



## CAREER MANAGEMENT TRAINING IN THE UNIVERSITY ENVIRONMENT

Formación para la gestión de la carrera profesional en el ámbito universitario

TERESA TORRES-CORONAS <sup>1</sup>, MARÍA-ARÁNTZAZU VIDAL-BLASCO <sup>2</sup>, MARÍA-JOSÉ SIMÓN-OLMOS <sup>3</sup>

<sup>1</sup> Universitat Rovira i Virgili, School of Engineering, Department of Business Management, Spain

<sup>2</sup> Universitat Rovira i Virgili, Faculty of Business and Economics, Department of Business Management, Spain

<sup>3</sup> Universitat Rovira i Virgili, School of Engineering, Department of Mechanical Engineering, Spain

---

### KEYWORDS

*Career management competencies*  
*Employability*  
*Curricular training*  
*Higher education*  
*COVID-19*  
*Economic crisis*  
*Comprehensive training*

---

### ABSTRACT

*In this paper we evaluate and confirm the effectiveness of including curriculum training on career management as a component of university studies. The behaviour of the students in this study was modified by the uncertainty created by the crisis in the labour market due to the pandemic. Our results confirm that universities need to develop the generic and academic skills demanded by the labour market in order to provide their students with comprehensive training while also taking joint responsibility for developing their students' career management skills.*

---

### PALABRAS CLAVE

*Competencias de gestión de la carrera profesional*  
*Empleabilidad*  
*Formación curricular*  
*Educación superior*  
*COVID-19*  
*Crisis económica*  
*Formación integral*

---

### RESUMEN

*En este trabajo se evalúa y confirma la eficacia de incluir formación curricular sobre la gestión de la carrera profesional como un componente más de los estudios universitarios. El comportamiento de los estudiantes en este estudio se vio modificado por la incertidumbre creada por la crisis del mercado laboral debido a la pandemia. Nuestros resultados confirman que las universidades deben desarrollar las competencias genéricas y académicas que demanda el mercado laboral para proporcionar a sus estudiantes una formación integral, al tiempo que asumen la corresponsabilidad de desarrollar las competencias de gestión de la carrera profesional de sus estudiantes.*

Recibido: 03/07/2022

Aceptado: 10/09/2022

## 1. Introduction

Youth unemployment has been a major concern in the European Union (EU) since the 2008 financial crisis (Hernanz and Jimeno, 2017). The current recession caused by COVID-19 has also negatively affected the rate of unemployment (Alberich-González, Fabra-Antón, Sala-Torrent and Serracant-Melendres, 2020). This persistent youth unemployment problem stems in part from the mismatches employers perceive between graduate competencies and market requirements (Štambuk, Karanović and Host, 2019; Likhitkar and Verma, 2020).

According to Lowden, Hall, Elliot and Lewin (2011), “employers expect graduates to have the technical and disciplinary competences from their degrees but require graduates to demonstrate a range of broader skills and attributes that include team-working, communication, leadership, critical thinking, problem solving and often managerial abilities or potential” (p. 24). This perception creates prejudices about the productivity of young people that hinder their insertion. For this reason, according to Healy et al. (2020), it is necessary to consider employment as a result of employability, which is taken to be the personal qualities and situational factors that promote or limit one’s ability to perform one’s work and achieve one’s professional objectives. This thesis is also supported by the studies of Clarke (2017), Donald, Baruch and Ashleigh (2019), and Monteiro, Almeida, Gomez and Sinval (2020).

To correct this mismatch in the labour market, since the start of the Bologna Process higher education institutions have focused on developing skills to improve their students’ employability (Sin and Neave, 2014; Harris-Reeves and Mahoney, 2017; Clarke, 2017; Budiarto, Gunawan, Kadiyono and Andriani, 2021). New university degree programmes seek to include the knowledge, technical skills and transversal competences companies require (Cotronei-Baird, 2019; Clares and Morga, 2019).

In uncertain economic environments such as that produced since 2020 by the global COVID-19 pandemic, increases in the unemployment rate negatively impact students’ perceptions of their employability and university education (Räty, Hytti, Kasanen, Komulainen, Siivonen and Kozlinska, 2019). Work experience, curricular internships and volunteering programmes therefore become key elements of job insertion (Irwin, Nordmann, and Simms, 2019). Learning in the workplace has positive effects on students’ career management skills (Mason, Williams and Cranmer, 2009; Jackson and Wilton, 2016), which are understood to be “competencies which help individuals to identify their existing skills, develop career learning goals and take action to enhance their careers” (Neavy and Dood, 2016, p. 13). At university, the teaching of these competencies is seldom complemented by curricular training in career management. However, as Harvey (2001), Yorke (2006) and Römgens, Scoupe and Beausaert (2020) have noted, employability is related to career management skills.

In this paper we conduct a longitudinal study to evaluate the influence of competence training on career management at a time of labour market uncertainty such as during the COVID-19 health crisis. In the first section we present the background and review the literature while placing special emphasis on factors affecting the employability of young people. We then describe our methodology and present our results. These show that joint responsibility between university and student to develop career management skills increases student proactivity regarding their own job insertion.

