Labour Market Insertion for University Graduates in the Field of Education Sciences: An Analysis of the Most Highly Valued Professional Competencies

Inserción laboral de egresados universitarios de Ciencias de la Educación: un análisis de las competencias mejor valoradas en su desempeño professional

教育学领域大学毕业生的劳动力市场安置：最受重视的专业能力分析

Включение на рынок труда выпускников университетов в области наук об образовании: анализ наиболее высоко ценимых компетенций в их профессиональной деятельности

María Dolores Castro Pais
Consortium Agency for the Quality of the Galician University System (ACSUG)
dolores.castro@acsug.es
https://orcid.org/0000-0002-0851-1476

Marta María Mallo Rey
Consortium Agency for the Quality of the Galician University System (ACSUG)
marta.mallo@acsug.es
https://orcid.org/0000-0003-3347-7123

Isabel Belmonte Otero
Consortium Agency for the Quality of the Galician University System (ACSUG)
isabel.belmonte@acsug.es
https://orcid.org/0000-0003-2521-2424

How to Cite this Paper · Cómo citar este trabajo

Castro, M. D., Mallo, M. M., & Belmonte, I. (2023). Labour Market Insertion for University Graduates in the Field of Education Sciences: An Analysis of the Most Highly Valued Professional Competencies. *Publicaciones, 53*(1), 33–48. https://doi.org/10.30827/publicaciones.v53i1.27984

Abstract

For university graduates, employability is directly linked to the education they have received in specific competencies, because after completing their studies, they must demonstrate acquisition of the abilities, attitudes, values, and skills that will help them compete in the labour market. One of the strategies that universities use to enhance labour market insertion for their graduates is offering up to date education that can generate useful, dynamic knowledge. To do this, they need to understand the demands of the labour market, and studies that track former students after graduation are one of the most useful tools available for this purpose. The aim of the research reported here was to analyse the competencies that best improve graduate employability, using results from the 2021 Labour Market Insertion Study performed by the Agency for Quality in the Galician University System (ACSUG). That study had a quantitative methodological focus and applied a descriptive, non-experimental research design, with a questionnaire used to collect information. Stratified random sampling was applied based on particular degrees and campuses, for a total sample of 842 graduates in the field of Education Sciences. The most notable results include the observation that the most highly valued competencies are Learning abilities, Problem-solving ability, Motivation, and Adaptability, while those with the lowest average scores were Foreign language knowledge, Creativity, and Leadership ability. A discussion is presented comparing the study's results with the existing perspectives summarised in the first part of the article, and the main conclusions are considered through an analysis of previous research.

Keywords: competencies, graduates, employability, higher education.

Resumen

En la Universidad la formación en competencias se vincula directamente con la empleabilidad de sus egresados que, al finalizar sus estudios deben demostrar la adquisición de habilidades, actitudes, valores y destrezas que les permitan ser competitivos en el mercado laboral. Una de las estrategias de las universidades para facilitar la inserción laboral es ofrecer una formación actualizada, capaz de generar conocimiento útil y dinámico, y para ello, necesitan conocer las demandas del mercado laboral. Los estudios de seguimiento de egresados se convierten en una de las herramientas más útiles para este fin. El objetivo de esta investigación es analizar las competencias que facilitan la empleabilidad de los egresados, partiendo de los resultados obtenidos en el Estudio de Inserción Laboral desarrollado por ACSUG en el año 2021. Se utiliza un enfoque metodológico cuantitativo, con un diseño de investigación no experimental descriptivo, empleando el cuestionario como instrumento para la recogida de información. Se utiliza un muestreo aleatorio estratificado por titulación y campus universitario y la muestra se compone de un total de 842 egresados de Ciencias de la Educación. Entre los principales resultados cabe destacar que las competencias mejor valoradas son Capacidad para el aprendizaje, Capacidad para resolver problemas, Motivación y Adaptabilidad. Las competencias que obtienen una puntuación media más baja son Conocimiento de idiomas, Creatividad o Capacidad de liderazgo. Se realiza una discusión de los resultados relacionando lo argumentado en la primera parte del artículo y estableciendo las principales conclusiones en relación con el análisis de estudios precedentes en esta temática.

Palabras clave: competencia, egresados, empleabilidad, educación superior.

