

Employability in Online Higher Education : A Case Study



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Abstract

Over the past 15 years, learning in distance education universities has become more interactive, flexible, collaborative, and participative. Nevertheless, some accounts have highlighted the importance of developing more instrumental and standardized educational practices to answer the challenges of employability. In fact, the choice of skills that are important to learning communities and the labour market has been the subject of controversy because it involves heterogeneous motives among different groups.

This paper compares the perceptions of employability skills in a sample of teachers from the Universidade Aberta and a sample of students who attend a local learning centre at this University. The research focused on the following dimensions: a) the most important employability skills, and b) the employability skills to be developed in online undergraduate degrees. To collect the required data, a questionnaire was prepared and applied to students and teachers, taking the theoretical model of Knight and Yorke (2006) as its main reference. In spite of the specificity of each group, the results revealed some similarities between students and teachers with regard to employability. The conclusions also highlighted the need to promote research on this matter in online education.

Keywords: Online higher education; employment; qualifications; lifelong learning

Introduction

The digital society requires individuals to develop generic skills over their lifespan which, combined with personal skills and the knowledge acquired, they should be able to apply to the world of work. As agents of an increasingly competitive market, employers have contributed to the debate, challenging the education systems of many European countries. The new labour market requires graduates to have a different attitude towards their career management since the expectation of a 'job for life' has lost its meaning in the context of organizational changes. Thus, the roles of education and training are essential in preparing students for an active working life.

As agents of education and training at tertiary level, universities are required to devise new educational and training models which can enhance access to employment and improve the graduates' work performance. One of the main issues with the definition of learning goals is how to identify the skills that truly prepare the individual to enter the labour market.

Within the Bologna Process in Europe¹, employability is part of the Lifelong Learning paradigm, which emphasizes the continuous learning process individuals develop throughout their lives and takes place in formal, informal, or nonformal contexts. In this domain, distance and online universities are seen as key organizations in preparing adults to fulfil the expectations of the labour market.

Lifelong Learning and the Labour Market

In the European context, interconnecting education and training is possible by identifying different learning procedures. The Qualifications Framework for the European Higher Education Area (QF/EHEA) and the European Qualifications Framework for Lifelong Learning (EQF) devised, albeit with different formulations, a systematic set of qualifications described in terms of learning outcomes, which functions as a reference to guide individuals in the management and organization of their education and training.

Both tools, the QF/EHEA and EQF, contribute to facilitating the recognition of qualifications. By systematizing the learning outcomes in a more understandable and

¹ The main goal of the Bologna Process is to "create a European Higher Education Area (EHEA) based on international cooperation and academic exchange that is attractive to European students and staff as well as to students and staff from other parts of the world". The European Higher Education Area must (a) facilitate the mobility of students, graduates and higher education staff; (b) prepare students for their future careers and for life as active citizens in democratic societies, and support their personal development; (c) offer broad access to high-quality higher education, based on democratic principles and academic freedom. (The official Bologna Process Web site, <http://www.ehea.info/>).

intelligible manner, they allow individuals to reorganize and redirect their education and training, fostering more credible and transparent mobility within the European Higher Education Area. However, a general framework covering higher education, school education, and vocational training has been lacking in the European context. The figure below shows some convergence in terms of benchmarking in this regard.

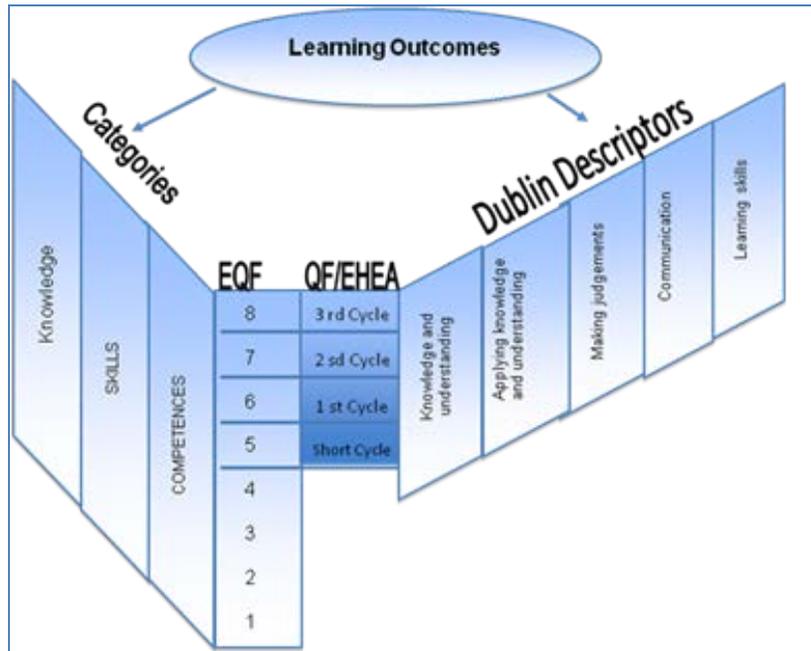


Figure 1. Benchmarking between Qualifications Framework for the European Higher Education Area (QF/EHEA) and European Qualifications Framework for Lifelong Learning (EQF) (Lourtie, 2009).