## 2. Factors impacting the employability of university graduates

Rothwell and Arnold (2007) define employability as the ability to use acquired competencies to hold down a job or obtain one’s preferred job. These competencies include individual values such as honesty, time-management skills, self-confidence, creative thinking, and decision-making (Rae, 2007; Dacre Pool and Sewell, 2007) as well as adaptability, an entrepreneurial mentality, analytical skills, and an acceptance of responsibilities (Bennett, 2012). Higher education improves these competencies (Saunders and Zuzel, 2010) by focusing on non-technical skills (Holmes, 2013) such as communication, self-management, self-awareness and problem-solving (AAGE 2013).

Employers and students agree on the value of university education. However, not everyone regards strictly academic skills as a good bargaining chip in the labour market (Räty et al., 2019). Such skills are valued less highly by employers (Humburg, de Grip and van der Velden, 2017). In other words, employers and students agree that a degree does not improve employability as much as practical experience does (Hogan, Chamorro-Premuzic and Kaiser, 2013; Nunley, Pugh, Romero and Seals, 2016; Mok, Wen and Dale, 2016).

For all these reasons, university students must not only acquire technical knowledge and technical skills but also learn how to design strategies and create a plan of action that improves the speed and quality of labour insertion. Learning through experience – the intersection between theory and practice – is one example of this (Orrell, 2011). Other strategies for improving employability are international exchange programmes, activities that increase students’ civic engagement, mentoring programmes with the productive sector, and/or volunteering (Holdsworth and Quinn, 2010; Pegg, Waldock, Hendy-Isaac and Lawton, 2012; Jackson and Wilton, 2016; and Ali and Aigbavboa, 2019). Such strategies reinforce students’ professional skills, strengthen their networks of contacts (Feijoo et al., 2019), and complement the theoretical education they receive in the classroom (Alshehri, Gutub, Ebrahim and Shafeek, 2016; Rouvrais, Remaud and Saveuse, 2020). Their impact on employability is clear

since they improve students' ability to apply their knowledge to their work, teamwork, decision-making skills and creative problem-solving. However, they are not always sufficient to enable graduates to hold down a job or to quickly enter the job market (Helyer and Lee, 2014).

It is also important to change people's attitudes and behaviours in relation to labour insertion plans. Universities therefore often create their own careers guidance services aimed at enhancing individual responsibility (Coetzee and Beukes, 2010; Jain and Jain, 2013) and developing career management skills (Jackson and Wilton, 2016). Attitude and behaviour are also determinants of employability (Clarke, 2008).

Career management competencies go beyond writing a curriculum vitae and a cover letter. They involve cognitive, attitudinal and motivational components associated with planning and decision-making skills. They therefore have instrumental and strategic value in the development of an individual's professional career and are renewed and expanded throughout one's professional and life trajectory. These competencies enable students who are actively seeking employment to improve their self-efficiency (Raelin et al., 2011) and to better understand the expectations of their profession and the various employment routes (Watts, 2006). This strengthens both their employment prospects (Purcell, Elias, Atfield, Behle, Ellison, & Luchinskaya, 2013) and their ability to progress professionally by means of an effective plan of action (Eby, Butts and Lockwood, 2003; Bridgstock, 2009; Berdrow and Evers, 2011).

In this context, career management competence as a factor of employability is multidimensional in nature, encompassing the formulation of professional goals, an understanding of the labour market, job-seeking skills, the identification of relevant learning opportunities (Eby, Butts, & Lockwood, 2003; King, 2004; Bridgstock, 2009) and the creation of professional networks (De Janasz & Forret, 2007; Gerard, 2012). This multidimensionality is also reported in the studies by Eby, Butts and Lockwood (2003), De Janasz and Forret (2007) and Bridgstock (2009) and is included in the competencies framework of the University in which this study has been conducted (Universitat Rovira i Virgili, Spain).

Career management competence is the sum of three dimensions: learning, environment, and itinerary. Learning is the ability to analyse and manage one's competency-acquisition process (knowledge, skills and attitudes). Environment is the capacity to show interest in labour market characteristics in one's field of study, especially when it comes to the most related professional opportunities. And itinerary is the ability to define one's academic or professional objectives, use the services, resources and instruments of the University, and identify and specify an itinerary of actions.

The analysis conducted by Carlo and Yinusa (2019) suggests that students need to be encouraged to participate in career management programmes. As we mentioned earlier, these programmes can be delegated to the University's employment services or, as we discuss below, incorporated into the curriculum. The latter option is a way of ensuring that all students can develop this competence in order to reinforce their employability by aligning their professional objectives with labour market requirements.

### **3. Design and methodology**

In this section we describe the design and methodology of our research, which aimed to assess the effectiveness of including career management competence as a component of the degree curriculum. Since 2010 the Universitat Rovira i Virgili (Spain) has included a course entitled Professional and Academic Orientation as a component of the first-year curriculum for degrees in Engineering.

To evaluate the effectiveness of this course, we analysed how students behave along their degree in relation to their career plan. Because engineering degrees have a high insertion rate, students taking those degrees do not always consider it important to plan their search for employment in advance. However, what happens if the labour market is negatively affected by external events? How does the behaviour of those students change in relation to their plans of action? Can they benefit from the skills they have acquired? Verifying the effectiveness of careers management training will help to find answers to these questions.

