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Career resources among higher education students: a mixed-method study

Recursos de carrera en estudiantes de educación superior: un estudio de métodos mixtos

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ABSTRACT

Increased attention has been paid to the way Higher Education institutions contribute to the development of graduates' employability. Such issue is particularly relevant in the light of the current uncertainty experienced in the labour market, particularly among younger people, that was recently exacerbated by the Covid-19 pandemic crisis. Building on the career resources framework, which integrates a set of resources that are expected to predict career success, including human capital resources, social capital, psychological resources

and career identity resources, this study aims to explore the development of student's career resources over their graduation courses and students' perceptions about the contribution of their higher education degree for career success. For this purpose, a mixed-method explanatory sequential design was conducted. The career resources questionnaire was applied to 339 Spanish higher education students from a public university, and then 18 interviews were conducted. The results obtained allow us to conclude that career resources are generally malleable and developed throughout higher education studies. It is also possible to identify dimensions where students present more fragilities, namely those related to the exploration of knowledge related to future professional opportunities in their surrounding environment, and to establish some relation between individual characteristics and educational experiences and the development of career resources. Thus, this research adds knowledge to the identification of specific career resources that need more attention in higher education programs. Implications from this study are discussed, taking its potential to higher education institutions in interventions, in terms of curriculum, pedagogical and/or career counselling actions.

Keywords: career development, employability, higher education, mixed-methods research

RESUMEN

Las universidades han sido cuestionadas por su contribución al desarrollo de la empleabilidad de su alumnado. Este tema es particularmente relevante por la incertidumbre que genera el mercado laboral, especialmente para la juventud, acentuado por la crisis pandémica de la Covid-19. Con este punto de partida, se realiza una conceptualización de los recursos de carrera, configurados por un conjunto de factores que inciden en el desarrollo profesional: los recursos relativos al capital humano, al capital social, psicológicos y los relacionados con la identidad. Seguidamente, se establece como propósito de la investigación explorar el desarrollo de los recursos de carrera y analizar la perspectiva del alumnado universitario sobre la contribución de sus estudios para conseguir sus metas profesionales. Para ello se realizó un análisis mixto exploratorio secuencial. Se aplicó el cuestionario de recursos de carrera a 339 estudiantes de educación superior de una universidad pública española y se realizaron 18 entrevistas. Los resultados obtenidos muestran que los recursos de carrera son generalmente trabajados y desarrollados en los estudios universitarios de grado. Asimismo, se han identificado algunas dimensiones que presentan una mayor debilidad, como el conocimiento de las oportunidades de futuro en su entorno próximo; y la conexión entre sus características individuales y las experiencias educativas en el desarrollo de los recursos de carrera. Por tanto, este trabajo contribuye a identificar aquellos recursos profesionales específicos que necesitan una mayor atención en la enseñanza universitaria y supone un punto de partida para continuar la investigación en otras instituciones de educación superior en intervenciones, en términos curriculares, pedagógicos y de orientación para la carrera y poder ampliar el conocimiento en este sentido.

Palabras clave: recursos de carrera, empleabilidad, enseñanza universitaria, investigación con métodos mixtos

INTRODUCTION

Over the last years, increased attention has been paid to the way Higher Education institutions contribute to the development of graduates' employability. Although the role of Higher Education might not be restricted to a functionalist perspective that assumes economic and employment returns as its unique mission (Sin et al., 2019), it is evident there is some increased scrutiny about the contribution of universities to career success outcomes of its graduates. This tension is particularly relevant in the light of the current uncertainty experienced in the labour market, particularly among younger people, that was exacerbated by the Covid-19 pandemic crisis (Timonen et al., 2021).

In the Spanish context, in addition to the pandemic crisis, it is important to note the 2008 crisis. It affected seriously the economy, the labor market and the hiring of university graduates. Following this argumentative line, Úbeda and colleagues (2020) compare the situation of Spanish youth with that of the European Union average:

> The Spanish population under 30 years of age depart from a worse situation compared to their EU counterparts: 27.5 per cent youth unemployment rate (14.1 percentage points above the EU average), 56.1 per cent temporary contracts (20 percentage points above the EU average), 15.3 per cent of young people in a NEET (Not in Education, Employment, or Training) situation (2.4 percentage points above the EU average), 6.9 per cent long-term youth unemployment (3.3 percentage points above the EU average) and 26.5 per cent part-time contracts (of which 52.5% involuntary, twice the EU average) (Úbeda et al., 2020, p. 545).

