities for students.

The heterogeneous quality of the ASL activities across Italian regions represents also a crucial challenge. The skills acquired by students during internship periods spent in larger firms in the north of Italy are generally regarded as superior relative to the competences acquired in other regions (or in smaller firms) where skills are generally acquired through weaker work-based learning done, in some cases, in simulated enterprises.

All in all, more should be done to integrate Italian firms both in the design of the work-based learning tracks and in the assessment of the skills acquired by students during the ASL. This latter element is especially important to build the necessary trust around the ASL skills so that these can be effectively used in the labour market. It is also crucial to raise the quality of skills acquired in the south of the country and in smaller firms as their status is still relatively low and their value in the labour market weak.

Box 4.3. Certifying the skills of the ASL

The certification of the skills acquired during the ASL periods needs to include minimum elements of proof as indicated in art. 6 of Legislative Decree 13/2013. Among these, the personal data of the student and the educational establishment; references to the type and content of the agreement which characterised the work-based learning path; the skills acquired as well as the work context and the methods of learning and the language used. The certification of skills developed through the ASL is included in the curriculum of the student with the purpose of mapping her/his skills and represents an integral part of their evaluation in the examination of state.

The Law 107/2015 introduces, in paragraphs 37 and 40 of Article 1, a further innovation by requiring schools and students involved in the ASL to give, at the end of the school year, a specific assessment of the training activities. Students can express an opinion on the effectiveness and consistency of ASL paths within their field of study while school principals are called to draw up an assessment of the facilities with which the conventions were signed, highlighting specifically their educational potential and any difficulty encountered in establishing the collaboration.

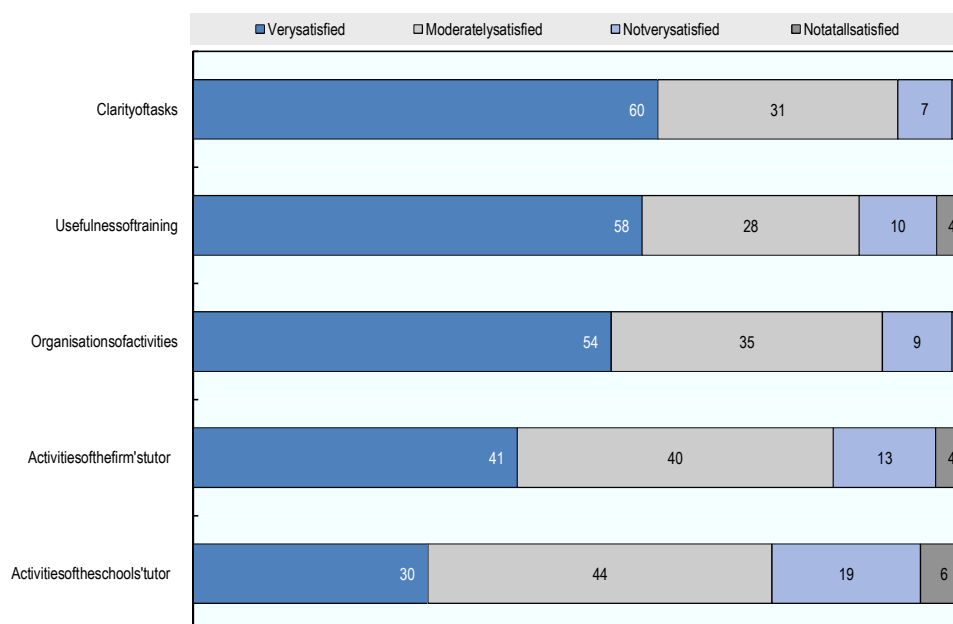
Source: Registro Nazionale per l'Alternanza: portale della Camera di Commercio.

Despite the difficulties the perception of the quality of ASL is positive

Despite the difficulties mentioned above, the perception of students regarding the quality of the ASL is rather positive. This is encouraging as it points to the broad acceptance of young Italians of such shift in the educative paradigm.

Almadiploma (2016) shows that the clarity of the tasks, the organisation of the activities and the usefulness of the ASL and work-based learning activities are highly valued by students (Figure 4.4). If anything, the activities of school tutors could be strengthened so as to match the quality of those of the tutor from the firm.¹⁴

Figure 4.4. Satisfaction of students towards the ASL and work-based learning activities



Source: Almadiploma (2016).

TVET education in Italy suffers from low visibility and fragmentation...

While the ASL reform is facing several challenges, especially in *licei* and in economically depressed geographical areas of Italy, its implementation has been relatively smoother in the context of technical and professional institutes (i.e. *Istituti Tecnici* and *Istituti Professionali*) where the tradition of creating bridges between schools and firms already existed in the past.

That being said, TVET more broadly in Italy is still facing several challenges that undermine its potential to reduce skills imbalances. Major challenges relate to the fragmentation and lack of visibility of the TVET supply. In Italy, TVET education is provided through three distinct models: i) technical institutes, ii) professional institutes, and iii) regional TVET programmes (IeFP). These different TVET pathways are largely overlapping and have grown in a somehow disorganised manner over time (Ballarino and Checchi, 2013).

A recent study by ISFOL (2016)¹⁵ shows, for instance, that one-third of Italians interviewed did not know the existence of IeFP programmes and that around 70% confounded these programmes with technical or professional institutes. The low visibility of TVET goes hand in hand with a profound social stigma towards it that started in the 1970s in Italy (see Box 4.4).

Box 4.4. The origin of the TVET stigma: The primacy of academic studies on TVET learning

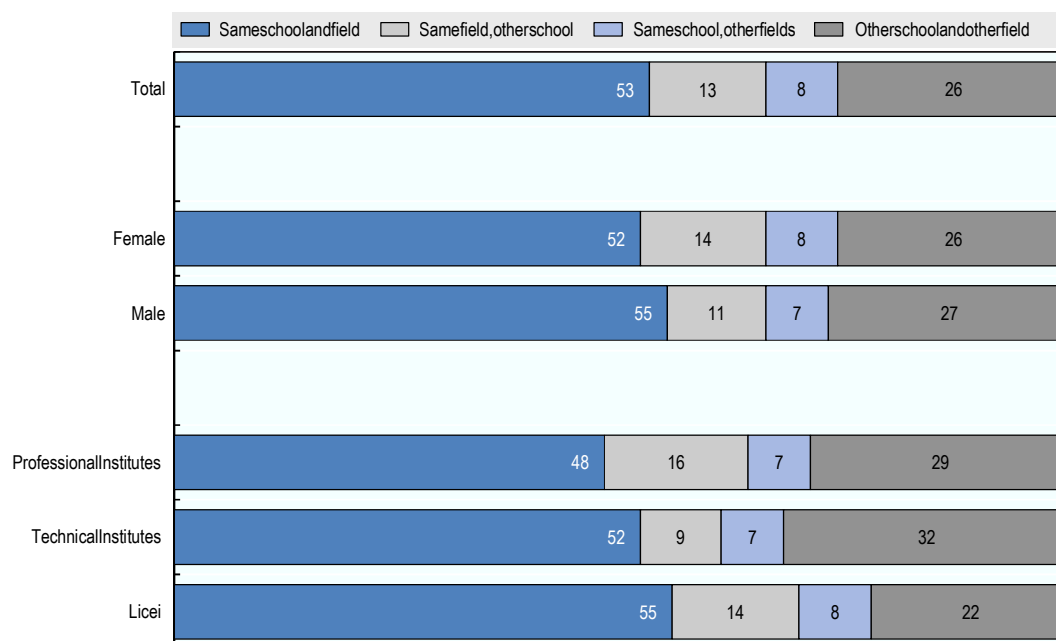
Technical institutes were established for the first time in Italy at the end of the 19th century as a response to the specific needs of a dynamic labour market where industrial production was quickly developing. At the beginning of the 20th century, the nationalisation of these private technical institutes absorbed them into the national education system. In parallel, in the 1950s, the professional institutes – three-year long programmes – were designed to target low skilled and disadvantaged youth through courses that were meant to introduce them to the labour market (the *avviamento professionale*) and whose quality was already perceived to be inferior to that of the *licei* as these would not allow to progress to tertiary education. More recently, however, bridging courses were designed so that students from the professional institutes could proceed to further education similarly to those of the technical institutes. In the meantime, the TVET programmes in the technical institutions started losing part of the TVET content in favour of an increasing emphasis on more general programmes. It is, however, only in between the 1970 and 1980s that, with the Italian economic boom and a general improvement in living standards also for more disadvantaged social classes that the number of students enrolled in *licei* started to increase relative to those in technical and professional institutes. This phenomenon is very likely linked to the ambition of working class families to emancipate from their condition through education pathways that were perceived to be of higher quality.

...and the perception of the quality of TVET programmes is still mixed

Despite the low visibility of TVET tracks, results from *Almadiploma* (2016) show that young students that are enrolled in technical and professional programmes are generally satisfied with their choice. However, the figure at average level hides significant variation across education pathways. While students in *licei*, for instance, show only slightly higher satisfaction rates than those in TVET tracks, it is interesting to notice that the share of “totally unsatisfied” – those who would change both school and field of study – varies a lot across fields of study (Figure 4.5). Unsatisfied students in technical (32%) and professional (29%) institutes are many more than in *licei* (22%).

Figure 4.5. Satisfaction towards schools and field of study

Share of students who would choose again the following options if given the chance



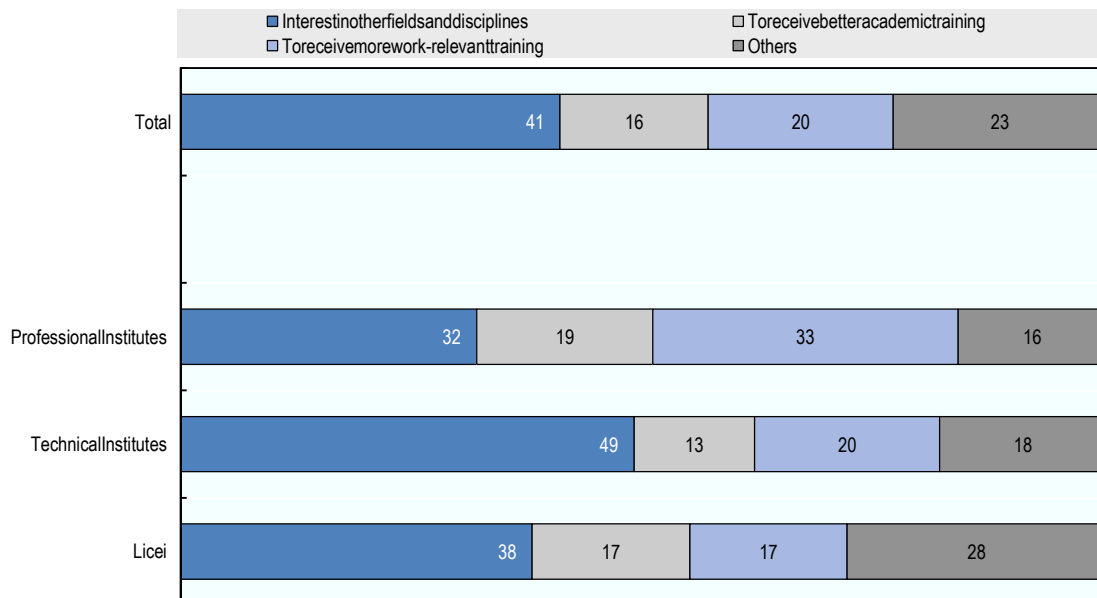
Source: Almadiploma (2016).

