

# Training and labour market integration of education science graduates

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## SUMMARY

**The aim of the research behind this article is to identify the relationships that must exist between university training and the social and occupational environment. One of the many functions that derive from the university-society relationship is to train students to carry out certain professions. As a result, the analysis of the labour market integration of graduates from one university and the definition of their skills becomes a quality indicator of this relationship and one of the pillars that define the list of qualifications within the European Higher Education Area.**

**We therefore look at a range of variables connected with information on professional opportunities, the satisfaction of job expectations, the relationship between university training and professional performance and the assessment of personal, intellectual, vocational and other training received on education science degree courses.**

## Keywords

Occupational profiles, higher education, quality indicator, vocational guidance, european higher education area, university-society relationship

## Introduction

The findings from two studies (1) and others with similar characteristics conducted by various experts and universities, have allowed us to draw a series of conclusions that are of interest to the university community, given the changes that the European Higher Education Area demands (see the proposals of the Tuning pilot project). These conclusions attempt to shed light on the social and professional integration of university graduates in order to develop one of the key functions of higher education: training students to carry out professions appropriate to the skills, needs and demands of the current labour market.

As a result, we believe that the social and professional integration of university graduates and their assessment of the training received are clear quality indicators of the university training (Molero, 2002; Parra, 2003; Aneca, 2004; Jiménez et al., 2007). These quality indicators can then serve as a source of systematic and rigorous information for improving both the institution itself and the understanding of new social requirements.

Thus, to achieve a quality education and guide the design of syllabuses towards European convergence, it is vital to assess the factors that determine the choice of studies by university students, the extent to which the profile demanded by the labour market and the characteristics of each degree course correspond and the correlation between the graduate and the occupational environment. To this end, tracking the progress of university graduates has formed a vital part and focus of our research, allowing us to identify the routes and circumstances involved in their integration into the labour market.

As Carrascosa and Molero (2002, p. 238) point out, 'information and empirical evidence are needed to back up and guide the development of opinions within both the university community and society. Research needs to be carried out on the university and

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(1) (2006-07): 'Análisis de perfiles profesionales y competencias tanto genéricas como específicas de las titulaciones de CC. de la Educación' [Analysis of occupational profiles and generic and specific skills of education science graduates]. Financed by the Regional Government of Castille and Leon, Ref: PO04/05 (Spain); (2003-05): 'Diagnóstico formativo e inserción laboral de los titulados en CC. de la Educación; estudio comparativo entre titulados hombre y mujeres' [Diagnosis of training and labour market integration of education science graduates; comparative study of male and female graduates]. Financed by the European Social Fund through the Community EQUAL Initiative in Spain under the decision of 16 November 2001.

not just on the effectiveness and efficiency within the system, but also on its capacity to respond to the needs of society and those of the people it trains. These needs are not limited to obtaining a qualification, but also include specific guidance on labour market integration and the development of further training processes’.

Furthermore, bearing in mind the personal perspective of students, the integration of university graduates is a complex and multifaceted phenomenon that must be rigorously analysed, given that it not only forms one of the most critical moments in the development of an individual’s career, but also, whereas ‘in previous decades, a graduate’s future seemed assured and was also linked with high social status and income, nowadays we are living in a climate of uncertainty as regards the relevance and value of a degree’ (Gaio Alves, 2005, p. 30).

What is more, of all the university graduates, the two groups that find it most difficult to fully and adequately enter into working life are women and graduates in the humanities, particularly education sciences. These are the two groups that interest us and that must particularly benefit from vocational guidance and research plans and strategies.

Therefore, we need to understand the situation of education science graduates in terms of their opportunities for entering into working life, so that we can propose specific vocational guidance actions and plans. We need to analyse their level of labour market integration, their reasons for choosing to pursue these studies, their assessments of the study courses, and so on. As a result, we hope to provide guidance to the students who are pursuing these studies today and to the university itself, so that it can improve and adapt its syllabuses to the needs of society and to the requirements of European convergence.

## Method

Due to its nature, our research covers different aspects of the university training and subsequent labour market integration processes, as well as the development of the university’s vocational guidance strategies and tools that are available to students. Our aim is to arrive at an understanding (skills, expectations, assessments, etc.) of the current situation of education science graduates that may be useful in the search for vocational guidance solutions and the

development of the university vocational guidance actions, as well as syllabuses in the European Higher Education Area that can be generally applied to other degree courses.

We therefore felt that the best way to examine the ideas raised and to analyse the results was to adopt a methodological pluralist approach. This approach, which is used and developed in the studies and research carried out by most experts in the field, allows a rigorous understanding of a complex situation in which assessments, expectations and interests must be diagnosed.

