

A Participative Approach to Evaluation of Graduates' Professional Outcomes

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Abstract This work discusses the professional outcomes of University of Padova graduates in academic year 2007/08. Its aim was to carry out an overall assessment of higher education professional outcomes, involving all the main actors of the learning process, students, teachers and tutors, in a perspective of participatory evaluation, to improve teaching and tutoring. The research design complements qualitative and quantitative approaches to data analysis. First, professional outcomes were analyzed according to longitudinal survey data, on a random sample of 210 graduates in Educational Sciences, interviewed within three years of obtaining their degree. The results of two parallel studies, sequential to the quantitative survey, are presented, involving 98 professors and 10 tutors in evaluation of professional outcomes. In particular, discourse analysis was applied to actors' free answers during semi-structured interviews, which focused on positive aspects and criticism of the courses analyzed, and potential improvements to them.

Keywords University Assessment, Professional Outcomes, Quali-Quant Approach, Participatory Evaluation

1. Introduction

Before the current educational system was introduced in Italy, the implementation of European Union regulations as set out in the Sorbonne and Bologna Declarations, in which changes were made to teaching autonomy at university level (Italian Ministerial Decrees 509/1999 and 270/2004), was a great challenge for Italian universities, marked as they were by continual changes and adjustments to organizational rules and curricula. The so called "Bologna Process", on the basis of voluntary cooperation, agrees and implements common objectives for the higher education systems of 47 countries; it has transformed the face of European higher education: higher education structures have been modified, quality assurance systems developed, mechanisms to facilitate mobility established, and a range of issues for the social

dimension of higher education identified. The Bologna Process has induced change at systems level through the implementation of trust building tools aimed at increasing transparency across national jurisdictions and at bringing about convergence of systems. These instruments include: the three-cycle system and the ensuing development of an overarching qualifications framework, the European Credit Transfer System and quality assurance (EACEA, 2012).

Within this process, the Italian universities have undergone profound changes, ranging from the passage *from universities of knowledge to universities of competences* (Galliani, 2011). In order to monitor training itineraries and evaluate the results of the reform (in particular employability and the quality of employment), the University of Padova, one of the largest in North-East Italy, carried out an important and extensive survey to examine the job results of graduates who had obtained their first or second-cycle degrees in academic year 2007/08. The Faculty of Educational Sciences (ES), which played an active role in the survey, took this opportunity to benefit by the survey results. The faculty research team, composed of scholars from various disciplines who are accustomed to using several methodological approaches, had a common research aim, focused to carry out an overall assessment of learning programs, putting particular attention to graduates professional outcomes, strongly oriented towards interpreting results and consequences in the organization of teaching and tutoring.

The quantitative results of the survey about the learners' careers, addressed to graduate students (phase 1 of the research design), created the necessary conditions for a qualitative study (phase 2), oriented to identify the strong and weak points of the learning programs (see Figure 1). This second phase involved various actors (teachers and tutors) of the educational process in a participatory assessment research.

2. Theoretical Framework

Nowadays both European and international interest

increasingly focused on *quality assurance*, a system for transparency and credibility in higher education for citizens, employers, students and researchers from other countries (Squarzoni& Stefani, 2011).

The model of the Bologna Process concentrated on the centrality of the person learning: this focus must remain, particularly at the moment of evaluation. This crucial position of the person who is learning turned out to be one of the most innovative and most complex aspects to achieve, in the passage between legislation and achievement in daily practice (Serbati&Zaggia, 2012). In addition, quality evaluation of university teaching takes on value if the “product” of the university is understood as a “public good”, and if the university system is considered to be a service of public utility (Zaggia, 2008), i.e., aiming at improving overall wellbeing (Carpitaet al., 2006).

This research forms part of studies evaluating the quality of higher education: specifically, focusing on its efficacy (Fabbris, 2007, 2011; Cammelli&Gasparoni, 2012) and on the link between education and graduates' jobs (Iezzi, 2011; Civardi&Crippa, 2012; Iezzi&Mastrangelo, 2012). The theoretical framework contains several interrelated issues, and is grounded on national and international literature (Biggs, 2003; Frost, 2006; Gruschkaet al.2006; Semeraro, 2006; Fabbris, 2007; Masia&Morcellini, 2009; Galliani, 2011). Although the main focus is on higher educational assessment, in particular, the professional outcomes of such education, methodological aspects are also examined carefully, according to participatory research (Battistellaet al., 2004; Bergold&Thomas, 2012; Gubrium& Holstein, 1997; Schön, 1987) and the integration of qualitative and quantitative approaches (Onwuegbuzie& Leech, 2005; Teddlie&Tashakkori, 2009).

As already noted, professional outcomes are very important within an evaluation process. The European Community's view of the “double track” i.e., teaching system and job market, reveals the need to analyse the requirements for professional figures, to define the tools and strategies to develop specific professional skills, and the criteria and conditions required to combine job demand and job offers (Fabbris, 2008). Graduates' entry into the job market and the work they are offered vary according to the degree course followed, but job potential is clearly connected to the extent of consistency between training aims and job market requirements (Palombaet al., 2003; Cedefop, 2001). Another important point is that the need to examine how graduates can best be inserted into the professional job market has recently come into conflict with the ongoing crisis in the economic sector, which has severely limited further research in this field (Censis, 2012; Cnel, 2012; AlmaLaurea, 2012). This topic must find its own place if a complex evaluative approach is to be carried out.

In the fields of social sciences and economics, attention has mainly focused on the measurement of job outcomes according to a “control perspective” (Broadfoot, 2007) applied to assessment. However, for an integrated view of aspects to be examined when evaluating the professional

outcomes of higher education, one interesting approach is certainly that of *participative evaluation* (Earl, 2003; Gallianiet al., 2009; Zaggia&Maniero, 2009; Grionet al., 2006; Grion, 2011; Palumbo, 2004; Rossi, 2004; Stake, 1988; Wates, 1999). In this approach, the actors of the training process themselves play active roles in the evaluative action, and thus become its subjects, in their quality and privileged position as the first to be the experts on the needs and opportunities of the context and training process to be evaluated. De Ambrogio (2003) believes that evaluation should involve both several actors and several institutional levels, linking all the stakeholders involved in training in a synergic logic. In the case examined here, students, teachers and tutors are the actors of the evaluation: students as the prime interpreters of their training, teachers as evaluators reflecting on their teaching to their students, and tutors as privileged observers as mediators between students, teachers and the university system.

According to the “new” forms of evaluation as defined by Varisco (2004: 71), participation consists of understanding the processes giving rise to the results, not only on the part of teachers, but also by students themselves, in order to create properly collaborative “learning environments” in which all actors contribute towards improving the processes, products and results, from the viewpoint of the improvement furnished by their co-participation in the evaluative act.