Almadiploma investigates the reasons behind students' dissatisfaction (Figure 4.6). Interestingly, up to 33% of the unsatisfied students in professional institutes have a negative perception of the work-related skills they have acquired during their studies.

This is worrying as work-based learning pathways such as those of professional institutes are, in principle, based on relevant hands-on activities in which students can experiment with new technologies, tools and instruments that will eventually use in their future jobs. The interviewed students are, also, rather negative about the quality of laboratories in schools. The dissatisfaction towards laboratories' infrastructures is highest in *licei* (53%) but it is also widespread among students in professional (47%) and technical institutes (46%).

Raising the quality of the work-based learning and of the infrastructures of TVET institutes is, therefore, fundamental. Several commentators among employers, in fact, argued that young Italians are too often trained on old technologies and that their work-related experience, when exiting schools, is far from being adequate to make them interesting candidates for the scarce jobs available.

In light of these challenges, the Italian Government is planning to redesign the functioning of Professional Institutes. The areas of study will pass from 6 to 11 and each school will be able to tailor the provision of courses to the needs of their local territory consistently with the priorities identified by regions. Moreover, activities in laboratory are going to be strengthened. In the first two years, more than 40% of the hours will be dedicated to teaching activities in laboratories with the idea, also, to allocate 10% of the time to personalised and work-based learning, starting in the second year of courses.

Figure 4.6. Reasons for students' dissatisfaction and decision to change school/field

Source: Alami diploma (2016).

The regional IeFP programmes target disadvantaged youth, but their visibility and status is still too low

Along with professional and technical institutes, the programmes of *Istruzione e Formazione Professionale* (IeFP – Vocational Education and Professional Programmes) are three to four-year pathways that provide vocational education. IeFP are funded by regions, autonomous provinces, the Ministry of Labour and the Ministry of Education, and supplied by public and private education providers at the secondary education level and in various TVET fields. The IeFP programmes, established in 2003 as a pilot project, are now a consolidated option in the Italian TVET panorama.

Given their regional and local design, the regional IeFP have the potential to provide tailored solutions for skills imbalances that are specific to the territory. This is particularly important in a country like Italy where economic, social and education challenges can change dramatically from one region to the other. IeFP pathways, however, face several challenges and, at the moment, do not seem to be able to fulfil their potentially important role of aligning the local supply of skills to the demands of the employers. The reasons are several.

IeFP programmes generally target disadvantaged youth at high risk of dropping out from the education system and with an irregular curriculum. This is a positive aspect of their design as this provides youth with difficulties with a second chance and it reduces the number of those who can potentially become NEETs. ISFOL (2016) shows, however, that in between 60% and 70% of students in IeFP programmes have used them as a makeshift and have enrolled without a clear objective¹⁶ and with little drive and motivation.

Apart from some exceptions, the IeFP programmes are perceived as low-quality courses. This contributes to a vicious circle that negatively selects less prepared

teachers into these tracks (see Ballarino and Checchi, 2013) and that contributes to their low-quality. Even more than in the case of professional and technical institutes, the IeFP programmes lack visibility and status.¹⁷

...and local fragmentation is a problem...

While flexibility in the allocation of funding at the local level is a potentially positive aspect of regional IeFP programmes, the fragmentation of the legislative framework contributes to the weak performance of IeFP. Standards for the delivery of IeFP courses and systems of quality assurance of education providers are not working homogeneously in all regions. ISFOL (2016) shows that while some virtuous regions have long identified a clear legislative framework, others are still in the process of doing so. This affects the overall quality of the IeFP as well as its status and visibility nationally.

With the objective of strengthening the IeFP track, the government has recently allocated additional EUR 27 million a year since 2015 to push for the establishment of a stable dual learning system in IeFP. The resources (additional to the ordinary annual funding) will come initially from the Ministry of Labour and Social Affairs but the plan envisages the active collaboration of regions in the effective management of funds to keep the important linkage with the local territory. Much of the resources will be devoted to reinforce the “*apprendistato di primo livello*” for young Italian aged 25 or below.

Apprenticeship contracts as a channel to reinforce the linkages with firms

The recent decree of 15 June 2015 No. 81 establishes new rules and definitions for the apprenticeship contracts in Italy. The main novelties are already outlined in Article 41 when reading the definition of apprenticeship. On the one hand, in fact, it is confirmed that this type of contract is to be considered as “*permanent contract aimed at training and employment*”. On the other hand, the internal articulation of two types of apprenticeships (first and third level) has been largely modified while the one related to the “professional apprenticeship” (*apprendistato professionalizzante*) has remained unchanged. The first-level apprenticeship contract has been expanded in its scope such that it not only allows to obtain a 3-year qualification, a professional diploma in IeFP as before, but also to obtain the certificate of “*specializzazione tecnica superiore*” as well as the diploma of upper-secondary education.¹⁸ If the first level apprenticeship contract has been expanded, the third-level has instead been revised to restrict and sharpen its focus to tertiary education masters, first-level tertiary degrees as well as doctorates and research activities.

As highlighted by Buratti (2015), the new normative contains an indication of the principle for which the apprenticeship should be explicitly structured so as to combine firm-level training and vocational and work-based training as depicted in the regional regulations. Importantly no contracts of this type can be activated if work-based learning tracks are not an integral part of the activities. In the intentions of the Italian Government, the new normative, more explicit on the work-based learning component, should help relaunch the apprenticeship contracts in Italy as a renewed way to promote dual vocational training in a similar fashion to the German example. That being said, the government acknowledges the potential difficulties in renewing the social status of this vocational track (Bobba, 2014) and, as such, the new apprenticeship contracts were

launched first with a pilot project. Importantly, the new normative has also drastically reduced the costs for firms to adopt the new normative so as to spur their pro-active engagement in apprenticeship. The hours spent in training by the apprentice outside the firm are, in fact, interpreted as leading to the acquisition of an education title and, as such, not paid as wage to the apprentice anymore.

Career guidance and education choices, still a family matter?

The visibility and status of different education tracks is closely related to the quality of information that students receive at school through career guidance and counselling services. That said, the orientation provided by families is equally important.

Almadiploma (2016) investigated the satisfaction of Italian students towards the career guidance and counselling support they received while in secondary school. Perhaps surprisingly, more than half of the students interviewed (56%) has a positive opinion of the counselling support they received. Satisfaction increases in technical institutes (62%) and it is the lowest in *licei* (53%).

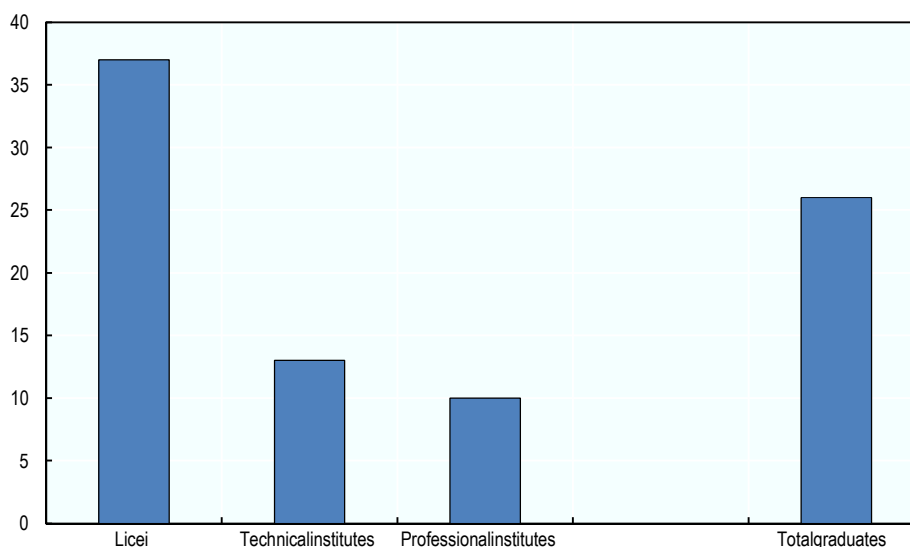
The perceived quality of career guidance in schools, however, does not immediately lead to smaller shares of *undecided* students. Table 4.2 shows, for instance, that while the satisfaction towards career guidance is higher in technical institutes it is also in those institutes that the highest share of undecided students are found (21%).¹⁹

Table 4.2. Career guidance and undecided youth

	Satisfaction towards career and counselling activities at school	Share of students who are undecided on what to do after graduation
Licei	53%	7%
Professional Institutes	54%	19%
Technical Institutes	62%	21%

Source: Almadiploma (2016).

Along with career guidance and counselling in schools, the decisions over the education of minors in Italy are strongly influenced by families. The help and support that Italian students receive from families is undoubtedly positive and important. However, an undesirable social *lock-in* effect can sometimes emerge. Evidence from Almadiploma (2016), Figure 4.7, shows that the socioeconomic and education background of families, especially in disadvantaged ones, can end up playing a far too important role in the education decisions of young students. Around 37% of students whose parents have at least a tertiary education degree choose to enrol in *licei* against 13 and 10% who choose technical and professional institutes respectively.²⁰

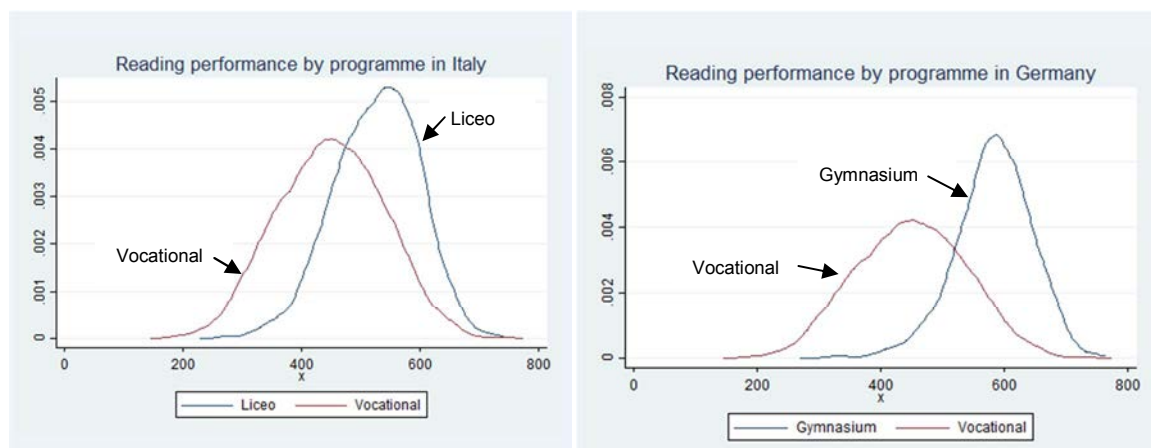
Figure 4.7. Enrolment decisions of students whose parents have tertiary degree

Source: Almadiploma (2016).