From an empirical-analytical perspective, we achieved the necessary objectivity and reliability in order to explain and predict the phenomena studied. We did this by using a questionnaire that was specifically designed to produce a quantitative assessment so that we could then apply the results to other degree courses, students and universities. However, a multitude of subjective factors can affect such a complex process as labour market integration and vocational guidance. Therefore, we had to give our research an interpretive humanistic focus when analysing the data, by concentrating on the intentions and meanings behind the human actions and seeking a general understanding of the situations and people.

Based on these premises, the empirical processing of the analysed data is divided into two main parts.

First, we assessed aspects relating to the university and further training received by the subjects of our sample, with an emphasis on their assessment of the training received at the university in relation to its usefulness for their labour market integration. We regard this assessment as a quality indicator of the university, given that the former students surveyed had had enough time to enter the labour market and understand its mechanisms. One of the many indicators for assessing the quality of university training would derive from graduates expressing their satisfaction with such training and their assertion that it was conducive to their subsequent full labour market integration.

In the same section and as another indicator of quality higher education, the assessments by former students of the work skills they possessed at the end of their studies serves to identify those aspects that must be strengthened in relation to previous findings on market demands and employability factors. If those surveyed declare that they finished their studies lacking in certain skills necessary for labour market integration, this must entail the improvement of the training in those skills.

The second section consists of a series of objective data on the integration process of the subjects, which identified the tools used in the job search process, the level of employability of the sample, the difficulties encountered when integrating into the market and the type of integration. We considered full labour market integration to be when a subject is employed in a profession pertaining to the degree studied and with a stable employment contract. In this section, we also analysed some more subjective data related to the integration process, such as the factors that influence the obtainment of employment and job satisfaction. We also wanted to discover the circumstances of those subjects who were not working at the time of the survey, to find out whether they had chosen not to work or were unemployed and actively seeking work.

These two sections determined the study objectives, which may be described as follows:

1. Study the academic and occupational profile of education science degree courses (pedagogy, psychopedagogy and community education).
2. Analyse the match between the university training received and the fields of work in which education science graduates are employed. In this case, our representative sample consisted of education science graduates (pedagogy, psychopedagogy and community education) from the Pontifical University of Salamanca (UPSA). We did not include teacher training students in our sample as their relationship to employment (in terms of defining occupational profiles, general and specific skills and jobs to be performed) is very direct and leaves little room for doubt.
3. Analyse the assessments made by graduates of the aforesaid degree courses about the training they received during their time at university.
4. Use the research results to assist the structuring of syllabuses for new degree courses, so that they are conducive to the social and professional integration of students who pursue education studies in the near future.

As a result, the surveyed population consisted of graduates from the three degree courses run by the Faculty of Education Sciences at the Pontifical University of Salamanca: pedagogy, psychopedagogy and community education, who completed their studies between the 1997/1998 and 2002/2003 academic years. It was essential that all subjects had passed all the modules and earned all the credits in their syllabus.

The period selected was of key importance, as the graduates had already had sufficient time to access the labour market with a certain degree of stability. In addition, the choice of the six academic years in that period corresponded with the introduction of the psychopedagogy degree course at the faculty, from which the first class of students graduated in 1997.

As a result, the total surveyed population consisted of 906 former students and, eliminating those who could not be located during our field work exercise, this gave us a real sample of 446 subjects to whom we sent questionnaires and from whom 248 responses were received.

The following tables and graphs contain some of the characteristics of the data-producing sample in terms of gender (Table 1), degree course followed (Table 2), year of graduation (Table 3), average age (Graph 1) and university entrance grade (Graph 2). This data, which is consistent and representative of the population, reveals significant characteristics about the surveyed subjects and allow the results to be generalised to other similar situations.

The information was gathered using questionnaires specifically designed for each degree course under study. This tool, prepared using validity and objectivity criteria as listed in Appendix 1 (Information about the preparation of the tools), consists of 41 questions divided

**Table 1. Distribution of sample by gender**

Gender	Percentage
Female	75.8 %
Male	24.2 %

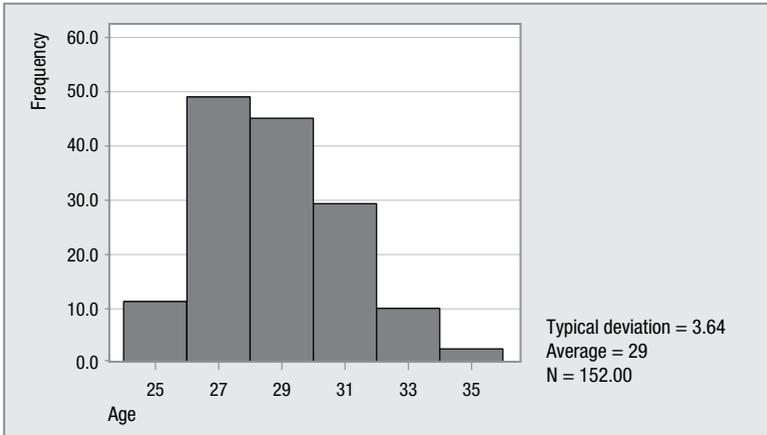
**Table 2. Distribution of sample by degree course**

