Understanding, discussing and addressing Employability

Fernandes, João Paiva[1] and Mendes, Rui[1]

[1]Employability Observatory, Instituto Superior Técnico, University of Lisbon

Abstract

The need to produce viable and up to date information concerning graduate employability demands that higher education institutions (HEI) develop structures and methodologies that allows the monitoring of the evolution of the transition from higher education to the labour market and in what conditions this is happening and how the professional paths are evolving. This sort of information is of the upmost importance in the strategic management of HEI in terms of labour market approach and how to assure that their graduates have a simplified access to jobs. In this sense, it is proposed a methodology based on the experience gained by the Employability Observatory at IST, Portugal, which has been monitoring graduates since 1993. This methodology is based on the definition of a set of key variables and a short,mid and long term survey plan which allows not only to learn about recent graduates but also about graduates who graduated 5, 10 and 20 years ago. In mid term is is possible to inquire the same group of graduates 5 years later allowing a longitudinal perspective and to gain some insight on the impact of professional experience in the career of a HE graduate.

Keywords: Employability; Higher Education

1 INTRODUCTION

Employability has gained ground in the way Universities manage and plan their activity, both in terms of supply, business links and research. Issues like unemployment among college-educated workers, the imbalances between educational offer and the areas lacking qualified workers have contributed to build a scenario where Universities must equate these concerns as one of their major strategic mainstays. In view of this, it is not necessary a great deal of thought to understand and recognize that the HEIs have increasingly sought to know more about the professional careers and status of their graduates. Putting somewhat aside the theoretical debate and speaking objectively, the purpose is in fact to overcome the imbalances placed by the labour market and to ensure an optimal level of professional integration of graduates after leaving the HEIs. Ultimately, it may be considered that professional integration is the culmination of a period of work carried out jointly between students/graduates and their Institution, and their success is measured and quantified through the analysis of the conditions and the context in which the professional integration of these graduates and their career has developed. Positive rates of professional integration show how sound institutions are in providing their students with employability skills and competences, making them competitive in the labour market. It is critical to monitor these rates to somehow improve or adapt actions by the institution itself both in terms of the curriculum and the strategies to address the issue of labour. Before a situation of imbalance in terms of labour market and in countries with a significant percentage of higher education graduates, attention is placed on what the degree of responsibility of educational agents is on this matter. Another important issue in the management of HEIs, in addition to the strategies to tackle the labour market, is the management of the educational offer. In this regard, the monitoring of the professional career and the dissemination of tangible and updated information play a fundamental role, just at a time when Portugal has started a widespread debate regarding the restrictions and access to educational offer as a means of addressing the labour market imbalances. This solution raises questions and doubts regarding the maintenance of a knowledge-based society and the institutional legitimacy in controlling certain areas of knowledge. In an open knowledge-based society, opportunities must be given to candidates to apply for any area of knowledge. Ultimately, it can be said that if the labour market does not currently need a certain area, students must not be discouraged to take up courses in that particular area. Alternatively, and preventing universities from being too dependent on labour market restrictions, there must be tools for producing information to allow candidates to higher education to make an informed choice, therefore assuming their responsibility[1]. The methods to measure a reality that HEIs must recognize will therefore be dealt with in this context. The issue is to somewhat stand back from the conceptual debates regarding employability and to focus on how to guarantee the best possible quality in gathering empirical evidence. The example of the professional integration was mentioned as one of the main

[1]FOLLOW Project, EU 2013 – Lisbon International Seminar

indicators and also as one of the most obvious. Nevertheless, while catering for their management needs, the HEIs should devise an objective strategic planning to address employability and find human resources with expertise and capacity to develop methodologies that may apply to this area. This document will precisely focus on the importance of structured methodologies for gathering information on the professional status of graduates in a context of strategic management, namely in terms of:

- Attraction of candidates to higher education,
- Institutional performance assessment and course efficiency performance (Employability),
- Visibility of the institution in the labour market,
- Attention devoted by the media to the institution

