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TRAINING HIGHER EDUCATION STUDENTS FOR EMPLOYABILITY SKILLS: IS IT WORTH IT?*

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Abstract. This paper reflects on the importance of employability skills for higher education students in the present and future working environment to determine the impact these skills may have on student competitiveness and satisfaction. The study focused on university students in the Madrid region during their final academic year who participated in a teaching activity that launched real business challenges. We created a model that analyzed the impact of employability skills on student competitiveness and satisfaction and the mediating role of competitiveness in two different moments (before and during the COVID-19 pandemic). Empirical findings suggest that students' improved employability skills increased their competitiveness and satisfaction, with competitiveness as a mediating factor. Thus, academic authorities must focus on students acquiring employability skills, which are among the most valuable in the labour market and positively impact student competitiveness and satisfaction. This way, future graduates can work successfully in a changing and demanding world and find positions aligned with their training. In contrast to some studies that place the teacher as the research target, ours focused on the student and the impact these skills have on the variables mentioned.

Keywords: competence; higher education; ability; attitudes; entrepreneurial intention

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1. Introduction

The expansion of economies and businesses worldwide has meant that universities face the great challenge of adequately educating future professionals, as a digital and globalized world requires a more competitive and better-prepared workforce. This rapidly developing phenomenon is a multidimensional and multifactor process that affects all educational institutions and, in particular, the competitiveness of universities (Coroş et al., 2021; Agapito et al., 2022). By 2025, half of all jobs will be predicted to be filled by highly skilled workers (Bileviciute et al., 2019).

According to Labas et al. (2016), more competitive higher education institutions (HEIs) will likely retain students. University competitiveness involves more than coping with external factors such as globalization but also with internal factors that affect efficient change management, which influences long-term financial sustainability (Rogers, 2019). To cope with this situation, universities must provide quality training focused on graduate needs for entering the labour market, which goes beyond discipline-specific skills and focus on various skills (Caballero et al., 2011), such as employability (Cotronei-Baird, 2020). For Griffin and Coelho (2019), employability skills remain an ongoing topic of debate, with studies addressing the ability of HEIs to produce graduates who are ready for the workforce.

According to Finch et al. (2013), universities are increasingly aware of the vital role they play in preparing future workers and have already shown a strong interest in increasing the employability of their graduates, which has become a critical factor for labour markets (Fugate et al., 2004; Weerathunga & Mallawarachchi, 2020).

In this line, Wilton (2012) highlights two key reasons to focus on improving employability skills: meeting the need for highly qualified staff in companies and increasing educational and employment opportunities for students. Therefore, students must acquire employment skills in advance. Employers are increasingly more interested in their employees' soft skills than in the theoretical knowledge acquired during their university education (Chamorro-Premuzic & Furnham, 2010), conditioned usually by their need to solve their business problems creatively. To respond to this interest, university students must be trained to have the essential skills and successfully develop their professional activity by providing appropriate proposals (Weerathunga & Mallawarachchi, 2020). In a McKinsey survey, 40% of employers posed that there is a significant skill gap between graduates and entry-level requirements: "There is a problem with education systems that do not prepare future workers with the kind of skills required by today and tomorrow's organizations" (McKinsey & Company 2012). In the same vein, Singh and Ehlers (2020) have suggested that there need to be more graduates with adequate interpersonal skills to fill available positions, which results in a potential mismatch between HEIs and the labour market.

There is another tendency, such as that followed by Li et al. (2006), who assess the results of surveys conducted on labour market prospects, concluding that the proportion of university-educated workers who are subsequently overqualified for the jobs they hold has been increasing in the last years. Therefore, universities must ensure that their graduates are qualified and skilled in professional decision-making while knowing how to demonstrate their abilities in a highly competitive labour market (Finch et al., 2013). It is paradoxical that many higher education graduates are overqualified for the position they hold but need more employability skills, making it sometimes difficult to find employment (Clokic & Fourie, 2016).

Regarding the specific employability skills that employees might require, we could highlight the approach of Jackson (2016), who states that communication, teamwork, and self-management are necessary. Companies widely accept these abilities, which is the reason why the efforts of the education community to foster graduate employability should, therefore, be extended to their development (Almerich et al., 2019).