	Degree course		
	Pedagogy	Comm. ed.	Phychopedagogy
Graduates	46	63	139

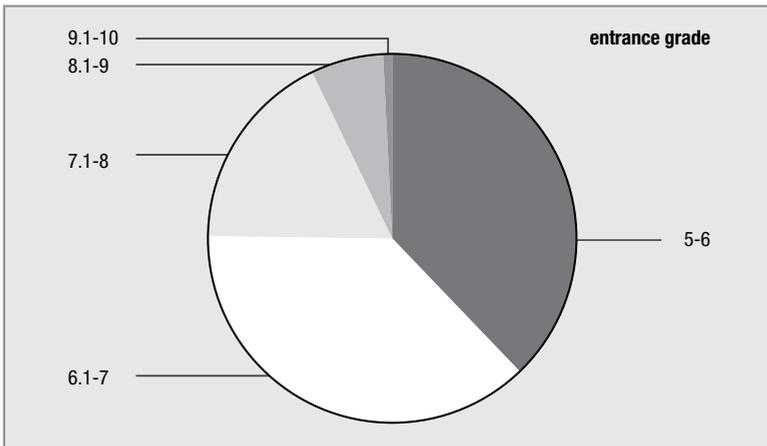
**Table 3. Distribution of sample by graduation year**

	Graduation year					
	97/98	98/99	99/00	00/01	01/02	02/03
Graduates	23	34	50	56	50	35

Graph 1. Average age of sample



Graph 2. Distribution of sample according to university entrance grade



into three sections that analyse a range of variables. The first section covers the personal and academic characteristics of the person responding to the questionnaire; the second section refers to the university training received; and the third section covers the process of entering into working life.

To gather the information, the questionnaire was sent in three separate mailings, with a one month interval between each, to the agents involved in the research. The survey respondents returned the questionnaire to the original sender in a prepaid envelope.

## Results

### Aspects relating to the university and further training

#### *Students' reasons for choosing degree course*

The reasons why students decide to follow a particular degree course within Education Sciences can impact upon their subsequent academic and professional results. Of the sample of graduates we surveyed, 45 % chose their course for primarily 'vocational' reasons. Given the difficulties these people will encounter when it comes to accessing the labour market in these areas, it is logical that their motivation for studying this course would be vocational and therefore this result was expected. The second reason most commonly cited by graduates (36.2 %) was to expand their training and range of studies; in other words, to 'continue their training'. This particularly applied to the psychopedagogy course and those cases where pedagogy was studied at postgraduate level, as, given that these are higher education studies, the aim of students was to expand their Teacher Training or Community Education qualifications with a view to improving their opportunities in the labour market.

Thus, by degree course, it was mainly the community education graduates who selected 'vocation' as the primary reason for their studies, whereas, the psychopedagogy and pedagogy students selected 'continue training' as their main reason, as shown in the table below (Table 4).

Table 4. Reasons for choosing degree course

	Pedagogy	Community education	Psycho-pedagogy	Total
<b>Vocation</b>	23.30 %	63.0 %	43.7 %	45.4 %
<b>Proximity</b>	3.30 %	0.0 %	0.0 %	0.6 %
<b>By chance</b>	20.0 %	17.4 %	0.0 %	8.6 %
<b>Professional opportunities</b>	3.30 %	10.9 %	1.1 %	4.3 %
<b>Social prestige</b>	0.00 %	2.2 %	1.1 %	0.6 %
<b>Family</b>	0.00 %	0.0 %	1.1 %	1.2 %
<b>To continue training</b>	46.7 %	6.5 %	48.3 %	36.2 %
<b>Other</b>	3.30 %	0.0 %	4.6 %	3.1 %

### *Assessment of university training received*

With regard to the ex-students' assessment of the university training received, we first had to explore the relationship between training and employment; then we had to investigate the assessments of the training and its impact on personal, professional and cultural development; and finally we analysed some of the basic qualities of the university studies.