概要

在大学，技能培训与其毕业生的就业能力直接相关，他们在学业结束时必须证明所获得的技能、态度、价值观和技能，使他们能够在劳动力市场上具有竞争力。大学促进劳动力就业的策略之一是提供最新的培训，能够产生有用和动态的知识，为此，他们需要了解劳动力市场的需求。研究生后续研究成为实现这一目的的最有用的工具之一。本研究的目的是根据 Agency for Quality in the Galician University System (ACSUG) 在 2021 年开展的劳动力安置研究中获得的结果，分析促进毕业生就业能力的技能。我们使用定量方法，采用描述性非实验研究设计，使用问卷作为收集信息的工具。研究使用按学位和大学校园分层的随机抽样，样本由总共 842 名教育科学专业的毕业生组成。在研究主要结果中指出，最有价值的能力是学习能力、解决问题的能力、动机和适应能力。获得较低平均分的技能是语言知识、创造力或领导技能。通过对结果进行的讨论，我们将文章第一部分中的论点联系起来，并建立了与先前关于该主题的研究分析相关的主要结论。

关键词：能力，毕业生，就业能力，高等教育。

Аннотация

В университете обучение компетенциям напрямую связано с возможностью трудоустройства выпускников, которые по окончании обучения должны продемонстрировать приобретение навыков, установок, ценностей и способностей, которые позволят им быть конкурентоспособными на рынке труда. Одной из стратегий университетов по содействию трудоустройству является предложение современного обучения, способного генерировать полезные и динамичные знания, а для этого они должны знать требования рынка труда. Последипломное обучение является одним из наиболее полезных инструментов для достижения этой цели. Целью данного исследования является анализ компетенций, способствующих трудоустройству выпускников, на основе результатов, полученных в ходе исследования "Включение в рынок труда", разработанного ACSUG в 2021 году. Используется количественный методологический подход, с описательным неэкспериментальным дизайном исследования, с использованием анкеты в качестве инструмента для сбора информации. Использовалась стратифицированная случайная выборка по степени и университетскому кампусу, а выборка состояла в общей сложности из 842 выпускников факультета образовательных наук. Среди основных результатов стоит отметить, что наиболее высоко оцениваются такие компетенции, как способность к обучению, способность к решению проблем, мотивация и способность к адаптации. Компетенции, получившие более низкий средний балл, - это знание языков, креативность и лидерские качества. Полученные результаты обсуждаются с учетом аргументов, приведенных в первой части статьи, и формулируются основные выводы в сравнении с анализом предыдущих исследований по данной теме.

Ключевые слова: конкурентоспособность, выпускники, трудоустройство, высшее образование.

Introduction

Young people who are seeking stable, high-quality employment in a society as complex and uncertain as the one we are all currently experiencing must confront ongoing structural challenges (European Youth Forum, 2020), and many of them will be affected by unemployment (International Labour Organization, 2020).

There are numerous studies demonstrating that employability is directly linked to the knowledge, abilities, and attitudes that job applicants possess, along with the ways in which they make use of those elements and present themselves to potential employers (Hillage & Pollard, 1998). In relation to this, Vrat (2013) has drawn attention to a variety of significant parameters that can be applied when calculating employability, based on each person's knowledge, abilities, and attitudes. The report published on the European Union's Youth Strategy 2019–2027 also addresses this subject, and it includes personal and professional development in its list of present and future challenges young people in Europe will have to confront, linking the concept of employability with independence, resilience, and life skills (European Union, 2018).

Many universities use the employment levels achieved by their graduates as an indicator of quality, and they consider these levels to be closely linked to the training in professional competencies that their students receive during their studies. However, the level of professional performance achieved by graduates does not only depend upon their acquisition of specific competencies that are taught in a particular, intentional manner in each degree programme and/or class; it also depends upon their development of more general competencies that are not always obtained through the formal approaches and structures applied to teaching and learning.

For all these reasons, universities need to be aware of what is being demanded from their graduates in society and in the workplace, so that they can offer the most up-to-date type of education possible, which can in turn generate useful and dynamic knowledge and assist students with their entry into the labour market. As explained by Molero (2000: 381), "we can use the new demands that companies are placing on university graduates as indexes to determine whether universities are providing the right type of education, and to establish the pertinent improvements in cases where the abilities demonstrated by university graduates seem to be insufficient". One of the tools that higher education institutions, including both universities and vocational training schools, have available for this purpose are studies that track their students after graduation, to analyse the process of labour market insertion. This has been the central theme of numerous research studies, especially since the 1990s (Teichler, 2003).

Studying the scope of the education that graduates have obtained and their current circumstances in the job market has emerged as a very valid method for evaluating higher education (Baker, 2001; Borden, 2003; Jiménez, 2009). Successful approaches to this include measuring the degree of satisfaction graduates feel with regard to the quality of educational services (Blanco & Blanco, 2007; Mora, Vila, & García, 2005), and especially compiling information on the relationship between what students have studied and the type of work they end up doing (Elias & Purcell, 2004).