#### **3.1. Participants**

This study is based on an online questionnaire sent to students on engineering degrees in January 2020 (pre-COVID-19) that analysed student behaviour in relation to career management competence. This pre-COVID-19 study involved 41.7% of first-year students (31.2% female) and 14.5% of students in their second to fourth years of study (49.1% female). In January 2021 (post-COVID-19) the questionnaire was again administered to 18.1% of students in their second to fourth years of study (37.5% female). During their first semester at university, all participants had completed a 6-ECTS course on career management.

#### **3.2. Measuring instruments**

This section describes the scales and psychometric properties of the measuring instruments used for this study. The questionnaires employed a Likert-type measurement scale with five options, where 1 indicated total

disagreement and 5 indicated total agreement. The data were collected in two time periods: January 2020 and January 2021.

Tables 1 and 2 show the questionnaires provided to the participants. Both questionnaires were divided into three dimensions: itinerary, learning and environment. The questionnaire provided to first-year students (Table 1) assessed the students' intentions, while the questionnaire provided to students in their second to fourth years (Table 2) also includes real actions undertaken. These tables also show the Cronbach's alpha statistic, which quantifies the level of reliability of the measurement scales used. Our results demonstrate that these data collection instruments were reliable.

- **Itinerary.** This dimension assessed the student's ability to define academic and professional goals and design a plan of action. To do so, it evaluated whether the student uses (or intends to use) the department's tutorial action plan (which assigns a tutor to each student) as well as the various services, resources and tools provided by the university for their professional development. It also evaluates the importance students attach to creating a network of contacts, i.e. "knowing who", to use the terminology employed by Eby, Butts and Lockwood (2003).
- **Learning.** This dimension assesses whether the student knows how to identify needs and learning opportunities via extra training, internships, volunteering programmes and international mobility.

**Environment.** This dimension evaluates whether the student expresses interest in the labour market and employment opportunities. Specifically, it measures the student's ability to analyse the degree's working or professional environment (key competencies, functions, requirements and opportunities) and assess the employment possibilities in their field of study. This knowledge of the sector and its trends is an academic competence that students do not possess (Ali and Aigbavboa, 2019).

Table 1. Questionnaire for students in their first year of study

<b>Itinerary (Cronbach's alpha: 0.619)</b>	
I will seek advice from my Tutorial Action Plan (TAP) tutor.	TAP
I will upload my CV to the University jobs bank and seek careers guidance.	URV Occupation
I will enrol in an association related to my professional goals.	Associationism
I will create a network of contacts with people in fields I would like to work in.	Networking
<b>Learning (Cronbach's alpha: 0.639)</b>	
I will take training courses related to my degree.	Training
I will take part in a volunteer programme to improve my skills.	Volunteering
I will take part in curricular internships.	Internships
I will apply for an international mobility grant.	Mobility
<b>Environment (Cronbach's alpha: 0.788)</b>	
I intend to keep informed about developments in the jobs market.	Job market information
It is important to seek information about companies and sectors in which I would like to work.	Sectoral information

Source: Author

Table 2. Questionnaire for students in their second to fourth years of study

<b>Itinerary (Cronbach's alpha: 0.734)</b>	
I proactively use the Tutorial Action Plan (TAP) to help me achieve my academic and professional goals.	TAP
I use the University's career's advisory service to submit my CV and seek advice.	URV Occupation
I am an active member of associations related to my professional goals.	Associationism
I create a network of contacts with people in fields I would like to work in.	Networking

<b>Learning (Cronbach's alpha: 0.610)</b>	
During my studies I have taken training courses related to my professional interests.	Training
I have taken part in volunteer programmes because it adds value to my curriculum vitae.	Volunteering
I have taken part in curricular internships to improve my skills.	Internships
I intend to apply for or have applied for an international mobility grant.	Mobility
<b>Environment (Cronbach's alpha: 0.815)</b>	
I actively seek information about the jobs market and recent developments in it.	Job market information
I actively seek information about companies and sectors I would like to work in.	Sectoral information

Source: Author

The questionnaire for first-year students evaluates actions related to the academic and professional career they believe they will undertake during their degree. The questionnaire for second- to fourth-year students evaluates the actions students are currently taking.

## 4. Results

### 4.1. Pre-COVID results

Table 3 shows the opinions of first-year students for each variable, while Table 4 shows those of students in their second to fourth years of study.

Table 3. Responses from first-year students (in percentages)

	Itinerary				
	1	2	3	4	5
TAP	12.8	16.8	43.2	20.8	6.4
URV Occupation	8.8	15.2	32.8	27.2	16
Associationism	8	11.2	32	13.6	15.2
Networking	5.6	5.6	20.8	31.2	36.8
	Learning				
	1	2	3	4	5
Training	1.6	11.2	30.4	25.6	31.2
Volunteering	13.6	20.8	26.4	22.2	16.8
Internships	3.2	0.8	18.4	28	49.6
Mobility	10.4	12.8	20	23.2	33.6
	Environment				
	1	2	3	4	5
Job market information	3.2	8	16.8	32	40
Sectoral information	1.6	1.6	15.2	37.2	44

Note: the scale ranges from 1 = strongly disagree to 5 = strongly agree.