The two frameworks point to different levels. The QF/EHEA comprises four levels that correspond to grades defined by the Bologna Process, whereas the EQF has eight levels, ranging from basic education to higher education, in which the last four correspond to the QF/EHEA (levels 5 to 8). The five categories of the Dublin descriptors are used in the Qualifications Framework for the European Higher Education Area, while only three are used in the European Qualifications Framework for Lifelong Learning: knowledge, skills, and abilities (comparing QF/EHEA to the EQF: Short Cycle – 5th Level; 1st Cycle – 6th Level, 2nd Cycle – 7th Level, and 3rd Cycle - 8th Level, respectively).

The frameworks mentioned above play an important role in the design of higher education programs and their internal and external assessment. Therefore, it is important to understand how these frameworks have been adopted in distance and online universities.

Organizations and New Skills

A few years before the Bologna Process was implemented, the UK had already rethought the purpose of higher education taking into account training and employment goals. Previously, areas of knowledge (more or less theoretical and/or more or less technical) in the study programmes were considered to be less important than extracurricular attributes. According to Harvey, higher education must be able to i) establish close links with employers, assisting them in identifying and adopting strategies suited to overcoming any lack of qualifications; ii) contribute with solutions for education and training in high-skilled areas with a low number of workers; iii) prepare graduates with effective working skills, ensuring that the employability requirements are explicit in the study programmes (Harvey, 1999, p. 5). The author further stresses how important it is for modern organizations to rely on employees that can cope with change, hence their choice to recruit graduates who add value to the organization and, at a higher level, have “transformative potential” for the evolution of the organization itself. To this end, he proposes three types of profiles: adaptive, adaptable, and transformative.

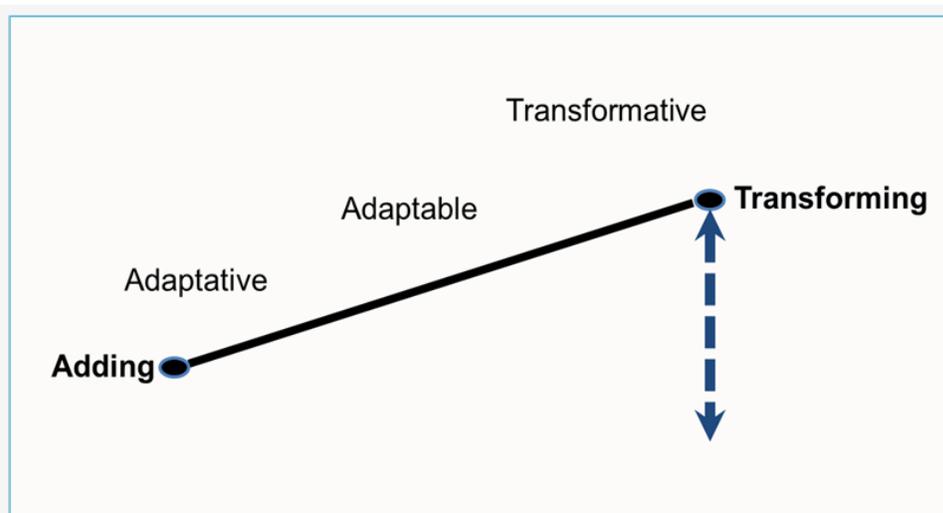


Figure 2. Enhancement continuum (Harvey, 1999, p. 16).

The adaptive profile reflects a competent performance, in which the workers take small risks and avoid questioning the company’s procedures; they adapt to the culture of the organization (Harvey, 1999, p. 16). The adaptable profile refers to individuals who are willing and able to learn; they are willing to acquire new knowledge and skills, and they show initiative, ability, and confidence to use their full potential to change and improve the organization. This profile is also guided by the ability to motivate teams, which involves the ability to communicate at several different levels. Finally, the more sophisticated profile is the transformative. It includes the use of higher skills: analyzing, criticizing, and synthesizing. This profile also reflects the capacity for leadership rather

than the strict control of management tasks (i.e., getting the best out of workers, maximizing their potential and ideas).