The indicator 'rate of employed graduates' is far from providing detailed information on the performance of an HEI in terms of employability. Let us consider the following example: A zero percent unemployment rate associated with a high mismatch rate between an educational area and a professional activity shows some deficiencies in the process of transition to the labour market, which must be corrected. Thus, it is important to broaden the level of detail and the dimensions associated with professional integration and status, therefore allowing the HEI to quickly identify the actions that need critical action. That's why is necessary to reflect upon an methodological analysis of the professional integration and status of graduates in higher education. Thinking both in internal and external quality assurance assessments, institutions must *"have mechanisms that help obtain information on the needs and expectations of the different stakeholders in relation to the quality of educational programmes and services offered"*[2]. It is also necessary to consider another relevant factor. In Portugal, each HEI is subject to legal requirements in terms of periodical data output regarding the professional status of graduates and some sets of data are even required in the accreditation processes carried out by the Assessment and Accreditation Agency for Higher Education (A3ES). Law 62/2007 of 10 September establishes the **Legal Framework for Higher Education Institutions (RJIES)**. Article 162, paragraph 2 provides that *"Accurate and sufficient information must be made available regarding the following aspects: (...) j) Achievement and underachievement rates, and employability rates of the study cycles offered (...)."* As regards evaluation and accreditation, Law

[2]Sérgio Machado dos Santos (2009). Análise Comparativa dos Processos Europeus para a Avaliação e Certificação de Sistemas Internos de Garantia da Qualidade (Working Version 1.0)

38/2007 of 16 August which governs the Legal Framework for Higher Education Institutions (RJIES) provides, in its Article 18, paragraph e, ii, that the HEIs must *"Publish, on a regular basis, quantitative and qualitative, updated, impartial and objective information regarding: the monitoring of the path of graduates over a reasonable period of time, in the perspective of employability."*

2 Information Collection

The structure/unit responsible for collecting, analyzing and maintening information must ensure that this process is carried out and gives careful consideration to the social and economic context in which it operates. The information output chain cannot be dissociated with it, therefore allowing for a simultaneous evolution between the methods and techniques and the context. The recent evolution of the labour market and higher education has imposed that the way information is collected, analyzed and produced evolve simultaneously and effectively, considering three key issues:

- What information to collect?
- How useful is the information collected?
- How to bring all these elements closer?

Considering the expectations of the HEIs and the context in which they operate, the need to know the reality may vary. So, on behalf of the optimization of resources, information must not consider non important or weird aspects. It is necessary to engage into a more critical reflection on what is really important and to what extent that information is useful for the purposes of employability management. The quantitative analysis and the respective information collection tools (questionnaires) are the preferred methods due to their extensiveness. They also may be articulated with qualitative methods if the purpose is to obtain detailed knowledge of certain dimensions. Having said that, the method must be put in practice, considering:

- The definition of the dimensions and the respective analysis indicators;
- The improvement of response rates;
- The development Vision;
- The analysis by cohort and study cycle;
- The dissemination actions and suggestions for improvement;

- The methodological reflection.

The definition of the indicators and the concern with better response rates are two directly related aspects. The good feedback of respondents to the collection tool is crucial to enhance full participation and therefore ensure a high rate of response. A user friendly questionnaire is obtained from the critical reflection on the indicators to be used, excluding those having little or no use for the management of HEIs through a combination of different paths adapting and shaping the questionnaire to the respondent's profile by not overloading graduates with the information which, despite its usefulness, does not add significant value to its purposes. This calls for the simplification of the questionnaire structure by reducing it to the minimum. Figure 1 shows the evolution of the response rates of the information collection processes carried out by the Employability Observatory of Instituto Superior Técnico (OEIST) and their relationship with the number of questions set out in the questionnaire. The intervals in the number of questions contained in the reports that came out in 2009, 2011 and 2013 reflected the adaptability of the questionnaire to the respondent's profile. For 2011 and 2013, there were extreme situations, in which only 7 questions or the whole 47 questions were responded. This occurs seldom and would involve a combination of very unlikely factors by the respondent. It can be seen that the concern with making the questionnaire more appealing had significant results. Currently, OEIST keeps the purpose of getting a response rate around 50%. The most recent survey, the VI Inquérito à situação profissional dos diplomados do IST achieved the highest percentage ever in terms of the response rate (49.2%). The rise of the response rates allows for bringing the collected data closer to reality and also adds credibility and reliability of the information produced. Other two important factors are the method of administration (also shown in figure 1) and the ability of maintaining an updated data base. Regarding the former, figure 1 shows that after the implementation of online collection methods there has been a significant increase in the response rates. It turns out to be cheaper, faster, and there is greater autonomy in the management of the whole process. Another factor concerning data bases involves an institutional effort in keeping updated contacts of its graduates. This is a factor of prime importance because it can render the whole information collection process invalid. In order to prevent this from happening, the structures of each HEI must keep an open channel of communication with former students, not only to collect information regarding their professional status but also to create collaborative networks and a direct link to the labour market through institutions where these graduates are performing their professional activity. Objectively speaking about the definition and choice