Source: Author

Table 4. Responses from students in their second to fourth years of study (in percentages)

	Itinerary				
	1	2	3	4	5
TAP	19.6	27.2	27.2	19.6	6.7



URV Occupation	65.2	9.8	12	8.7	4.3
Associationism	40.2	26.1	16.3	12	5.4
Networking	15.2	19.6	35.9	19.6	9.8
<b>Learning</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Training	13	33.7	26.1	16.3	10.9
Volunteering	21.7	30.4	25	7.6	15.2
Internships	9.8	3.3	14.1	25	47.8
Mobility	27.2	12	23.9	18.5	18.5
<b>Environment</b>					
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Job market information	6.5	17.4	32.7	43.5	10.9
Sectoral information	8.7	19.6	33.7	29.2	8.7

Source: Author

Differences between the intentions of first-year students and the behaviour of students during their degree are verified by the Student's t-test for independent samples. The aim was to determine whether discrepancies existed between what students expected they would do and what they are doing in reality. Comparisons of means are shown in Table 5.

Table 5. Comparison of means (pre-COVID)

T-test for equality of means							
	t	gl	Sig. (bilateral)	Difference of means	Standard error difference	95% confidence interval of the difference	
						Lower	Upper
PAT	1.590	183.944	.114	249	.157	.060	558
<b>URV Occupation</b>	9.158	215	.000	1.492	163	1.171	1 813
<b>Internships</b>	1.384	164.160	.168	222	160	.095	.538
<b>Mobility</b>	3.526	215	.001	677	.192	.298	1.055
<b>Associationism</b>	7.506	215	.000	1.205	161	.889	1.521
<b>Networking</b>	6.218	215	.000	.989	.159	.675	1.302
<b>Training</b>	6.171	215	.000	953	154	.649	1.258
<b>Volunteering</b>	2.453	215	.015	.439	179	.086	.791
<b>Job market information</b>	4.192	215	.000	.628	.150	.333	.924
<b>Sectoral information</b>	8.050	169.541	.000	1.110	.138	.838	1.382

Source: Author

These results show:

- Itinerary. There are no significant differences between how first-year students intend to use their tutorial action plan and how they actually use it. The students maintain a behaviour that is consistent with their initial intentions. However, different behaviours exist in relation to students who use (or plan to use) the University's orientation and professional development service to help them enter the jobs market during the degree, and also in relation to Associations and Networking.
- Learning. The only variable for which the intentions of first-year students coincide with what students actually do during their degree is the one that refers to curricular internships. Such internships improve students' perceptions of their employment prospects by informing them of potential positions (Lo, So, Liu, Allard and Chiu, 2019). Internships are considered a priority strategy for their insertion into the labour market.
- Environment. Statistically significant differences are also observed in the two variables that make up this dimension (job market information and sectoral information).

In general, these results show that when students have recently received training in career management competences, their predisposition towards actively managing their careers is high. However, these intentions do not translate into actual actions during their degree, i.e. students who are trained in career management skills will not always choose to engage in proactive career management during their degree.

#### 4.2. Post-COVID results

The conclusion from the above section (that students display a lack of proactivity in their career management) may change if the labour market is negatively affected by an external event. To confirm this assumption and determine the effectiveness of offering career management as a component of the curriculum, we analysed whether student behaviour has been modified by the COVID-19 health crisis.

To assess differences between the pre-COVID-19 and post-COVID-19 behaviours of our university students, we used the Student's t-test for independent samples. Comparisons of means are shown in Table 6.

Table 6. Comparison of means (post-COVID)

	T-test for equality of means						
	t	gl	Sig. (bilateral)	Difference of means	Standard error difference	95% confidence interval of the difference	
						Lower	Upper
<b>PAT</b>	925	127	357	200	216	.228	.628
<b>URV Occupation</b>	3.070	53-108.	.003	904	294	313	1.494
<b>Internships</b>	-329	127	743	.086	.263	-606	434
<b>Mobility</b>	-1.93	127	.055	-540	279	-1.093	.013
<b>Associationism</b>	-1.22	127	223	.298	.244	.780	184
<b>Networking</b>	1.560	127	121	335	215	.090	.761
<b>Training</b>	-1.36	55.273	177	377	276	930	176
<b>Volunteering</b>	-3.14	127	.002	-762-	242	-1.241	283
<b>Job market information</b>	1.323	127	188	.274	207	136	.683
<b>Sectoral information</b>	2.362	127	.020	.524	222	085	.963

Source: Author

These results show:

- Itinerary. In this dimension, statistically significant differences are observed only in the use of the University's orientation and professional development service. Post-COVID students are more active in their use of this service.
- Learning. Statistically significant differences are observed in the volunteering variable. Pre-COVID students displayed a greater predisposition towards this type of experience for acquiring professional competences.
- Environment. The need for information about which sectors, at times of crisis, demand university graduates is appreciated more by post-COVID students than by pre-COVID students.

#### 5. Discussion

The above analysis helps us to understand the attitude of undergraduate students in relation to their career management. First, we found that training in career management does not make undergraduate students more active in this regard during their university education. Apart from their use of the tutorial action plan and internships, the intentions they express on completing the course in Academic and Career Guidance do not match the actions they undertake during their undergraduate studies. Second, with regard to the labour market crisis caused by COVID-19, we observed that the uncertainty created is modifying student behaviour. Specifically, the university's employment services are being used more often and searches for sectoral information are increasing.