As pointed out by Ballarino and Checchi (2013), the effect of families' socioeconomic background on students' education decisions goes in two directions. On the one hand, too few young Italians from disadvantaged backgrounds tend to choose the *licei* when, instead, they would have the adequate skills and abilities to do so.²¹ On the other hand, students coming from advantaged backgrounds, and who would do better in professional and technical institutes, usually dismiss the possibility of enrolling in TVET tracks as these are perceived to be of lower quality.

In other countries such as Germany, the socioeconomic context of students' families plays a far smaller role in the education decisions at the upper-secondary level while the assessment of school teachers is, instead, predominant and binding. The differences between these two systems can have notable effects on the allocation of talent across schools and fields of study.

In Germany, for instance, the literacy skills of students who exit secondary schools and enrol in *licei* are clearly distinguishable from those of students who enter technical and professional institutes (vocational). In Italy, instead, where the socioeconomic background of families plays a much more prominent role in enrolment decisions, there is, instead, a strong overlap between the literacy skill levels of students in *licei* and those in TVET programmes (Figure 4.8). Socioeconomic background rather than merit seem to play a much more important role in Italy than in Germany when it comes to enrolment to different types of schools.

Figure 4.8. PISA literacy (reading) scores by type of education institution, 2015

Source: OECD calculations based on OECD PISA, 2015.

No system is perfect. Education decisions taken solely on the basis of families' social status can lead students from disadvantaged backgrounds – but who proved to have high literacy skills – to enrol in professional or technical institutes and not in *licei*. *Viceversa*, students with lower literacy proficiency but high socioeconomic background may be encouraged to transit to *licei* not matter what their skills are.

That being said, the enrolment of highly skilled students to TVET tracks should be generally reinforced and not discouraged by socioeconomic and status' prejudices. Families and schools in Italy should work more closely together to strengthen the orientation and counselling given to students. Similarly, the Italian Government should boost the publicity campaigns used to increase the status and visibility of TVET programmes and highlight, both among students and families, the good employment outlook of these programmes.

Eduscopio: A tool to inform families, students and teachers

If the role of families in education decision is fundamental, the dissemination of high-quality information on education and career prospects can play a key role to improve the way youth are matched to the different education pathways. Better information on career and education prospects has, ultimately, an important positive impact on reducing skills imbalances.

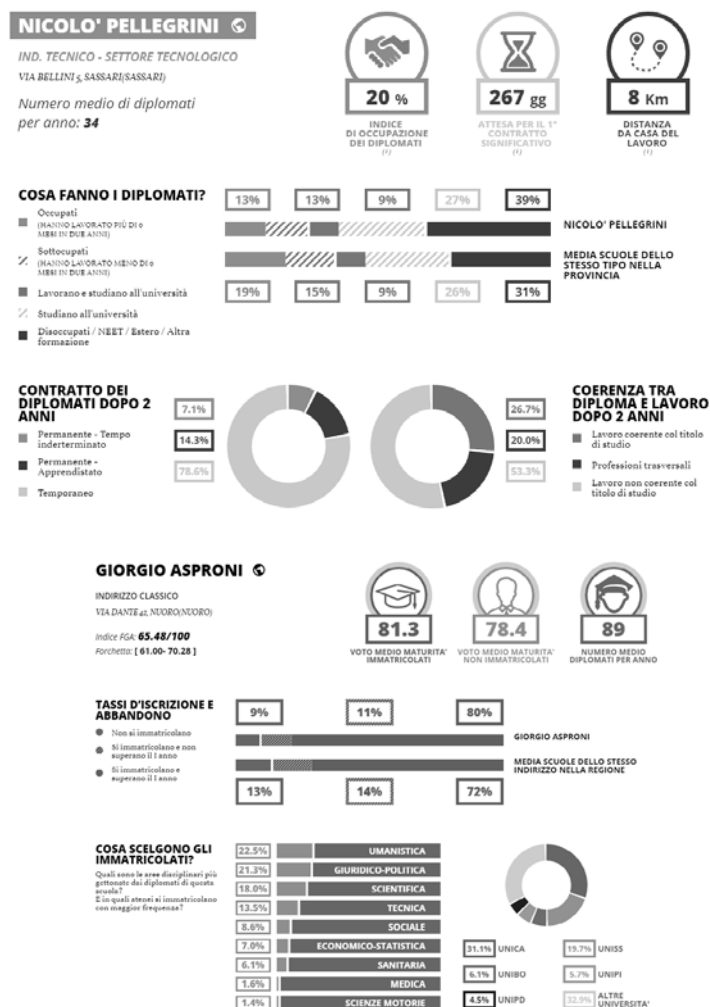
With this in mind, the *Fondazione Agnelli* launched an online tool (*Eduscopio*²²) with the goal of offering students, families and teachers simple and comparable information on schools as well as detailed statistics on how these prepare their students for the world of work.

The online tool presents a direct comparison of schools on the basis of several fundamental indicators such as the percentage of graduates that are employed,²³ the time to the first “significant” contract after graduation and the alignment between studies, qualifications and jobs' requirements. Similarly, information is provided on the grades of university students who graduated from each secondary school.

Several aspects of the *Eduscopio* web platform make it an interesting tool and a case of best practice in the dissemination of skill-related information. First, *Eduscopio*

is extremely user-friendly and it tailors the information to different users' needs, being these those of students or of adults (families or teachers) (Figure 4.9). The results presented are easy to understand. Charts and boxes are complemented with an online help tool. Second, the results are based on the analysis of administrative data. As an example, information on the number of exams, the credits earned and grades obtained by students in the first year of university are used to assess the quality of the training, the goodness of the study methods and the usefulness of guidance suggestions acquired in the secondary schools of origin. This allows for a granular representation of labour market and education outcomes of most schools across the Italian territory. Caveats to the interpretation of these data apply, however. Self-selection of students from more advantaged backgrounds to certain schools may lead to their more favourable labour market or university outcomes and *viceversa*. Data and results, therefore, needs to be critically assessed by the user as reverse causation may be an issue and bias the results.

Figure 4.9. Eduscopio data: Granular information on most Italian secondary schools



Source: Eduscopio's website.

Qualifications are too often a black-box which provides little information about graduates' skills...

Qualifications can be interpreted as the “visible” credentials through which a worker advertises her/his skills to employers. Qualifications, however, can be very weak predictors of workers’ true skills. This situation results in information asymmetries that pose severe challenges to the skills-matching process that eventually contribute to the emergence of skills imbalances.

Noteworthy, the more *qualifications* diverge from the *skills* of workers and the more it will be difficult for an employer to identify the right candidate for the advertised job. In those cases where qualifications provide weak or incorrect/incomplete information about the skills of an individual, potential mistakes in the recruiting process tend to emerge. These, in turn, lead to the suboptimal matching of workers’ skills to job requirements.

The weak signalling power of certain qualifications (e.g. how well they describe the true skills of graduates), and the imperfect recruiting decisions that can stem from it, can entail large costs for economies and individuals as they lead to lower productivity or to the need of providing additional training to workers who are lacking the skills required by their job.

Data from the OECD survey of Adults Skills (PIAAC) allows to indirectly measuring the skill-signalling power of qualifications (e.g. their strength to inform about true skills) across fields of study. This can be done by computing the share of those who are mismatched by qualifications (say over-qualified) but who are, at the same time, well-matched by (true) skills in their job. This group of workers goes under the name of “*apparently over-qualified*” (Box 4.5). High shares of apparently over-qualified signal a low signalling power of qualifications as these do not fully map into skills.

Box 4.5. Only apparently mismatched?

The reasons behind apparent qualification mismatch can be various. Apparent over-qualification (e.g. when a worker has a qualification level that is above the one theoretically required by the job but his/her skills are, nonetheless, well matched to the job requirements) may appear due to the so-called credentialism (i.e. the belief that acquiring further academic or other types of formal qualifications is the best way to signal a worker ability to do a particular job). Credentialism can work both in the supply and demand of skills. Bulmahn and Krakel (2002) argue, for instance, that employers may be tempted to inflate recruitment criteria with the idea that this will help them selecting the best candidates. Similarly, individuals may try to acquire higher qualification levels than really necessary (i.e. qualifications that bring only little marginal additions to their true skill set while, however, inflating their curriculum) if they believe these extra-qualifications to be essential to signal their skills in very tight and competitive labour markets. Apparent under-qualification may appear, instead, when workers are able to acquire informal skills and competence at work (or through experience) but these skills are only partially reflected and recognised in their formal qualifications and titles.

Source: OECD (2017), *Getting Skills Right: Sweden*, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264265479-en>.

In Italy, the share of workers who are *apparently* over-qualified is high (79%) but yet lower than in other OECD countries. The qualifications obtained in certain fields of study, however, convey better skill information than others as shown by the different shares of apparently over-qualified workers in Table 4.3.

Table 4.3. Apparent over-qualification by field of study in Italy

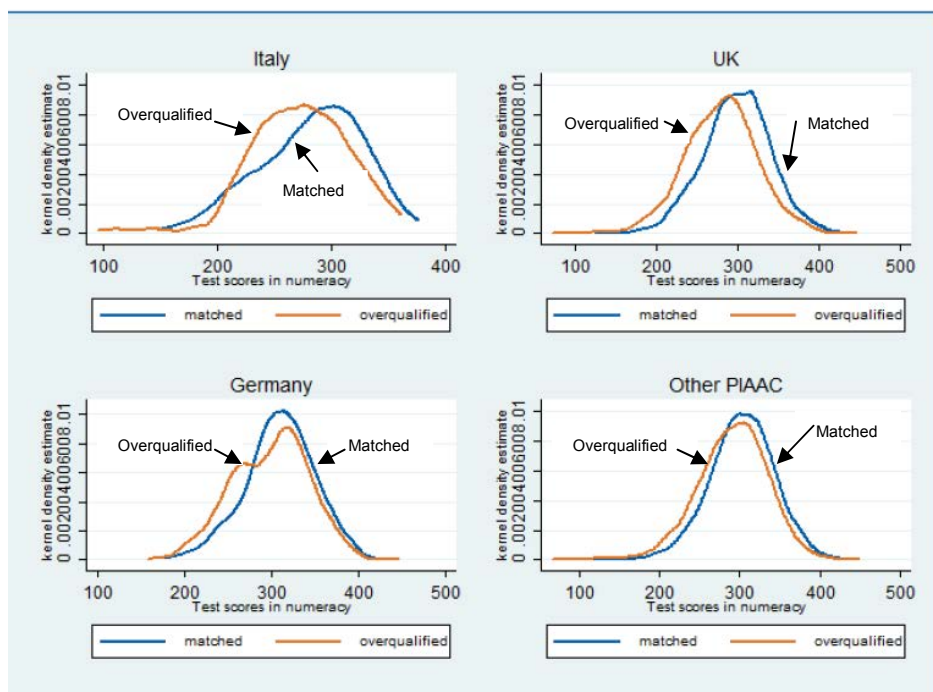
Major	Over-qualified but under-skilled	Over-qualified but well-matched	Over-qualified and over-skilled
	(%)	(%)	(%)
Teacher training and education science	0	92.3	7.7
Agriculture and veterinary	0	86.7	13.3
General programmes	5.9	85.3	8.8
Services	10.3	82.8	6.9
Engineering, manufacturing and construction	2.6	82.1	15.4
Social sciences, business and law	5.2	81.8	13
Health and welfare	0	76.9	23.1
Humanities, languages and arts	5	71.7	23.3
Science, mathematics and computing	3.3	68.9	27.9

Note: Fields of studies are ranked according to their skills signalling power starting from the weakest to the strongest.