The capacity to identify individuals who have the transformative potential is far from linear since it is not certain that an intellectually brilliant graduate will be able to provide continuing strength in the organization. Intellect and knowledge, whilst important, are not direct indicators of the potential transformer.

It can be concluded that three types of profiles are needed for two reasons: i) not every area within an organization requires the more sophisticated profile; and ii) organizations are different and, therefore, have different needs and require different skills profiles. On this matter, in 1991 and 2002, Robert Reich identified the need for two types of advanced profiles in advanced economies: the first focuses on the discovery and the second focuses on the exploitation of the discovery made by others, through knowledge and application of available interpersonal skills in a given medium and context (Yorke, 2006, p. 5).

Reich calls individuals who are recognized as imaginative and creative *symbolic analytics*, those who demonstrate a high understanding of the subject content and generic skills, which, when combined, give rise to excellent performances. Reich, cited by Knight, states that higher education can contribute to national development through graduates who may have a good performance at work. This means that the curricula for students should be concerned with four areas: 1) abstraction (theory and/or empirical data on theory and/or use of formulas, equations, models, and metaphors); 2) system of thought (insert/see a larger context); 3) experimentation (intuitively or analytically); 4) collaboration (involving communication and teamwork skills) (Knight, 2003, p. 3).

With respect to online students, the literature notes that autonomy and flexibility are two basic dimensions of adult and online learners (Knowles, 1970; Garrison & Anderson, 2003; Conrad, 2009). It is for this reason that our study is focused on examining these profiles in students at the Universidade Aberta from an empirical perspective.

Employability in Online Higher Education

Yorke defines employability as “the set of achievements – skills, understandings and personal attributes – that make graduates more likely to gain employment and be successful in their chosen occupations, which benefits themselves, the workforce, the community and the economy” (2006a, p. 8). Similarly, Lourtie (2009) argues that employability should be a goal of any training in any cycle, be it first, second, third, or even short cycle. The aim is to increase the graduate’s chances of obtaining employment and being successful in his/her occupation.

To define the concept of employability, Yorke emphasizes that employability depends on several factors, making it difficult to accurately define the interference of each of these

factors in the final result – the job you get. Knight (2003, p. 5) highlights the following determinants: 1) Employability is probabilistic because it is related to the uncertainty of external factors, socioeconomic variables such as the state of the national, regional, or local laws of supply/demand for employability skills; 2) Getting a job and succeeding at work are different situations; some specific aspects of the world of work may not be legitimately addressed in higher education; 3) For many graduates, the first job does not reflect the occupation they are looking for and which would encourage their skills development; in situations of shortage of employment, graduates accept the jobs available under the circumstances.

For the research conducted, employability is considered both in its theoretical and practical dimensions. At the theoretical level, employability is the students' potential to adapt and make their knowledge, skills, and attitudes flexible towards the labour market, promoting their social inclusion and ensuring their quality of life. At a practical level, employability is the potential students bring into practice through their skills to become employed.

The USEM model by Knight and Yorke highlights four interrelated components, understanding, skills, efficacy, and metacognitions, showing close links between all four. In this model, the authors attribute crucial importance to the efficacy (E) component because of its major influence on the other contributions to employability, as shown in the diagram below.

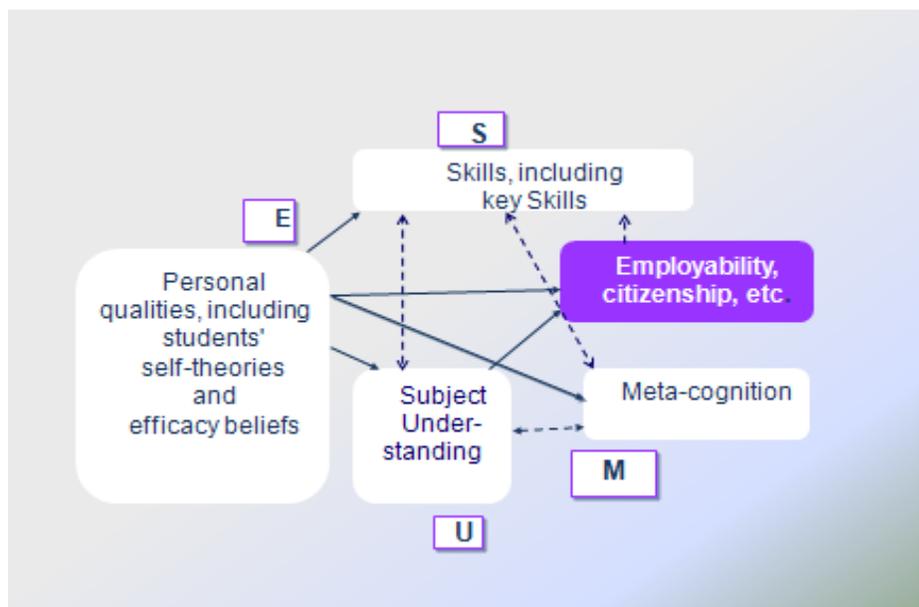


Figure 3. USEM model (Knight & Yorke, 2003, p. 3).