Although the course in Academic and Career Guidance helps to raise awareness, in practice undergraduate students do not actively plan their careers. For example, few students seek extra-curricular training. This result is consistent with those of Martínez et al. (2019). According to the Observatory of Innovation in Employment, university students consider "[...] complementary training to be an added value and an element that makes a difference when competing in the labour market" (Observatory of Innovation in Employment, 2014, p.32).

However, though most students are aware of the importance of this type of training, they do not take it into account until the final years of their degree (Martínez et al., 2019).

In a crisis, students use careers guidance resources (such as the university job bank) more actively, reduce the time they spend on activities that may not directly result in employment (such as volunteering), and seek information about the labour market more actively. Thanks to their training, they have acquired the knowledge they need to explore the labour market, identify available opportunities, and take career-related decisions (Jackson and Wilton, 2016). This is consistent with the results of Praskova and Johnston (2021). Individuals who have received stronger careers guidance make greater use of proactive behaviours aimed at developing and managing their careers, such as networking, self-promotion, and exploring professional opportunities. These results are similar to those obtained, for example, by Parker and Collins (2009) and by Strauss, Griffin, and Parker (2012).

In both the pre-COVID and post-COVID periods, students include in their training itinerary the need to gain practical experience. This result is important because, as Stan (2017) demonstrated, this experience gives students the opportunity to plan their careers and, if complemented by orientation activities, helps them to make decisions about their potential career paths. The experience-based approach to learning helps students develop their competences and improve their career management skills. As Saulite and Andersons (2019) have pointed out, career management skills are mainly associated with opportunities for students to get closer to the world of employment during their period of education. This gives them confidence and belief and therefore improves insertion.

The opposite case to that of internships is non-curricular training during the degree. In this case, a crisis in the labour market does not alter student behaviour and does not increase student interest in training despite the impact the crisis may have on the gap between market demands and student competences. Studies such as that by Meissner and Shmatko (2019) demonstrate that the levels of experience, knowledge and skills required by employers are superior to the level of skills young people possess. This should encourage students to improve their core skills (in communication, information management, reasoning, and problem solving), self-management skills, and teamwork skills in order to improve their chances of entering the labour market (Idkhan, Syam, Sunardi, and Hasim, 2021).

In times of crisis, not widening the gap should be a major concern. However, as is recommended by Jackson and Wilton (2016), student behaviour is more focused on improving their opportunity-seeking strategies and broadening their understanding of the labour market. Greater knowledge of the environment improves career planning since it enables students to align their expectations better with existing employment opportunities (Lau, Wan, & Tsui, 2021) and to design alternative career scenarios more proactively (Bridgstock, 2009).

For their part, Llanes, Figuera and Torrado (2017) propose improvements in the training and orientation of university students to improve their chances of employment. They believe it is important to analyse which elements of career management are essential for their training and to work on skills that develop their employability, and suggest that initial training should be based on career self-management.

Our results complement the vision expressed by Llanes, Figuera and Torrado (2017) since they enable us to evaluate the effectiveness of career management training and ascertain which actions students consider to be priorities. They also confirm that, if universities are to provide a comprehensive education, they need to develop the academic and generic skills required by the labour market. They also need to promote curricular harmonization or to design programmes aimed at consolidating and developing competences (Moreno-Murcia and Quintero-Pulgar, 2021).

## 6. Conclusions

This paper is a first methodological approach for evaluating the effectiveness of career management training and enabling higher education institutions to evaluate whether to include this training in their academic curriculum. Basically, the aim of such a measure would be to promote acquisition of the knowledge, skills and attitudes that are needed to increase student employability levels. This is achieved by increasing the speed and quality of labour insertion and by promoting co-responsibility from the university to teach students career management skills in their three dimensions: itinerary, learning and environment.

Our data show that including this training in the curriculum should be considered, especially in times of economic crisis with a negative impact on the labour market. In stable labour markets with low rates of unemployment, career management is not an important student concern. However, in uncertain environments, students select and prioritize actions they consider may be the most effective for their rapid labour insertion.

This longitudinal study thus offers an important conclusion for higher education institutions. Joint responsibility can be implemented to promote career management skills within the curriculum. This measure should go hand in hand with the strategy of higher education institutions to increasingly focus learning on work, including dual training (Kinash, Crane, Judd and Knight, 2016, and Clares and Morga, 2019), to increase the general perception of the value of higher education.