Since its creation in 2001, the consortium known as the Agency for Quality in the Galician University System (ACSUG by its acronym in Spanish and Galician) is the body responsible for periodic monitoring of the students who have graduated from the uni-

versities belonging to that system, which it does through its series of Labour Market Insertion Studies.

Through the information that the ACSUG collects, those former students are able to provide an external perspective on how well the universities are functioning, and on the obstacles and challenges they faced, or are still facing, in relation to entering the labour market. These are perspectives that are essential for adjusting the educational offer to the needs of employers. These studies performed by the ACSUG ask the participants to provide information that includes their opinions about the education they received at their university, their job search process, and their current employment situation, among other aspects. Another dimension analysed as part of the ACSUG's Labour Market Insertion Studies are the competencies that recent graduates find to be most highly in demand among employers.

Competencies is a concept that can be defined as the ability to appropriately, at a specific time, apply the set of knowledge, skills, abilities, attitudes, values, emotions, and motivations that a person possesses, in order to meet the demands that arise for them at a particular time or in a specific situation (Bisquerra & Pérez, 2007).

It can also be said that there are various categories of competencies: technical, professional, participatory, personal, basic, key, general, transferable, emotional, socio-emotional, etc. (Bisquerra & Pérez, 2007).

Solanes, Núñez, and Rodríguez-Martín (2008) have classified competencies as either specific or general (or cross-cutting), with the latter in turn subdivided into competencies that are instrumental, interpersonal, or systemic. The competencies considered to be cross-cutting, transferable, or general (European Commission, 2018; UNESCO, 2015; van de Oudeweetering & Voogt, 2018) have also been referred to as "21stcentury competencies" (Voogt & Erstad, 2018). From an educational perspective, these competencies can be understood as the set of knowledge and abilities that students are able to apply or use in their academic work, but that are also transferable into the working world (Almerich et al., 2018). Among others, these include problem-solving ability, creativity, critical thinking, working in a team capacity, interpersonal skills, and knowledge of ICT (Binkley et al., 2012; Voogt & Erstad, 2018; Hinostroza, 2017; UNESCO, 2015; Voogt & Pareja Roblin, 2012).

Developing competencies of this type may be seen as essential for participation in an increasingly competitive and dynamic social and employment environment. Simeon-Fayomi, Cheatan, and Oludeyi (2018) define cross-cutting competencies as the set of social tools required for success in everyday life in a variety of contexts, while Vallejo-Trujillo and Aguilar (2019) define them as a person's characteristics that will allow them to interact effectively with others, and which are fundamental for entry into the labour market and for achieving adequate job performance.

In the field of education, which is the particular focus of this article, it can be seen that during the last decade various general frameworks have been established in relation to these 21stcentury competencies (Alberta Education, 2011; Ananiadou & Claro, 2009; Binkley et al., 2012; World Economic Forum, 2015). However, these frameworks are not entirely consistent with each other. For example, Hinostroza (2017) makes a distinction between higher-order abilities (capacity for advanced thinking and working in a team capacity) and ICT competencies. Nevertheless, despite the overall lack of consensus regarding these classifications (Binkley et al., 2012; Voogt & Pareja Roblin, 2012; World Economic Forum, 2015), it can be said that the basic competencies they tend to include are critical thinking, selfmanaged learning, problem-solving ability, adaptability, com-

munication skills, interpersonal skills, and working in a team capacity. According to Binkley et al. (2012), the first five of these belong to the category of advanced thinking competencies or skills and the others are teamwork skills, while other authors have focused on the need for ICT competencies to include technologies, teaching skills, and ethics (Almerich et al., 2018; Diaz-Garcia, Cebrian-Cifuentes, & Fuster-Palacios, 2016).

In this article, the competencies analysed are those included in the survey tool that the ACSUG designed and applied in its Labour Market Insertion Study for university students who graduated during the 2014-2015 academic year, with the fieldwork for that study being performed in 2021.

The following competencies were subject to analysis: Learning abilities, Motivation, Adaptability, Initiative, Critical thinking, Creativity, Written and oral communication skills, Theoretical field-specific, Practical field-specific, Working in a team capacity, Working independently capacity, Working under pressure capacity, Analytical ability, Ability to assume responsibility, Problem-solving ability, Leadership ability, Foreign language knowledge, Computer skills, and Planning, coordination, and organisation skills.

The aim of the research reported in this article was to analyse the degree to which particular competencies can be considered as useful in terms of facilitating employability for graduates from the Galician university system in the field of Education Sciences, and to analyse whether those competencies coincide with those that other graduates from those universities reported as being most in demand at their first job, regardless of the type of degree they earned.

