

# STUDENTS' SKILLS AND COMPETENCIES IN HIGHER EDUCATION SYSTEM AFTER THE INTRODUCTION OF THE INNOVATION IN THE DIDACTICS FOR THE NEW COURSES IN ITALY

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**ABSTRACT:** The aim of the paper is to describe how the role of the University system has been redefined in Italy with the national regulation that has enhanced the interactions between the knowledge and the economy, in particular about the innovation in the didactics. It became compulsory for the University courses to take advice in advance from the local labour and professional market. The national regulation has been directed to the attenuation of problems as the transformation of the students' population, the coexistence between study and work and the gap between the students' skills and the needs of the labour market, raised since the increasing demand in higher education: in particular a standing advisory committee, "Comitato di Indirizzamento", is the new available instrument to monitor and redefine students' curricula as an up-to-day factor. Our empirical work describes the interaction between the new courses of study and the local labour and professional market, focusing on a dataset of courses of the eleven most populated Italian Universities, available online from the national database of the Ministry of University and Research.

## 1. INTRODUCTION

Since 1980s, the change in favour of a larger access to higher education has been completed in Europe. Many countries, as Italy, increased significantly the dimensions of the system with new institutions, faculties and courses of studies (CNVSU, 2009), while other European countries operated towards federated structures (EUA, 2010). These structures could be also in Italy only now, according to the recent national regulation (art. 4, D.M. 50/2010).

The increasing demand in education brought some typical problems that have still become particularly significant: the transformation of the students' population, the extremely high rate of drops outs, the long time elapsed in graduating, the coexistence between studies and work and the gap between the students' skills and the requests of the labour market. In Italy, the periodical surveys of students' profiles examined these problems fully. They pointed out an increase in non traditional students' background: an average of 22 years and older students, 25 and more aged, became a significant population, above 10%, since the didactical reform of the academic year 2000/01 (Eurostudent, 2008).

Besides the students, that come into H.E., have already got experience in working; nearly four students in ten have a regular paid work or vocational training, but for five students in ten the job is not related to their studies at all. Moreover if their satisfaction about the learning by theory is the 62%, the satisfaction about the learning by practise is only the 33%, except for the students from the health faculties. It's remarkable that above six graduates in ten want to enrolled no more, because they are unsatisfied with working results (Ministry of Labour and Social Policy, 2009).

It's noteworthy also the gap between the offered competencies and the requests of the labour market; the expectations of the 2020s show a strong mismatch between the demands of the labour market and the students' skills. The rate of the unemployed graduates (from 25 to 34 years old) is one of the highest in Europe. The labour market demands technical experts above all from the high school and, only in the last year, the market turned toward professional high skill to face the recessive crisis (Unioncamere, 2009).

So, it became necessary to redefine the role of the University system, towards a more interaction with the technical high schools and with the changes of the labour market.

## 2. THE INNOVATION IN THE DIDACTIC TO REDEFINE STUDENTS' CURRICULA

At the end of the 1980s, in Italy the institutional strategies were directed to the attenuation of the above mentioned problems: first with sectional actions, then systematically with national strategies for the programming of the University system and the definition of three years goals (CNVSU, 2009). The role of the University system was redefined with the national regulation that enhanced the interactions between the knowledge and the economy, in particular for the innovation in the didactics. So, the first declared purpose of the H.E. is to assist the students in fitting the requirements of cultural, social, civil and economical development and the evolution of the labour market, reducing national unbalances (art. 2, Decree of the President of the Republic 25/1998). Then, with the national programme of the 2001s-2003s the interactions between the knowledge and the economy enhanced.

With the declared focus of the *innovation in the didactics* (art. 11, c. 4, D.M. 509/1999 and D.M. 270/2004), it became compulsory to take advice in advance from the local labour and professional market for the post reform University courses. A standing advisory Committee, "Comitato di indirizzamento", is the new available instrument to monitor and redefine students' curricula as an up-to-day factor (All. 1, D.M. 115/2001). The researches of Campus (Foundation CRUI, 2002) show how the University system has been put into practice the early Committees, before it became compulsory, establishing them for single courses, but also for faculties, groups of faculties or as unique committee of Atheneum. It's an instrument to let together, the academy meet the working world (trades union, chamber of commerce, professional associations, public administration and so on) with biannual or annual frequency. The function is to take advice and to plan mainly for a public accountability. The spread of this new instrument in the University system was also reported from 2002 to 2008 in the national evaluation database "Nuclei" (CNVSU-MiUR), so these Committees has been up to now established in the whole University system.