In order to clearly and rigorously interpret the responses concerning the link between university training and the social and professional environment, we dichotomised the response scale by combining, on the one hand, the 'totally disagree' and 'disagree' responses, considering them both as negative values and, on the other hand, the 'agree' and 'totally agree' responses, considering them both as positive values.

As a result, a majority of 65.6 % of former students thought that, when they completed their studies, they had sufficient information about their occupational opportunities.

A lower proportion of ex-students felt that they had satisfied the employment expectations they had whilst studying, at 54 % compared with 46 % who did not agree with this statement. Bearing in mind that the study population had had sufficient time to successfully integrate into the labour market, the percentage of former students who felt they had not met their expectations was high. This coincides with the difficulties these students face when trying to find a job appropriate to their degree course.

The proportion of former students who agreed that their university training had adequately prepared them to work in a job related to their degree course was 56.3 %; an almost equal proportion disagreed with this statement (43.7 %). The proportion of former students who felt that the course contents had helped them access employment was also very close to the proportion who did not agree with this statement. Specifically, 50.3 % thought that the course content had helped them to access employment compared with 49.7 % who thought this was not the case.

With regard to the practical side of the course, a majority of around 70 % thought that this had been useful to their labour market integration and 65.6 % also felt that, thanks to this practical element, they discovered new occupational profiles relating to the studied course.

One of the highest satisfaction ratings was for the general assessment of the Pontifical University of Salamanca, with more

than 85 % of those surveyed saying they would go back to study at the same university. What's more, a majority of former students (73.7 %) would go back to study the same course and nearly 80 % of students said they were generally satisfied with their university training.

The following table (Table 5) displays this data, which can be interpreted as telling us that, generally, Education Science graduates from the Pontifical University of Salamanca are satisfied with the training they received, although the assessment of some points reveals areas for improvement, specifically the need to match course

**Table 5. Student opinions on the usefulness of their university training**

%	Totally disagree	disagree	total	Agree	Totally agree	total
<b>a. On completing my studies, I had adequate information about my professional opportunities</b>	6.2	28.2	34.4	50.3	15.3	65.6
<b>b. In terms of employment, I have met the expectations that I had whilst studying</b>	12.3	33.7	46.0	36.2	17.8	54.0
<b>c. My university training prepared me to carry out a job connected with my degree course</b>	7.0	36.7	43.7	43.0	13.3	56.3
<b>d. The course content helped me to access employment</b>	7.4	42.3	49.7	39.3	11.0	50.3
<b>e. The practical side of the course was useful for my integration into the labour market</b>	6.7	26.5	33.2	37.4	29.4	66.8
<b>f. The practical side helped me to discover new occupational profiles</b>	7.4	27.0	34.4	42.3	23.3	65.6
<b>g. Would I go back to study at the same university?</b>	6.1	8.7	14.8	47.2	38.0	85.2
<b>h. Would I choose the same course?</b>	8.6	17.7	26.3	34.4	39.3	73.7
<b>i. I am satisfied with my university training</b>	3.1	16.7	19.8	57.4	22.8	80.2

content more closely to market demands and the need to improve these students’s opportunities with a view to their labour market integration and their conditions of employability.

This coincides with the responses of the former students to another three questions that assess the training received at the university in three areas: personal, cultural or intellectual and vocational. Whereas the assessment of personal and cultural training was very high, with almost 90 % of former students believing that the training they received in these two areas was good or very good, when assessing the vocational training received, the proportion considering this as good or very good dropped to 63.8 % (Table 6). This data again indicates the need for improving the quality of the university in terms of the objective of training professionals who can easily integrate into the labour market.

**Table 6. Student opinions on the type of university training received**

%	Very Poor	Poor	total	Good	Very Good	total
<b>a. Personal training</b>	1.2	9.3	10.5	65.3	24.2	89.5
<b>b. Cultural/intellectual Training</b>	0.6	11.6	12.2	71.8	16.0	87.8
<b>c. Vocational training</b>	1.8	34.4	36.2	57.1	6.7	63.8

Although a majority considered that the university training received was good or very good in all three areas: personal, cultural and vocational, 36.2 % of former students considered that the vocational training received was poor or very poor. This figure is high enough to be considered when making improvements to the quality of the university.

The third question, aimed at obtaining more information about the assessments of the graduates, measures seven basic qualities of university training.

In this way, we discovered that 92 % of those surveyed thought the training they received at university was quite or very theoretical: this being the quality that, according to students, most characterised the training they received, given that the other qualities did not receive such a high percentage.

When assessing whether the training was critical, a majority of 59.2 % thought that it was only slightly or very slightly critical.