Methods

To achieve the objectives of this research, a quantitative methodological focus was applied with a descriptive, nonexperimental research design. A survey questionnaire was used to collect information, in a similar way as in the studies reported by Akbulut et al. (2008), Balbuena and Lamela (2015), Caldevilla (2010), and Cevallos et al. (2016). Use of questionnaires is widespread in research when large sample sizes of participants are available, especially when studying aspects related to perceptions for the purpose of improving certain types of practices (Martínez-Sala & Alemany-Martínez, 2017).

Participants

The population subject to study consisted of students from bachelor's degree programmes who graduated from the Galician university system (SUG) during the 20142015 academic year, and this included those who were enrolled during that academic year and who had their degrees registered in 2015. This means that at the time when the survey was given in 2021, those former students had completed their bachelor's degree approximately 51/2 years earlier.

The total sample used in the ACSUG's Labour Market Insertion Study for 20142015, which was the basis for this research, included 5,163 graduates, out of a total population of 9,155 (Table 1). The overall sample therefore represented 56.39% of the total population of bachelor's degree graduates from the SUG during the 20142015 academic year.

Stratified random sampling was applied, based on the particular degree earned and campus attended (subpopulations), with the size of each sample determined in order to estimate proportions (with maximum variance), and with a maximum permissible error of 10% and a confidence level of 95% established.

The present article is focused on the results obtained for former students who earned degrees in the departments of Education Sciences at the three universities in the SUG, which included a total of 842 graduates with the following bachelor's degrees: Primary Education (30.6%), Preschool Education (30.2%), Physical Education and Sports Sciences (10.8%), Pedagogy (8.3%), Social Education (12.1%), and Social Work (8%). The distribution of those degrees among the three universities was as follows: University of Santiago de Compostela (USC): 24%; University of A Coruña (UAC): 37.6%; and University of Vigo (UVigo): 38.4%. Out of the total respondents, 19.8% were male and 80.2% were female.

Table 1

Total populations and sample sizes

University	Population	Total sample	Sample from Education Sciences
UDC	2,746	1,528 (37.6%)	202
USC	3,624	1,958 (37.6%)	317
UVigo	2,785	1,677 (38.4%)	323
Total for the SUG	9,155	5,163	842

Survey tool

The survey questionnaire used was the one that the ACSUG has developed for use in its Labour Market Insertion Studies, which is based on other questionnaires applied in similar research studies. This survey tool was used to collect information about the perceptions that the bachelor's degree graduates from the SUG had regarding their university and the education they received there (university education, educational work and practices in their degree programme, mobility, and knowledge of languages), as well as information about their employment search and current employment situation (access to employment, job search routes, current employment situation, time spent looking for employment, type of employment contract, and competencies in demand).

A total of 98 items were included, grouped into five sections: (1) personal information, (2) employment search, (3) current situation, (4) current employment and previous employment, and (5) satisfaction with the academic curriculum. Each section was in turn divided into various dimensions.

In this article, the primary focus of analysis will be one of the six dimensions from Section 4: competencies in demand during previous job / current job. The Likert scale was used to present five response options, from 1 (not at all important) to 5 (very

important), with the students asked to assess the usefulness of each of the following competencies in terms of performing their previous job / current job.

Table 2 presents a list of the professional competencies that were the focus of the ACSUG's Labour Market Insertion Studies, including names given to each competency on the questionnaire and the codes assigned to assist with the subsequent analysis:

Table 2

List of competencies and their corresponding codes

Code	Competencies
P77	Competencies
P78	Learning abilities
P79	Motivation
P80	Adaptability
P81	Initiative
P82	Critical thinking
P38	Creativity
P84	Written and oral communication skills
P85	Theoretical field-specific
P86	Practical field-specific
P87	Working in a team capacity
P88	Working independently capacity
P89	Working under pressure capacity
P90	Analytical ability
P91	Ability to assume responsibility
P92	Problem-solving ability
P93	Planning, coordinating and organising
P94	Leadership ability
P95	Foreign language knowledge

Calculation of Cronbach's alpha for the survey tool showed a mean reliability for the three universities of .80 (.81 for USC; .86 for UAC; and .73 for UVigo), which in all three cases demonstrates a high level of reliability for the survey tool applied.

Procedure for collecting information

Computer-assisted telephone calls were used in this research project to apply the survey questionnaire, which took place between 15 January 2021 and 2 March 2021.

The instructions issued by the ACSUG's Ethics Committee were followed, and informed consent was first obtained for each university. Before the survey was given, each student was informed of the most relevant details regarding the purpose and benefits of the research, and the guidelines on anonymity that would be applied during the study.

Data analysis

The software used for the statistical analyses was IBM SPSS Statistics, version 29.0. The descriptive analysis of the data was performed based on calculations of central tendencies (mean, median, and mode) and spreads (standard deviation).