However, it is noteworthy that in terms of youth with higher education studies, Spain exceeds the EU target of having at least 40% of the population between 30 and 34 years old with some form of higher education completed. In Spain, the average of the different educational seventeen administrations and Ceuta and Melilla is 44.8% (Eurostat, 2021). In Spain, educational decisions are transferred to the educational administrations of the autonomous communities and to the autonomous cities of Ceuta and Melilla. Despite the above data, the rate of graduated employees (20-34 years old) who left education and training 1-3 years earlier follows the trend indicated. This supports a worse situation for Spanish youth in comparison with European Union.

Taking this context, this study will articulate the literature on the employability of higher education graduates with current knowledge about career success, particularly, individual and educational background and career success. In this study, we will assume the employability definition proposed by Guilbert et al. (2016, p. 85), that is, "the possibility to access a suitable job or to remain employed, resulting from the dynamic and evolving interactions between governmental and educational

policies, organizational strategy, individual characteristics, and the social, economical, cultural and technological context". Despite the alignment of the two fields of the literature above identified in terms of research and educational goals, there is a recognized lack of exchange between them (Healy et al., 2020). For this purpose, we will take the career success framework developed by Hirschi and colleagues (2018) as a theoretical basis and explore how individual and educational experiences contribute to the development of career resources during Higher Education studies.

Career Resources Framework

Taking the concepts of capital, Hirschi and colleagues (2018) propose, on the basis of an extensive literature review, a comprehensive framework to assess key predictors of career success. Four domains of empirically and theoretically supported correlates of career resources integrate this model: (i) knowledge and skills; (ii) motivation; (iii) environment; and (iv) career management behaviors. Career resources are here defined as "anything that helps an individual attain his or her career goals" (Hirschi et al., 2018, p. 4), while the career resources framework represents the dimensions considered pivotal from empirical and theoretical literature for successful career development (Haenggli & Hirschi, 2020). The operationalization of this framework with higher education students resulted in the identification of a set of 12 dimensions that integrate knowledge and skills, environmental, motivational resources and career management behaviors. Although, this valuable framework has still not been subject of extensive empirical research, particularly in the field of higher education, where it can be particularly useful to inform stakeholders and practitioners.

Higher Education and career development

Some literature has explored how Higher Education can contribute to graduates' career success. Here, the competence-based approach, which emphasizes the perceptions of abilities, skills and capacities as promoters of employability (Vanhercke et al., 2014) has assumed particular relevance in the field. For example, perceptions of field-specific and generic skills, such as oral communication or critical thinking, have been described as significant predictors of undergraduates' self-perceived employability (Qenani et al., 2014). Similarly, García-Aracil and colleagues (2018) show that the perception of the development of practical and theoretical knowledge in the study field, together with methodological competencies, has a positive impact on students' perceptions of their preparedness for work transition. There is some evidence that this positive relationship between education and subjective

career success seems to persist when graduates integrate into the labour market, with some research showing that graduation increases graduates' perceptions of an improvement in their employment situation, although this might not be linear, particularly in non-professional courses (Tuononen et al., 2019). Besides traditional scientific and soft skills developed by higher education curricula, career resources seem also to be necessary for graduates handle their knowledge and attributes and capitalize it in terms of career success (Bridgstock, 2009). Furthermore, such career resources, seem to depend on individuals' variables and experiences that might influence the relationship that is supposed to exist between higher education and career development and success (Monteiro et al., 2020). For example, age and work experience represent two variables that frequently are associated with the ability of graduates to activate and mobilize competencies in face of contextual demands (di Meglio et al., 2019; Phillips et al., 2002), but also seem to relate with higher levels of career maturity, career decision-making capacity and self-efficacy (Edwards, 2014). Such relation seems to derive from a higher perception of competence and understanding of the labour work from worker students, who frequently also are older students (Bennion et al., 2011; Edwards, 2014). Although, some research has also indicated that students workers, particularly those who accumulate several roles' life, might express less confidence regarding their future employment prospects (Brine & Waller, 2004). Likewise, extracurricular activities, particularly when derived from a reflected and deliberated plan (Clark et al., 2015; Díaz-Iso et al., 2020), are generally linked to career resources, such as career exploration (Munson & Savickas, 1998; Potts, 2015), increased sense of competence derived from experience (Munson & Savickas, 1998), career agency (Munson & Savickas, 1998; Potts, 2015), skills development (Jackson & Bridgstock, 2020) and positive career prospects (Potts, 2015). Some research also suggests that social variables could influence career success, namely parental education (Erola et al., 2016; Tomlinson, 2017b), or being or not a first-generation student in higher education, with better career prospects for graduates with parents with higher education levels or social context (Eimer & Bohndick, 2021).