This model has been tested in higher education. The Skills Plus Project is an example of its application at this level. Based on an extensive table of skills (39 dimensions of

employability), it aimed to find common points of reference based on the dialogue established between students and teachers, thereby supporting the development of employability in higher education.

The model suggests that employability is influenced by 1) the understanding people have on a subject area or professional field and specific and general skills; 2) the belief in their efficacy and that they will be able to make a difference; (3) and metacognitive fluency (i.e., the awareness they have about the way they act, learn, and develop their skills) (Zulauf, 2006, p. 135).

Universities can improve the employability of students by focusing on the development of their metacognitive abilities, that is, by helping them to learn how to learn and by promoting their self-confidence.

In the context of lifelong learning, a personal development plan (PDP) is fundamental for individuals to explore and capitalize on all learning acquired (formal, nonformal, and informal), making a better connection between their expectations and actual work, guaranteeing not only their growth and development, but also their social integration. To this end, employability skills have to be embedded in the curriculum and learning strategies and assessments should be available upon their application. The university's strategies may be supplemented by work internships, short-term and nonmandatory, during the years of study with the aim of preparing students for the world of work (Zulauf, 2006, p. 136).

In Europe, distance universities are an integral part of the European Higher Education Area (Bologna Process) and the national policies with regard to lifelong learning and employability. Flexibility, accessibility, personalization, and collaboration, priority dimensions in employability, are also priority principles in distance and online education programs (Knowles, 1970; Garrison & Anderson, 2003). Thus, it was important to understand how these principles are interconnected at a specific distance education university like the Universidade Aberta.

Universidade Aberta: Students and Teachers' Perspectives on Employability

The Universidade Aberta (UAb) is a public distance education university and was founded in 1988. It is the only Portuguese public university to teach all undergraduate, master's, and PhD degrees based on an e-learning system. All the degrees have been adapted to the Bologna Process. Its diversified educational offer is based on a self-developed pedagogical virtual model that emphasizes the following principles: i) student-centred learning, ii) flexibility, iii) interaction, and iv) digital inclusion. These principles guide teaching procedures, the roles of students and teachers, the planning, design, and management of learning activities, the materials used, and the assessment of the acquired skills (Pereira et al., 2007, p. 10).

At the UAb, the student is at the centre of the university's pedagogical model, taken as an active individual, the builder of his/her own knowledge and integrated within a learning community (Aires, 2007, p. 21). At its different levels, education should facilitate the acquisition and development of interlinked skills required by the digital society as well as of specific skills in the area of knowledge chosen by the student.

The planning of teaching and learning activities is meticulous, giving priority to the development of skills in each subject (Pereira et al., 2007, p. 10). Additionally, the results of student learning derive from a combination of autonomous and collaborative learning. Collaborative learning prepares students for the needs of organizations whose obligations are based primarily on work in multidisciplinary teams and the joint construction of knowledge (Pereira et al., 2007, p. 11).

The principles of the UAb virtual pedagogical model meet the challenges currently facing higher education in the field of employability. The primacy of providing students with flexibility, autonomy, reflexivity, and a critical guide to the development of metacognitive skills, developing their perceptions of self-efficacy and knowledge about their mechanisms of action, thought, and development, are all dimensions that are closely linked to the skills required for employability.

To summarize, our study was based on the following question: "What are the perceptions of online higher education students and teachers about the skills required for employability?" The following section presents the methodological design of the empirical research.

Method

The central goals of our research consisted of "recognizing which skills for employability are most highly rated by students and teachers at a distance university" and "exploring the perceptions of teachers and students at the Universidade Aberta on the skills required for employability". We opted for a design case study (Yin, 1994), considering that this method would be most suited to explore the informants' conceptions of the phenomenon of employability at the Universidade Aberta. It was not our intention to build generalizable knowledge, but to obtain an in-depth understanding of this matter from a public university that offers all of its courses through e-learning.