The literature provides three approaches to evaluation: positivist experimental, pragmatist, and constructivist (Zaggia, 2008). As regards the last, Varisco (2002: 158) states: “[...] in a constructivist environments, students can act in a space using tools, collecting and interpreting information, and interacting with the other actors in the system (peers or teachers). Learners should be able to define aims and learning activities. [...] In a situational environment, students can also participate in the practices of a learning community.” (authors' translation).

This approach also shows its cognitive character, which allows the context to be understood by means of the actors' own interpretations. A university, as a complex organisation, is considered mainly according to such an evaluation, in that the sense that actions depend on interactions among the actors involved and negotiations of significances (Semeraro, 2006).

When defining our research design within this theoretical framework, the method guiding our operative choices was mixed, with moments of triangulation and integration between qualitative and quantitative approaches (Onwuegbuzie& Leech, 2005; Teddlie&Tashakkori, 2009; Clericiet al., 2013). International debate in the last few decades (Datta, 1994; House, 1994; Reichardt& Rallis, 1994; Tashakkori&Teddlie, 1998, 2003; Mertens, 2003; Marslandet al., 2011) has shown the need to integrate “old” and “new” theoretical models. More recently, Lincoln & Guba (2000) have mentioned possible “emerging confluences” (Vannini, 2009). We considered a mixed method approach as the most appropriate way to reach our research aim.

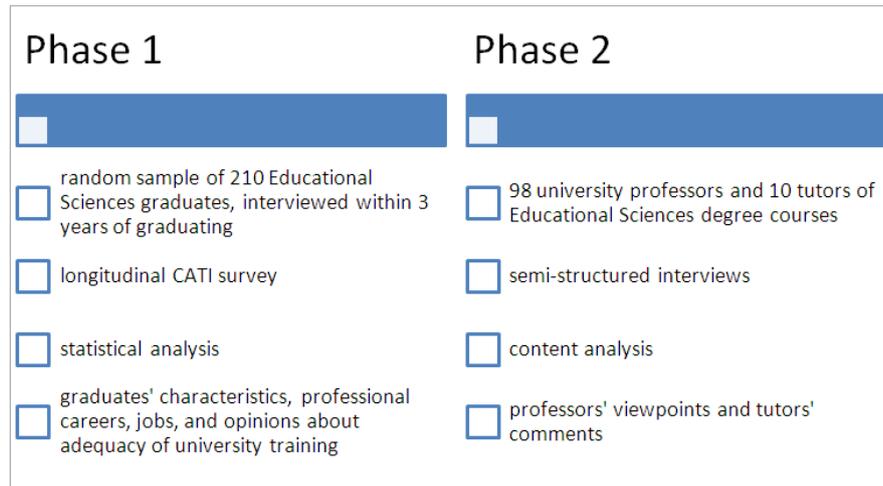


Figure 1. Research design

Table 1. ES Graduate population and sample size by degree level

Degree Level	Graduates (a)	Graduates (b)	Sample	Follow-up 6 months	Follow-up 12 months	Follow-up 36 months
D1	405	325	186	161	145	134
D2	58	56	50	46	41	37
SC	384	383	47	45	41	39
Total	847	764	283	252	227	210

(a) 2007/08 graduates; (b) 2007/08 graduates, not attending specialization courses lasting at least one year.

3. Empirical Research

The research presented here was developed within the perspective of quantitative and qualitative methodological integration, using the measurements and analytical tools of both, with the participation of the actors involved. The quantitative results of the study on job outcomes and opinions regarding the quality of university training in a random sample of ED graduates from a large Italian university were used as the basis for the second qualitative phase, involving the teachers and tutors of the academic programmes in which the students had obtained their degrees (see Fig. 1).

3.1. PHASE 1: Graduate Survey

The longitudinal survey of 2007-08 University of Padova graduates was promoted by the academic authorities in order to develop evaluation models and tools to improve teaching and educational offers. It is an important source of information for evaluating the effectiveness of training during first- and second-cycle degree courses, with respect to graduates' subsequent employment (Fabbris, 2010).

The survey plan involved three observation moments (at six months, one year and three years after graduation) and non-proportional random sampling, both to have a representative sample and to keep the costs of data collection low. Twelve faculties were involved, with a follow-up of

about 4,000 graduates. The ES faculty took part in the project by surveying four first-cycle degree courses (D1), two second-cycle degree courses (D2) and one single-cycle degree course (SC); this sub-sample involved 283 ES graduates, 210 being followed for three years after graduation. As the survey focused on the job results of training, graduates who attended any *post-lauream* course during sample selection were excluded *a priori*. In the various waves of the survey, as some of the interviewees were following specialization or other courses lasting at least one year, they were also excluded from follow-up and filtered *a posteriori*. Table 1 lists the ES number of graduates and sample data during the three types of follow-up.

The graduate samples was chosen by the *Servizio Studi Statistici* from the university archives by non-proportional casual selection, in order to ensure that all degree courses were statistically represented and at the same time to limit survey costs. In the following analysis, the survey data are post-weighted, to obtain a realistic reconstruction of the referential population of graduates. In this way, the survey could monitor graduates' job itineraries through repeated observations up to three years after graduation. On these occasions, recent graduates were allocated structured questioning paths by means of Computer Assisted Telephone Interviewing (CATI). The paths differed greatly according to graduates' job status at the times of the current and former interviews. In particular, those with jobs at the time of the interview were asked to

define their work and to mark their profession or job on a list (Fabbris, 2005). Opinions about their use of knowledge, abilities and skills were studied in relation to their jobs. All the interviewees then answered several questions highlighting their *ex post* evaluations about their university program and the worth of their degrees.

Starting from a very large amount of information, interest in this research focused on three main issues: (i) graduates' professional situation, (ii) the job on which they were engaged (if any), (iii) the adequacy of the university path with respect to the job they were doing or expecting to do. Many of the degree courses are highly profession-oriented, so that some of the in-depth analysis regarded the coherence between the dimensions of "expected" professionalism and those which graduates declared after they had actually gained some experience of certain professions.

Table 2. ES graduates by upper secondary school and degree. Percentage profiles by degree level

Secondary school	1st-cycle (D1)	2nd-cycle (D2)	Single-cycle (SC)	Total
Professional	14.2	3.8	10.8	11.7
Technical	22.2	11.3	16.1	18.3
Specialising in education	33.0	39.6	45.9	40.1
High school	25.8	44.2	24.4	26.4
Other	4.5	-	2.8	3.3
Total %	100.0	100.0	100.0	100.0
<i>N</i>	288	353	53	694

3.1.1. GRADUATES' Characteristics

The university administrative archives supplied information about the sample of ES 2007/08 graduates (followed for three years after graduation). Graduates who

stated that they were "out of the market" were excluded, as were those who chose to continue their studies and not enter the job market. A weights system was used for analysis, to compensate for the unequal probabilities of selection between sample data and reference population. The results are divided according to the kind of degree course: first-cycle (D1), second-cycle (D2) or single-cycle (SC).