This means that the current diversity of students' characteristics might contribute to differentiated career development paths and necessities that need to be identified and considered if higher education institutions aspire to become promoting agents of employability. Specifically, it is important to better understand which individual dimensions or experiences can actually be related to career resources. Also, it is necessary to clearly identify career resources dimensions that need to be improved, according to those individual characteristics.

To better understand the impact of individual and educational experiences on career resources, four research questions will guide this research, composed of two studies: how career resources develop over higher education experience? What are the strongest and weakest domains of career resources overall and in differentiated

subgroups? What personal characteristics/experiences differentiate subjects in terms of career resources? What are students' perceptions about the contribution of their higher education degree to career success?

METHOD

To answer the study research questions, a mixed-method approach was developed, in which both quantitative and qualitative research data were used (Yvonne Feilzer, 2010). The complementarity of the methods provides the possibility of having a more global approach and a more complete overview of the object of study. Therefore, a sequential explanatory mixed methods design was used, consisting of two distinct phases: the quantitative data was collected and analyzed first, while the qualitative was collected and analyzed second in sequence (Creswell & Creswell, 2018). Table 1 summarizes the specific research design of this study taking research questions and quantitative and qualitative research goals. All data of this research were collected between the academic year 2019/20 with students mostly from the first and second years; and the academic year 2020/21 with the same students mostly in their third year, which includes an internship experience for most of them.

Table 1

Research questions and methodology

Research question	Quantitative Data analysis	Qualitative Data analysis
How do career resources develop over higher education experience?	Comparison of students from initial years (1st and 2nd years) of training with more advanced years of training (3rd year or more)	Exploration of participants' discourse in order to deepen their perception of career resources development over higher education experience
What are students' perceptions about the contribution of their higher education degree for career success?		Exploration of participants' discourse in order to deepen their perception of the contribution of higher education to the process of career resources development
What are the strongest and weakest domains of career resources overall and in differentiated subgroups?	Descriptive statistics of career resources overall and in differentiated groups	
What personal characteristics/experiences differentiate subjects in terms of career resources?	Correlation of students' characteristics/experiences regarding career resources	

Source: Authors' own.

Quantitative study

Sample

A sample of 339 participants (nearly 72% female), from different study fields (Education, Economics, Engineering) and course years of a public Spanish university participated in the quantitative study, with a mean average of 22 years old (SD = 4.54). Approximately 29% of these participants reported being student workers. Detailed descriptive statistics of sociodemographic and academic background variables are presented in Table 2.

Table 2
Description of sociodemographic and academic variables

Descriptive variables		Mean (SD)
Age		22.09 (4.54)
		(n) %
Gender	Female	243 (71.7%)
	Male	96 (28.3%)
Course year	1	16 (4.7%)
	2	227 (67%)
	3	31 (9.1%)
	4	47 (13.9%)
	5	6 (1.8%)
	+ 5/Postgraduate courses	12 (3.5%)
Student worker	Yes	99 (29.2%)
	No	240 (70.8%)
Mother Education	No basic education	1 (0.3%)
	Primary education or equivalent	38 (11.2%)
	Compulsory Secondary Education or equivalent	79 (23.3%)
	Baccalaureate or equivalent	53 (15.6%)
	Intermediate Vocational Training or equivalent	43 (12.7%)
	Higher Vocational Training or equivalent	42 (12.4%)
	Diploma or equivalent	21 (6.2%)
	Bachelor's degree or equivalent	27 (8%)
	Degree or equivalent	25 (7.4%)

Descriptive variables		Mean (SD)
Mother Education	Master's degree or equivalent	8 (2.4%)
	Doctorate or equivalent	2 (0.6%)
Father Education	Primary education or equivalent	5 (1.5%)
	Compulsory Secondary Education or equivalent	79 (23.3%)
	Baccalaureate or equivalent	49 (14.5%)
	Intermediate Vocational Training or equivalent	45 (13.3%)
	Higher Vocational Training or equivalent	46 (13.6%)
	Diploma or equivalent	9 (2.7%)
	Bachelor's degree or equivalent	13 (3.8%)
	Degree or equivalent	
	Master's degree or equivalent	8 (2.4%)
	Doctorate or equivalent	6 (1.8%)
	Other status (missing, don't know/no answer)	5 (1.5%)
Academic Achievement	5 – 6.99	87 (25.7%)
	7 – 8.99	242 (71.4%)
	9 – 9.99	10 (2.9%)
Work experience	Nonexistent	108 (31.9%)
	Little	93 (27.4%)
	Some	83 (24.5%)
	Quite a lot	55 (16.2%)
Extracurricular experience	Nonexistent	66 (19.5%)
	Little	105 (31%)
	Some	110 (32.4%)
	Quite a lot	58 (17.1%)
Course satisfaction	Nonexistent	73 (21.5%)
	Little	140 (41.3%)
	Some	112 (33%)
	Quite a lot	14 (4.1%)

Data collection and analysis

Firstly, was sent to the teaching staff who taught different degrees in Education, Economics and Engineering (N=36). Subsequently, to expand the data-producing

sample, an email was sent to the institutional distribution list. The invited sample was all the students who were studying for a degree in the academic year 2019/2020 (around 13000 students).