Researchers' interest in how HEIs address the improvement of students' employability (Masduki et al., 2022) has been increasing in the last ten years, motivated by the increased speed of technological changes, globalization, and new business models (De Vos et al., 2021). But despite a positive evolution of the literature, there is still a need for further literature review and empirical studies that address new trends and variables related to employability skills, as well as more applied to countries such as Spain, where the number of studies is significantly lower than other countries such as the United Kingdom or the United States (Dinh et al., 2022). We must consider that employability has also become a topic of vital urgency in the literature due to the lack of graduate training that would allow them to acquire the necessary qualities to meet the requirements of an increasingly demanding labour market (Vande-Wiele, 2017).

So far, most previous methodologies have developed outcome-based learning to enhance employability skills (Noori and Azmi, 2021); other newer methods enable the acquisition of such skills. In our case, we propose a different learning based on solving business challenges. Considering these premises, our research addresses both gaps, on the one hand, by conducting an applied study in Spain through less employed learning and, on the other hand, starting from a review of the literature related to employability skills.

We study whether participation in an undergraduate challenge from two universities in the Region of Madrid (Spain) improves students' employability-related skills and the influence that possessing these skills might have on their competitiveness and satisfaction. Specifically, we define our research questions: (1) Do students' employability skills improve by solving real challenges? (2) Do employability skills lead to more competent and satisfied students? (3) Does student competitiveness have a mediating effect on employability skills and satisfaction?

The remainder of the paper is organized as follows: The theoretical framework is developed, explaining and defining the importance of employability competencies and posing the hypotheses of the established model. The methodology is then described, and the data obtained through structural equations are analyzed, followed by an analysis of the obtained results and the most relevant conclusions. Finally, the limitations of the study and future research lines are established.

2. Theoretical Framework and hypotheses

Employability is one of the challenges set out in the Declaration of Leuven of 2009, as it is understood to empower the individual to make the most of the opportunities offered by the changing labour market with the new requirements of Industry 4.0. Employability is often defined as obtaining and retaining formal employment or finding a new job if necessary (Fugate et al., 2004).

The research trends regarding the concept of employability have changed through the years, being the hot topics of the last years of their studied period, the employer requirements and HEI preparation. In this line, Vande-Wiele (2017) posits that identifying the needs of the labour market is crucial, and this topic is urgent.

Argos and Ezquerro (2014) question whether academic curricula in HEIs are designed to accommodate, cater for, and enhance necessary competencies for students. Schech et al. (2017) confirm that universities are making improvements to incorporate employability into their teaching programmes so that graduates can compete in a globalized environment, while Jiracheewong et al. (2019) go further and state that curricula do not specifically address employability skills, making it difficult for university students to develop practical skills. However, even if such skills were to be incorporated into academic curricula, those needed by new graduates are changing faster than educational programmes can adapt, so there is a need to implement activities within subjects that enable students to acquire these skills. As demonstrated in their empirical study by Menshikov et al. (2021), the activities implemented in the academic environment determine students' employability. Therefore, if skills are not incorporated into

university studies, students will not fully understand the importance of practical employability due to a lack of consideration of future career prospects.

According to Cavanagh (2015), university lecturers must actively intervene by developing effective learning activities for students to develop employability skills. Indeed, more than passive student learning as a mere recipient of lectures is required to cope with today's work environment. Ripollés (2011) and Bager (2011) stress the need to use methodologies in which the learner takes an active and participatory role. Therefore, working on employability skills through challenges is increasingly essential to provide students with the necessary tools. This is precisely the aim of the entrepreneurial challenges we have designed as an innovative activity to develop the skills described above. In this line, Jackson and Wilton (2016) recommend that students reflect on their learning to understand better the relationship between the working world and their undergraduate studies; this allows them to integrate theory with practice better because they have more opportunities to practise the knowledge and skills they have acquired as they try to solve real problems (Weisz & Smith, 2005).

As students' progress through the academic year, they become more aware of employment challenges, particularly in their final year of study, driven by the search for employment opportunities (Qenani et al., 2014). For this reason, our research aims to provide evidence of the need for more studies.

In this vein, Llinares et al. (2013) point to establishing close links between academia and business to promote employability among undergraduates. In addition, the demand for new graduate employees and employers' expectations that graduates possess general and specific skills highlight the importance of methodological initiatives that link educational institutions with businesses to achieve better job-ready graduates (Orr et al., 2023).

Thus, university courses aiming to improve personal strategies, such as time management skills or learning and self-motivation techniques that could be later translated into higher employability and that can be transferred from a particular field of study to life, have long been popular (Fry et al., 2003).