Instruments

The instrument used was a survey, based on the dimensions of the theoretical model by Knight and Yorke (2006, p. 7). This was the selected model because it was assumed that the perceptions of groups about the skills for employability are inextricably linked to the students' and teachers' social contexts or each individual's own specificities.

For the empirical study, two questionnaires were constructed: one for online students and the other for online teachers. The scale of Employability Dimensions (Knight & Yorke, 2006, p. 7) was crucial to the design of the questionnaires (groups I and II). The aim was to use a common reference for the respondents to identify the most relevant skills for the labour market. The 37 competencies addressed were organized into three groups, as illustrated in the following table: personal qualities, core skills, and process skills.

Table 1

Thirty-Seven Dimensions of the Knight and Yorke Model (Knight & Yorke, 2006, p. 7)

PERSONAL QUALITIES	CORE SKILLS	PROCESS SKILLS
<i>Malleable self-theory</i>	<i>Reading effectiveness</i>	<i>Computer literacy</i>
<i>Self-awareness</i>	<i>Numeracy</i>	<i>Commercial awareness</i>
<i>Self-confidence</i>	<i>Information retrieval</i>	<i>Ability to work cross-culturally</i>
<i>Independence</i>	<i>Language Skills</i>	<i>Prioritising</i>
<i>Emotional intelligence</i>	<i>Critical analysis</i>	<i>Planning</i>
<i>Adaptability</i>	<i>Self-management</i>	<i>Problem solving</i>
<i>Management Stress</i>	<i>Creativity</i>	<i>Resolving conflict</i>
<i>Initiative</i>	<i>Listening</i>	<i>Decision making</i>
<i>Willingness to learn</i>	<i>Written communication</i>	<i>negotiating</i>
<i>Reflectiveness</i>	<i>Oral presentations</i>	<i>Team work</i>
	<i>Explaining</i>	<i>Acting morally</i>
	<i>Global awareness</i>	<i>Applying subject understanding</i>
		<i>Coping with ambiguity and complexity</i>
		<i>Influencing</i>
		<i>Arguing for and/or justifying a point of view</i>

Participants

Students and teachers of the Universidade Aberta (UAb) (the Portuguese Open University) participated in this study. The students were attending the Local Learning Centre of Grândola (Grândola LLC) and were selected from among those living in the surrounding area of the Grândola LLC (one of the university's 13 LLC). The teachers work at the Universidade Aberta.

Results

The Grândola LLC had 62 students at the time the questionnaire was administered, all of whom were invited to participate in the study, given that it was a small population. The response rate to the survey was 74% (46 students), of which 76% were female. The average age of the students was 35 years, the youngest student being 22 years old and the oldest 51. The most represented age group was the 20-30 year-olds, accounting for 35% of the total respondents.

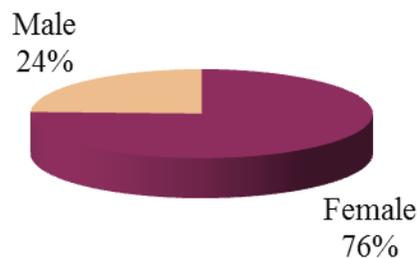


Figure 4. Students' gender.

Most of the participants were in the labour market (91%) and about 9% were unemployed. This is important because, based on experience, the students, employed and unemployed², would have a clear idea of the skills that need to be improved to enhance employability.

² This is an interesting aspect, coincidental with the total unemployed population in the 2001 data for Grândola. The National Statistics Institute does not have more recent data. It has an estimate from 2008, which relates only to the resident population of Grândola, totalling 13 979 at the time. More recent disaggregated information is not available, nor is data which has been analyzed in relation to unemployment or other indicators that have been noted in the study.

Table 2

Courses Attended

Course	Enrolled students	%
Social Services	2	4.3
Social Sciences	17	37.0
Social Sciences (Policies and Administration)	1	2.2
Social Sciences (Psychology)	3	6.5
Social Sciences (Social Services)	1	2.2
Environmental Sciences	2	4.3
Education	7	15.2
European Studies	2	4.3
Management	7	15.2
Computer Sciences	1	2.2
Applied Languages	2	4.3
Modern Languages and Literature	1	2.2
Total	46	100.0

The courses with the highest number of enrolled students was Social Sciences (37%), followed by Education and Management (both with 15.2%).

As with the Grândola LLC students, all of UAb's teachers (totalling 143 in May 2009) were also invited to participate in this study.

The questionnaire was sent to the entire teaching staff population and the response rate obtained was 43.3% (62 teachers), 54% male and 46% female (Figure 5). The average age of the teachers was 45 years, with ages ranging from 35 to 66 years. The data collected on the teachers' professional experience revealed a high degree of variation in the number of years teaching, between 1 and 44 years of experience.