The proportion who thought that the training received was only slightly or very slightly scientific was higher, with a total of 66.7 % former students considering that they could not qualify their training as scientific. This was therefore the quality that least defined the university training received in Education Sciences.

Among the other qualities analysed, we discovered that, for a majority, the training received could be regarded as active (63.8 %), useful (69 %), complete (62.4 %) and up-to-date (75.9 %). Although these are majority percentages, it must be borne in mind that a significant number (36.2 %) of former students considered their training as only slightly or very slightly active; that 31 % felt the training received was only slightly or very slightly useful; that 37.6 % felt it was only slightly or very slightly complete; and that 24.2 % regarded it as only slightly or very slightly up-to-date, all of these qualities being fundamental to high-quality university training (Table 7).

**Table 7. Opinion on the qualities of the university training received**

%	Very slightly	Slightly	total	Quite	Very	total
<b>a. Theoretical</b>	1.2	6.8	8.0	58.0	34.0	92.0
<b>b. Critical</b>	6.2	53.0	59.2	35.2	5.6	40.8
<b>c. Scientific</b>	10.5	56.2	66.7	30.8	2.5	33.3
<b>d. Active</b>	6.1	30.1	36.2	49.1	14.7	63.8
<b>e. Useful</b>	3.7	27.3	31.0	56.0	13.0	69.0
<b>f. Complete</b>	4.3	33.3	37.6	56.8	5.6	62.4
<b>g. Up-to-date</b>	2.5	21.7	24.2	57.8	18.0	75.8

This data gives us numerous pointers about the direction that must be taken to improve university training. This training must become increasingly critical, scientific and dynamic, if it is to be useful when entering working life.

Another factor that can affect opinions about the training received at university is the success with which former students have integrated into the labour market. It may be expected that those who have stable jobs appropriate to the course studied and who are satisfied with their work will give a better assessment of the training they

received than those graduates who are in unstable jobs that bear no relevance to their degree course or those who are unemployed.

#### *Data on further training*

As we have seen, further training is one of the most important factors for improving a graduate's chances of being employed. To measure the professional success of our graduates, we needed to consider the possibility that this success was due to the further training received, either during or after their time as students at the university.

Information about the graduates' further training was divided into two parts:

(a) Further training undertaken at the same time as the university training. This covered the courses and activities that supplemented the university studies and were pursued at the same time as the degree course, distinguishing between courses connected with education, language courses, IT courses and other activities.

The graduates in this survey followed specific courses on Education rather than IT or language courses. The data showed that more than 66 % of former students followed Education-related courses during their degree course. However, only a meagre 10 % studied languages and just over 16 % studied IT.

(b) Further training undertaken after university training. This covered courses and other activities, such as a new university degree course or a master's degree or the preparation of a doctoral thesis, all of which help increase the chances of employment.

Once again, the highest percentage was for Education-related courses, which more than 70 % of the subjects followed.

At the same time we must highlight the number of students who, after finishing their degree course, started another one. More than 30 % of former students opted to do this, which will undoubtedly increase their chances of employment in areas where they need to improve their competitiveness on the market. Generally, the courses chosen as a second option were also in the Education Science field. This coincides with the data relating to the reasons why students chose their university course, which in many cases was due to an interest in expanding their previous training.

On the other hand, the percentage of graduates studying for a doctorate was only 10 %. Due to the specific nature of this activity, doctorate courses are mainly followed by those people who want to steer their working life towards research and university teaching.

The number of students who opted to enrol for a Master's degree after completing their studies was somewhat higher, at just over 20 %. This is still not particularly high if we consider that it increases one's chances of employment, as, for a Master's, the university graduate specialises in a specific field within their own field and thereby defines their occupational profile. On the other hand, the investment of time and money required to do a Master's degree could explain why the percentage of graduates who do this is not particularly high.

With regard to the study of languages and IT, it seems that graduates realise the importance of these subjects on completing their university studies and so the percentage of people studying them then increases, with the proportion studying IT rising to more than 30 % and the figure for languages increasing to 23 %.

To summarise the above, we present some of the analysed data as follows:

In conclusion, we can say that the further training most in demand are education-related courses, which have been undertaken by

**Table 8. Further training undertaken during the degree course**

%	Total	
	Studied	Not studied
<b>Education-related courses</b>	66.5	33.5
<b>Languages</b>	9.9	90.1
<b>IT</b>	16.8	83.2

**Table 9. Further training undertaken since the degree course**

%	Total	
	Studied	Not studied
<b>Another degree course</b>	31.7	68.3
<b>Doctorate</b>	10.6	89.4
<b>Master's degree</b>	22.4	77.6
<b>IT</b>	31.1	68.9
<b>Languages</b>	23.0	77.0
<b>Education-related courses</b>	72.0	28.0

most of the former students at some time in their academic or professional life.