To guarantee the anonymity and authenticity of the quantitative data collection, an online questionnaire was carried out. The instrument has been completed through the official platform of the university, in which the Microsoft forms tool is hosted, and which can only be accessed with the institutional email. Then data was exported and analysed with the software IBM SPSS (version 27.0).

Instrument

Career Resources Questionnaire

The Career Resources Questionnaire (CRQ) was translated and adapted from the original version developed by Hirschi and colleages, 2018. The validation process followed the steps collected in Sousa and Rojjanasrirat (2011). For the first four steps (the translation of the original, the comparation of both, the blind back translation and the comparison of the two versions) the support of two language experts was requested (a language university teacher and a professional translator). The fifthly and sixthly steps were guaranteed with postgraduates students with different domains of language; at the end, full psychometric testing of the pre-final version of the translated instrument in a sample of the target population in a Faculty of Education was developed. It was the first application of this instrument in Spanish language (see Appendix I).

This scale is composed by a total of 38 items in a 5-point Likert scale, ranging from 1 (completely disagree) to 5 (completely agree), divided by twelve dimensions: (i) Occupational expertise; (ii) Job market knowledge; (iii) Soft skills; (iv) Organizational career support; (v) Job challenge; (vi) Social career support; (vii) Career involvement; (viii) Career confidence; (ix) Career clarity; (x) Networking; (xi) Career exploration; (xii) Learning. For the sample of the present study, QRC showed good factorial validity for the twelve-factor model (X2/df = 1.50; CFI= .957; GFI= .877; RMSEA= .039) and acceptable reliability (CR= .71 - .92; α = .69 - .92).

Qualitative Study

Sample

A convenience sample of eighteen students participated in the semi-structured interviews, following a snowballing technique, from four degrees related to

education and social development, 16 female and 2 male, with ages ranging between 21 and 37 years old, who were enrolled in the third year of their graduation course.

Data collection and análisis

First, the selection of participants was structured based on the scores obtained in the previous quantitative study (CRQ: G1 - high scores; G2 - intermediate scores; G3 - low scores). Subsequently, in order to enable the presence of different visions, variables included in the quantitative study were considered as inclusion criteria: sex, age, degree, if they were working, mother education, father education, work experience, participation in extracurricular activities, academic achievement, and satisfaction with studies. Qualitative data were collected through interviews that were recorded, transcribed and analysed using MAXQDA Pro 2020 software. A thematic analysis of the interviews was conducted by rereading the results and identifying the recurring themes and ideas to be classified into categories. Data analysis was of deductive nature with the categories extracted from the questionnaire. This method of analysing information from the construction of units of meaning enabled us to understand the phenomenon. The interviews ceased when saturation of categories across interviews was reached.

Instrument

Semi-structured interview

The semistructured interviews were analysed from a phenomenological approach of qualitative nature. It is justified by the methodological strategy with the main purpose to promote a deeper analysis of the perspective about the contribution of higher education to career development through their narratives. The focus is on the meaning constructed by the participants and their experiences (Chan et al., 2015). In this sense, the phenomenological approach allows focusing on the perspective of students about the career objectives, job market knowledge, social career support, learning, occupational expertise and networking (Hirschi et al., 2018). The technique used for generating qualitative data was guided by open questions (Chan et al., 2015). It provided a wealth of diverse perspectives on the object of study, collected by videoconference because of the Covid-19 limitations to face-to-face contact.

Four types of questions were asked: 1) introductory questions; 2) students' vision about higher education contribution to career development; 3) perspectives on career support, learning, occupational expertise and networking; 4) open

questions to participants make other relevant contributions. Interviews ranged between 20 and 40 minutes in length.