Women constitute 95% of the sample. The large number of female students in the educational field is notable, especially in the SC, which trains teachers, whereas there are a few more male students (10%) following courses to train educators for contexts other than primary school. As regards graduates' schooling prior to university, the kind of upper secondary school to which they had gone and their high school grades (normalized in hundredths) were examined. Most of the graduates (Tab. 2) had been to high schools specializing in education (40%), of which the degree courses followed were a natural continuation, particularly those aspiring primary school teachers.

The distribution was remarkably heterogeneous, with substantial numbers of graduates from high schools (26%), particularly those focusing on sciences (16%) and technical education institutes (18%). There were many high school students (44%) among the second-cycle graduates, whereas in those of the first-cycle, there were many students with technical or professional diplomas (36%). There was a considerable difference between graduates' high school grades and the degree courses they chose. Overall, scores were distributed over the whole range (60-100), with a slight left asymmetry around the mean (79/100) and median (78/100). The mean grades for SC graduates were 81.0-83.6 out of 100 (level of confidence: 95%): they had significantly higher scores than both D2 graduates (+4.5; *p*_value=0.038) and, to an even greater extent, D1 graduates (+6.5; *p*_value=0.000).

Table 3. ES graduates' characteristics by degree level. Descriptive statistics

Characteristic	Degreelevel	N.	Min	Max	Median	Mean	SE
Age at graduation	1st-cycle	288	21	53	24	26.9	.46
	2nd-cycle	51	24	49	25	27.2	.81
	Single-cycle	353	22	35	24	25.2	.15
	Total	693	21	53	24	26,0	.22
Completion Index	1st-cycle	288	0.3	4.3	1.33	1.47	.04
	2nd-cycle	51	1.0	2.0	1.50	1.48	.03
	Single-cycle	353	0.3	2.8	1.00	0.98	.02
	Total	693	0.3	4.3	1,00	1.22	.02
Graduation grade	1st-cycle	288	84	110 honours	98	99.2	.37
	2nd-cycle	51	98	110 honours	110	108.5	.46
	Single-cycle	353	93	110 honours	103	102.7	.26
	Total	693	84	110 honours	102	101.7	.23

pre-university paths and associated features of efficiency (in terms of timing) and quality (through the final graduation grade) could be captured.

Table 4. ES graduates' professional careers. Percentage profiles by degree level

Professional careers	D1	D2	SC	Total
Subjects kept jobs they had before graduating	35.8	36.5	19.0	27.3
consistent	19.7	30.8	18.9	20.1
regularly employed	32.3	32.7	19.0	25.5
permanently employed	28.1	31.4	19.0	20.0
Subjects found new jobs (different from their old ones)	15.3	26.9	45.9	31.7
consistent	10.7	19.2	43.2	27.9
regularly employed	11.1	25.0	45.9	29.8
permanently employed	8.0	19.6	7.5	5.2
Subjects found their first jobs	40.3	36.5	35.1	37.4
consistent	29.4	19.2	35.0	31.5
regularly employed	32.6	30.8	35.1	33.7
permanently employed	12.8	19.6	11.5	13.8
Unemployed (used to have a job)	6.9	-	-	2.9
Unemployed (never had a job)	1.7	-	-	0.7
Total %	100.0	100.0	100.0	100.0
N	288	51	353	694

3.1.2. GRADUATES' Professional STATUS

The data collected six months and one year after graduation already showed that a high percentage of the graduates were already employed, thus confirming the results of other surveys (e.g., Istat, 2010; AlmaLaurea, 2011) on Italian graduates employability in the educational field. The survey estimates that, three years after graduation, only 3.5% of subjects are not employed, and only about 1% are never observed as in work: all these cases involve D1 graduates. These results are remarkable, considering the frequently changing situation of graduates' employability, although both their more or less linear job itineraries and the quality of their jobs must also be considered.

When data about subjects' professional status at graduation and 6, 12 and 36 months later (i.e., the *post lauream* points of observation) are combined, the professional paths of graduates over the three-year period can be re-created (2007/08 to 2010/11). For those in work, their job stability and any job changes can be verified. Table 4 shows both summarized (last column) and comparative indexes (specific rates by degree level) about graduates' types of degree and professional status three years after graduation. Table 4 also shows subjects' job suitability at the moment of the last data collection, with respect to the university course followed and the kind of contract currently regulating their current jobs.

The first path shows for how long, after graduating, subjects kept the job they had already been doing. More than one-third of D1 graduates kept the jobs they had before graduating: they were not always consistent with their university courses, but were usually "secure", meaning that they were had proper work contracts, even if they were not permanent. D2 subjects who stated that they were already working when they graduated (36.5%) continued to have good jobs, secure, permanent and usually consistent. Of the SC graduates, fewer than 20% had jobs and all of them were already teaching under permanent contracts.

About 70% of the graduates had found new jobs (either for the first time or by changing their old jobs) within three years of graduating. Among the SC graduates, this percentage rose to over 80%, with very high levels of consistence, although permanent contracts were unusual. Among D1 and D2 graduates, the percentages were lower (56% and 63% respectively) and with lower coherence levels (about 40%). However, permanent contracts were more common.

In general, we note that jobs for D1 graduates were less well-defined than the others. There were also a small number of cases of unemployment.

3.1.3. GRADUATES' Jobs

We now focus on subjects who stated that they had jobs three years after graduating. Our first aim was to classify free answers to questions concerning jobs, which were usually phrased very briefly in imprecise terminology. The faculty tutors – i.e. the coaches who help students to learn how they can best learn and how to work in an academic environment, were involved in processing and interpreting the data. They used both structured data and graduates' free answers to describe their *post lauream* condition, and extrapolated information which was not always explicit in single answers, particularly as regards their jobs and the coherence between the teaching aims of degree courses and their professional collocation. The perspective of *classical content analysis* (Krippendorff, 1980; Ian, 2004; Tuzzi, 2003) was applied, starting from an *ex ante* conceptual grid composed of the above-mentioned list of the faculty's typical professions. However, as many parts of the grid (and thus the list) turned out to be inadequate, we proceeded by examining respondents' self-collocation in the professions list as one of the elements (not the only nor the main one) to be considered when classifying the type of job. We then found a set of informative variables (economics, public or private sector, final users) which contributed towards tracing job contexts and features. This enabled us to reformulate the list of graduates' jobs, shown briefly as macro-categories in Table 5.