When analysing labour market integration, we felt it would be interesting for the survey to explore how this further training affects the professional opportunities of Education science graduates: in other words, does further training improve labour market integration or, on the contrary, does this training have no effect at all on the transition process from studies to work?

### *Data on skills and competences*

To interpret the data concerning the skills and competences graduates felt they possessed on completing their studies and what they currently possess, it was important to once again dichotomise the results, by combining the 'very few' and 'few' responses, considering both as negative values, meaning that former students *did or do not* possess these skills, and by combining the 'some' and 'many' responses, considering these as positive values, meaning that former students *did or do* possess these skills.

We first present the results relating to the level of the skills that graduates claimed they had acquired during their university studies and possessed on completion thereof.

As can be seen in Table 10, almost all students (95.6 %) declared that, on completing their studies, they had good teamworking and integrating skills (92.4 %). These two skills are essential for education science graduates when carrying out a job aimed at and for people and so it is very positive that the graduates themselves considered that, on completing their studies, they were capable of working in a team, of integrating people and being tolerant.

In addition, teamwork is one of the skills that employers value most. Due to the changing and dynamic society in which we live, another valuable capacity when entering the labour market is the ability to adapt to new situations. Most of the former Education Science students from UPSA declared that, on completing their studies, they possessed this skill (73.5 %); they also declared that they had a good problem-solving capacity (73.2 %), the capacity to innovate and be creative (72.7 %) and the ability to gather information independently (70.9 %). All these skills are highly valued in a rapidly-changing market that needs dynamic and independent people who can tackle the different work situations and dynamics that arise.

On the other hand, two skills that are more specific to educational work produced lower values: 67.3 % of former students considered

**Table 10. Skills possessed on completing the university studies**

%	Very Few	Few	total	Some	Many	total
<b>Educational planning</b>	5.0	37.5	42.5	46.9	10.6	57.5
<b>Teaching methods and resources</b>	5.7	36.1	41.8	48.7	9.5	58.2
<b>Command of new educational technologies</b>	13.2	54.1	67.3	27.0	5.7	32.7
<b>Independent information gathering</b>	3.2	25.9	29.1	51.9	19.0	70.9
<b>Adaptation to new situations</b>	1.3	25.2	26.5	55.1	18.4	73.5
<b>Problem solving</b>	1.3	25.6	26.9	42.3	23.3	73.2
<b>Skill at integrating people</b>	0.0	7.6	7.6	57.0	35.4	92.4
<b>Teamwork</b>	0.0	4.4	4.4	54.3	41.3	95.6
<b>Oral communication</b>	8.1	43.1	51.2	35.6	13.2	48.8
<b>Written communication</b>	1.3	16.9	18.2	58.1	23.7	81.8
<b>Creative and innovational ability</b>	1.9	25.5	27.3	52.8	19.9	72.7

that, on completing their studies, they did not have a good command of new educational technologies, which are currently highly valued and necessary resources in teaching and educational work. With regards to oral communication skills, it must seriously be taken into account that 51.2 % of graduates declared that, on completing their studies, they were poor at oral expression, which is an essential element of educational work. This data is useful for improving the quality of the university, as they offer pointers to some of the weaknesses that can be improved.

### **Aspects relating to labour market integration**

#### *Data on level of employability*

This section will provide information on the graduates' level of employability based on two indicators:

- percentage of students who have worked at some point;
- percentage of students who are working at the time of the survey.

For the first indicator, the data showed a high percentage of graduates who have worked at some point, with only 6.2 % declaring that they have never worked.

In addition to this information, another requirement that is necessary if we are to talk of the full labour market integration of university graduates, is whether their jobs directly relate to the degree course followed, whether they are connected in any way with education, even though they are not directly related to the degree course, or whether they have no connection at all with the Education Science courses.

On this important issue, the gathered data indicates that 37.6 % of all students have performed jobs directly related to their degree course; 36.9 % have performed jobs that are connected in some way to their studies and 25.5 % have held jobs that were not at all connected with the degree course studied.

- Another of the most important pieces of information in this survey as a whole is the proportion of graduates who were working at the time of the survey. The figures showed that 80.4 % were working when the survey was carried out.

#### *Characteristics of the labour market integration process*

To discover the characteristics of the labour market integration process for education science graduates from UPSA, we must examine the data concerning the:

- time taken to find their current job;
- time spent in that job;
- sector in which they are working: whether public or private;
- type of contract.

This set of objective data will clarify the conditions of the integration, so that we can establish whether or not there is full labour market integration.