There is a lack of consensus on how employability can be solely defined for undergraduate students, as universities can choose to develop these types of projects in many ways, such as targeting specific groups of scholars, whether struggling or high potential or for targeted training, directly designed to promote one or more soft skills (Emanuel et al., 2021). Jackson and Wilton (2016) refer to graduate employability as the tools to get and maintain suitable quality employment and eradicate the social reproduction of inequality, which many drivers are constantly shaping. In this line, Fugate et al. (2004) argue that employability consists of means and competency attributes that contribute to a person's success in working life and that employers expect workers to possess, which may raise their expectations about their subordinates. Employability skills are the core element of human capital (Yorke, 2006). It includes having the skills and the ability to communicate and demonstrate them directly to employers (Hillage & Pollard, 1998). Therefore, Hora (2018) emphasizes the need for society to recognize universities as places of legitimization of employability skills.

At the same time, the literature has been concerned with finding those factors or skills characteristic of employability. Jackson (2013) identifies self-management, teamwork, communication, problem-solving, and critical thinking, while Donald's (2019) literature review identifies the need to expand on the above classification and include the seven most cited skills from the Dearing Report (2017): oral communication, problem-solving, teamwork, literacy skills, time management, information technology skills, and numeracy skills. Other authors, such as Finch et al. (2013), distinguish between distinct types of skills by trying to group them. The first group would be communication skills, including written (Andrews & Higson, 2008; Gardner et al., 2005) and verbal and listening skills (Grey, 2010; Gardner et al., 2005). A second group, problem-solving skills (Lievens & Sackett, 2012), in turn, incorporates a range of competencies, such as leadership (Conrad & Newberry, 2012), creativity (Kilgour & Koslow, 2009), and flexibility (Barr et al., 2009; Jabr, 2011) and critical thinking (Reid & Anderson,

2012). Empirical evidence suggests that soft skills are an essential predictor of employment (Lievens & Sackett, 2012; Finch et al., 2013).

2.1 Impact of employability skills on student satisfaction

The pursuit of employability has consequences for the satisfaction of HEI students. Kotler and Clarke (1987) defined satisfaction as a state felt by someone who has experienced a performance or outcome that meets their expectations. Satisfaction could be identified as a function of the relative level of expectations and perceived performance, seen as intentional performance that results in contentment (Malik et al., 2010). Many studies have attempted to analyze why some students are more satisfied than others, and various attempts have been made to identify its determinants (Aldridge & Rowley, 1998). Knowing and understanding all the elements that can impact scholar satisfaction creates a valuable resource for research (De Cuyper et al., 2012). It is known that satisfied students with their learning environment and experience can lead to better learning outcomes, which may generate more qualified professionals (Duque & Weeks, 2010; Yusoff et al., 2015).

Following Denson et al. (2010), a significant predictor of student satisfaction is the ability to enroll in courses and activities at an HEI as the student who decides to join this type of activities that, a priori, brings them a closer approach to the company (Hew et al., 2020). For this reason, the possibility of participating in a challenge would affect their satisfaction because the student enrolls in it. HEIs should consider the wide range of elements that increase student satisfaction levels, such as employability, and propose activities that improve student employability. The acquisition of employability skills is here seen as a determinant of student satisfaction and is the independent variable of the proposed model of our study. We understand that students with more employability skills are more satisfied, leading to the following hypothesis.

Hypothesis 1. The acquisition of employability skills is positively related to student satisfaction.

2.2 Impact of employability skills on university student competitiveness

While all employability skills are essential, some are particularly vital from employers' perspective. According to Wilton's (2012) findings, a graduate with scarcer skills (e.g., advanced IT skills) will achieve a higher excellent salary in particular employment searches and potentially superior employment outcomes. In the same vein, Finch et al. (2013) have argued that new degree holders who demonstrate employability-related skills (e.g., effective communication and interpersonal skills) might be more competitive in the labour market than those who do not. This is because skills related to critical thinking, entrepreneurship, decision-making, and working under pressure are among the most essential competencies employers look for when hiring new degree holders (Hogan et al., 2013). Creativity, motivation, and learning styles derived from students' goals, values, and attitudes can improve student competitiveness (Howard et al., 2015). Within the university field, the level of understanding and training of specific abilities is a key factor for students in developing skills that make them more competitive (Barba-Sánchez et al., 2021). Under these premises, students with employability skills will be more competitive. We, therefore, pose the following hypothesis:

Hypothesis 2. Employability skills positively affect student competitiveness.