There were clearly two main professions: for SC graduates, teaching (primary school, preschool and special needs educational assistance), plus educators in the social and health services sector and extra-school sector for D1 and D2 subjects. The latter included some examples of consultancy and managerial work in contexts pertinent with university

paths.

Table 5. ES graduates' jobs. Percentage profiles by degree level

Job	D1	D2	SC	Tot.
Teacher	13.0	12.6	97.3	56.0
Educator	49.3	29.4	-	22.7
Coach/Responsible for human resources	4.9	33.4	-	4.5
Coordinator (educational services)	3.1	2.4	-	1.5
Consultant (educational sector)	2.0	6.1	-	1.3
Other (partially consistent)	7.2	9.1	-	3.7
Other (non-consistent)	11.8	7.8	2.7	6.9
<i>Total number of graduates with jobs</i>	<i>91.5</i>	<i>100.0</i>	<i>100.0</i>	<i>96.5</i>
<i>Unemployed</i>	<i>8,5</i>	-	-	<i>3.5</i>
Total	100.0	100.0	100.0	100.0

These professional outcomes (which closely followed study paths) showed a remarkable number of “other” activities, many of which were mentioned by D1 subjects. Their description of these activities showed that working as a clerk was an alternative outcome to roles such as “coach”, “tutor” or “person responsible for human resources”, and the respective tasks and duties had to be examined more thoroughly in order to evaluate their consistency level. Among these “other” activities, “partially consistent” were distinguished from “non-consistent” ones by a set of answers illustrating jobs with respect to the economic sector, public or private sector, and the kinds of users of a certain type of job. These partially consistent activities could become completely pertinent in parallel to the pursuit of a professional career.

3.1.4. Adequacy of University Training

Our graduates answered one question which explored their ideas about the adequacy of the university training they had received according to their job (current or anticipated).

Items were sent to all subjects and submitted according to a self-anchoring scale from 1 (minimum) to 10 (maximum). Figure 3 shows the distribution of answers, emphasizing a few outliers which express very strong dissatisfaction. Most of the graduates were satisfied with their training (median=8.5; trimmed mean=7.7), although inter-subjective variability was high (range 4-10, standard deviation=1.9, interquartile range=2).

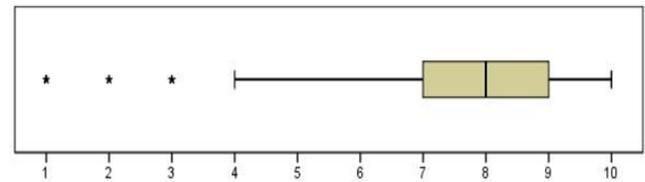


Figure 3. Adequacy of university training. (Boxplot)

The relation of dependence between the adequacy evaluation of training and the various outcomes along subjects' professional path was examined by analysis of the variance of adequacy evaluation by certain factor variables and covariates with the *general linear model univariate procedure* (for details, see IBM, 2011). The factor variables divide the population into groups, so that this model can test null hypotheses about the effects of those factor variables on the means of various groupings of a joint distribution of independent variables. This enables us to compare the means of respondents' subgroups, classified by degree course and the characteristics of their professional path (type of path, job, type of contract) while taking into account the effects of the various qualities of the respondents with respect to their performance: high school and graduation grades, completion index.

Table 6 shows the full factorial model, containing all factor and covariate main effects and factor-by-factor interactions. The overall adaptation was acceptable, at $R^2=0.49$.

Table 6. Adequacy of university training. ANOVA by GLM: full factorial model with covariates

Effect	Variables	F	p_value
Factor	Professional path	4.581	.000
main effect	Job	6.802	.000
	Form of contract	6.308	.000
	Degree course	6.084	.000
	Covariate	High school grade	2.327
main effect	Graduation grade	14.255	.000
	Completion index	5.272	.022
	Interaction	Professional path * Job	29.399
effect	Professional path * Form of contract	3.892	.002
	Professional path * Degree course	1.634	.123
	Job * Degree course	0.799	.372
	Form of contract * Degree course	2.766	.027
	Professional path * Form of contract * Degree course	1.549	.201

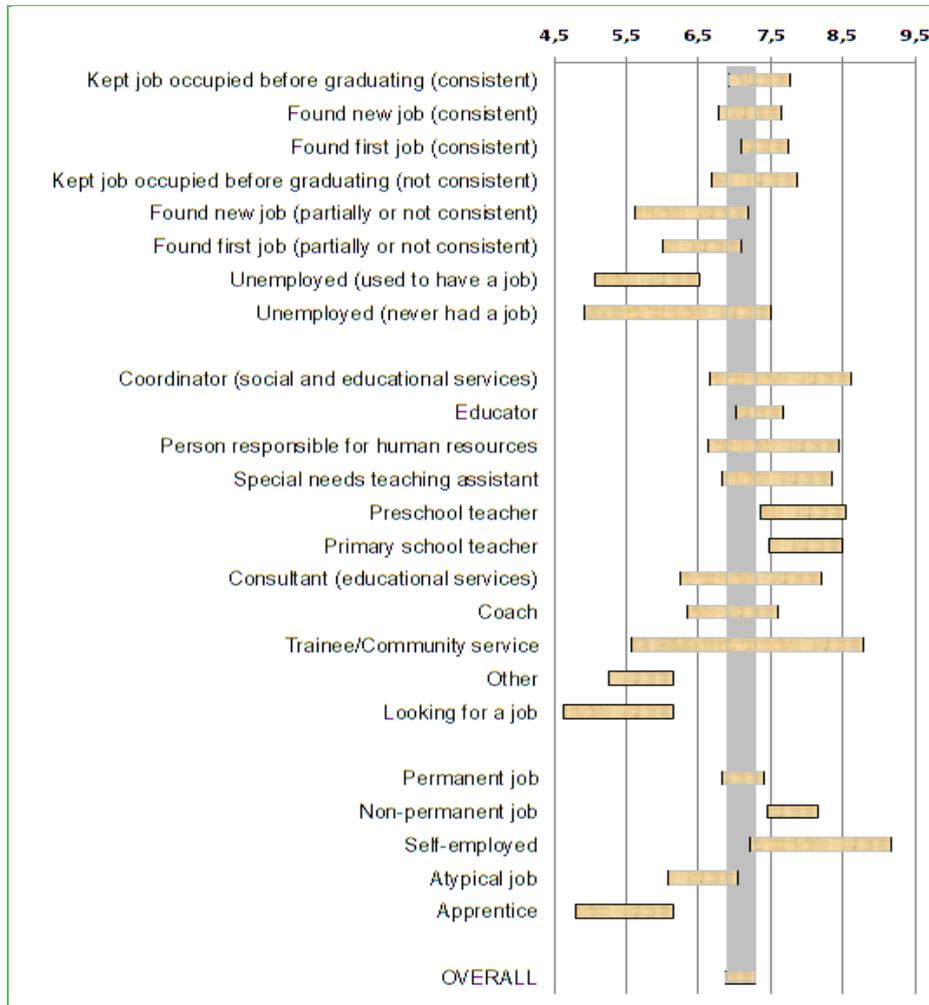


Figure 4. Adequacy of university formation. Expected marginal estimate means (95% confidence intervals)

All the factor main effects and some of the interactions had high levels of significance, showing that there were differences among the means. The set of covariates in the model allowed us to make standardized comparisons with the typical high school grade (79.2), graduation grade (101.8) and completion index (1.2).