## References

- Australian Association of Graduate Employers. (2013). *2013 AAGE Employer Survey*. Sydney: Australian Association of Graduate Employers.
- Alberich González, N., Fabra Antón, S., Sala Torrent, M., & Serracant Melendres, P. (2020). Joventut, COVID-19 i desigualtats. Situació actual i prospectiva. Agència Catalana de la Joventut, Generalitat de Catalunya. <https://ja.cat/iI46c>
- Ali, J., & Aigbavboa, C.O. (2019). Employer's perception of employability skills among built-environment graduates. *Journal of Engineering, Design and Technology*. doi: 10.1108/JEDT-06-2019-0162
- Alshehri, A., Gutub, S. A., Ebrahim, M. A. B., & Shafeek, H. (2016). Integration between industry and university: Case study, Faculty of Engineering at Rabigh, Saudi Arabia. *Education for Chemical Engineers*, 14, 24-34. doi: 10.1016/j.ece.2015.11.001
- Bennett, D. (2012). A creative approach to exploring student identity. *International Journal of Creativity and Problem Solving*, 22(1), 27-41.: [https://www.academia.edu/download/39993936/Bennett\\_22-3\\_.pdf](https://www.academia.edu/download/39993936/Bennett_22-3_.pdf)
- Berdrow, L., & Evers, F. T. (2011). Bases of competence: A framework for facilitating reflective learner-centered educational environments. *Journal of management education*, 35(3), 406-427. doi: 10.1177%2F1052562909358976
- Bozionelos, G., & Bozionelos, N. (2015). Employability and key outcomes in times of severe economic crisis: The role of career orientation. *Human Resource Management*, 107(6), 11-35.
- Bridgstock, R. (2009). The graduate attributes we've overlooked: Enhancing graduate employability through career management skills. *Higher Education Research & Development*, 28(1), 31-44. doi: 10.1080/07294360802444347
- Budiarto, A., Gunawan, G., Kadiyono, A. L., & Andriani, E. (2021). Predicting graduate employability through personal development training in digitalization context. Association of Industrial & Organizational Psychology (Apio) West Java. *Journal of Legal, Ethical and Regulatory Issues*, 1-8.
- Clares, P. M., & Morga, N. G. (2019). El dominio de competencias transversales en Educación Superior en diferentes contextos formativos. *Educação e Pesquisa*, 45. doi: 10.1590/S1678-4634201945188436
- Clarke, M. (2008). Understanding and managing employability in changing career contexts. *Journal of European Industrial Training* 32(4): 258-284. doi:10.1108/03090590810871379
- Clarke, M. (2017). Rethinking graduate employability: The role of capital, individual attributes and context. *Studies in higher education*, 43(11), 1923-1937. doi: 10.1080/03075079.2017.1294152
- Coetzee, M., & Beukes, C. J. (2010). Employability, emotional intelligence and career preparation support satisfaction among adolescents in the school-to-work transition phase. *Journal of Psychology in Africa* 20(3): 43-446. doi: 10.1080/14330237.2010.10820396
- Cotronei-Baird, V. (2019). Academic hindrances in the integration of employability skills development in teaching and assessment practice. *Higher Education*, 79(2), 203-223. doi: 10.1007/s10734-019-00405-4
- Dacre Pool, L., & Sewell, P. (2007). The key to employability: developing a practical model of graduate employability. *Education + Training* 49(4): 277-289. doi: 10.1108/00400910710754435
- De Janasz, S. C., & Forret, M. L. (2007). Learning the art of networking: A critical skill for enhancing social capital and career success. *Journal of management education*, 32(5), 629-650. doi: 10.1177%2F1052562907307637
- Donald, W., Baruch Y., & Ashleigh M. (2019). The undergraduate self-perception of employability: Human capital, careers advice, and career ownership. *Studies in Higher Education* 44(4): 599-614. doi:10.1080/03075079.2017.1387107
- Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 24(6), 689-708. doi: 10.1002/job.214
- Feijoo, G., Arce, A., Bello, P., Carballa, M., Freire, M. S., Garrido, J. M., ... & Moreira, R. (2019). Potential impact on the recruitment of chemical engineering graduates due to the industrial internship. *Education for Chemical Engineers*, 26, 107-113. doi: 10.1016/j.ece.2018.08.004
- Gerard, J. G. (2012). Linking in with LinkedIn®: Three exercises that enhance professional social networking and career building. *Journal of Management Education*, 36(6), 866-897. doi: 10.1177%2F1052562911413464
- Harris-Reeves, B., & Mahoney, J. (2017). Brief work-integrated learning opportunities and first-year university students' perceptions of employability and academic performance. *Australian Journal of Career Development*, 26(2), 32-37. doi: 10.1177/1038416217697974
- Harvey, L. (2001). Defining and measuring employability. *Quality in higher education*, 7(2), 97-109. doi: 10.1080/13538320120059990
- Healy, M., Hammer, S., & McIlveen, P. (2020). Mapping graduate employability and career development in higher education research: A citation network analysis. *Studies in Higher Education*, 1-13. doi: 10.1080/03075079.2020.1804851
- Helyer, R., & Lee, D. (2014). The role of work experience in the future employability of higher education graduates.