2.3 Mediating Role of Competitiveness

Competitiveness is a personality trait that affects how someone behaves in various personal and professional situations (Smither & Houston, 1992), and it is considered essential for achieving high levels of satisfaction. One of the most relevant elements for students is innovative didactic activities aligned with business reality, which prepares students to be more competitive. In their study, Barba-Sánchez et al. (2021) show that university activities related to entrepreneurship directly influence students' entrepreneurial intention and attitude towards entrepreneurship, contributing to students' perceived control to manage a company and self-confidence. In this sense, Pérez-Rivero & Ubierna (2021), in an applied study on university students' motivation for entrepreneurship, identified the factors that affect the push to promote entrepreneurship, soft skills a key one. The educational system conditions its students' competitiveness and satisfaction (e.g., Misiak-Kwit & Zhang, 2022) show how Chinese students evaluate their educational process higher than European ones). In our study, the motivation referred to by the authors is related to their competitiveness so that it will generate actions in the individual and, therefore, satisfaction. In a sample of university students, Stander et al. (2015) demonstrated how proactive behaviour determines their satisfaction with their studies. Consequently, we consider that more competitive students will achieve higher satisfaction because they are aware of the improvement achieved, so we define the following hypothesis:

Hypothesis 3. Student competitiveness is related to satisfaction.

In Figure 1, we graphically represent the relationships between the study variables:

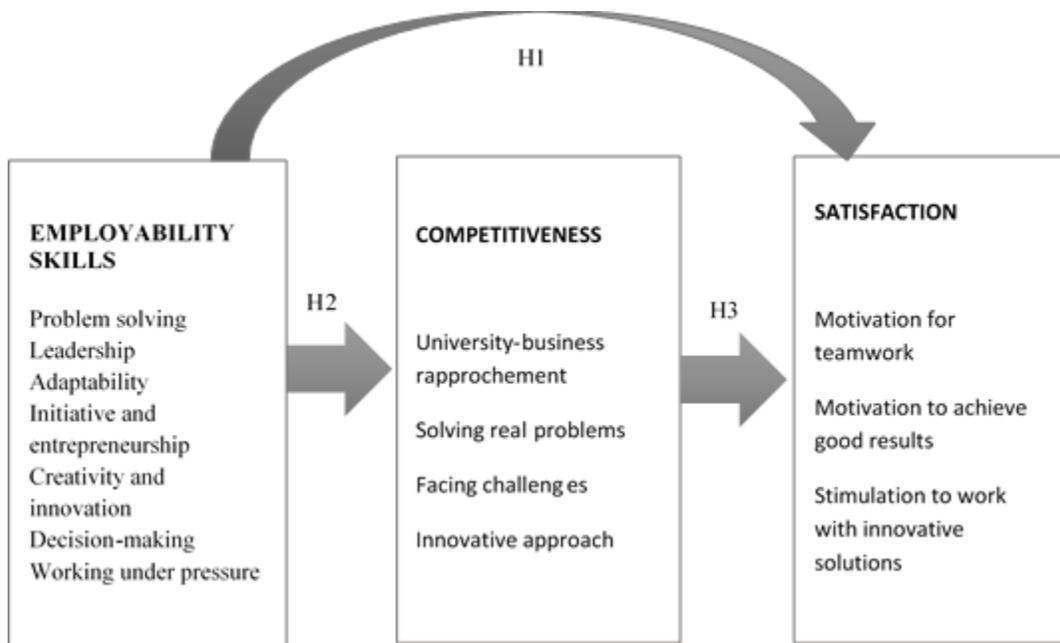


Figure 1. Proposed Model
 Source: Own elaboration

3. Methodology

3.1 Population and sample

In contrast to some studies that place the teacher as the target of the research (Arifin, 2015), our study focuses on the students (Raihan & Azad, 2021). The sample we used is final-year students for a bachelor’s degree in business administration at two universities in the region of Madrid who participated in a teaching activity called Challenges, which consists of launching real business challenges at two different moments, before and during the COVID-19 pandemic. In the 2019–20 academic year, a total of 175 students participated, 112 of whom completed the questionnaire correctly. In 2020–21, the pandemic year, our sample was 102 students, all of whom completed the questionnaire correctly. The activity occurred during the first semester of each academic year (September–January). On a scale of 1 to 5, participants rated the level that best describes their ability after facing the proposed challenge. They rated 31 indicators (e.g., oral communication, learning aptitude, creativity), 18 related to employability skills, 7 to competitiveness, and 6 to student satisfaction.