Figure 4 shows the 95% confidence intervals of the expected marginal estimate means of adequacy evaluation. The graduate groups which plot far from the overall mean (estimated at 6.9-7.3) are clear-cut, and differences between the groups, which must be considered when the intervals do not overlap, can easily be checked.

In respect to the principal issue of interest, analyzed by the survey among the graduates, we can summarize these principal results: (i) graduates' professional careers have very heterogeneous consistency and regularity, and the employability strictly depends on the level and type of degree course; (ii) the jobs on which graduates are engaged three years after their graduation are frequently what it is expected in relation to their learning program, but there is also a remarkable percentage of "other" jobs that are partially or completely non consistent with the expected professional outcome of the degree program; (iii) the

graduates' evaluation of adequacy of the university path are in general positive, but they strictly depend on the specific learning program they attended, the job and the form of contract that regulates the professional condition, the professional path from the degree completion to the current job.

The survey highlights that some degree courses, in particular some first-level degrees, not always succeed in defining clear professional outcomes. This evidence founds the need of an in deep analysis of the learning process and its learning outcomes. The actors of the learning process should increase their awareness on the results of their teaching and training activities, and become part of a process which may improve the quality and effectiveness of the system.

3.2. PHASE 2: The Qualitative Study

The findings of the first analysis were presented to the professors teaching the first-cycle degree courses (D1). We examined courses identified as showing some weak points; i.e., low scores for students' high school qualifications at the start and for their degree at the end of their university career, and their low or inconsistent job opportunities. We asked

their professors to read these findings and to provide written answers to four correlated questions:

- 1) What do you think about these results, particularly those relating to the job opportunities of graduates who completed your degree course?
- 2) Reading the results of the 2007/08 graduates' job opportunities and their comments on their university education, which strong points do you identify related to the degree course which you teach?
- 3) What weaknesses do you identify in that course?
- 4) In your opinion, are there any improvements (at individual or course level) which could be implemented in the new university system?

This phase specifically aimed at obtaining various types of data and integrating them with the results of quantitative analysis, for deeper understanding of reality. Professors' answers were collected and submitted, together with the quantitative findings, to the faculty tutors. The tutors were then to interpret them and deduce from them unvoiced information about academic activities and the level of consistency between the educational aims of the degree courses and the graduates' subsequent professional employment.

In order to collect the comments made by tutors, they were provided with a list of the questions given to the professors but were allowed to develop their personal viewpoints and highlight any significant elements without limitations imposed by our input. It should be stressed that the tutors' involvement in this study was an important educational occasion for them. They had the opportunity to reflect on and gain understanding of the job outcomes of the various degree courses, as a consequence of which they could be better prepared to do their own jobs, such as orienting students at the start of their university career and assisting them throughout it.

From the research point of view, the tutors' professional status, between that of professors and students, represented a privileged perspective in observing the dynamics characterising courses and captured their protagonists' "perceived realities". These realities would be more significant because: "[...] *how things are is often less important than how people think – or perceive – things are [...] because it is these perceived "realities" that give shape and meaning to people's lives and actions*" (Flutter & Rudduck, 2004: 6).

The professors' written answers and the tutors' comments were then submitted to Discourse Analysis (DA) (Hardly *et al.*, 2004) by *AtlasTi* software, which allows systematic analysis of complex phenomena hidden in textual data. We chose to organize these texts into two Hermeneutic Units (HU) and analyze them separately because of their different sources and characteristics: the professors' brief answers to precise questions *versus* the tutors' longer, more pondered texts.

Discourse analysis of the texts started with our time-consuming reading and rereading of the above materials many times (Nikander, 2008). The method

recommended by Peräkylä (2005: 870) was followed: "*in many cases, qualitative researchers who use written texts as their materials do not try to follow any predefined protocol in executing their analysis. By reading and rereading their empirical materials, they try to pin down their key themes and, thereby, to draw a picture of the presuppositions and meanings that constitute the cultural world of which the textual material is a specimen*". After this first phase, following the recommendations of Cohen *et al.* (2007) on DA, and in order to avoid oversimplification, we used a bottom-up process to derive a list of codes¹, one for each HU, representing the meanings emerging from the texts. This process revealed patterns and broad areas in the discourses. We then re-examined the texts to discover the intentions of interviewees, the functions and consequences of the discourses, using tools as "families" and "networks of meanings" in order to create an interpretive framework in which to understand the social reality created by participants.

3.2.1. Professors' Point of View

All 98 professors teaching at least one of the four degree courses considered in the quantitative survey were asked to provide written free answers to four quoted questions in an online interview developed through the *LimeSurvey*² application program. After this invitation had been sent out, professors who had not answered were contacted again and offered the opportunity to provide written free answers through a paper interview. The total response rate was 56%: the highest response rate was for adjunct professors (76%) and the lowest for full professors (40%) and researchers (43%); the rate for associate professors was good (64%).

The 55 respondents commented on 71 courses: 25% first-year, 34% second-year and 41% third-year, thus denoting the increasing involvement of professors in the later years of courses, which are typically those when lectures tend to cover more professional aspects. The professors were asked to read the data concerning job opportunities for their graduates before the implementation of the new system of university degrees, and to express their opinions, particularly by highlighting any strengths, weaknesses and possible ways of improving the new system. The complete list of codes developed through the DA of respondents' answers (described above) was classified into three "families"³: a) strengths, b) critical aspects, and c) improving actions (Fig. 5).

¹ Coding simply involved associating code words with selections of textual data (quotations).

²*LimeSurvey* is an open-source, free software application which allows users to create online surveys. For details, see: <https://www.limesurvey.org/en/>.

³Families are a way of forming clusters of codes for easier handling of code groups.