As regards the time taken to find their current job, a majority of 40.5 % of ex-students took under six months to find a job, whereas, at the other extreme, 14.3 % had not found work within two years of completing their studies. This data is qualified by the data on job stability. In our case, we consider it important to highlight that just over half of our students do not achieve job stability after two years of work (Table 11). We believe it is important to point out that this data is not specific to the work and job profiles connected with Education Science. If we look at this same type of survey carried out in relation to other degree courses, the results are the same. We therefore believe that this instability is a characteristic of our labour market and not exclusive to the degree courses under study.

**Table 11. Time taken to find current job and job stability**

%	Find job	Stability
Less than 6 months	40.5	20.8
Between 6 months and 1 year	22.2	10.0
Between 1 and 2 years	23.0	14.6
More than 2 years	14.3	54.6

At the same time, we thought it would be interesting to find out whether former students were working in the public or private sector. In this case, it is important to highlight that 60.9 % of graduates were working in the private sector, compared with 39.1 % in the public sector, which they had accessed, mostly, through competitive examinations.

Finally, there is another final piece of information that allows us to determine whether or not we are talking about full labour market integration: that is the type of contract. A permanent, full-time contract offers certain guarantees of stability, which means that we can talk about full integration. However, the types of contract used in our labour market are many and varied and in many cases combine the type of contract (permanent, temporary, work experience, etc.) with the number of working hours (full-time or part-time). Thus, the data on the type of contract our graduates hold is given in the following table (Table 12).

From this we can see that full-time contracts predominate, accounting for almost 60 % of those surveyed, of which 39.9 % having a permanent contract. On the other hand, we consider it important to point out that 6.6 % of graduates are self-employed. We believe that this option, which is generally unknown to and little valued by Education Science graduates, is an important working method for the future. What is more, by looking in more detail at the assessments from those ex-students who opted for self-employment, we discover that they feel empowered to implement innovative ideas in education, provided that they have support and, from their working experience, they indicate that there are many and varied work opportunities in the field of education: we highlight the educational services enterprises that provide support for extracurricular activities in ordinary educational establishments, consultancy firms providing advice to

labour organisations, educational advisory enterprises (particularly on issues of multimedia and interactive material development), psychopedagogical and vocational guidance firms, etc.

This data shows the importance that universities must attribute to the development of entrepreneurial, leadership and self-employment skills among our students.

To sum up, we can say that virtually all the education science graduates found work within a maximum of two years after completing their studies and that this work was related to the degree course studied (psychopedagogy, pedagogy or community education) for 75 % of the sample.

The majority took no more than six months to find a job and spent more than two years in the same. They work mostly in the private sector and have primarily full-time permanent contracts, followed by full-time temporary contracts.

**Table 12. Type of contract**

%	Total
Full-time permanent contract	39.2
Part-time permanent contract	7.7
Full-time temporary contract	21.5
Part-time temporary contract	9.2
Training or work experience	1.5
Employed without contract	4.6
Self-employed	6.9
Work and service	9.2

## Conclusions

The analysis of the labour market integration of university graduates is one of the most useful tools for assessing the effectiveness of higher education. It is not regarded as a simple quality indicator, but as a complex reality influenced by both personal and social factors.

The results of such an analysis must be taken into account when improving the syllabuses of the different Faculties, as they can bring the university and the demands of the labour market closer together.

Therefore, the analysis of labour market integration impacts on all areas of the university training process, not only because it provides the information needed to guide the training and occupational choices of the students, but also because it informs enterprises about the occupational profiles existing within a degree course. At the same time, with regard to society in general, it helps optimise the human resources of the population and satisfy society's needs for appropriately trained and skilled professionals.

This article has analysed labour market integration processes and their correlation with university training based on the assessments from education science graduates (pedagogy, psychopedagogy and community education) of the Pontifical University of Salamanca (Spain). These students are regarded as representative of highly feminised degree courses with difficulties in matching training to employment.

The data described throughout this document has led to a series of conclusions that respond to the set objectives. We therefore believe that this data must be taken into account when deciding on the syllabuses of these degree courses in the EHEA.

We draw the following general conclusions:

1. The current labour market demands many skills and occupational profiles specific to education science degree courses, but the lack of knowledge among enterprises means that the number of contracts is still not adequate. A closer relationship needs to be established between the university and employers and this type of course also needs to be encouraged, by clearly defining the skills taught and demanding specific areas of action.
2. If the job opportunities for education science degree courses are improved, then the working conditions of female university graduates, who for various social and cultural reasons dominate in this field, will also be improved.
3. For education science degree courses to be more highly valued, the quality of university training relating to labour market integration must be improved. According to the graduates, the university training they received was not sufficiently critical or active and they do not feel that it was totally useful or complete. Therefore, improvements should be made in these areas. With regard to skills, university studies in this area must concentrate more on the command of new educational technologies and the ability to communicate orally, both of which are basic skills for working in education.