Results

The results of this study presented in Table 3 below show the most relevant descriptive statistics (mean, median, mode, and standard deviation) for the 19 competencies included in the survey questionnaire, for the sample of bachelor's degree graduates from the universities' Education Sciences departments. The correspondence between those results and those obtained for the total SUG sample are then compared in Table 4.

A descriptive analysis corresponding to each of the competencies being analysed is presented in Table 3 and Figures 119, with those calculations based on the mean point scores obtained for each of the items, and also taking into account the frequencies given to each response by the graduates:

Table 3

Descriptive statistics on perceived usefulness of the competencies

Competencies	n	M	Md	Mo	SD
Learning abilities	842	4.64	5.00	5	.689
Motivation	842	4.54	5.00	5	.781
Adaptability	842	4.51	5.00	5	.707
Initiative	842	4.25	4.00	5	.905
Critical thinking	842	3.95	4.00	5	1.147
Creativity	842	3.60	4.00	5	1.221
Written/oral communication skills	842	4.48	5.00	5	.812
Theoretical field-specific	842	3.99	4.00	5	1.106
Practical field-specific	842	4.26	5.00	5	1.042
Working in a team capacity	842	4.39	5.00	5	.872

Competencies	n	M	Md	Mo	SD
Working independently capacity	842	4.32	5.00	5	.840
Working under pressure capacity	842	4.36	5.00	5	.921
Analytical ability	842	4.19	5.00	5	.926
Ability to assume responsibility	842	4.48	5.00	5	.807
Problem-solving ability	842	4.61	5.00	5	.673
Planning, coordinating and organising	842	4.43	5.00	5	.833
Leadership ability	842	3.71	4.00	5	1.067
Foreign language knowledge	842	3.19	3.00	3	1.297
Computer skills	842	3.77	4.00	5	1.128

As can be seen in Table 3, the five competencies receiving the highest scores from the graduates are *Learning abilities* (M=4.64, Md=5.00, Mo=5, SD=.689), *Problem-solving ability* (M=4.61, Md=5.00, Mo=5, SD=.673), *Motivation* (M=4.54, Md=5.00, Mo=5, SD=.781), *Adaptability* (M=4.51, Md=5.00, Mo=5, SD=.707), and *Written and oral communication skills* (M=4.48, Md=5.00, Mo=5, SD= .812).

On the other hand, the competency that received the lowest mean point score, and therefore the one that the graduates perceived as being the least useful for performing their jobs, was *Foreign language knowledge* (M=3.19, Md=3.00, Mo=3), although it should be pointed out that it also had one of the highest variation scores (SD=1.297). Other competencies that received low scores included *Creativity* (M=3.60, Md=4.00, Mo=5, SD=1.221), *Leadership ability* (M=7.71, Md=4.00, Mo=5, SD=1.067), *Computer skills* (M=3.77, Md=4.00, Mo=5, SD=1.128), *Critical thinking* (M=3.95, Md=4.00, Mo=5, SD=1.147), and *Theoretical field-specific* (M=3.99, Md=4.00, Mo=5, SD=1.106).

By comparing the results obtained for graduates with a bachelor's degree in Education Sciences (n=842) with those obtained for all of the SUG graduates during the 20142015 academic year (n=5,163), it can be seen that the five competencies given the highest scores coincide between those two groups (Table 4).

Table 4

Descriptive statistics on perceptions of usefulness for the most highly scored competencies

Competencies	Graduates of SUG Education Departments		All SUG Graduates	
	n	M	n	M
Learning abilities	842	4.64	5,163	4.68
Problem-solving ability	842	4.61	5,163	4.61
Motivation	842	4.54	5,163	4.56
Adaptability	842	4.51	5,163	4.52
Written and oral communication skills	842	4.48	5,163	4.51

Discussion

The main objective of this study was to analyse perceptions of usefulness for specific competencies, in terms of increasing the employability of graduates from the Galician university system in the field of Education Sciences, and to determine whether the competencies scored most highly by those graduates are the same as those scored most highly by the rest of the graduates from those universities, regardless of their field of study.

Although employability is clearly a very complex concept that can be influenced by contextual factors, such as the economy, policies, and educational approaches, developing and mastering certain key competencies can be understood as an important factor for helping university graduates transition into the labour market. According to Marzo, Pedraja, and Rivera (2012), employability levels are in fact related to the general competencies displayed by job applicants.

In the present study, the competencies that the participants considered to be most highly valued by employers coincide with those appearing in the various articles consulted from the literature, with Learning abilities, Problem-solving ability, Motivation, and Adaptability being the most noteworthy among these.