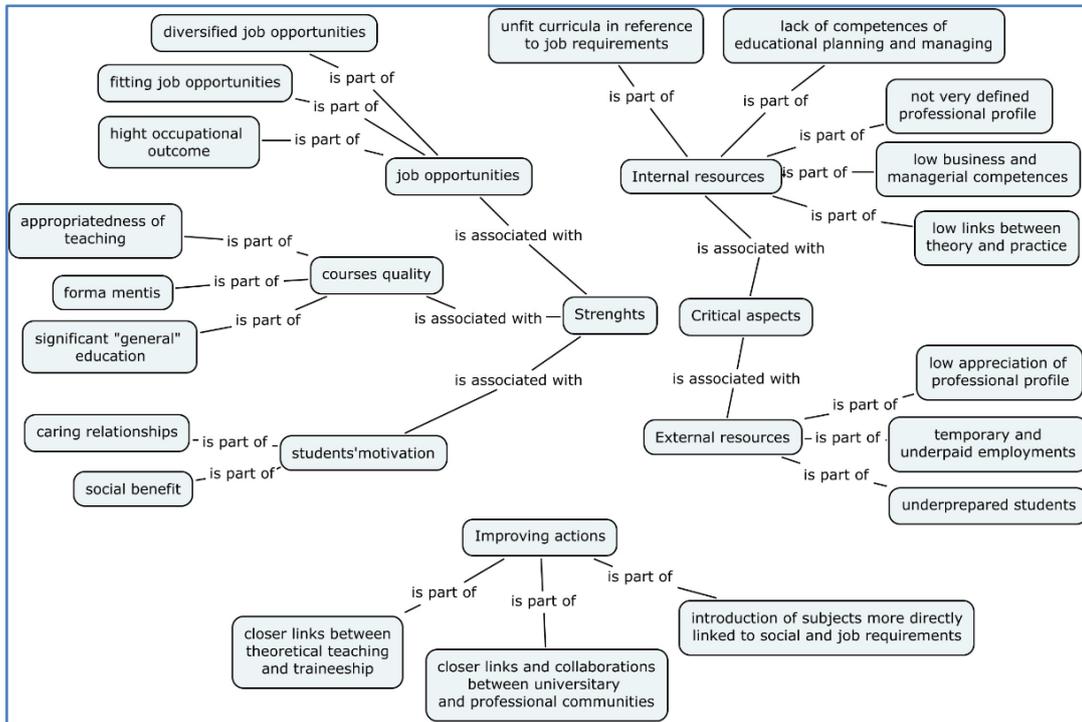


Figure 5. Network of meanings emerging from professors' answers

The first family contained the representative codes of the text extracts referring to and features of degree courses which the professors identified as qualifying and positive. These codes can be organized according to three focuses: the first, which is the most frequent, relates to many positive job opportunities, expressed by codes such as “good job opportunity”, “opportunity of various job placements” and “job opportunities which are consistent with type of degree”; the second refers to the positive features of degree courses, denoted by codes such as “appropriateness and completeness of basic teaching”, “formation of a *forma mentis*” (professional culture acquired at university) and “meaningful basic teaching”; the third is associated with “personal motivation”, which is the basic reason why many students decide to attend degree courses aiming at forming socially useful professional figures. This last aim includes the context of supportive relationships with young people and adults who are going through difficult situations.

The second family of codes comprises those which represent aspects of degree courses considered by professors to be weak or negative. Also in this case, the codes can be organized into two focuses referring to the causes of negative aspects. The first focus groups the codes (hereafter listed according to decreasing order of frequency) which highlight internal elements of university courses which may lead to graduates' poor professional success: “an inappropriate curriculum for the requirements of the job market”, “lectures are poorly organized and managed”, “formation of a general rather than a specific professional figure”, “poor connection and association between teaching and internship, between

theory and practice”, and “poor entrepreneurial competence”. The second focus concerns external causes. First of all, in both public and private workplaces, professional figures are often poorly acknowledged and esteemed, so that graduates are often hired to do temporary jobs and are underpaid. Secondly, there is a prevailing idea that the training of students enrolling at university has worsened over the last few years, due to the uncertainty of some basic skills - particularly language and communications - weak general knowledge, and a poor basic ability to study and conduct research.

The third family is composed of codes which identify the text extracts in which professors highlighted potential corrections which could improve the general offer of teaching and courses. The codes in this third family cover the particular attention which professors paid to the need to re-organize courses in order to provide more professional training, to enhance the relationship between internship and teaching, where the university offers paths of knowledge and the opportunity to participate in professional environments through various forms of cooperation with institutions and people external to the university which could represent future job opportunities for graduates; and where there is teaching and subjects which are closely linked to the job market, in order to discuss important issues such as recent legislation.

Lastly, as regards potential corrections, a significant proportion of professors mentioned the need for greater cooperation among professors teaching different subjects and therefore better integration among subjects and teaching.