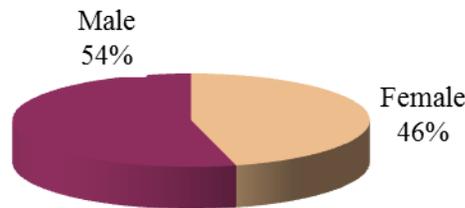


Figure 5. Teachers' gender.

The distribution of teachers in their academic area is represented in the chart below, labelled according to the academic area of origin.

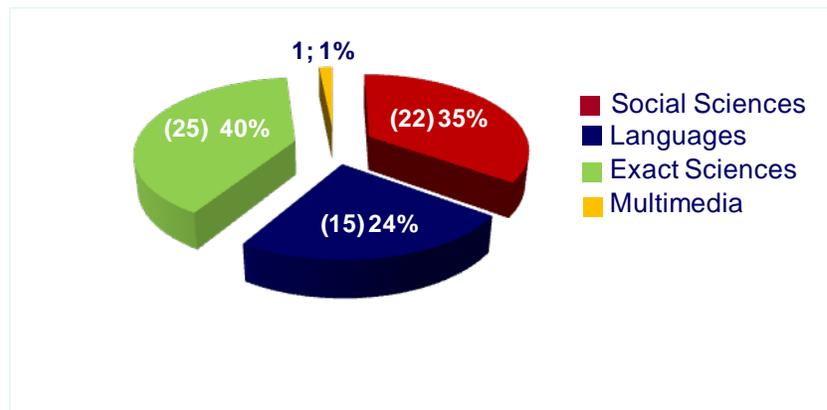


Figure 6. Academic area of origin (teachers).

Among the respondent teachers, 40% came from the Exact Sciences, mainly in the areas of mathematics, computer science, biology, and environment. About 35% of the respondents came from the Social Sciences, which included backgrounds in the social sciences, management, and history. Approximately 24% of the respondents came from the areas of Languages, Linguistics, and Modern Languages and Literature. None of the teachers from the Department of Education answered the questionnaire.

The questionnaires were first submitted to a descriptive statistical analysis, according to the objectives defined in the study. When justified, the data was analyzed based on parametric and nonparametric techniques (Hill, 2008).

The internal consistency of the student and teacher questionnaires was analyzed using Cronbach's alpha coefficient. The value found for the case of the students in 54 items was 0.86, while for the teachers it was 0.695 in 43 items. The first is considered a good result, while the second is lower in reliability, taking into account the reference values (Hill, 2008, p. 149).

From the data collected in this broader research, two dimensions have to be highlighted here: 1) the employability skills students and teachers rated most highly, and 2) opinions on how to integrate employability skills in the online undergraduate courses.

Skills for Employability: Views of Students and Teachers

The respondents' answers on the 10 most important skills for employment can be seen in the following table.

Table 3

The Ten Most Important Skills

Students		Teachers	
Variables	Average	Variables	Average
1. Problem-solving	7.58	1. Creativity	7.31
2. Planning	6.88	2. Problem-solving	6.53
3. Self-awareness	6.36	3. Negotiating	6.50
4. Critical analysis	6.33	4. Decision-making	6.46
5. Decision-making	6.31	5. Computer literacy	6.09
6. Self-management	6.25	5. Listening	6.09
7. Global awareness	6.06	7. Explaining	6.00
8. Applying subject understanding	6.05	7. Reading efficiency	6.00
9. Teamwork	6.04	9. Willingness to learn	5.95
10. Willingness to learn	5.90	10. Planning	5.92

Relating these findings to the three profiles presented by Harvey, previously compared with the skills selected by students and teachers, we found that the respondents' choices fall mostly on the *adaptable* and *transformative* profiles.

This fact is not surprising. Both students and teachers expect higher education to provide the tools for more enterprising and professional performances. This means they need to possess attributes such as “willingness to learn,” “acquiring knowledge,” “ability to communicate at various levels,” “teamwork,” amongst others.

At a higher threshold, the worker should be a transforming agent capable of contributing to the potential evolution of the organization, for which, among other attributes, “critical analysis” is important.

Attention has to be drawn to “creativity,” selected by teachers as the most important skill. In this regard, Reich argues that individuals who possess this ability, combined with a good understanding of subject content and other generic skills, are excellently placed to produce optimum performances.

Interestingly, the skills chosen in our study are in line with the findings of Harvey and Reich because they reflect the most relevant ones as requirements for higher performances as well as the most suited to the challenges in the labour market.