Table 3
Semi-structured interview script

Introductory questions	The interview begins by explaining again the research objective and confidentiality. It was a first contact, which allowed us to clarify possible doubts about the investigation. From the doubts or queries we could link the following questions.
Career goals	How do you personally evaluate the importance of the different career resources for attaining your professional goals? To what extent do you consider them important?
Job Market Knowledge	How do you judge the current situation and the future development of the labor market with regards to your aspired profession? How do you get information about the current market in relation to your future career goals? What can you do in order to be prepared for the current and future situation in the labor market?
Social support	What support do you have for career development in the degree? Do you think that there are other people who could better support you in your professional development? What would you have to do to receive this support?
Learning	How often do you learn something voluntarily in order to further develop your professional knowledge? When did you last do that?
Occupational expertise	In which area of expertise in your field of study do you have a lot of in-depth knowledge? Which skills and competences do you find the easiest to develop and which have been the most difficult? What can you do in order to implement the knowledge and strengths you gained through your studies in the practice of your future employment?
Networking	In relation to the contacts you know (e.g. contacts from internships, ex-employers, teachers, acquaintances), to what extent do you think they could support your professional development? How could you better use existing contacts for your occupational/professional development? How could you foster existing contacts? What could you do to maintain contact? What could you do for these contacts?
Open Questions	At the end of the interview, open questions were asked, first if they wanted to clarify, explain, deepen or add any more aspects and then, we also asked them if there were other people they considered to be of interest as participants in the research.

RESULTS

Results of the quantitative study

Table 4 presents descriptive statistics of the 12 dimensions of the QRC, organized into three groups, according to their stage in terms of their training path: initial stage (1st and 2nd years of the graduation course), advanced stage (3rd or more advanced year of the graduation or postgraduation course), and the total sample. Taking results scores, it is observable that all the dimensions present kurtoses and skewness around the 0 value, which means this sample is close to the normal distribution. Higher scores occur on the dimensions of Social Career Support, Career Clarity and Career Involvement in the three groups. For the students in more advanced stages of their course, Learning is equally high. In turn, Occupational Expertise, Job Market Knowledge, Organizational Career Support and Career Explorations represent the dimension with lower scores in all the compared groups. It is also possible to verify that, with the exception of the dimensions of Organizational Career Support, Social Career Support and Career Clarity, there is a general tendency for career resources to increase as students progress through their studies.

Table 4

Descriptive statistics of the CRQ dimensions by subgroups and total sample

Variables	1st and 2nd year (n= 243)				3rd year or more (n= 96)				Total sample (n= 339)			
	Mean	SD	Kurtosis		Mean	SD	Kurtosis		Mean	SD	Kurtosis	
OE	2.64	0.75	0.49	0.39	2.67	0.75	-0.66	0.20	2.65	0.75	0.15	0.34
JMK	2.52	0.79	0.24	0.21	2.83	0.84	-0.16	0.16	2.61	0.81	0.09	0.21
SS	3.29	0.75	0.09	-0.03	3.74	0.79	-0.01	-0.48	3.42	0.79	-0.15	-0.10
OCS	2.83	0.85	0.06	-0.18	2.66	1.10	-0.84	0.13	2.78	0.93	-0.30	-0.10
SCh	3.18	0.79	-0.07	-0.33	3.31	0.83	-0.47	-0.06	3.21	0.80	-0.17	-0.23
SCS	3.80	0.81	0.03	-0.57	3.76	0.93	-0.69	-0.40	3.79	0.85	-0.23	-0.51
CInv	3.56	0.83	-0.00	-0.45	3.67	0.96	-0.22	-0.43	3.59	0.87	-0.11	-0.42
CConf	3.49	0.73	0.50	-0.26	3.52	0.84	-0.52	-0.26	3.50	0.76	0.12	-0.25
CCl	3.67	0.81	-0.51	-0.15	3.65	1.00	-0.19	-0.62	3.66	0.87	-0.26	-0.36
CExp	2.75	0.99	-0.57	0.19	3.44	1.00	-0.68	-0.23	2.95	0.82	-0.71	0.09
Ntw	3.12	0.78	-0.08	0.18	3.36	0.89	-0.20	-0.47	3.19	1.04	-0.27	-0.01
Lear	3.36	0.80	-0.10	-0.16	3.76	0.77	-0.68	-0.08	3.47	0.81	-0.24	-0.14

Note. OE – Occupational expertise; JMK – Job Market Knowledge; SS – Soft Skills; OCS – Organizational Career Support; SCh – Study Challenge; SCS – Social Career Support; CInv – Career Involvement; CConf – Career Confidence; CCl – Career Clarity; CExp – Career Exploration; Ntw – Networking; Lear – Learning.