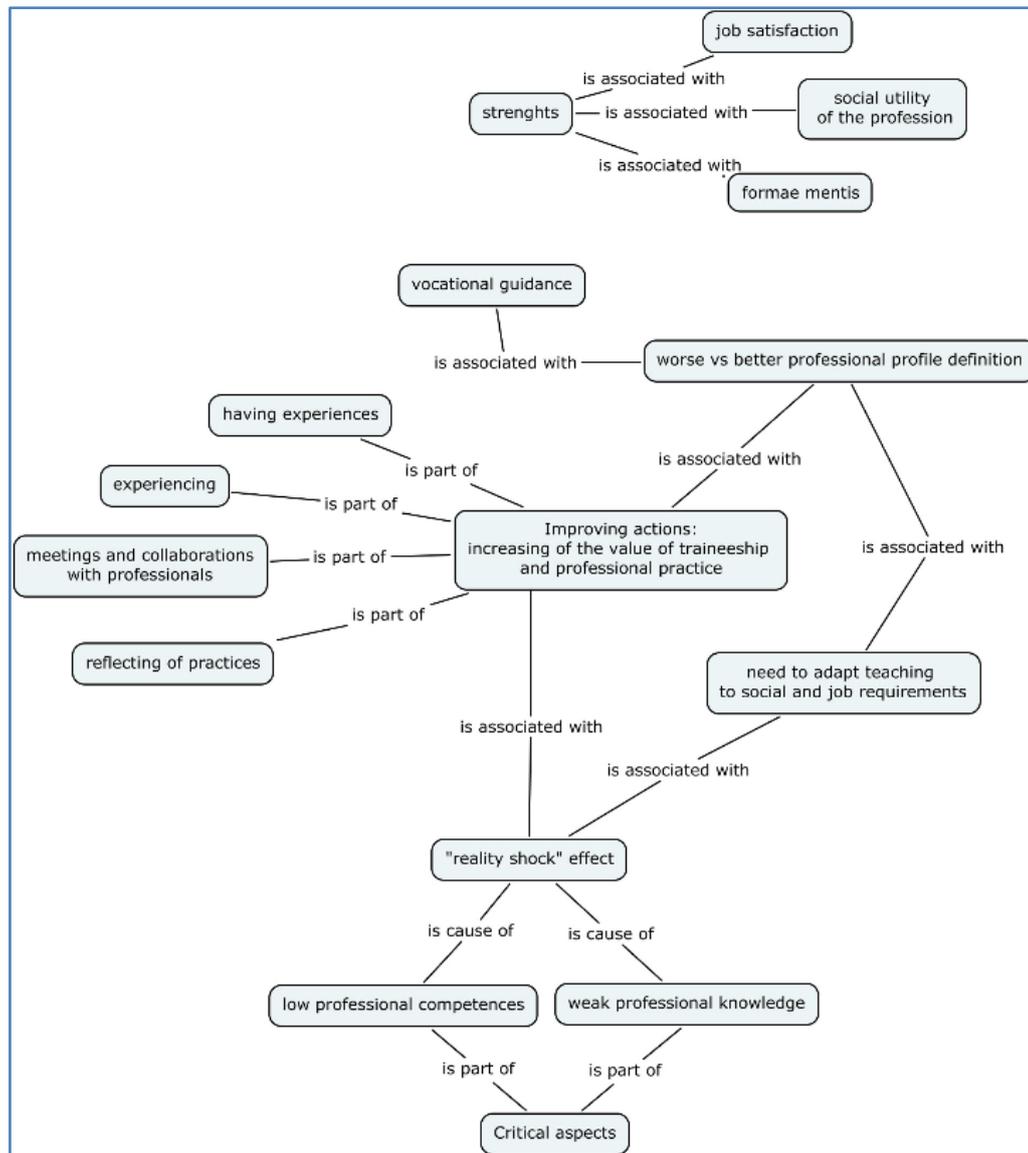


Figure 6. Network of meanings emerging from tutors' texts

3.2.2. Tutors' Points of View

The opinions of six of the ten tutors were examined by qualitative analysis, as described above. The different types of text and the greater number of details provided by the tutors than the professors enabled us to organize the codes according to relations inferred on the basis of the meanings “emerging” from the text extracts. These relations were then developed inductively from analysis of the plots included in the narrations. As in the case of the professors, the list of codes developed through DA of the answers was organized into three families: a) strengths, b) critical aspects, c) improving actions (see Fig. 6).

Although numbering fewer than the critical aspects, some important strengths also emerged from the analysis, supporting findings from the quantitative analysis. The tutors of the undergraduate courses (D1) describe the following aspects as qualifying: the job satisfaction which former

students feel in their current job; perception of the social utility of their profession; and the match between graduates' cultural interests and their *forma mentis*. Tutors highlighted the satisfaction reported by former students with the brief time it took them to find a job, with the type of job they found, and with the good match between their training and later job opportunities.

The highest number of meanings emerging from the texts concerns the critical aspects of degree courses; in other words, aspects which require “rethinking” courses in order to improve them. The codes “poor competence in professional practices” and “theoretical-professional gaps” describe the areas of skills and competences which the tutors, like the professors previously, view as aspects which their graduates lack when facing the job market. After this analysis, the tutors mentioned possible corrections which could solve these critical aspects. Like the professors, the tutors' view was that the best thing was to improve “the dialogue between

university and the local environment, with regard to required professional aspects” and thus adapt training to the specific requirements of the organizations and institutions which represent the normal job opportunities for graduates. By highlighting the lack of “tuning”, or the “no or low consistency between university formation and job market”, the tutors believe that “*validation of an operator's skills should be less associated with formal procedures and increasingly depend on the overall quality of training. University courses should be therefore based on the demand for services*”(authors' translation).

In this setting, the tutors suggested that courses need to “place more value on internship and professional aspects” and that graduates must have the opportunity to “experience integration, confrontation, mediation and cooperation on several levels in various multi-professional environments, both before and after internship (in order to develop critical thinking about their profession)” and to “organize lectures (*ex ante*, *in itinere* and *post* courses) which ask professional figures from the specific workplace of a training team, so that both graduates and professors can develop, achieve, and analyze training projects concerning the specific contexts to which the professionals belong”. According to the tutors' opinions, a greater use of tools and contexts typical of professional figures, e.g., educational and heuristic tools, can improve the definition of a professional figure and, above all, lead to graduates' greater awareness of the training they have received, particularly the tasks and limitations of their professional profiles.

3.2.3. Some Reflections on Qualitative Analysis

Findings from the qualitative analysis gave rise to several important comments. The most significant criterion used by the professors in evaluating the strengths of degree courses (the first family of codes) regards those features of the courses which allow students to become acquainted with the competences which are now required by the job market. In other words, most of the professors consider degree courses which prepare students to face real employment contexts are effective, so that students are offered more job opportunities. Therefore, courses which are positively evaluated are those whose graduate students found employment consistent with their university studies. These courses are clearly highlighted in the quantitative analysis, which describes both the coherence and adequacy of university training. Instead, according to the professors, courses which need to be “re-organized” are those whose graduates are not doing jobs consistent with their university program or who are not improving their previous professional status (for students who worked before graduating). The professors' main criticisms concerned the low level of salaries and, in particular, the precarious employment of graduates. However, it should be noted here that this situation, in Italy, does not only involve educational professions and is in fact widespread.

We also stress that, within the context of the Italian academic tradition, the actual professional potential of

courses (at least as regards the teaching professions) have attracted increasing attention since the university reform came into force, introducing three-year courses (i.e., the first-cycle degree course). Therefore, our professors showed full awareness of this situation and have sound knowledge which enables them to interpret the required improvements. Conversely, their positions change when they are asked to identify strengths and weaknesses, which are more closely related to the educational features of courses. The crucial problem is the need to reach equilibrium between good general knowledge (related to acquisition of cross-curricular competences) and adequate vocational training; the latter aspect is deeply rooted in real traineeship experiences in job environments, and may be integrated with appropriate theoretical reflections in academic settings.

As regards the second family of codes, of great interest is the fact that much responsibility for criticism concerns the design, organization and management of degree courses. In particular, very many professors noted weak or non-existent coordination among the various educational units (there are several teaching units each year), because of the lack of coordination among teachers whose subjects do not share the same contents and methods. In line with several considerations developed in relation to the first family of codes, some professors expressed negative opinions about the ways in which theory (or general pedagogical knowledge) is integrated with practice (or professional competence) in degree courses. The tutors also support this idea and focus their arguments on the critical area of the relationship between theory and practice within the framework of education for, and in, the professions (Fabbri, 2007). Some professors even expressed doubts about the possibility of universities offering good vocational training. They believe that this can only be acquired through direct experience in authentic job realities.