- Higher Education Quarterly*, 68(3), 348-372. doi:10.1111/hequ.12055
- Hernanz, V., & Jimeno, J. F. (2017). Youth Unemployment in the EU. Ifo Institut – Leibniz-Institut für Wirtschaftsforschung an der Universität München, *CESifo Forum*, 18(2), 3-10. <https://www.econstor.eu/bitstream/10419/166711/1/cesifo-forum-v18-y2017-i2-p03-10.pdf>
- Hogan, R., Chamorro-Premuzic, T., & Kaiser, R. B. (2013). Employability and career success: Bridging the gap between theory and reality. *Industrial and Organizational Psychology*, 6(1), 3-16. doi: 10.1111/iops.12001
- Holdsworth, C., & Quinn, J. (2010). Student volunteering in English higher education. *Studies in Higher Education*, 35(1), 113-127. doi: 10.1080/03075070903019856
- Holmes, L. (2013). Competing perspectives on graduate employability: possession, position or process?. *Studies in higher education*, 38(4), 538-554. doi: 10.1080/03075079.2011.587140
- Humburg, M., De Grip, A., & Van der Velden, R. (2017). Which skills protect graduates against a slack labour market? *International Labour Review*, 156(1), 25-43. doi: 10.1111/j.1564-913X.2015.00046.x
- Idkhan, A. M., Syam, H., Sunardi, S., & Hasim, A. H. (2021). The Employability Skills of Engineering Students': Assessment at the University. *International Journal of Instruction*, 14(4), 119-134. <http://eprints.unm.ac.id/id/eprint/20747>
- Irwin A., Nordmann E., & Simms K. (2019). Stakeholder perception of student employability: does the duration, type and location of work experience matter?. *Higher Education* 78(5), 761-781. doi: 10.1007/s10734-019-00369-5
- Jackson, D., & Wilton, N. (2016). Developing career management competencies among undergraduates and the role of work-integrated learning. *Teaching in Higher Education*, 21(3) 266-286. doi: 10.1080/13562517.2015.1136281
- Jain, R., & Jain, S. (2013). Conceptualization, measure development and empirical assessment of career oriented attitudes and employability of technology graduates. *Vision*, 17(2), 143-157. doi: 10.1177%2F0972262912483528
- Kinash, S., Crane, L., Judd, M. M., & Knight, C. (2016). Discrepant stakeholder perspectives on graduate employability strategies. *Higher Education Research & Development*, 35(5), 951-967. doi: 10.1080/07294360.2016.1139555
- King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of vocational behavior*, 65(1), 112-133. doi: 10.1016/S0001-8791(03)00052-6
- Lau, S.S.S.; Wan, K.; & Tsui, M. (2021). Evaluation of a Blended Career Education Course during the COVID-19 Pandemic on Students' Career Awareness. *Sustainability*, 13(6), 3471. doi: 10.3390/su13063471
- Likhitkar, P., & Verma, P. (2020). HR value proposition using predictive analytics: an overview. *New Paradigm in Decision Science and Management*, 165-171. doi: 10.1007/978-981-13-9330-3\_15
- Llanes, J., Figuera, P., & Torrado, M. (2017). Desarrollo de la empleabilidad y gestión personal de la carrera de graduados en Pedagogía. *Revista Española de Orientación y Psicopedagogía*, 28(2) 46-60. <http://hdl.handle.net/2445/122489>
- Lo, P., So, S., Liu, Q., Allard B., & Chiu, D. (2019). Chinese students' motivations for overseas versus domestic MLIS education: a comparative study between university of Tsukuba and Shanghai university. *College & Research Libraries*, 80(7), 1013-1035. <https://crl.acrl.org/index.php/crl/article/view/23616/30928>
- Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). Employers' perceptions of the employability skills of new graduates. *The SCRE Centre Research in Education, Edge Foundation*, University of Glasgow. [https://www.academia.edu/download/31848633/employer\\_perception.PDF](https://www.academia.edu/download/31848633/employer_perception.PDF)
- Martínez, A. R., Pascual, A. C., & Blasco, S. V. (2019). Análisis de la mejora del nivel de empleabilidad de los universitarios mediante la mejora de competencias transversales y habilidades. *Revista Española de Orientación y Psicopedagogía*, 30(3), 102-119. doi: 10.5944/REOP.VOL.30.NUM.3.2019.26275
- Mason, G., Williams, G., & Cranmer, S. (2009). Employability skills initiatives in higher education: what effects do they have on graduate labour market outcomes?. *Education Economics*, 17(1), 1-30. doi: 10.1080/09645290802028315
- Meissner, D., & Shmatko, N. (2019). Integrating professional and academic knowledge: The link between researchers skills and innovation culture. *The Journal of Technology Transfer*, 44(4), 1273-1289. doi: 10.1007/s10961-018-9662-8
- Mok, K. H., Wen, Z., & Dale, R. (2016). Employability and mobility in the valorisation of higher education qualifications: The experiences and reflections of Chinese students and graduates. *Journal of Higher Education Policy and Management*, 38(3), 264-281. doi: 10.1080/1360080X.2016.1174397
- Monteiro, S., Almeida, L., Gomes, C., & Sinval, J. (2020). Employability profiles of higher education graduates: a person-oriented approach. *Studies in Higher Education*, 1-14. doi: 10.1080/03075079.2020.1761785.
- Moreno-Murcia, L. M., & Quintero-Pulgar, Y. A. (2021). Relación entre la formación disciplinar y el ciclo profesional en el desarrollo de las habilidades blandas. *Formación universitaria*, 14(3), 65-74. doi: 10.4067/S0718-50062021000300065