Up to 92% of over-qualified workers who graduated from the Teacher, training and education science field are, in fact, well-matched by skills (e.g. only *apparently* over-qualified). On the contrary, less than 69% of graduates in the Science, Mathematics and Computing field are apparently mismatched and about one-quarter of workers are indeed *both* over-qualified and over-skilled for their jobs (e.g. *genuinely* mismatched).

Results highlight, therefore, that certain qualifications (e.g. teacher, training and education or agriculture and veterinary) are weak predictors of the true skills of their graduates. Crucially, the existence of these information asymmetries stemming from weak skill signalling of qualifications is among the reasons for Italian employers to revert to the use of personal or informal selection channels to hire candidates. The use of these channels is widespread and more than formal channels (see Mandrone et al., 2016 and later).

Similar results (Figure 4.10) are found by Monti and Pellizzari (2016) who show how the skills (measured as test scores in PIAAC) of over-qualified workers in Italy are lower than those who are, instead, well-matched in their job. These results highlight that much of the observed over-qualification among Italian graduates may, in fact, be only “*apparent*”.

Figure 4.10. The skills of over-qualified and well-matched university graduates

Source: Monti and Pellizzari (2016).

All in all, more needs to be done to strengthen the skill-signalling power of Italian qualifications to make them robust signals for employers. Much can be achieved by creating bridges between education providers and the world of work while, at the same time, strengthening the work-based learning component of formal education.

High-quality professional training in universities leads to better labour market outcomes

If the qualifications acquired by students in certain fields of study can be weak predictors of graduates' skills, those students who graduate from university programmes that provide high-quality professional training are well-rewarded in the labour market and are likely to quickly transit to high-quality jobs.

Figure 4.11, based on data collected by AlmaLaurea on Italian graduates²⁴ suggests the existence of several linkages between i) the quality of the professional training provided by universities in different fields of study, ii) the overall usefulness²⁵ of the university degrees in the graduate's current job and iii) the average salaries paid to workers.

First, data on students of the *laurea triennale*,²⁶ shown in Figure 4.11, highlight that students from the health and welfare, safety and defence, and teaching and education²⁷ fields of studies are those reporting the best alignment between the professional and technical training received during their studies and the skills required by their current jobs (e.g. the "quality" of the professional training). The fields of study of geo-biology, humanities and political science show, instead, a relatively weaker

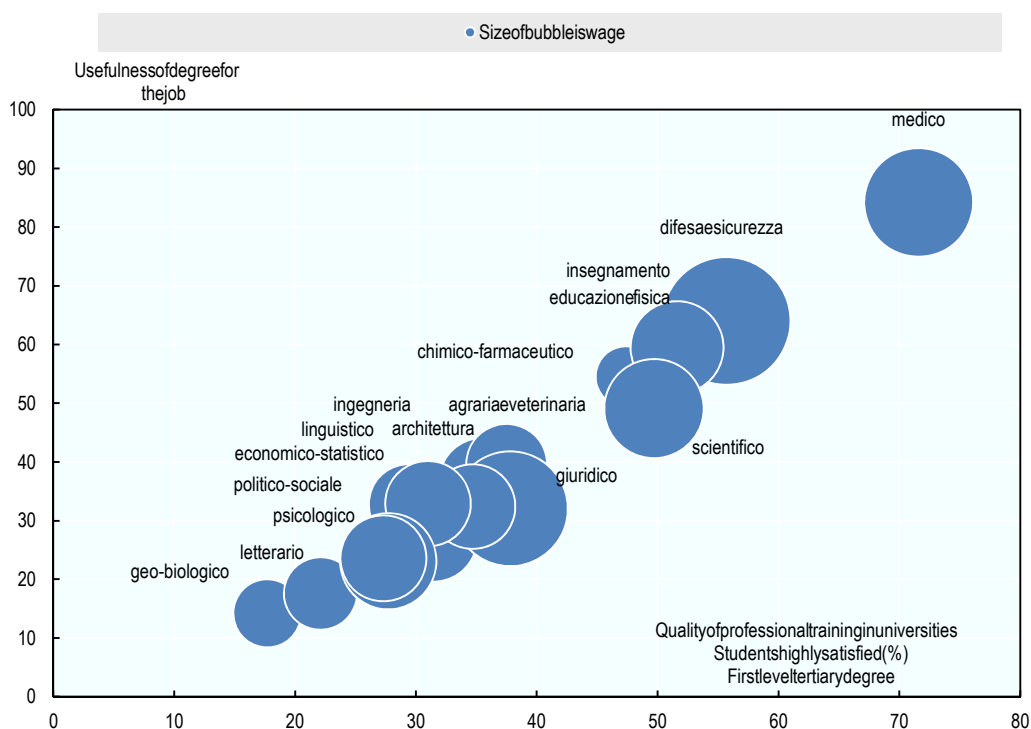
alignment between the professional and technical content of the university programmes and the skills required by employers in the job.

Second, the quality of the professional training received at university is also associated to a better opinion of students towards the overall usefulness of their degree for the job they are carrying out. This highlights a positive correlation between technical and professional education, skill use at work and satisfaction towards the degree as a tool to find employment.

Third, all the dimensions mentioned above (i.e. quality of professional training and usefulness of the degree for the current job) are positively and strongly associated with higher wages.

In a nutshell, evidence in Figure 4.11 seem to suggest that students who graduate from fields where the professional training is better tailored to the requirements of students' future jobs will also be able to extract higher value from these skills in their jobs. This situation is, in turn, also rewarded by higher salaries in the labour market.

Figure 4.11. Quality of professional training in universities, usefulness of the degree for the job and wages by field of study



Source: OECD calculations based on Almalaurea (2016).

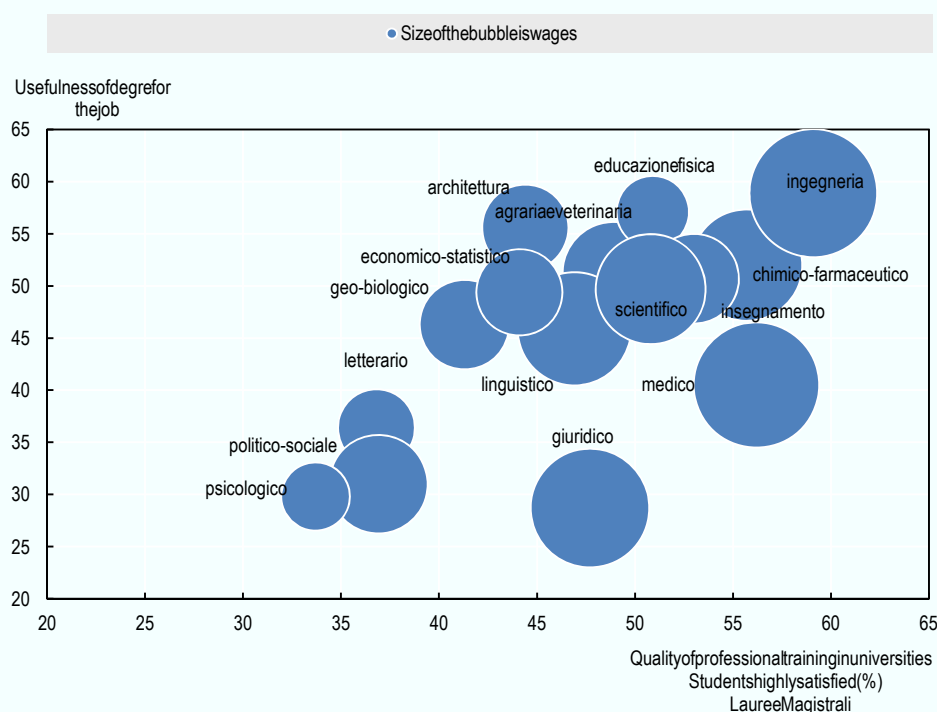
Results remain qualitatively similar when examining the students graduating from the so-called “specialistic” programmes (*lauree magistrali*) with some notable exceptions in the Health and Welfare and in the Law fields of study (Box 4.6).

Box 4.6. The 3+2 *magistrali* degree: Does it pay off everywhere?

Graduates from the *lauree magistrali* are required to complete a 3+2 years degree (where the last two years are meant to provide students with more specialised skills in their respective fields of study). A notable exception to the pattern of results found for first-level tertiary degrees is, however, found in the Health and Welfare and Law fields of study. The satisfaction towards the professional and technical skills taught in the “3+2 courses” as well as the perception of the usefulness of the study programme for the jobs decreases substantially relative to that expressed by students of first level degrees. This result seems to suggest that the two extra years of specialised training acquired in these fields do not map into a stronger alignment of those degrees to the skill needed by employers. Again, this seems to point to a skill-demand issue where the demand is not capable of absorbing the supply of high skills in specific sectors.

Villosio (2011) also argues that while choosing a 3+2 degree may lead to higher skills, graduating later in life reduces the attractiveness of a graduate relative to a similar worker with more years of work-experience. The choice of pursuing a 3+2 degree rather than a shorter one may, therefore, be not immediately rewarded by the labour market when the additional skills acquired are not work relevant.