The third family of professors' answers confirms previous comments on the relationship between theory and practice: they express the need to improve links between theoretical/pedagogical and professional knowledge. Nevertheless, their suggestions are not limited to the simple hope of improving and strengthening the current features of teaching courses. Great attention focuses on traineeship (currently mandatory for all students, for a minimum of 250 hours): almost all subjects believe that educational potentials can be improved by paying greater attention to the phases of planning and evaluating courses and by involving tutors and mentors in more training activities; the latter represent particularly significant actors for effective career guidance and the productive insertion of graduates into job environments. In order for graduates to put into practice their acquired theoretical knowledge to good effect, many of the professors stated that improved training is not enough: there is a need for deeper collaboration between universities and the companies which accept graduates as apprentices.

To summarize, many answers reveal clear awareness of the fact that universities must interact and develop a better dialogue with the external environment. This awareness

involves several realities, from the job market to the economic and political system and public administration. In particular, it represents a series of new tasks for Italian university professors, which goes beyond the traditional aspects of teaching and research. Awareness that changes in university life - aspects which have often occurred in a confused and contradictory way - are irreversible, is often associated with anxiety and concern. Some professors wished that a new organization (or revision) of degree courses would take as its starting point competences required from professional profiles; others expressed considerable resistance to the idea of a university curriculum which is functional to the job market. According to a centuries-old tradition, those last mentioned believe that university training should aim at developing second-level competences (cultural, reflective, meta-reflective) and therefore reject subordination of these skills to the present-day economic centered world.

According to the tutors, it is important to rethink the training of professional figures according to new professional types of professional epistemology, following Schön (1987), according to whom practice is acknowledged: as an epistemological and historical context in which knowledge is transferred and developed: a social and physical space in which learning and working take place; an analytical construct which contributes to the explanation of how one learns and develops professional knowledge (Fabbri, 2007). By rejecting the technical rationale according to which professional figures are instrumental problem-solvers who can find the best tools for specific aims, these new types of epistemology question the view of training seen as a model of abstract and explicit knowledge transfer, from the mind of a person who already knows, to the mind of a person who does not yet know, in environments which do not include the complexity of practice and the existence of knowledge in communities of practitioners. In this way, as stated by Fabbri (2007: 62-63): *“Training loses all its decontextualized features and becomes situated training; a device which is neither top-down (applicative paradigm) nor bottom-to-bottom, but is concerned with developing communities of practice towards reflective competences which allow the acquisition of awareness of [...] professional practices”* (authors' translation).

4. Considerations on Method and Findings

This study on graduate students carried out by the research group of the Faculty of Educational Sciences is an opportunity to promote actions aimed at improving the context examined. The main aim of this study was in fact to make a critical and pro-active contribution.

The main improvement took place when quantitative analysis of the data was integrated with qualitative analysis. The former provided an interesting picture of graduates' characteristics, taking into account their training and the

variety of pathways into employment. This enables us to highlight some of the aspects of the quality of education, in particular-in this paper- the match between university curriculum and subsequent job, and between training received and work performed. This knowledge about the number of graduates with different characteristics allows us to identify, for example, the characteristics of teacher education. This is a clearly job-oriented course (regarding the possibility of entering the job market and the quality of training), although it raises some external problems, such as difficulties in finding legal forms of work contracts. The quantitative analysis then showed that these strengths are not evenly shared by other training courses in both first- and second-cycle degree courses.

However, we believe that a purely quantitative approach cannot be effective when we endeavor to develop reflective and self-evaluating processes in the actors in the context examined. A quantitative survey is not suitable for collecting comments and suggestions from teachers and tutors: first, because they are much smaller populations, with different abilities to respond (our 55 professor respondents are not representative of the 98 teachers involved in the courses) and, secondly, because the research aim is different: we did not wish to quantify the opinions of these actors, but to involve them in reflection and proposals. Thanks to knowledge based on quantitative research, this reflection starts from the actual picture, graduates' true stories, the true dimensions of their career paths.

The motivation to integrate qualitative and quantitative research often stems from a wish to construct (by means of typically qualitative methods) paradigms of reference on which to structure subsequent quantitative research. That is, the former assumes a service role for the latter. At other times, a qualitative approach is preferred, and quantitative analysis only helps to present the context. In the present work, researchers from various disciplines, who habitually use various methodological approaches, met around a common research goal, strongly oriented towards interpreting results and consequences in the organization of teaching. This is a research process, in which two different perspectives in interpreting the same reality can contribute significantly to further knowledge of that reality. According to the research and its results, we can now list some important implications for future research perspectives.

First, we believe that sharing results, both quantitative and qualitative - that is, the new knowledge generated by this study - with the members of the contexts which were examined, represents an important moment in the paths involved in the research. In particular, in participative research, researchers collaborate with stakeholders in order to generate better understanding of situations to improve actions aimed at enhancing practice. In line with this idea, we believe that sharing final results is important for the development of new reflective paths for professors and tutors, a necessary condition in order to make definite improvements to course offers.

Second, the aim of gathering further knowledge on the

subject by analysis of qualitative data may be developed further by extending the qualitative survey to graduate courses not considered in our research. This may develop other reflective improvements in different contexts. Extension to a larger sample of subjects-students, teachers and tutors-and collection of their free expressions on the problems which emerged as significant in exploratory analyses (sections paragraphs 3 and 4) could offer the possibility of mixed analysis (quali-quant) of data collected in unstructured form, typically associated with the qualitative approach. In this way identification of emerging conceptual categories could be accompanied by a measure of the prevalence of topics and variability between groups regarding their importance. Relationships between concepts could be analyzed with the classical tools of analysis of multiple correspondences, and the causal links assumed in the diagrams presented here could be measured by their strength and direction. But in order to do this, as well as a representative sample of respondents, texts must refer to the same units of analysis used by all researchers. Fragments of the text corpus can no longer be the unit of analysis. The individual (or interview) should be the common reference in the analysis and presentation of data. In this way, the information will become consistent and fully integrated.

At a methodological level, our main aim was to overcome these two partial approaches by combining them with a third dimension, known as organizational improvement, which focuses attention on actors' potentialities and their environment in order to develop improvement strategies. In this way, it is possible: (i) to define an integrated model which can report and provide the information and data required for actors to express founded opinions on higher education (aims, activities, learning environments, results and management systems); (ii) to induce stakeholders to develop reflective processes aimed at determining (and creating the related awareness) of the strengths and weaknesses of graduate courses, in order to promote changes and improvement strategies.

After implementing the appropriate refinements, particularly with reference to critical aspects related to methodology, previously described, we believe that this research is an interesting example of self-assessment of university courses. One of its most important aspects is that it overcomes some of the main weaknesses of the assessment process which universities have adopted and which focuses mainly on external assessments. It also aimed at recommending improvements, following an approach based on participation and mutual sharing of choices and possible solutions.

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