- Nunley, J. M., Pugh, A., Romero, N., & Seals Jr, R. A. (2016). College major, internship experience, and employment opportunities: estimates from a résumé audit. *Labour Economics*, 38, 37–46. doi: 10.1016/j.labeco.2015.11.002
- Observatorio de Innovación en el Empleo. (2014). *Informe OIE sobre jóvenes y mercado laboral: el camino del aula a la empresa*. [http://www.oie.es/wp-content/uploads/2015/09/oie\\_estudio.pdf](http://www.oie.es/wp-content/uploads/2015/09/oie_estudio.pdf)
- Orrell, J. (2011). *Good Practice Report, Work-Integrated Learning*. Sydney: Australia Learning and Teaching Council. <http://hdl.voced.edu.au/10707/213987>
- Parker, S. K., & Collins, C. G. (2009). Taking stock: Integrating and differentiating multiple proactive behaviors. *Journal of Management*, 36(3), 633–662. doi: 10.1177/0149206308321554
- Pegg, A., Waldock, J., Hendy-Isaac, S., & Lawton, R. (2012). *Pedagogy for Employability*. York: Higher Education Academy. [https://www.heacademy.ac.uk/sites/default/files/resources/pedagogy\\_for\\_employability\\_update\\_2012.pdf](https://www.heacademy.ac.uk/sites/default/files/resources/pedagogy_for_employability_update_2012.pdf)
- Praskova, A., & Johnston, L. (2021). The role of future orientation and negative career feedback in career agency and career success in Australian adults. *Journal of Career Assessment*, 29(3), 463-485. doi: 10.1177/1069072720980174
- Purcell, K., Elias, P., Atfield, G., Behle, H., Ellison, R., & Luchinskaya, D. (2013). Transitions into employment, further study and other outcomes. *Futuretrack Stage*, 4. [https://www.warwick.ac.uk/fac/soc/ier/futuretrack/stage\\_4\\_report\\_final\\_30\\_10\\_2013.pdf](https://www.warwick.ac.uk/fac/soc/ier/futuretrack/stage_4_report_final_30_10_2013.pdf)
- Rae, D. (2007). Connecting enterprise and graduate employability: challenges to the higher education culture and curriculum? *Education + Training*, 49(8/9), 605-619. doi: 10.1108/00400910710834049
- Raelin, J. A., Bailey, M., Hamann, J., Pendleton, L., Raelin, J., Reisberg, R., & Whitman, D. (2011). The effect of cooperative education on change in self-efficacy among undergraduate students: Introducing work self-efficacy. *Journal of Cooperative Education and Internships*, 45(2), 17-35. <https://ssrn.com/abstract=2019933>
- Räty, H., Hytti, U., Kasanen, K., Komulainen, K., Siivonen, P., & Kozlinska, I. (2019). Perceived employability and ability self among Finnish university students. *European Journal of Psychology of Education*, 35(4), 975-993. doi: 10.1007/s10212-019-00451-7
- Römgens, I., Scoupe, R., & Beausaert, S. (2020). Unraveling the concept of employability, bringing together research on employability in higher education and the workplace. *Studies in Higher Education*, 45(12), 2588-2603. doi: 10.1080/03075079.2019.1623770
- Rothwell, A., & Arnold, J. (2007). Self-perceived employability: development and validation of a scale. *Personnel Review*, 36(1), 23-41. doi: 10.1108/00483480710716704
- Rouvrais, S., Remaud, B., & Saveuse, M. (2020). Work-based learning models in engineering curricula: insight from the French experience. *European Journal of Engineering Education*, 45(1), 89-102, doi: 10.1080/03043797.2018.1450846
- Saulite, M., & Andersone, R. (2019). Career education as a set of planned actions integrated in the study process. *The Proceedings of The International Scientific Conference Rural Environment Education Personality (REEP) 12*, 303-308. doi: 10.22616/REEP.2019.040
- Saunders, V., & Zuzel, K. (2010). Evaluating employability skills: employer and student perceptions. *Bioscience Education*, 15(1), 1-15. doi: 10.3108/beej.15.2
- Sin, C., & Neave, G. (2014). Employability deconstructed: perceptions of Bologna stakeholders. *Studies in higher education*, 41(8), 1447-1462. doi: 10.1080/03075079.2014.977859
- Štambuk, A., Karanović, G., & Host, A. (2019). Employers' perceptions of business and economics graduates' competencies in Croatia. *Business Systems Research*, 10(2), 108-123. doi: 10.2478/bsrj-2019-021
- Stan, C. (2017). The formative impact of the career plan on the students' professional path. *European Proceedings of Social and Behavioural Sciences*, 27, 744-752. doi: 10.15405/epsbs.2017.07.03.88
- Strauss, K., Griffin, M. A., & Parker, S. K. (2012). Future work selves: How salient hoped-for identities motivate proactive career behaviors. *Journal of Applied Psychology*, 97(3), 580–598. doi: 10.1037/a0026423
- Terzaroli, C., & Oyekunle, Y. (2019). Career service as a measure to support employability: A comparison between the university of Florence and the University of Lagos. *Andragoška spoznanja*, 25(1), 89-110. doi: 10.4312/as.25.1.89-110
- Usher, A. (2012). Measuring work integrated learning: The development of the meta-competency test. *Journal of Cooperative Education & Internships* 46(1), 5–15. [http://www.ceiainc.org/wp-content/uploads/2017/08/JCEIA\\_Vol46-2012.pdf#page=4](http://www.ceiainc.org/wp-content/uploads/2017/08/JCEIA_Vol46-2012.pdf#page=4)
- Watts, A. G. (2006). *Career development learning and employability*. York: Higher Education Academy. <http://qualityresearchinternational.com/esecttools/esectpubs/watts%20career.pdf>
- Yorke, M. (2006). *Employability in higher education: What it is-what it is not*. York: Higher Education Academy. <http://hdl.voced.edu.au/10707/136159>