Independent samples t-tests were conducted in order to identify significant differences among the two groups regarding their stage in the course degree, confirming that students in a more advanced stage of their degree present higher scores for Job Market Knowledge (*t*= -0.3222; *df* = 337; *p* = .001; Cohen's *d* = -0.39), Soft skills (*t* = -0.4939; *df* = 337; *p* = .000, Cohen's *d* = -0.60), Networking (*t* = -2.427; *df* = 337; *p* =.016, Cohen's *d* = -0.29), Career exploration (t = - 5.734; *df* = 337; *p* = .000, Cohen's *d* = -0.69) and Learning (*t*= - 4.236; *df* = 337; *p* = .000; Cohen's *d* = -0.51).

Table 5 presents the correlation between some background variables (age, parental education, work experience and extracurricular experience) and educational outcomes (course achievement and course satisfaction) and the CRQ dimensions, on separated groups: 1st and 2nd year students; 3rd year or more of the graduation or postgraduation and total sample. Age is significantly and positively correlated with several dimensions of the QRC, particularly among the group who is in the first years of their graduation, and in the case of Organizational Career Support the correlation is negative. Such significant correlation is limited to Networking, and in a negative sense, in the case of the more advanced students. Parental education does not show any significant correlation with career resources. Work experience and extracurricular experience are significantly correlated with several dimensions of the CRQ, and these correlations seem also to be more expressive among the students from the first and second year of their course. Course achievement correlates significantly with Social Career Support and Career Involvement in the case of the initial stage group, and solely with Career Involvement in the case of the more advanced stage group. Course satisfaction correlates positively and significantly with several dimensions of the CRQ, particularly among the group of more advanced students. All the correlations range from weak (.13) and moderate (.47), with the exception of the relation between career satisfaction and Organizational Career Support and Study Challenge which reach a strong correlation (.61) in the case of the group with 3 or more years of studies.

Table 5

Correlation matrix between CRQ and sociodemographic and academic variables

	1st and 2nd year (n= 243)						3rd year or more (n= 96)						Total Sample (n= 339)					
	Age	PE	WExp	Ext_ Exp	CAch	CSat	Age	PE	WExp	Ext_ Exp	CAch	CSat	Age	PE	WExp	Ext_ Exp	CAch	CSat
OE	.13**	-.09	.23**	.16*	.12	.16**	.11	.09	.33**	.01	.06	.41**	.12*	- .05	.26**	.12*	.09	.23**
JMK	.24**	-.09	.18**	.18**	.05	.18**	.10	.00	.17	.17	-.15	.22**	.22**	-. 08	.21**	.19**	-.05	.20**
SS	.11	.01	.18**	.25**	.10	.03	.02	.00	.18	.13	-.11	.17	.16**	- .01	.22**	.23**	-.02	.08
OCS	-.17**	.01	-.14*	.00	.01	.47**	.05	.08	.01	-.09	.17	.60**	-.10	.04	-.11	-.03	.09	.50**
SCh	-.12	-.02	-.10	.08	.05	.43**	.10	.03	.09	-.14	.03	.61**	.00	- .01	-.03	.02	.03	.48**
SCS	-.06	.03	-.03	.17**	.14*	.13*	-.13	.12	.07	.00	.08	.39**	-.09	.05	.00	.12*	.12*	.21**
CInv	-.06	.00	-.10	.02	.27**	.13*	-.18	.00	.04	-.06	.25*	.33**	-.08	.00	-.05	.00	.24**	.20**
CConf	-.05	.04	.03	.11	.11	.03	-.10	.14	.14	.14	-.04	.41**	-.06	.07	.07	.12*	.05	.15**
CCl	.04	-.08	-.02	.02	.07	-.02	.00	.04	.22**	.25**	.07	.41**	-.08	-.04	-.05	.00	.24**	.12*
CExp	.31**	-.08	.20**	.19**	-.07	.03	-.05	-.07	.11	.12	-.20	.16	.26**	- .10	.22**	.19**	-.16**	.07
Ntw	.10	-.04	.14*	.27**	.98	.00	-.21*	.14	.08	.28**	.04	.36**	.02	.00	.14**	.28**	-.01	.17**
Lear	.14**	.09	.21**	.28**	.02	.12	-.08	-.05	.04	.17	.07	.22**	.13*	- .03	.20**	.35**	-.01	.15**

Note. OE – Occupational expertise; JMK – Job Market Knowledge; SS – Soft Skills; OCS – Organizational Career Support; SCh – Study Challenge; SCS – Social Career Support; CInv – Career Involvement; CConf – Career Confidence; CCl – Career Clarity; CExp – Career Exploration; Ntw – Networking; Lear – Learning; PE – Parental Education; WExp – Work experience; ExtExp – Extracurricular experience; CAch – Course achievement; CSat – Course Satisfaction

* Significant correlation at the level .05; ** Significant correlation at the level .01

Results of the qualitative study

This qualitative study was guided by the following question: How do career resources develop over higher education experience? What are students' perceptions about the contribution of their higher education degree to career success?