Figure 4.12. Quality of professional training in Universities, usefulness of the degree for the job and wages by fields of study in *Lauree Magistrali*



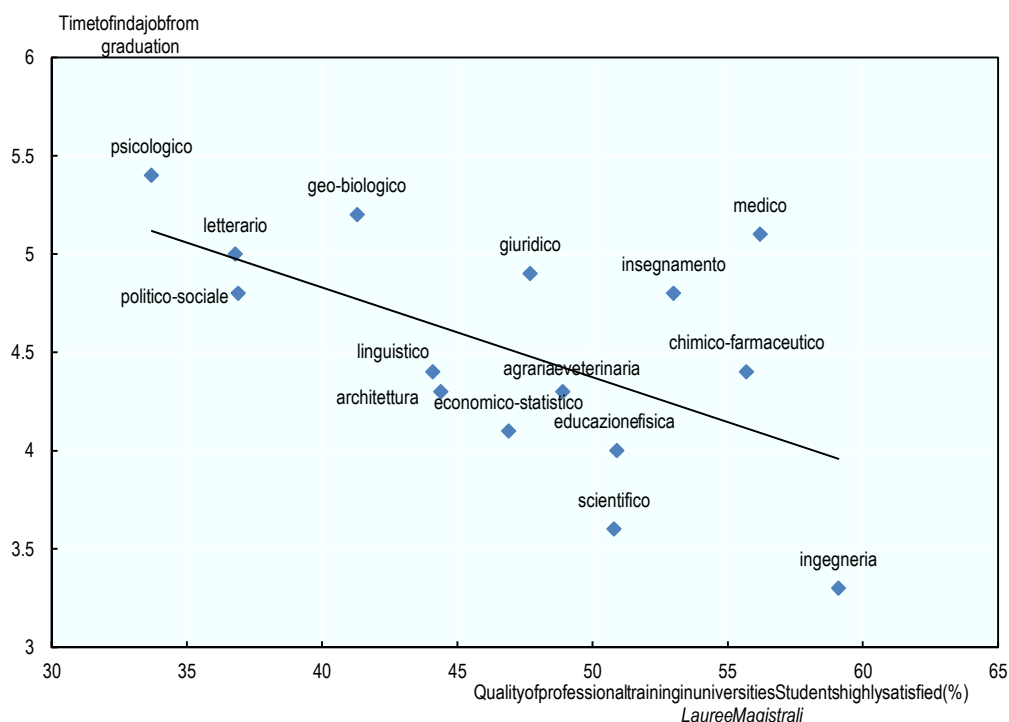
Source: OECD calculations based on Almalaurea (2016).

...and to a quicker transition to high-quality jobs...

The alignment between the professional and technical training received by tertiary graduates and the skill requirements of their current jobs is also strongly associated to a smoother transition from education to the labour market (Figure 4.13). As an example, students graduating from the engineering and chemical-pharmaceutical fields (where the content of the professional training is generally better aligned to skills requirements

in the labour market) transit to their first job much more quickly than students from the fields of psychology and humanities (where the quality of professional training provided by universities to jobs' requirement is lower).

Figure 4.13. Time to first significant job and quality of professional training in universities by field of study



Source: OECD calculations based on Almalaurea (2016).

A quick transition from education to jobs may, in certain specific cases, be masking employment in low-quality jobs, being these latter generally easier to fill. In those cases where shorter job-search does lead to low-quality jobs, these are also usually associated to workers' higher propensity to look for another job while employed²⁸ being these latter unsatisfied with the current one.

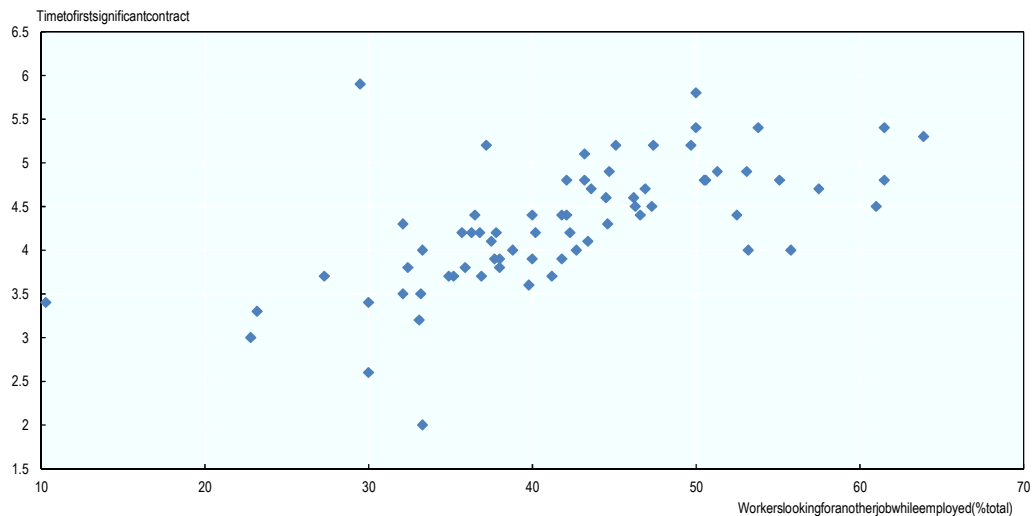
Figure 4.14 seems to suggest that this is not the case in Italy. On average, graduates who are able to transit from education to the labour market more quickly are also less likely to be looking for a job while employed (e.g. they are more satisfied in their current job). The result seems to indicate that better alignment of professional training received at university to job-requirements spurs a quicker transition to jobs that are, in fact, high quality, better and more satisfying jobs.

Worryingly, instead, graduates from universities and fields of studies where the alignment between the professional training and jobs' requirements is weaker, tend to find a job later. Longer job-search periods, in addition, do not seem to be associated to a better and more satisfactory matching in the labour market. They are, instead, associated to higher job-turnover and to lower salaries.²⁹

The picture of a strongly polarised labour market emerges. High-quality and relatively well paid jobs in Italy are scarce and these are quickly filled by candidates

who have developed the adequate skills in universities and fields of study that provide a robust alignment between skill supply and skills demanded by employers. In Italy, however, low-quality jobs are also scarce, given the relative large supply of candidates who are unemployed in the Italian labour market. The job-search and matching process for graduates who are endowed with poorer skills is relatively longer³⁰ than for better equipped students and, worryingly, this leads to low-quality jobs where the final match is poor both in terms of workers' satisfaction and wages.

Figure 4.14. Time to first significant contract and quality of the match



Note: Each dot represents the average value for students graduated in each university institution in Italy covered by the AlmaLaurea data.

Source: OECD calculations based on AlmaLaurea (2016).

Istituti Tecnici Superiori and Lauree Professionalizzanti: A bottom-up or top-down response to employers' skill shortages?

Results above show that a strong alignment between the technical and professional training provided by universities and the skills required by employers is key to spur a quicker and more stable transition from education to the labour market into better quality jobs.

The fundamental question is, therefore, that of finding ways to align university programmes to the needs of employers so as to start a virtuous circle leading to a reduction of skills imbalances and improve job-matching and workers' satisfaction.

Generally speaking, the alignment between education programmes and employers' needs can be spurred by a *top-down* approach, where the government and universities design the training programmes so as to respond to the requests of the labour market or through a *bottom-up* approach, where firms are strongly involved in the identification of training priorities for students.

Both approaches can, in principle, lead to successful results, but the challenges facing their specific implementation are extremely different. Italy is now addressing the *puzzle* related to the implementation of both approaches simultaneously through, on the one hand, the establishment of the so-called *Lauree Professionalizzanti* (professional tertiary degrees – where the government and universities take the lead in

the design of programmes to satisfy labour market needs) and, on the other hand, the creation of the *Istituti Tecnici Superiori* (Higher Technical Institutes – ITS, where the firms play a key role in the provision of training for their own needs).

***Istituti Tecnici Superiori* (ITS): A bottom-up response to skills imbalances**

ITS are meant to provide short-cycle vocationally-oriented tertiary programmes to prepare students for a quick transition into the labour market through the development of work-relevant skill. The novelty brought by ITS to the Italian education panorama is the strong bottom-up involvement of firms and employers (see Box 4.7) in the design of curricula as well as in the provision of internships periods that form integral part of the education programme. ITS courses are implemented with a strong focus on local needs and individualised training routes.

Box 4.7. ITS: Involving many towards one goal

Around 75 ITS foundations were active in 2015 in Italy delivering 349 education pathways and 7 838 students admitted to the courses. In 2015, the 75 Italian ITS involved around 1 335 partners of whom 509 companies, 248 Secondary Institutes of grade II, 188 training agencies, 132 local authorities, 68 university departments, 42 scientific and technological research institutions, 27 employers' associations, 23 professional orders, 11 chambers of commerce, 6 trade unions, 3 banks, 3 foreign partners and 75 other entities of a different nature.

Source: Cartellette INDIRE.

ITS foundations operate across multiple technological areas. The highest number of ITS (30 ITS, 40% of the total) belongs to the area of new technologies for the made in Italy which operates mainly in the context of the agri-food area (12 ITS) and of the mechanical production and mechatronics (11 ITS). The technological area of sustainable mobility (13 ITS) is followed by that of energy efficiency (11 ITS), innovative technologies for cultural heritage and activities - tourism (10 ITS), technologies of information and communication (6 ITS) and new technologies of life (5 ITS).

ITS foundations are autonomous entities established by a mix of public and private institutions. The tight links with the world of work are evident in the high number of firms (on average 25%) among ITS' founding partners as well as in the number of teachers (38%) delivering the training who directly come from firms.

The involvement of firms in education and training is most useful when these set goals, priorities as well as assessment criteria and quality assurance of the programmes. When partnerships are designed this way, students can, not only acquire skills that are truly required in the labour market, but also have them assessed and certified by firms so that these become credible qualifications spurring skill matching and labour market mobility.

Aligning training and skill needs from the bottom, a problem of coherence...

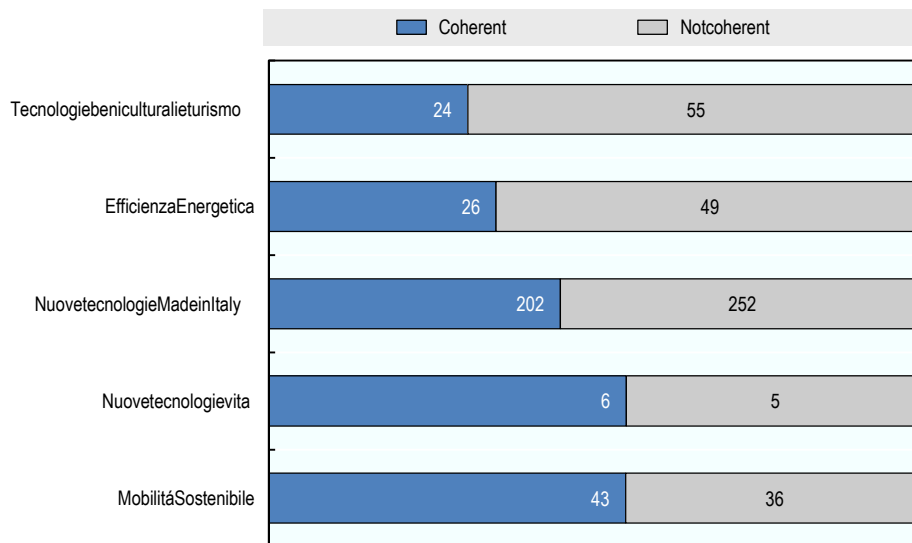
Many commentators argue that one of the peculiar strengths of the ITS lies in the flexible design of their programmes that allows employers to continuously monitor their needs and adjust education programmes accordingly. As an example, the

approach taken in Emilia Romagna in the area of the mechatronics led to the decision of carrying out strategic foresight analysis of the regional skill needs over the short and medium run which then fed into the design of the ITS training programmes.³¹

Once skill priorities are identified by firms, however, much still needs to be done to ensure that training programmes truly lead to the development of the skills that are (and will be) needed by employers. Probably one of the most important steps towards achieving a coherent alignment of training programmes to firms' skill needs is the design and implementation of effective internship periods where students can get valuable hands-on work experience that will be crucial for their future career.