Also, in relation to the correspondence between the results obtained in this study and those reported from similar research, it can first be emphasised that there is a clear common emphasis on the fact that it is no longer sufficient just to master a body of knowledge relating to a specific occupation, but instead, it is important to develop dynamic learning capabilities (Quiles & Rekalde, 2021). The participants in the present study perceived *Learning abilities* as the competency most highly valued in the job market (M=4.64), while in contrast, the competency *Practical field-specific* was among those receiving the lowest scores from the graduates (M=3.99) in relation to performing their jobs. In line with other results reported in the literature, this suggests that specific competencies for each profession must be supplemented by crosscutting skills and abilities, which have become relevant because they can be applied more generally and transferred to a variety of contexts and activities (Martínez & González, 2017, 2018; Rekalde & Buján, 2014).

Various authors have also agreed upon the need to develop emotional intelligence (Goleman, 2013; Saarni, 2000), and in the research being reported here, there were indeed competencies more emotional in nature that the participants considered to be very relevant. For example, the SUG graduates in Education Sciences considered the competency *Motivation* (M=4.54) to be one with the strongest influence on employability, which is in line with the results reported by Martínez and González (2017) and by Ricci, Alonso, and Mendo (2022):

> Development of motivation is seen as a fundamental factor when taking on the challenges of the job market and seeking high-quality employment, especially in view of the uncertainty caused by the COVID19 pandemic and the changes it led to in relation to our ways of working. (p. 2015)

However, the analysis performed in the present study also found that other competencies related to interpersonal relations and that could be considered as more emotional were perceived as less relevant for employment, such as *Working in a team capacity* (M=4.39), which had a score very close to the overall mean (M=4.38), while also showing one of the lowest variation scores (SD=.872).

Another competency that was perceived as key for employers was the ability to adapt to new situations, as measured by the competency *Adaptability* (M=4.51). The current employment market is characterised by its rapid updating, and a person with versatility is able to take advantage of better employment opportunities (Ricci, Alonso, & Mendo, 2022).

Finally, it must be pointed out that this article is just one part of a more extensive research project on the transition between university studies and the working world, so there are other essential issues that will be presented and discussed in later works. Nevertheless, the present study represents a contribution to our understanding of which competencies may be most essential in relation to employability and university education, so that all institutions offering higher education can improve their performance in terms of this indicator of quality.

The limitations presented by the current study will be used to create proposals for future research. For example, one recommendation would be to design specific survey tools to measure competencies, and to produce questionnaires that are more sensitive to the structure of the "21stcentury competencies" that have become relevant to the profiles of university students in the field of education (Van Laar et al., 2017). As mentioned in the first part of this article, the current models for these 21stcentury competencies are structured around five main elements: two competencies that reflect higherorder abilities (capacity for advanced thinking and Working in a team capacity), and three others corresponding to ICT skills (technological, pedagogical, and ethical competencies). However, there is still a lack of generalised consensus on this subject, which suggests that future research should be focused on achieving a better delimitation of these 21stcentury competencies (van de Oudeweetering & Voogt, 2018), and on the ways in which they can be integrated into university degree programmes and curricula (Voogt & Erstad, 2018). In addition, universities should develop teaching plans for their students that will provide better training in the competencies that, according to the results of these studies, are most highly valued by employers. Those plans should be adapted in ways that will therefore improve employability (Álvarez et al., 2015), offering skills and competencies that are appropriate for the demands of the labour market (Garbanzo, 2012; González & González, 2008).

Funding

Acknowledgments

References

Akbulut, Y., Sendag, S., Gürkay, B, Kiliçer, K., Sahin, M. C., & Odabasi, H. F. (2008). Exploring the types and reasons of Internet-triggered academic dishonesty among turkish undergraduate students: Development of Internet-triggered academic dishonesty scale (ITADS). *Computers & Education, 51*, 463-473. https://doi.org/10.1016/j.compedu.2007.06.003

Alberta Education. (2011). *Framework for student learning: Competencies for engaged thinkers and ethical citizens with an entrepreneurial spirit.* Alberta Education. http://go.uv.es/FNp90Pu.

Almerich, G., Díaz-García, I., Cebrián-Cifuentes, S., & Suárez-Rodríguez, J.M. (2018). Estructura dimensional de las competencias del siglo XXI en alumnado universitario deeducación. *RELIEVE, 24*(1). http://doi. org/10.7203/relieve.24.1.12548.

Álvarez Pérez., A., González Afonso, M., & López Aguilar D. (2015). La Enseñanza Universitaria y la Formación para el Trabajo. Un análisis desde la opinión de los estudiantes. *Paradigma, 30*(2), 7-19.

Ananiadou, K., & Claro, M. (2009). *21st century skills and competences for new millennium learners in OECD countries*. Organization for Economic Cooperation and Development. http://go.uv.es/5qOd5pb.