Following, the major findings from analysed data are synthesized and evidenced by transcriptions' interviews.

Finding 1: The contribution of learning to career development

The following transcriptions illustrate the relevance attributed to learning, which seems to be important to guide students over their career development.

> For the labour objectives, I believe that everything learned in the degree is absolutely fundamental. After all, the [academic] career and the degree are the basis and the guide to guide myself at work and I can develop my role in the most appropriate way in the future (ECEW4).

This result is possibly related with the correlation between career satisfaction and Organizational Career Support and Study Challenge which reach a stronger correlation in the case of the group with 3 or more years of studies. Students refer to a certain cumulative effect of career resources over time as if the development of some career resources in an initial stage potentiates the development of further career resources:

> (...) it seems to me that we need to take advantage of resources [career resources]. Perhaps, other people do not have them, and we must be taken into account that. That is to say, it must be valued, and we must always take it into account, so that we can obtain other resources (...) I place on value these resources (SEW2).

Finding 2: The importance of social career support for career resources development

In general, students refer to the role of family, friends and peers in terms of expectations and emotional support, which can contribute to a higher perception of confidence in the approach to the labour market:

> Well, I believe that with all the support from my environment, my family, my friends, my university colleagues (…) In my context I have the support of all the people around me (EPEW5)

> Oh yes my family, my parents, I can't complain, quite the contrary. The best thing that I achieved was because of their expectations on me, for their courage to tell

> me that I can get it! (...) My family, without a doubt, they have been the greatest support (ECEW2)

Finding 3: The perceived relevance of continuous training and practice for career resources development

Participants seem to be aware of the relevance of continuous training after their graduation, but also about the experience of voluntary work as a way to improve their contact with practice. These references can reflect a perception of the need to add credentials to their diploma as a way to improve their employability.

> Well, then, I will continue to learn when I finish the degree, I will do training courses, specialized training, masters, doctorates, whatever, or also volunteering, even if it is not in early childhood education, to expand my knowledge a little more (ECEW4)

> Every year, in addition to the university, I try to do something extra, (...) In the second year, to get a bit of experience, I was volunteering with children at the Red Cross (EPEW3).

Finding 4: The different contributions of practice to career resources development

The contact with the labour market through practice seems to assume relevance at different levels. First, as a complement to theoretical learning in a real-world context:

> Well, to improve my training more (...) after reading a lot I think we get from different authors different visions (...) but especially the practice with the children in the class, listening to the history of each of them, seeing the behaviour of the group and individually. I think that's the best way to work, or have the opportunity to work and thus learn, (ECEW2)

> (...) I think internships are very important too because today is where you really learn for real (EPEM4)

> It is also true that, on the other hand, since I have had the practices [at the school], I can say obviously that the theoretical is not enough. Experience and observation are very important to acquire certain habits or ways of acting for my own exercise as a teacher (ECEW4).

The contact with practice seems to be relevant not only because of the additional opportunity to apply and expand knowledge but also as a chance to contact people

that can support their development experience and expand their network. This result reinforces the quantitative study, students in a more advantageous stage of their degree have more knowledge about the job market and their network as a consequence of internships. For example:

> (...) for example, my internship tutor told me, in future, even if I'm not doing the internships there, anything that she can help me or whatever, well, I can count on her (SEW1)

> In all professions, contacts are quite useful because they can always help each other. I think that in this case, for example, with my internship teacher, he can help much more, for example, for his experience in the offer of examinations for public teachers: how to do them or how to present yourself (...) (EPEW1)

DISCUSSION AND CONCLUSIONS

The present study aimed to explore career resources development of higher education students by taking graduates' employability and career success literature. A mixed-method sequential explanatory study was conducted for this purpose. Quantitative data evidenced that the dimensions with higher scores among the early career and advanced students are Social Career Support, Career Clarity and Career Involvement. Learning also represents one of the dimensions with higher scores, in the case of the more advanced students. Conversely, Occupational Expertise, Job Market Knowledge, Organizational Career Support and Career Exploration are the dimensions with lower scores in all the compared groups. The way of career resources develop over time was further explored with qualitative data, as well as the contribution of the higher education degree to such development. The main results obtained in this second study allowed us to corroborate by the interviews that students perceive their graduation as an important booster of their career development. In addition, it was noticeable that participants perceived that the development of some career resources provides fertile ground for the development of new career resources. This cumulative approach to knowledge is common in the field of education (see, for example, Krathwohl (2002), but not so evidenced in the fields of graduate employability and career development. Furthermore, participants highlighted the role of social support and the relevance of continuous training and practice as a way to improve the development of their career resources.