A national decree establishes that ITS foundations operating in a specific technological area should be assigned several NACE³² codes within which the ITS should activate internships or apprenticeships contracts. The rationale behind matching ITS areas to NACE codes is that of fostering the creation of internships in firms whose technological characteristics are truly aligned to ITS programmes and avoid, instead, the promotion of internships in firms that provide non-relevant work-experience to students. Data from INDIRE³³ (2013) in Figure 4.15 shows, however, that the coherence between ITS technological areas and internships is not always ensured. Internships are, most of the times, incoherent to the assigned NACE code.

Figure 4.15. Share of coherent and non-coherent internships by ITS technological area



Source: INDIRE (2013).

By crossing information from INDIRE (2013) and ITS' graduates labour market outcomes (Almalaurea, 2016) it is possible to extract a partial³⁴ indication on the importance of strengthening the coherence between internships and ITS' technological areas to develop of truly relevant internships paths.

Figure 4.16 shows, in fact, that the coherence of internships to NACE code³⁵ (e.g. the share of internships activated in firms operating in areas that are close to the ITS technology programmes) seems to be positively associated to better labour market outcomes (employment rate) of ITS graduates.³⁶ The lowest coherence in internships is in the *Efficienza Energetica* area. This is also the area showing the lowest employment

rate (51%), well below the average of 72% for all ITS. The area of *Mobilità Sostenibile* shows the highest share of coherent internships as well as the second highest employment rate (76%) after that of *Nuove Tecnologie della vita* (84%), areas where, however, the coherence of internships remains relatively low (29%).

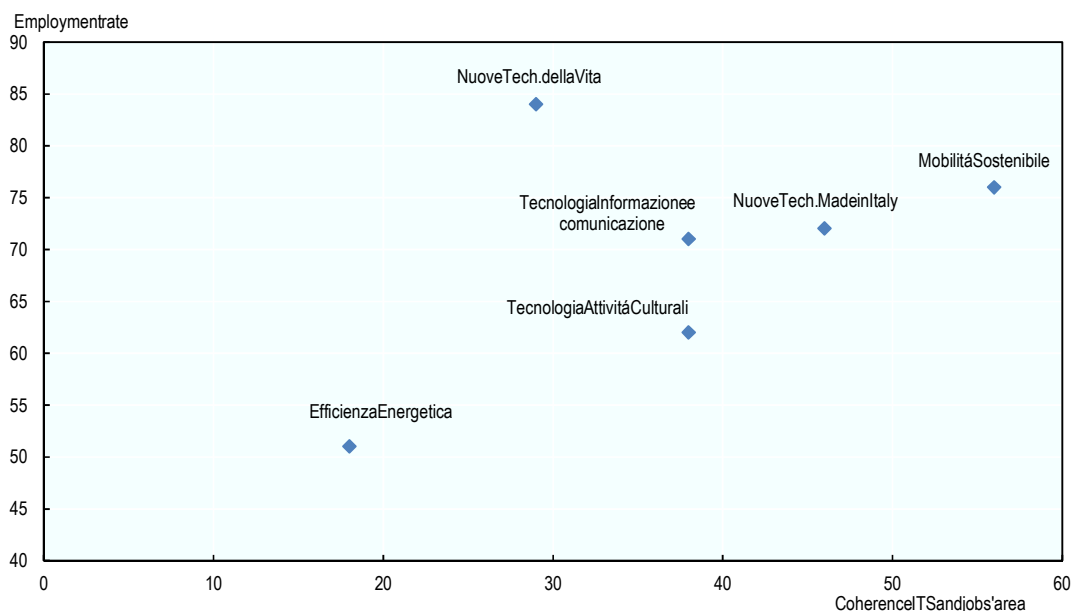
Box 4.8. Coherent or incoherent internships?

The incoherence between the NACE code and the internship has been used as an indicator of the weaknesses of the training programme. This criteria has been challenged by several ITS representatives under the assumption that the NACE classification is outdated and that it does not fully reflect the complexity of the Italian productive system today. The argument is that, in many instances, the internships proposed in a specific technological area aim to develop transversal skills and they can, therefore, be carried out in firms that do not belong directly to the NACE associated to the specific ITS. Apparently incoherent internships, in the opinion of some ITS commentators, still ensure a coherent and effective training and work-based learning.

Other commentators, however, argued that the matching between fields of studies and some internships can yet be improved in many areas and that some ITS have been created with weak linkages to real firms' needs.

All in all, Italy needs to strengthen its support to ITS by developing more granular criteria for the assessment of the coherence of their internships periods with their underlying ITS technological area. This could be done, perhaps, through the use of an updated classification system whose criteria are recognised by all stakeholders involved. Providing this support is key for two reasons. First, it can help ITS streamline their activities and place students in increasingly better-quality internships programmes, more aligned to the needs of the labour market and to the ITS technological areas. Second, developing an enhanced and more granular set of criteria to measure the alignment of internships paths to the ITS education programmes is important as this can help assess ITS' outcomes and link the funding decisions to robust and shared criteria. The coherence of internships to the NACE is currently used as one of the criteria to allocate funding to ITS.

Figure 4.16. Coherence of ITS internships to programmes' technology area and employment rates

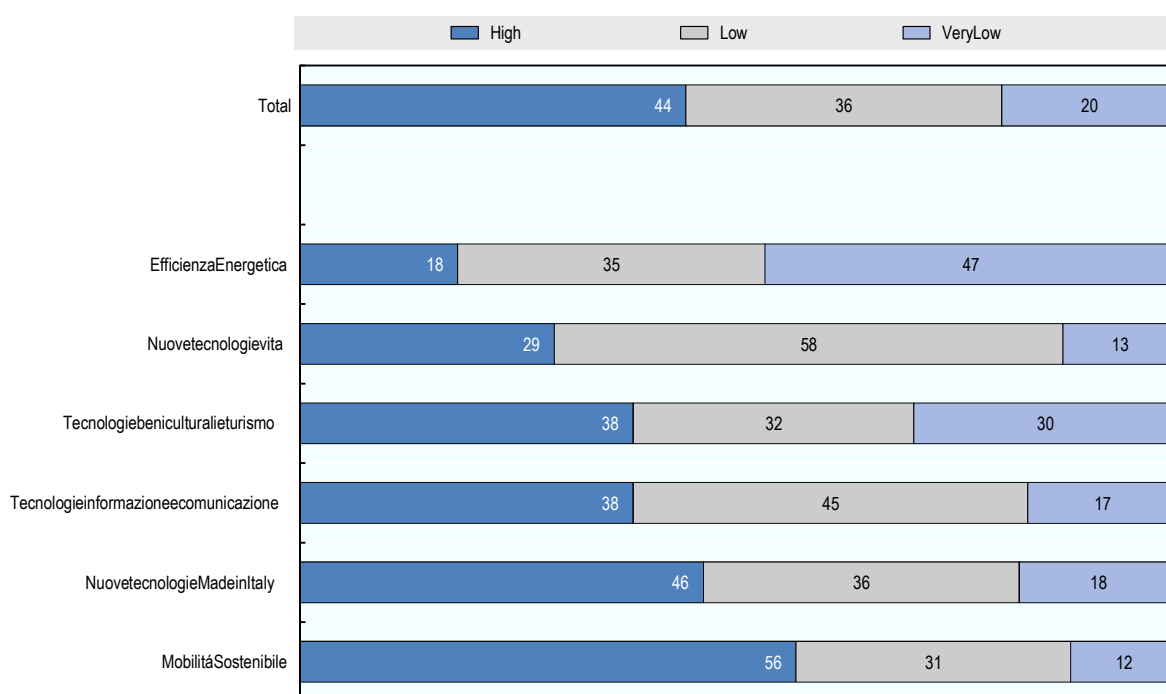


Source: OECD calculations based on INDIRE (2016) and Almalaurea (2016).

...which can potentially affect training and labour market outcomes...

Other dimensions seem to suggest that ITS in certain technological areas do better than others both in terms of the coherence of the training provided and in terms of employability results.³⁷ Data from Almalaurea (Figure 4.17) show that students in the area of *Efficienza Energetica* declare the lowest match between the skills developed during their ITS studies and those required by their jobs. Graduates from the *Mobilità Sostenibile* area, instead, report the highest match between skills developed in ITS and those used in their job one year after graduation.

Figure 4.17. Coherence between ITS technological area and current job

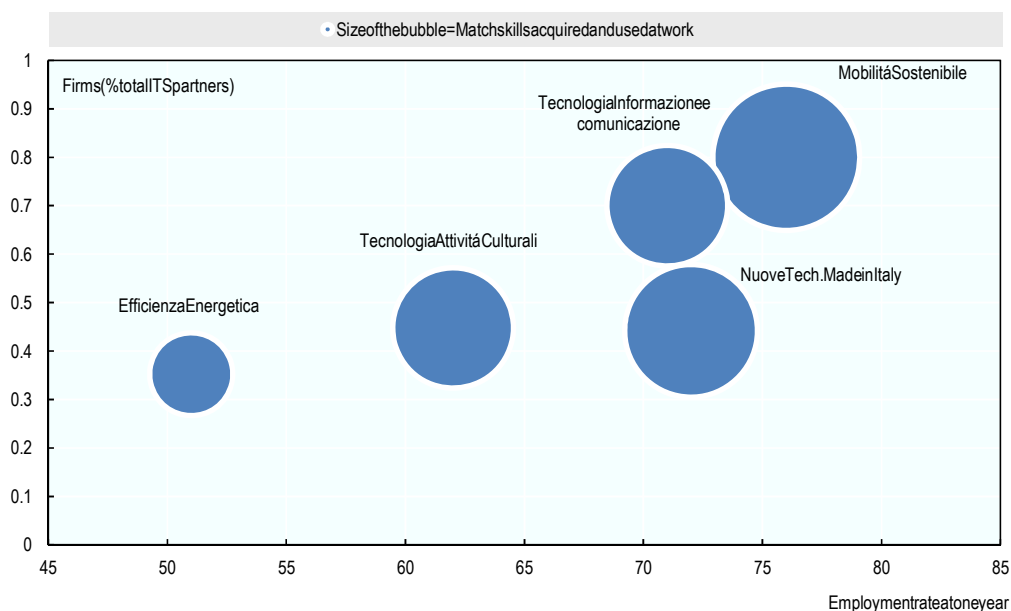


Source: Almalaurea (2016).