Table 4 presents a comparison of the ordering of the 10 skills deemed as the most important for employability by students and teachers³.

³ The student T test was applied to the sample because the values of the respondent student population had been compared with the values of the respondent teacher population, having thus obtained the value of the mean.

Table 4

The Four Common Skills

Students		Teachers	
Variables	Average	Variables	Average
1. Problem-solving	7.58	1. Creativity	7.31
2. Planning	6.88	2. Problem-solving	6.53
3. Self-awareness	6.36	3. Negotiating	6.50
4. Critical analysis	6.33	4. Decision-making	6.46
5. Decision-making	6.31	5. Computer literacy	6.09
6. Self-management	6.25	6. Listening	6.09
7. Global awareness	6.06	7. Explaining	6.00
8. Applying subject understanding	6.05	8. Reading effectiveness	6.00
9. Teamwork	6.04	9. Willingness to learn	5.95
10. Willingness to learn	5.90	10. Planning	5.92

Among the 10 most highly rated skills, four are common to both students and teachers, which represents a degree of agreement of 40%: *problem-solving* (1st and 2nd), *planning* (2nd and 10th), *decision-making* (5th and 4th) and *willingness to learn* (10th and 9th)⁴. It can be said, then, that the teachers' and students' perceptions are quite close with regard to employability skills.

⁴ In the four skills analyzed, we found that, on average, the difference in importance attributed to each one between students and teachers was not significant (i.e., the degree of importance attributed to each skill is similar in both groups). The chi-square [$\chi^2(1) = 1.742, p = 0.187$] was used.

Employability in Online Undergraduate Courses

There were no statistically significant differences between students and teachers (i.e., teachers and students considered that the 10 skills were being developed in the subjects taught by the teachers who participated in the study). Very expressively, 91% of students believed that skills for employability should be developed in higher education. In the teacher sample, about 82% considered that employability skills were being developed, and 91.5% agreed that these skills must be developed in the course they teach. It is thus possible to conclude that both groups expressed very similar opinions, both in skills covered in higher education and the recognition of their development in the course taken/given, respectively.

Teachers were also asked whether the skills should be addressed in higher education in elective modules. Teachers responded positively (75%), which indicates that they agree that employability should be addressed both in the formal curriculum and in elective modules. Regarding the importance of consulting employers about the formal structure of the curricula, although online teachers considered that employability should be a purpose of higher education, openness to including the views of employers in the field of study did not receive a positive response (29.3%).

Discussion

Among the 37 skills analyzed by online teachers and students on the basis of our survey, those that stood out were teamwork, written communication, the ability to explain, critical analysis, willingness to learn, computer literacy, and oral presentations.

Both groups considered problem-solving, planning, decision-making, and willingness to learn important skills for employability. It should be noted that these group perspectives could be framed by the UAb's pedagogical model, suggesting that the student develops learning independently but in a cooperative and collaborative environment, developing the skills required for successful integration in organizations, especially in tasks that require work in multidisciplinary teams and knowledge sharing.

An important strategy to boost employability skills could include explicit approaches to these skills in online higher education. Measures could be taken, such as the development of specific modules and a review of the curricula, in order to include the areas of competence, the assessment of noncognitive skills, the integration of professional experience, and practice in real projects, as mentioned in the literature review (Harvey, 1999, p. 22).

Although there is a tendency to develop these skills in higher education, the difficulty still remains in deciding which employability skills should be addressed in the curriculum or which can be learned by other means (Harvey, 1999, p. 22), that is, deciding whether to develop a skill, such as oral communication, as part of a course, for

instance, economics, or to offer a specific module, for example, oral and written expression.

In this respect, it should be noted that the Dublin descriptors include generic skills and/or transferable ones, called *communication skills* and *learning skills*, of which the latter aim to prepare students to learn in an autonomous manner.

The focus of the matter is not so much on skills development, but rather on how we should develop critical skills in students through lifelong learning, which means that employability represents a subset within this set. That is, as the online student is confronted with new challenges, he/she should be able to decide, solve problems, and make choices autonomously.

One way to address the issue is to focus on developing a critical approach to online learning, challenging the preconceptions of both students and teachers (Zambrano, 2007). It is important to think of knowledge as a process and not as an object or something stable and fixed. The online teacher assumes the role of moderator, facilitator, and knowledge-provoker, fostering autonomy and the self-assessment of learning (Harvey, 1999).

Final Remarks

Research on the phenomenon of employability in online higher education needs further development. The challenges currently facing the European Higher Education Area, particularly the complexity of entering the labour market for many graduates, the new paradigm of Lifelong Learning, the Bologna process, and the peculiarities of adult and online learning, justify more research in this domain.