Quantitative data also demonstrated a general tendency for career resources to increase as students progress through their studies. Such increase in career resources was particularly notable in the dimensions of Job Market Knowledge, Networking, Career Exploration and Learning, where statistical differences emerged between early-career and advanced students. This suggests that, although students

evidence lacks in their knowledge about how to navigate in the labour context, these dimensions are malleable, as proposed by Hirschi and colleagues (2018), and develop as they progress along their academic path.

Regarding the relation between individual characteristics and experiences and career resources, age, work and extracurricular experiences are significantly and positively related to career resources, namely, Job Market Knowledge, Occupational Expertise and Career Exploration. The relation between practice and career resources was also acknowledged by students at the moment of the interview, particularly in relation to the perceived relevance of internships. This is congruent with the literature that refers to individual life and professional experiences, which also tendentiously increase with age, as an added value for employability (Dacre Pool & Sewell, 2007; Jackson, 2016; Jackson & Wilton, 2017). Although, Organizational Career Resources are negatively related to age in the early career group, which can suggest that older students are more demanding of institutional support regarding career development. Likewise, age is negatively correlated with the dimension of Networking, in most advanced students, which suggests a less proactive attitude from older students in terms of exploring networks. A possible explanation for this can be that older students may already have established contacts, which makes them feel less need to establish new networks. Contrarily to what could be expected from previous research (Eimer & Bohndick, 2021; Erola et al., 2016), parental education did not correlate significantly with any of the career resources dimensions. A possible explanation for this lack of association can be that familiar background assumes a more expressive impact after work transition, when graduates are exposed to a less protective environment and when social and cultural capital plays a more determinant role in the way graduates navigate and adapt to the work world (Hirudayaraj, 2011; Tomlinson, 2017a). This result was evidenced in the qualitative study, when most of the participants expressed doubts about their future or decisions about it, but did not express concern about entering the labor market or networks. Perhaps, this result could have been connected to the social situation experienced by the pandemic situation, to which, however, they have rarely referred in the qualitative study.

Course achievement is positively related to Social Career Support in the early career students and Career Involvement in both groups, which is congruent with previous research that enhances the role of social influences on academic achievement and engagement of youth (Hilts et al., 2018; Pan et al., 2017). Lastly, course satisfaction represents the variable with a more positive correlation with career resources dimensions, which confirms the close interconnection between the development of career resources throughout higher education and this subjective dimension of success.

To conclude, the results obtained in this study suggest that career resources are generally malleable and develop throughout higher education studies. It also allows

identifying dimensions where students present more fragilities, namely those related to the exploration of knowledge related to future professional opportunities in their surrounding environment, and to establish some relation between individual characteristics and experiences and the development of career resources. Thus, this research contributes to graduate employability and career success literature by adding knowledge to the way how career resources are developed as students advance in educational training and to the identification of specific career resources that need more attention in higher education programs.

This study has also some limitations that need to be referred to as a way to more accurately frame the discussed results and stimulate further research in this field. This is a cross-sectional study, with a convenience sample, so it supposes that career resources develop similarly among individuals with the same characteristics. Longitudinal studies, with a representative sample over years of higher education programs would be necessary to confirm this growing trend in career resources and to confirm the possibility of generalization of these results to other populations. Further research should also clarify if the strongest and weakest dimensions of career resources are the same among different higher education contexts and programs and if the developmental pattern of such career resources is similar in other samples. In this sense, it would be interesting to carry out specific studies by degrees applying this instrument, in order to have a more focused approach in the different areas of specialization.

The social and health situation has conditioned data collection, which has made it difficult to have a larger sample size, as well as the possibility of having face-to-face contact with the people participating in the qualitative study. However, it has been possible to have information on access to career resources at a crucial time of social change and labor market needs.

The evaluation and understanding of the influence of educational contexts, individual characteristics and experiences in the development of resources open doors to institutional interventions, in terms of curriculum, pedagogical and/or career counselling actions with young people, who are worldwide in a disadvantaged position in current socioeconomic conjuncture. Specifically, curricular plans and pedagogic practices should stimulate students' involvement in career exploration activities as the courses progress. Curricular and extracurricular activities can provide important spaces for students, in interactions with peers, to have the opportunity to think about themselves over time, about their various social roles and in the exercise of an activity or professional experience. Nowadays, graduate employability requires opportunities to learn through active and cooperative ways and by applying knowledge to the organization of projects and problem-solving, inside and outside classrooms, and recognizing how academic skills can be applied to current socioeconomic challenges (Monteiro et. al, 2020).

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