4. The university must encourage students to pursue further training, both during and on completion of their studies, which will provide them with more opportunities for practical work experience. In this case, as with other university degree courses, graduates indicate that it is vital to inculcate an interest in training on two fundamental factors of employability: languages and IT.
5. The university must also undertake to establish effective channels of communication between enterprises and its students, systematically tracking their professional careers once they complete their university training. This tracking will serve, among other things, to provide information that may guide the careers of future students.
6. On the other hand, we have also determined that, despite certain limitations, the time it takes for education science graduates to find employment is no longer than that for other university graduates. At the same time, this labour market integration tends to be in line with their expectations (connected with their occupational profiles) and holds guarantees of stability in many cases.

As a final conclusion, we want to highlight that the findings presented herein are intended to respond to the demands of a world in which the supply of a high-quality education and the fight for equal opportunities continue to be two of its main challenges.

We consider that, in order to successfully develop an education that is appropriate to the changing society in which we live, particularly within the European Higher Education Area, young university graduates must be offered suitable support for their full integration into the labour market. We stress the need to develop vocational guidance strategies for education professionals who are frequently forgotten, despite the fact that their educational profiles responding to the current requirements of enterprises.

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## ANNEX 1

### Information about the preparation of the tools

The questionnaire preparation process can be summarised as follows:

1. To prepare the questions, the scales previously developed by authors and universities in pursuit of similar objectives were reviewed, such as those developed by the following universities: Polytechnic Universities of Catalonia, Valencia and Madrid; Universities of Jaén, Granada, UNED, Rey Juan Carlos I, Carlos III de Madrid, Basque Country, Miguel Hernández de Elche, Murcia, Oviedo, Zaragoza and Córdoba; Autonomous University of Barcelona, and Pontifical University of Salamanca. Having performed this review and, as there was no scale that exactly responded to the research objectives, we took some of the questions from each scale, using them as a source of ideas to generate our own questionnaire.
2. The questionnaires contained different types of question and different types of response scales, with those that best responded to the research objectives applied to each question, although we did try to harmonise them as far as possible to assist completion by the survey respondents. Thus, for sets of questions that measure the opinion of those surveyed or their attitude towards certain aspects, we used ordered response categories ranging from one extreme to the other and on occasions expressing consent (agree-disagree), quality (poor-good) or quantity (very-slightly). We kept the same order of presentation for the response options of all the questions: from less to more. The quantity of response options per question was the same, with four options. This decision was due to the fact that it was important for the research that those surveyed chose one position or the other. When an odd number is used, the intermediate item is neutral. However, when the number is even, the person surveyed is forced to choose between agreement or disagreement, which is what was important to us in this case.
3. To ensure that the content of the questionnaires was valid, in addition to the aforementioned review of the literature, we consulted experts of both statistics and labour market integration, who gave their opinion on the appropriateness of each question to the established variables. We then produced the first

questionnaires, which were piloted (pre-tested) amongst a small group of people. For this purpose, we selected two groups of subjects with similar characteristics to those people who would comprise the target sample of our survey. In general, completing the questionnaire did not pose any particular difficulties to any of the people who participated in the process. However, they did point out that questions with a particular type of response did seem to be interspersed with questions of another type, which complicated the task of answering the questions. To solve this problem, we combined questions and restructured the questionnaire so that it was easier and faster to complete. With regard to each of the questions, certain points were observed that had to be changed in order to improve the final questionnaire.

4. New questionnaires were produced and tested among a pilot sample of final-year Pedagogy and Psychopedagogy students. We gave them the questionnaires and then asked the group about the following aspects:
  - opinion on the time needed to complete the questionnaire;
  - difficulty in completing the questionnaire;
  - understanding of each of the questions asked;
  - questions not appropriate to their situation;
  - general assessment of the questionnaire.
5. In addition, the pretest served for making an empirical analysis of the scale questions, using the alpha ( $\alpha$ ) coefficient of Lee J. Cronbach as an index to measure the internal consistency. An alpha coefficient of 0.8101 was obtained.

Based on the suggestions stemming from this process, we constructed the final questionnaire. Given that the questionnaire would be completed by graduates of the three degree courses at the Faculty of Education Sciences: pedagogy, community education and psychopedagogy, we produced three very similar models, but with some differences as necessary for the purpose of the analysis.