One possible reason behind the stronger performance of certain ITS relative to others may be found in their organisational structure and in the number of firms participating to it. INDIRE (2013) collects data on the average number of firms among the founding members of each ITS by technology area.³⁸

Preliminary evidence in Figure 4.18 seems to signal that, on average, ITS foundations in areas where the engagement of firms is stronger show a better alignment between the skills of its graduates and those required by their jobs. In addition, those ITS also show brighter labour market outcomes in terms of employment rates.

Figure 4.18. Involvement of firms in ITS structure, employment rates and match between skills acquired and used at work



Source: OECD calculations based on INDIRE (2013) and Almalaurea (2016).

As an example, the area of *Efficienza Energetica* and *Tecnologia and Attività Culturali* show a relatively low engagement of firms in the establishment of the ITS (measured by the share of firms over the total ITS partners). These areas also show lower employment rates and a more negative opinion of graduates towards the alignment of the skills they acquired and their usefulness at work.³⁹ Results seem to suggest, therefore, that increasing the presence of firms among the founding partners of the ITS leads to better outcomes under many key dimensions such as employability skills alignment/use at work and graduates' satisfaction.

Having too many founding partners, however, may create co-ordination issues. The assessment of ITS made by INDIRE (2013) highlights that one of the major weaknesses of ITS foundations lies in their governance structure. The flexibility and responsiveness of the training offer can be hindered, in fact, when agreement on education targets and skill priorities has to be reached within an enlarged board of directors. INDIRE (2013) also points out that bureaucracy is a hurdle to ITS management as foundations typically have a complex legal and administrative status which can, sometimes, even undermine their autonomy. On top of that, as of now, every ITS can develop different funding and accounting strategies.

While a certain degree of flexibility in the management structure of ITS is certainly positive, the absence of a national framework guiding the functioning and structure of ITS foundations can lead to the creation of a fragmented system with varying experiences and capacity at the national level. The Italian Government should, therefore, provide clearer guidance to streamline the normative behind the establishment and functioning of ITS foundations with the aim of ensuring the same efficacy of the foundations across the whole national territory.

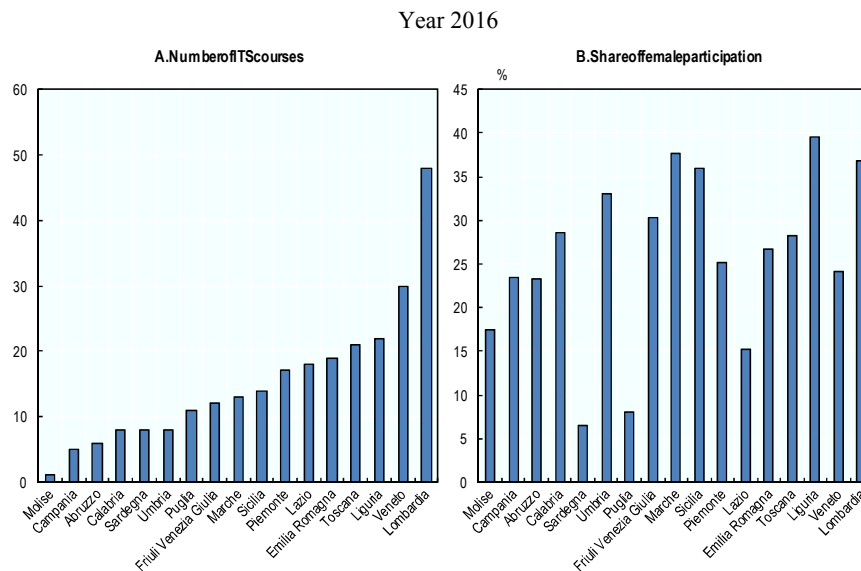
ITS are too small and concentrated in certain geographical areas: Visibility remains an issue

ITS represent an extremely interesting innovation in the Italian TVET panorama but they are, as of now, a small reality. Too few students enrol in ITS each year and the number of graduates that ITS are able to produce is not sufficient to fill the skill gaps that Italian employers are facing in specific technical areas. ITS are also an experience that is geographically concentrated in Italy's most industrialised regions.

The geographical concentration of ITS foundations is not surprising and it is directly related to the well-known North-South economic divide. Commentators highlighted that it will be difficult for ITS to grow in number (while keeping their efficacy and nature) as the Italian productive fabric (mostly small enterprises) is not fertile to such experiences everywhere across the national territory. That being said, the new industrial reform *Industria 4.0* (see Chapter 5) could potentially unlock the productive potential of southern regions and spur both economic convergence and stronger skill demand to be filled through the creation of new ITS also in economically lagging regions.

Challenges remain in increasing the status and visibility of ITS however. Around 59.2% of ITS students have completed a technical upper-secondary degree with final marks that are slightly above the average of their peer students in technical institutes but yet largely below those of students from *licei* who then continue to university. Needless to say, students proceeding from *licei* or with a university background are extremely rare among those who choose ITS.⁴⁰ Women's participation is also extremely low (Figure 4.19). This disappointing result is related to the cultural and social stigma towards technical training which is especially strong among women. Drop-out rates are also considerable (22.3%). Against this backdrop, the MIUR has recently decided to increase the resources to ITS and to allocate part of such increase to strengthen national campaigns to increase their attractiveness among students.

Figure 4.19. The offer of ITS courses remains concentrated in most industrialised regions with low female participation



Source: Banca dati ITS, INDIRE, MIUR.

Lauree Professionalizzanti to fill the gaps?

As mentioned, ITS are a small reality in the Italian education panorama and, taken alone, these will not be able to fill the skill needs of Italian firms in several key technical areas. While some commentators argue that ITS should be accompanied by other education programmes of similar nature, the challenge is that of providing new options in the tertiary education landscape that can effectively bridge between education and labour market needs.

The *Lauree Professionalizzanti* (tertiary degree programmes designed by universities with a strong work-based component⁴¹) have been recently proposed by the government⁴² as a possible solution to fill the skill needs of employers in different areas where skill shortages have emerged.

Striking a good balance between the need to support the development of ITS and that of strengthening the education system with a more varied TVET offer at the tertiary level is a complex task. Some commentators suggest that universities and ITS should work more closely together and that the former could redirect students that are not performing well to ITS to provide them a second chance. This strategy poses major co-ordination challenges and it is likely to lead to a potentially negative perception towards ITS. Both aspects are undesirable.

Other critics of the *Lauree Professionalizzanti* argue that their implementation will likely repeat the unsuccessful experience of the so called “*specialistic degrees*” (*Lauree Magistrali 3+2*) and, on top of that, that the new offer at the tertiary level will also distort the incentives to enrol in ITS. There are reasons to believe that the *Lauree Professionalizzanti* may not achieve their challenging objective especially if a strong bond between university and firms – stronger than the one experienced in the past – is not established effectively.

The success of this experiment, in fact, calls for the creation of strong links between universities and employers from the very beginning. While much needed, these linkages have emerged only in sporadic cases so far. Among the reasons of past failures, the lack of dialogue between tertiary education institutions and the world of work and the difficulties of integrating technical and professional programmes into tertiary academic programmes, these latter usually favouring theory over practical and hands-on teaching and learning.

Monitoring the creation of linkages between universities and firms will be key to assess the success of the *Lauree Professionalizzanti*. As it stands now, the decree that establishes the creation of these tertiary programmes foresees the accreditation only to those institutes for which 80% of graduates will be employed one year after graduation. The decree, however, does not clearly identify the strategy and tools through which the complex collaboration between universities and firms should be initiated and strengthened.

Italy needs younger teachers with up to date skills and stronger knowledge of the labour market

Other, more general, challenges relate also to the disconnect between university teaching staff and the world of work as only few university teachers have up to date technical and professional experience. Achieving the goal of increasing the ties between education providers and the world of work requires rethinking the functioning

of the Italian education system from primary to the tertiary level. Much needs to be done, for instance, to upskill Italian teaching professionals at all level so that these can be able to meet the challenges of the future of work.

The *Buona Scuola* reform has recently put efforts to potentiate schools and to increase investments in training for teachers and school principals. Substantial challenges remain, however. Teachers in Italy are old and much older than in other OECD and EU countries (Table 4.4).

Table 4.4. Teachers' average age by education programme in Italy

Sex		Primary education (ISCED2011 level 1)	Total secondary education (ISCED2011 levels 2 and 3)	Total tertiary education (ISCED2011 levels 5 to 8)	Upper secondary general education (ISCED2011 level 3 programme 4)	Upper secondary vocational education (ISCED2011 level 3 programme 5)
Less than 30	Total	0.5	0.3	1	0.2	0.2
	Women	0.5	0.2	1.4	0.1	0.2
	Men	0.7	0.6	0.8	0.3	0.2
Less than 40	Total	9.6	8.9	16.2	6	7.6
	Women	9.5	9	19.7	6	8.3
	Men	11.6	8.4	14.1	5.8	6.4
30 to 39 years	Total	9	8.5	15.2	5.8	7.4
	Women	9	8.8	18.2	5.9	8.1
	Men	10.9	7.9	13.3	5.5	6.2
40 to 49 years	Total	32.5	26.3	30.2	25.1	23.2
	Women	32.7	28.2	34.3	26.7	25.3
	Men	29.2	21.3	27.8	20.6	19.6
50 to 59 years	Total	41.9	45.5	30.2	51	50.7
	Women	42.1	44.7	29.1	51	50.4
	Men	36.8	47.4	30.8	51	51.2
60 and over	Total	16	19.4	23.4	18	18.5
	Women	15.7	18.1	17	16.3	16
	Men	22.5	22.9	27.3	22.5	22.8

Source: OECD.stat.

Only 10% of teachers in primary education are aged 40 or less. Around 9% and about 16% in secondary and tertiary education respectively are also less than 40 years old. Numbers in upper-secondary education are even lower, with more than half of the teachers being in between 50 and 59 years old. The relatively old age of teachers represents challenge as these may lag behind the fast developments of new technologies and of labour market needs. In addition, in Italy, the large share of relatively old teachers discourages youth to become teachers as their career progression and wages are not attractive.