Knowledge must be valued and recognized as no longer being confined to formal institutions; it may have occurred outside the formal systems and be based on life experience, the experience of working in a family environment, or in other structural contexts that have contributed to the development of the individual. Thus, distance and online universities may play an important role in changing traditional perspectives about *why*, *where*, and *how* adults learn. Planning, problem-solving, decision-making, and willingness to learn are important referents of pedagogical narratives about online adult education (Garrison & Anderson, 2003; Conrad, 2009). In this sense, when we discuss the previously mentioned employability skills, we are also discussing the core principles of adult and online learning.

In this new framework, the creation of referential skills leads to interconnections among different levels of education and serves to identify and understand the learning that takes place; learning by the individual is enhanced, and mechanisms are set in place to recognize and certify the knowledge acquired.

The challenge facing higher education institutions is reflected in the importance of finding common ground, capable of integrating and combining the recognition of

acquired knowledge and skills, offering training that prepares students for employability and for lifelong learning.

In this research, the concept of employability reveals particularities when it is transposed to online higher education. It should be noted that obtaining employment is not a valid indicator for measuring employability; it depends, among other factors, on economics, including the supply and demand of employment, which vary over time. The role of higher education in improving employability is concerned with developing the students' potential and flexibility to adapt their knowledge, skills, and attitudes to the labour market. In view of this, distance universities may have an important role in designing and implementing accreditation standards for employability.

It is widely acknowledged that higher education plays a key role in preparing graduates for the labour market and constitutes a lever for the economic development of countries, through the development of profiles geared towards high performance and able to respond to the needs of organizations, under strong competitive pressure. However, with rare exceptions, there are very few studies in this field in Portugal. It is therefore hoped that this study will provide relevant insights on the matter.

References

- Aires, L., Azevedo J., Gaspar I., & Teixeira A. (2007). *Comunidades virtuais de aprendizagem e identidades no ensino superior*. Porto: Universidade Aberta e Fundação para a Ciência e Tecnologia.
- Conrad, D. (2009). Cognitive, instructional, and social presence as factors in learners' negotiation of planned absences from online study. *The International Review of Research in Distance and Open Learning*, 10(3). Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/630/1296>.
- Garrison, D., & Anderson, T. (2003). *E-learning in the 21st century: A framework for research and practice*. London: Routledge/Falmer.
- Harvey, L. (1999). *New realities: The relationship between higher education and employment*. Birmingham Centre for Research into Quality.
- Hill, M. M., & Hill, A. (2008). *Investigação por questionário*. Lisboa: Edições Sílabo.
- Knight, T. P., & Yorke, M. (2003). *Assessment learning and employability*. England: SRHE and Open University Press Imprint.
- Knight, T. P., & Yorke, M. (2006). *Embedding employability into the curriculum*, Series 1. United Kingdom: The Higher Education Academy.
- Knowles, M. S. (1973). *The adult learner. A neglected species*. Houston: Gulf Publishing.
- Lourtie, P. (2009). Quadro Europeu de qualificações e acesso às profissões. In *O Processo de Bolonha e os seus Desenvolvimentos*, CNE.
- Pereira, A, Mendes, Q.A, Morgado, L, Amante, L., & Bidarra, J. (2007). *Modelo pedagógico virtual da Universidade Aberta*. Lisboa: Universidade Aberta.
- Pereira, C. D. (2007). *Nova educação na nova ciência para a nova sociedade*. Porto: Universidade do Porto.
- Silva, A. P. (2010). *As competências param a empregabilidade no ensino superior* (Dissertação de Mestrado). Universidade de Aveiro (Secção Autónoma de Ciências Sociais, Jurídicas e Políticas).
- Yin, R. (1994). *Case study research: Design and methods* (2nd ed.). Thousand Oaks, CA: SAGE Publications.
- Yorke, M. (2006a). *Employability in higher education: What it is – what it is not*. United Kingdom: The Higher Education Academy. Retrieved from

<http://www.heacademy.ac.uk/resources/detail/employability/employability336>.

Yorke, M. (2006b). *Pedagogy for employability*. United Kingdom: The Higher Education Academy.

Zambrano, R. H. (2007). "El paradigma de las competencias hacia la educación superior", Granada: Revista Facultad de Ciencias Económicas: Investigación y Reflexión, Vol XV, pp. 145-165.

Zulauf, M. (2006). Ensino superior e desenvolvimento de habilidades para a empregabilidade: Explorando a visão dos estudantes. *Sociologias. Porto Alegre*, 16, 126-155.

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