### 3. THE PLANNING ON THE NEW COURSES

Our empirical work interprets the information available online from the national database of the Ministry of University and Research about the offerings of the post reform courses at Italian Universities (<http://off.miur.it>), focusing on a dataset of the eleven most populated Universities in Italy: 1. Roma “La Sapienza” (130.277), 2. Napoli “Federico II” (87.405), 3. Bologna (84.319), 4. Torino (68.534), 5. Palermo (63.136), 6. Bari (59.574), 7. Milano (58.968), 8. Firenze (58.828), 9. Catania (58.077), 10. Padova (57.837), 11. Pisa (50.942) (source: National Statistical Office, academic year 2008/09). We have examined 720 forms filled up by the faculties of the above mentioned Universities, for planning the new courses: 1st cycle (three-year course) and one-block courses of the 2nd cycle (more of three-year as Dentistry, Human Medicine, Pharmacy, Veterinary Medicine, Architecture) of the academic year 2010/11. A specific section of the forms describes the interaction between the new courses of study and the local labour and professional market. The analysis of the contents is summarized in accordance with four areas of studies: Health, Humanistic, Scientific and Social, as showed in the Table 1.

**Table 1.** Number of new courses described in the forms filled academic year 2010/11.

Area	Number of new courses analysed
Health	87
Humanistic	114
Scientific	355
Social	164

In these four areas, the University courses take advice in advance from the local labour and professional market by questionnaires, focus groups, interviews, standing round tables, advisory Committees and so on. In the forms the formulations are often the same, but we tried to highlight the main aspects of the planning.

In the Health area the 87 forms analysed show that the labour market demands for graduates with additional skills such as the communicative ability and a very good knowledge of foreign language. The private sector suggests the introduction of specific marketing studies in the curricula (like the business management of the Pharmacy) and the public sector, as the medical association, gives emphasis to the deontological point of view and the learning of the “mistake education”. Moreover, it’s important to improve the training as a professional experience (for example a specific clinic training is provided to complete the learning by practice, in the last year of Dentistry course).

In the Humanistic area, according to the 114 forms examined, it’s important that the graduates have flexible curricula to be suited to the evolution of the labour market. So the traditional qualitative aspect of the humanistic curricula is completed with extra University experiences: stage and training. The labour market suggests a multimedia learning and the knowledge of the most advanced mass media techniques. It’s also remarkable a *forma mentis* to make plans and the problem solving.

In the Scientific area, according to the 355 forms analysed, the English language is an additional requirement to enter in the labour market (for example the Engineering lectures are delivered also in foreigner language). The work to prepare a degree thesis can be a good opportunity for the senior students to collaborate with the companies. In this way the personal learning can be enriched and brought up to date. The

professional associations demand of paying more attention to the project management, also with standing seminars. The public sector complains of a lacking in the in force regulations and the official methodology (for example for the chemical analysis).

In the Social area, according to the 164 forms analysed, the associations demand life skills as team working, competencies in reporting and deliverable for the business. It’s important the teaching by experience to reduce the gap between the University and the business, such as the analysis of *case study*, in Economy. Moreover a cross-disciplinary curriculum is appreciated in Political Science to fit the market trend and to attend stage in European organizations.

**Table 2.** Skills and competencies planning on the new courses.

Area	Students’ skills and competencies
Health	Foreigner language, communicative ability, marketing study, deontological study, training
Humanistic	Flexible curricula, problem solving, competencies in mass media techniques
Scientific	Foreigner language, competencies in planning, official methodology and regulation in force
Social	Team working, case-study, cross-disciplinary curricula, international stage.

### 4. CONCLUSIONS

The introduction of an innovation in the didactics to redefine students’ curricula shows a real interaction between the planning of the new courses of studies and the local professional market.

The described procedures range from an occasional interest in some cases, that is showed only when necessary by law, for instance by questionnaires administered to the business that agreed to the stage, to more systematic interest in others cases, above all for the regulated profession that oriented to European harmonization. But, in either case, there are no significant local experiences to track the students’ employment and oriented to identify new jobs retrospectively, new skills and competencies of the graduates and their career development, according to the rapid changes in the occupational structures.

So the role of University system has been redefined by the national regulation, but the implementation, as effort to improve the quality of the curricula and the employability of the new degrees, should ascend to a wider effectiveness.

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