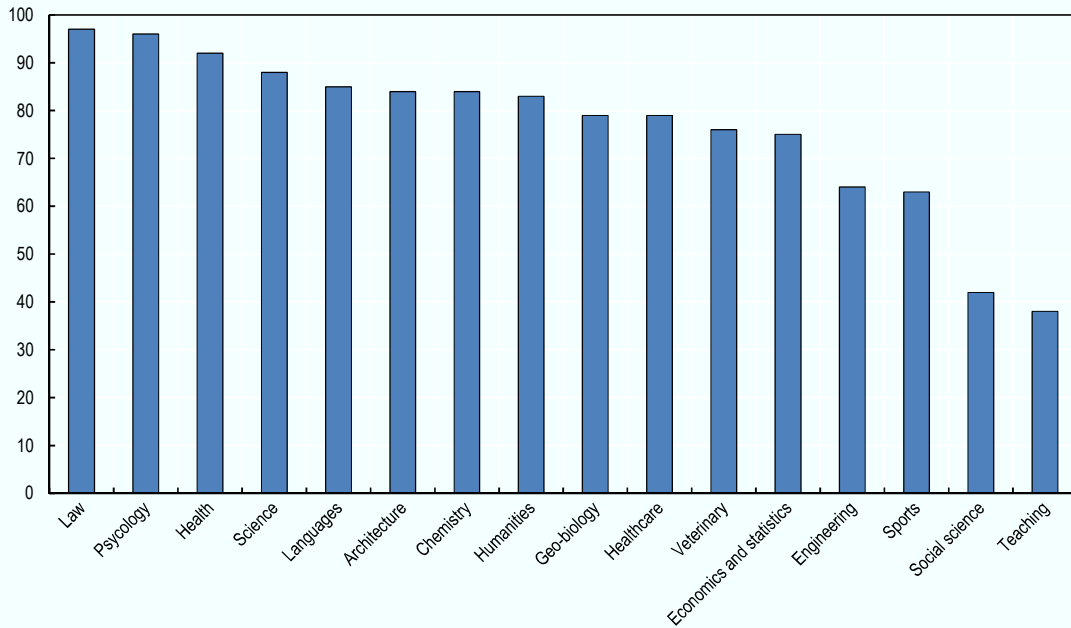
Data from Almadiploma (2016) show that up to 62% of upper-secondary students enrolling in tertiary education in the teaching field of study are not happy with their choice (see Box 4.9).

Much of the negative perception of young Italians towards careers in teaching professions may be linked to the fact that graduates working in the education sector end up in workplaces that are not innovative (Figure 4.21) or stimulating.

Box 4.9. Teachers: Satisfied with your field of study?

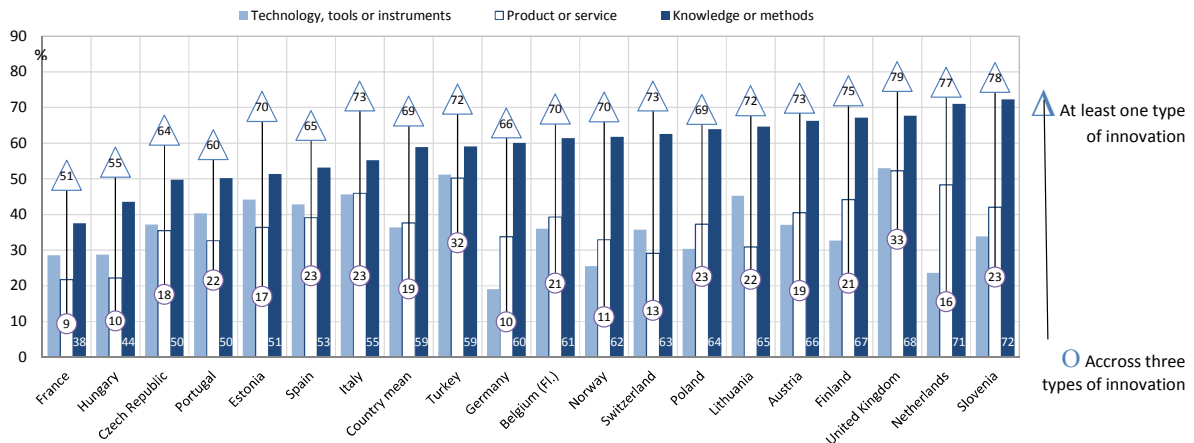
Interestingly, dissatisfaction towards the choice of field of study in the teaching area does not seem to be directly related to its poorer labour market outcomes (which is similar to that of other field of studies) but, possibly, to a more complex set of reasons. Students enrolling in the area of Law or Psychology face similar labour market prospects than those in the Teaching area but, differently from this latter, the satisfaction for their choice is relatively high. Weak career progression, low wages and poorly innovative workplaces may be at the core of such discontent.

Figure 4.20. Share of upper-secondary students satisfied with their choice of fields of study in tertiary education



Source: Almadiploma (2016)

Figure 4.21. Education professionals in highly innovative workplaces, by innovation type and country
Percentage of graduates working in the education sector who perceive their workplace as highly innovative, 2005 or 2008



Note: Data are ranked in ascending order of the percentage of graduates who perceive their workplace in education sector to be highly innovative for knowledge or methods innovation.

Hungary, Lithuania, Poland, Slovenia and Turkey refer to HEGESCO (2008). Austria, Belgium (Flemish Community), the Czech Republic, Estonia, Finland, France, Germany, Italy, the Netherlands, Norway, Portugal, Spain, Switzerland and the United Kingdom refer to REFLEX (2005).

Source: Figures 1.3, 1.5 and 1.7 from OECD (2014), *Measuring Innovation in Education: A New Perspective*, Educational Research and Innovation, OECD Publishing, Paris, <http://dx.doi.org/10.1787/9789264215696-en>.

Low wages and issues related to the geographical mobility of teachers remain among the well-known and long-standing problems of the Italian education system. Around eight out ten teachers in Italy have been trained (and reside) in the south of the country (*Mezzogiorno*). However, only a third of the available vacancies in the education sector was advertised in that area of the country in 2016. Wages paid to teachers do not adjust for such geographical imbalances and incentives for teachers living in the South to move to the North are very thin. This creates dissatisfaction which has, in many cases, resulted in strong teachers' protests against the reforms trying to relocate teaching staff from the south to the north of the country.

All in all, the imbalances of teaching professionals at the regional level contribute to perpetuate the skill divide between the north and the south of the country. A better designed set of incentives, stronger career progression and wages can boost the attractiveness of the profession and provide teachers with adequate incentives for mobility.

Notes

1. Projections in the 2015 National Reform Programme suggest that, of all the ongoing reforms in Italy, the school reform is likely to have the largest positive impact on GDP in the long-term (Ministero dell'Economia e delle Finanze, 2015, pp. 110-111), reaching an increase of 2.6% of GDP (OECD, 2017a).
2. Internships in these institutes have been already in place for a long time.
3. See “Attività di Alternanza Scuola Lavoro: Guida Operativa per la Scuola”, MIUR.
4. The guidelines suggest to consider reports from ISFOL, ALMALAUREA and others from, for instance, UNIONCAMERE and Excelsior.
5. Some commentators also argue that the recent selection process that led to the hiring of a substantial number of teachers within the Buona Scuola reform has culpably neglected to assess some of those teachers on, among other criteria, their knowledge of the labour market dynamics which would have proven to be essential for the implementation of the Buona Scuola itself.
6. The guidelines to the implementation of the ASL reform also mention that the work-based learning activities should be based both on students' aspirations and labour market analysis of firms' skill needs.
7. For a definition of SAA exercises see OECD (2016).
8. These are networks of public and private local stakeholders.
9. See MIUR, http://www.istruzione.it/alternanza/formazione_docenti.shtml.
10. In the initial phases of the implementation of the ASL reform, Italian firms have been required to pay a fee of EUR 150 to enrol in the national registry of the ASL. The fee has now been dropped.
11. <http://scuolalavoro.registroimprese.it/rasl/home>.
12. Firms but also social partners interviewed by the OECD secretariat during several meetings in Italy.
13. Mostly within the activities of the school council (*consiglio di classe*). In other contexts such as in Germany, the involvement of firms in such assessment is more profound. Final exams, for instance, are run directly by firms that are also bearing the associated costs.
14. Results (not shown) also highlight that students' satisfaction is higher in those institutes where the work-based learning activities are more diffused and better established.
15. Istruzione e formazione professionale A.F. 2014-15.
16. <https://servizi.anpal.gov.it/approfondimenti/Pagine/Il-sistema-di-IeFP.aspx>.

17. ISFOL (2016) shows, for instance, that the possibility of moving from and to an IeFP without having to take specific exams, by using bridging programmes (*passerelle*) is unknown by most people.
18. The age of first-level apprentices is between 15 and 25 years and the maximum duration of the contract is three years to obtain a qualification or four for the professional diploma.
19. A similar inverted relationship can be found for professional institutes and *licei*.
20. A similar pattern applies to students coming from advantaged socioeconomic backgrounds with higher income levels who are more likely to enrol in *licei* than in TVET programmes.
21. This hinders also their possibility to progress into further education at the tertiary level.
22. <http://eduscopio.it/>.
23. Those who have worked for more than six months in two years. <https://eduscopio.it/dati-e-metodologia>.
24. The sample refers to graduates interviewed one year after completion of their three-year first level degree (*laurea di primo livello*) in Panel A and to graduates of the 3+2 specialistic (*Magistrale*) in Panel B degree who have been or are currently employed after graduation.
25. Usefulness is defined as both the importance of the specific degree to find a job and the use given to the skills acquired during education in the actual job.
26. First level three-year tertiary degree.
27. The classification of fields of study used by Almalaurea is slightly different from the one in the OECD Survey of Adults Skills.
28. Searching for a new job while employed is one indicator of low job satisfaction as well as of potential mismatch.
29. Results are correlation and should not be interpreted as referring to a direct causation between time spent looking for a job and the willingness to look for another job. However, data seem to point to a strong positive association between the two dimensions.
30. Probably due to the resistances of graduates to accept low-quality jobs.
31. The foresight effort done on Emilia Romagna's labour market heavily involved the firms in the territory with the objective of identifying skills priorities and how the introduction of new technologies would/could impact the productive structure of the region and skill needs altogether.
32. ATECO in Italian. The need of establishing coherent internships is established by the MIUR-MLPS decree, 7 September 2011.
33. INDIRE is the institute that assesses the performance of ITS under several aspects and that manages funds allocation to ITS.
34. Data on this issue are scarce and results should be taken with caution.
35. Share of coherent internships established in each technological area.
36. This is measured at one year from the completion of the ITS programme.

37. Data are scarce and results should be taken with caution.
38. Institutions other than firms can be founding members of the ITS foundation
39. Not surprisingly, these are also the areas where the overall satisfaction of students is lower as shown by Almalaurea (2016).
40. Some 35% of ITS students has been employed in the past but is unemployed at the moment of enrolling in ITS. This signals the fact that ITS may be used as a form of retraining or up-skilling by unemployed and that this can potentially play an important role in aligning the skills of the unemployed to labour market needs.
41. The *Lauree professionalizzanti* are foreseen to be three-year programmes where one year will be devoted to traditional university programmes and the remaining 2 years will be devoted to technical studies (in labs) and to work-based learning in firms.
42. A recent decree signed by the new Italian Government on the 12 December 2016 established the *lauree professionalizzanti* as a pilot project for the year 2017.

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