Baker, R. (2001). Evaluating Quality and Effectiveness: Regional Accreditation Principles and Practices. *The Journal of Academic Librarianship, 28* (1), 3–7.

Balbuena, S. E., & Lamela, R. A. (2015). Prevalence, motives, and views of academic dishonesty in Higher Education. *Asia Pacific Journal of Multidisciplinary Research, 3*(2), 69-75. https://bit.ly/3bnxqo6

Binkley, M., Erstad, O., Hermna, J., Raizen, S., Ripley, M., Miller-Ricci, M., & Rumble, M. (2012). Defining 21st century skills. En P.E. Griffin, B. McGaw, & E. Care (Eds.), *Assessment and teaching of 21st century skills* (pp. 17–66). Springer.

Bisquerra Alzina, R., & Pérez Escoda, N. (2007). Las competencias emocionales. *Educación XX1*, *10*, pp. 61-82 Universidad Nacional de Educación a Distancia Madrid.

Blanco Guillermety, R. J., & Blanco Peck, R. (2007). La medición de la calidad de servicios en la educación universitaria. *Cuaderno de Investigación en la Educación, 21*, 121-136.

Borden, V. (2003). Las encuestas a egresados universitarios como medio para la mejora de las universidades: lecciones desde Estados Unidos. In J. Vidal, J. (Ed.), *Métodos de Análisis de la Inserción Laboral de Universitarios* (pp. 81-94). Consejo de Coordinación Universitaria.

Caldevilla, D. (2010). Internet como fuente de información para el alumnado universitario. *Cuadernos de Documentación Multimedia, 21*, 141-157. https://bit.ly/3kw-MRLW

Cevallos, L., Guijarro, A., & López-Domínguez, L. (2016). Factores que inciden en el mal uso de la información en trabajos de investigación científica. *Didasc@lia, 7*(4), 57-74. https://bit.ly/3lwnfQF

Claro, M., Preiss, D. D., San Martín, E., Jara, I., Hinostroza, J. E., Valenzuela, S., Cortés, F., & Nussbaum, M. (2012). Assessment of 21st century ICT skills in Chile: Test design and results from high school level students. *Computers & Education, 59*(3), 1042-1053. https://doi.org/10.1016/j.compedu.2012.04.004

Comisión Europea. (2018). *ANEXO de la Propuesta de Recomendación del Consejo relativa a las competencias clave para el aprendizaje permanente*. https://eur-lex.europa.eu/resource.html?uri=cellar:395443f6-fb6d-11e7-b8f5-01aa75ed71a1.0013.02/DOC_2&format=PDF.

Díaz-García, I., Cebrián-Cifuentes, S., & Fuster-Palacios, I. (2016). Las competencias en TIC de estudiantes universitarios del ámbito de la educación y su relación con las estrategias de aprendizaje. *RELIEVE, 22*(1). http://doi.org/0.7203/relieve.22.1.8159

Elias, P., & Purcell, K. (2004). Is mass higher education working? Evidence from the labour market experiences of recent graduates. *National Institute Economic Review, 190*, 60-74. https://doi.org/10.1177/002795010419000107

European Union. (2018). Resolution of the Council of the European Union and the Representatives of the Governments of the Member States meeting within the Council on a framework for European cooperation in the youth field: The European Union Youth Strategy 2019-2027. *Official Journal of the European Union*.

European Youth Forum. (2020). *European quality charter on internships and apprenticeships*. http://qualityinternships.eu/

Garbanzo Vargas, G. (2012). Factores asociados al rendimiento académico en estudiantes universitarios, una reflexión desde la calidad de la educación superior pública. *Revista Educación, 31*(1), 43-63.

Goleman, D.,& Boyatzis, R. (2013). *Emotional and social competency inventory*. Hay Group.

González, V., & González, R. (2008). Competencias genéricas y formación profesional: un análisis desde la docencia universitaria. *Revista Iberoamericana de Educación*, *47*, 185-209.

Hillage, J., & Pollard, E. (1998). *Employability: developing a framework for policy analysis*. Department for Education and Employment.

Hinostroza, J. E. (2017). *TIC, educación y desarrollo social en América Latina y el Caribe.* UNESCO. http://go.uv.es/Y70CBPv.

Jimémez, A. (2009). Training and labour market integration of education science graduates. *European Journal of Vocational Training*, *47*, 78-102.

Martínez, P., & González, N. (2017). *Satisfacción de los estudiantes de grado con la formación en competencias transversales*. AIDIPE2017, XVIII Congreso Internacional de Investigación Educativa y AIDIPE Asociación.