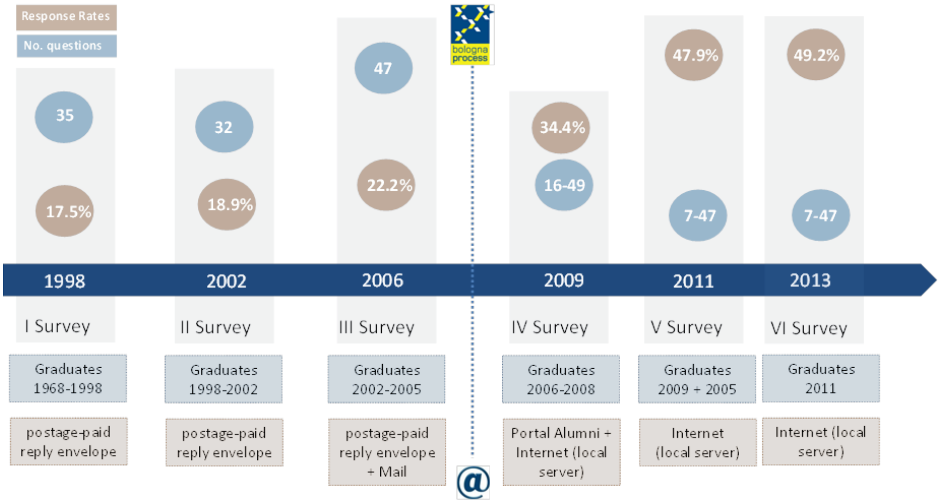

Figure 1: *Positive evolution of response rates of the Employability Observatory of IST*

of indicators (what one wants to know exactly), it must be oriented not only by the said determination of its importance and relevance but also by the adequacy to the populations surveyed. Different types of population require different types of indicators. Albeit interesting, there are indicators which are not the most adequate for a certain type of graduates and the the collection instrument may give rise to a surplus of information and result in entropy in the whole process. For instance, the *"Waiting time for getting the first job"* is an indicator that measures the institution's professional integration capacity performance.This is a cohort of recently graduates, which measures the gap between the course completion and the integration in the labour market (and can also produce a negative value if integration has occurred before the course has been completed). The guiding principles to define the indicators are based on their relevance and sustainability to show a detailed and sufficient picture and the professional career of graduates. Thus, there are **structuring indicators** and **support indicators**. Structuring indicators are sufficient to provide essential information whereas the support indicators derive from the structuring indicators and will supplement and strengthen the former. It should also be mentioned that support indicators are flexible to the context and needs whereas structuring indicators are little volatile to the context. Irrespective of the situation, they continue to be critical to determine the reality. Structuring indicators include:

- Occupational status
- Waiting time for getting the 1st job

- Type of Employment
- Form of getting current job
- Employer where graduate performs his/her activity
- Payment level
- Duties performed/Area of activity
- Job offers received
- Employment in the area of training

Example of support indicators:

- Internationalization
- Area of activity of Institution
- Leading/top positions

The administation of the structuring indicators varies according to the results obtained may identify from the extreme need of actions in all strands to just determining that the link to the labour market is fully working and thus the instrument is used for monitoring and maintaining the excellence in this subject matter. Indicators such as the type of duties performed or employment in the area of study allow the HEI to understand the qualitative integration of its graduates in the labour market whereas the indicators such as the occupational status or the waiting time to get the 1st job provide a quantitative insight of that integration. A proper integration in terms of the number of employed graduates may suggest a deficient professional integration if the job strongly differs from the educational area. With this type of information, the HEI must engage in the effort through varied means from liaising with the alumni structure to industrial partnerships and protocols. The purpose is to have information that sustains tangible corrective actions of imbalances or simply, as already mentioned, to monitor the behaviour of the HEI in terms of approaching the labour market. Support indicators refer to needs or specific interests of the HEI or to determine a certain reality that is relevant in strategic terms only in a short period of time. The "Leading positions" indicator is an example of IST concern with knowing if its graduates fill leading positions (or top or middle management positions) but, in its absence, it does not mean that it faithfully portrays the graduates' professional situation. Below is an example of administration of indicators by OEIST:

An additional remark must be made to the importance this information has to the student population, both students of secondary education

Table 1: *Table of application of surveys to the professional status of IST's graduates*

I & II Report	III & IV Report	V Report	VI Report
–Occupational Status			
–Waiting Time			
–Labour relation			
–Form of obtaining			
–Institution			
–Payment			
–Position			
–Job Offers			
–Employment in the area of training			
–Struturing	–International		
		–Mobility Programs	
		–Pursuit of students	
			–Lading positions
			–Average of working hours (day)

and candidates to higher education or the HEI students who may adapt their curriculum plan according to the job opportunities and the areas of performance of their duties. There must be clarity and transparency when providing information in order to help candidates to university and university students. These indicators may even be used by newly-graduates when negotiating job opportunities and has already indicative information regarding the type of remuneration of those on the labour market. The knowledge of the paths of former students in the field of employability, since they graduated or concluded their MSc programme until today and the way the appreciate their career, appears as added-value in guiding final-year students and recent graduates. According to the type of result, it is possible to use the indicators by area of communication and image or by public relations in order to enhance the economic and social value of a diploma granted by a HEI.

2.1 Evolutionary vision and analysis by cohort and study cycle

The HEIs must concern with keeping an evolutionary vision of their performance in terms of employability and develop a methodology which ensures that reliable temporal series are produced. The evolutionary vision must allow for the greatest possible richness in terms of comparisons between time periods and graduate cohorts. The following items must be considered:

- Graduate cohort – Year of conclusion
- Time after course completion – ex.: [x - 1, x - 5, ...[(x = Year of conclusion)
- Year of analysis – Year of collection of information

In practical terms, a mapping based on these factors will result in a table similar to the one that is currently being administered by OEIST:

Table 2: *Table of application of surveys to the professional status of IST's graduates*

Target Population	Application timeline									
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
X-1	2009		2010	2011	2012	2013	2014	2015	2016	2017
X-5	2005			2007			2010			2013
X-10				2002			2005			2008
X-20				-			1996			1999

This planning makes it possible to follow up the professional career of recently graduate cohorts on a regular and helps monitor those recently graduate cohorts in different stages of their professional life. For example, according to table 2, the 2010 cohort, which in 2012 was surveyed as the recently graduate cohort and, in 2016, will be surveyed as the cohort with 5 years after course completion. This allows for a horizontal comparison using the same population as if it was a case study. Another advantage lies in the possibility of measuring the impact of professional experience and time after course completion in different years. Having 5 years of experience in 2010 has a different impact than having 5 years of professional experience in 2013 and, by comparing the X-5 cohorts and the X-1 cohorts, differences are found according to the year of administration. The time factor allows for comparing 2 different cohorts in the same situations and the influence of that factor in the professional status of graduates can be found. The 3-year interval in the administration of surveys (except for the X-1 cohorts) is made to spare the populations from an overload of questionnaires, which could saturate respondents and unduly make the results skewed. It is important to mention that the criterion of the X-5 year cohort is arbitrary and does not follow any theoretical criterion. Besides, it is based upon previous studies carried out by the OEIST which shows that there are significant differences in the '4- and 5-year after course completion' cohort in terms of structuring and additional indicators. The analysis by cohort needs reflection on the relevance of some indicators in each of them. Professional integration indicators, for example, will not make sense in cohorts whose integration took place some time ago. On the other hand, it is not justified to survey recent graduates regarding the means and motivations for the creation of their own business when the data shows a residual percentage and, in some cases, no entrepreneurs. This does not mean that there are not late professional integration or entrepreneurship in recently graduates, but these are residual examples and the instruments must be tuned in order to identify regularities and patterns. Another important factor of analysis, which has gained further prominence with the implementation of the Bologna process is the one of the different study cycles. Depending on the area of studies all cycles are studieds differently. Nevertheless, in some areas, such as social support or management, the 1st cycle has a significant level of professional integration and justifies being analyzed in detail. In addition to the graduates of each study cycle, there are also populations who have direct or indirect implications on the issue of employability, namely final-year students and employers. The following figure (2) shows the applicability of this idea by the OEIST:

2.2 Dissemination actions, improvement and methodological reflection suggestions

It was said that the data covers a broad range of applications in addition to containing information on the professional status of graduates. HEIs are interested in maximizing the information collected in addition to statistics output on the integration and professional status of graduates. HEIs may promote the attractiveness of their programmes through the dissemination of the best performance indicators at the level of employability by using online resources, brochures, social networks, participation in conferences, seminars, etc.. On behalf of transparency and the possibility of giving university candidates the possibility of making an "informed choice", the sets of data are presented with the due exceptions regarding the methodologies used and respective characteristics. An analysis of the critical factors must be made, which influences the evolution of employment and the levels of employability. The patterns verified between the university graduates must also be analyzed and identified. The analysis of the labour market is another relevant factor of the phenomenon which will subsequently guide

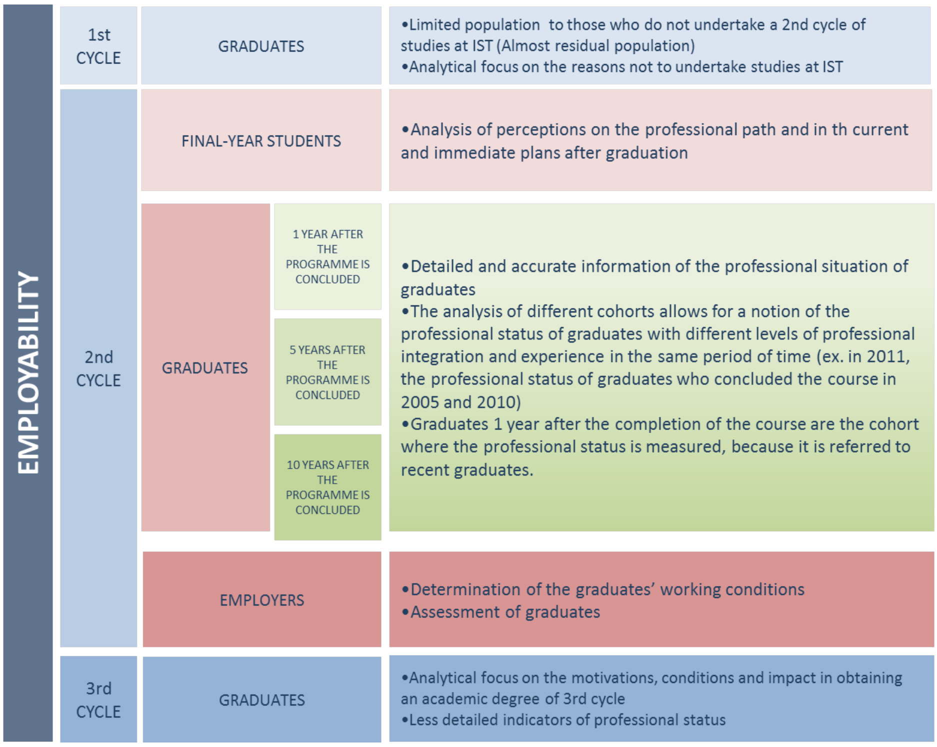

Figure 2: *Populations in employability analysis by OEIST*

the previously mentioned methodological development.

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