Martínez, P., & González, N. (2018). Las competencias transversales en la universidad: propiedades psicométricas de un cuestionario. *Educación XX1*, *21*(1), 231-262. https://doi.org/10.5944/educxx1.20194

Martínez-Sala, A., & Alemany-Martínez, D. (2017). Aprender en un mundo en cambio. Aplicación práctica de métodos de aprendizaje colaborativo-cooperativo en el ámbito de la publicidad y las RR. PP. In R. Roig-Vila (Ed.), *Investigación en docencia universitaria. Diseñando el futuro a partir de la innovación educativa* (pp. 614-625). Octaedro.

Marzo, M., Pedraja, M., & Rivera, P. (2006). Las deficiencias formativas en la Educación Superior: el caso de las Ingenierías. *Cuadernos de Gestión, 6* (1).

Molero, D. (2000). Situación sociolaboral de los graduados universitarios, necesidades y demandas de formación. Una propuesta de actuación. In J. Ruiz, & G. Medina, *Orientación Educativa e Intervención Psicopedagógica. I Jornadas Andaluzas de Orientación y Psicopedagogía*. Publicaciones de la Universidad de Jaén.

Mora, J., Vila, L., & García, A. (2005). European Higher Education Graduates and Job Satisfaction. *European Journal of Education, 40* (1), 35-44.

Organización Internacional del Trabajo. (2020). *Informe Mundial sobre el Empleo Juvenil 2020*. https://bit.ly/3LdRd8G

Quiles-Pinar, L., Rekalde-Rodriguez, I. (2021). Pedagogues in the business context: An approach through scientific literature. *Contextos Educativos. Revista de Educación, 27*, 183-204.

Rekalde, I., & Buján, K. (2014). Las eRúbricas ante la evaluación de competencias transversales en Educación Superior. *Revista Complutense De Educación 25*(2), 355-374. https://doi.org/10.5209/rev_RCED.2014.v25.n2.41594

Ricci Caballo, B., Alonso Díaz, L., & Mendo Lázaro, S. (2022). Competencias sistémicas que predicen la empleabilidad en Educación Social [Systemic skills that predict employability in social education]. *Educación XX1*, *25*(2), 201-221. https://doi.org/10.5944/educxx1.31538

Saarni, C. (2000). Emotional Competence. A Developmental Perspective. En R. Bar-On, & J. D. A. Parker (Eds.), *The Handbook of Emotional Intelligence. Theory, Development, Assessment, and Application at Home, School, and in the Workplac* (pp. 68-91). Ca: Jossey-Bass.

Simeon-Fayomi, B. C., Cheatan, B. S., & Oludeyi, O. S. (2018). Soft skills for young adults: Circuit in the formal, non-formal and informal models. *Issues and Ideas in Education, 6*(1), 99-112. https://doi.org/10.15415/iie.2018.61006

Solanes, A., Núñez, R., & Rodríguez-Martín, J. (2008). Un cuestionario para la evaluación de competencias. *Apuntes de Psicología*, *26*(1), 35-49.

Teichler, U. (2003). Aspectos metodológicos en las encuestas a graduados universitarios. En J. Vidal (Ed.), *Métodos de Análisis de la Inserción Laboral de Universitarios* (pp.15-30). Consejo de Coordinación Universitaria.

UNESCO. (2015). *Replantear la educación. ¿Hacia un bien común mundial?* UNESCO.

Vallejo-Trujillo, S., & Aguilar, J. A. H. (2019). Preferencias de competencias transversales: enfoque de la alta dirección. *Administración Y Organizaciones, 22*(42), 53-72. https://doi.org/10.24275//uam/xoc/dcsh/rayo/2019v22n42/Vallejo

van de Oudeweetering, K., & Voogt, J. (2018). Teachers' conceptualization and enactment of twenty-first century competences: exploring dimensions for new curricula. *The Curriculum Journal, 29*(1), 116-133.

Van Laar, E., van Deursen, A. J., van Dijk, J. A., & de Haan, J. (2017). The relation between 21st-century skills and digital skills: A systematic literature review. *Computers in human behavior, 72*, 577-588.

Voogt, J., & Erstad, O. (2018). Section of the Twenty-First Century. En J. Voogt, G. Knezek, R. Christensen, & K. W. Lai (Eds.), *Second Handbook of Information Technology in Primary and Secondary Education*, (pp. 15-18). Springer

Voogt, J., & Pareja-Roblin, N. (2012). A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies. Journal of *Curriculum Studies, 44*(3), 299-321.

Vrat, P. (2013). A model for employability of graduates in technical education system. *The Journal of Engineering Education, 102*(2), 11-20.

World Economic Forum. (2015). *New vision for education: Unlocking the potential of technology.* World Economic Forum. http://go.uv.es/2h6pKZ7