3.2 Measurement instrument

The questionnaire was designed for this study by selecting indicators, variables, and links based on the literature. The questions relate to employability skills, student competitiveness after participating in the challenge, and satisfaction.

3.3 Data Processing

We used structural equation modelling (SEM) and statistical methods to estimate the chains of causal relationships between the unobservable latent variables (Williams et al., 2009).

We have also performed a power analysis using G*Power 3 (Faul et al., 2007) for the regression with our model's most significant independent variables (i.e., 3). To achieve 80% power with a large effect size (0.4), a sample of 80 cases is required. In our case, both samples of model 1 and model 2 exceed the number recommended by the analysis.

The present study used reflective variables to respond to research objectives (Hair et al., 2014). The indicators and observable variables reflect the constructs, linked to the selected indicators, and are not directly observed (Wetzels et al., 2009) (Table 1).

Table 1. Description of the Variables, Indicators and Authors

EMPLOYABILITY SKILLS	Indicators		Authors
	EK_1	Teamwork ^(*) (**)	Wilton, 2012; Donald et al., 2019; Barr et al., 2009; Jabr, 2011; Jiracheewewong et al., 2019; Conrad & Newberry, 2012; Chhinzer & Russo, 2018; Jabr, 2011; Barr et al., 2009; Jackson & Kilgour & Koslow, 2009; Reid & Anderson, 2012; Fallows & Steven, 2000; Finch et al., 2013
	EK_2	Autonomous Learning ^(*) (**)	
	EK_3	Problem-solving	
	EK_4	Management of ICT management ^(**)	
	EK_5	Leadership	
	EK_6	Ability to adapt to new situations	
	EK_7	Initiative and entrepreneurial spirit	
	EK_8	Creativity and Innovation	
	EK_9	Decision-making	
	EK_10	Working under pressure ^(**)	
	EK_11	Assuming responsibility	
	EK_12	Negotiation ^(*) (**)	
	EK_13	Self-confidence	

	EK_14	Detecting new ideas and opportunities	
	EK_15	Acquiring new knowledge	
	EK_16	Motivation to improve ^(*)	
	EK_17	Apply knowledge in practice ^(*)	
	EK_18	Critical thinking	
COMPETITIVENESS	COM_1	Real problem-solving ^(**)	Smither & Houston, 1992; Chamorro-Premuzic et al., 2010.
	COM_2	University-business rapprochement	
	COM_3	Proactive Student Input	
	COM_4	Facing a Challenge	
	COM_5	Novel approach	
	COM_6	Choosing my partners favours my competitiveness ^{(*) (**)}	
	COM_7	Training ^(*)	
SATISFACTION	SAT_1	Increased motivation to achieve good results	Krägeloh et al., 2019; Chhinzer & Russo, 2018.
	SAT_2	Increased motivation for teamwork	
	SAT_3	More motivation as a result of being able to compete with other teams	
	SAT_4	More stimulation for work with novel solutions	
	SAT_5	Greater satisfaction with creative work	
	SAT_6	I would again participate ^(*)	
(*) not significant in model 1: Pre-COVID-19 (**) not significant in model 2: During COVID-19			

Source: Own elaboration

4. Results

4.1 Evaluation of the measurement model

The individual reliability of each indicator or manifest variable was tested by examining the weights obtained by PLS (λ). An initial iteration of the algorithm was carried out using SmartPLS. Indicators with standardized weights below 0.4 were removed (Churchill, 1979, cited in Henseler et al., 2009), and both models were reformulated. There are some differences in the significance of the indicators; specifically, in model 1, the indicators COM_7, SAT_6, EK_16 and EK_17 were not significant but were significant in model 2. On the other hand, COM_1, EK_4 and EK_10 were substantial in Model 1 but not in Model 2. We decided to keep these minor differences in the indicators in both models because it is a necessary construct. In both models, Cronbach's Alpha was also considered satisfactory, as the obtained values are over 0.70 (Hair et al., 2014). The first model is between 0.818 and 0.927, and the second is between 0.756 and 0.909. For Fornell and Larcker (1981), composite reliability is a preferable criterion, as it reaches an appropriate value, high in both models (0.832 or more). For Henseler et al. (2009), only values below 0.60 indicate a lack of reliability.

The criterion establishes AVE values of at least 0.5 for latent variables (Fornell & Larcker, 1981; cited in Henseler et al., 2009). As can be seen in Table 2, this is significant in both models, except for Employability in Model 2, which is slightly below that value (0.478).

Table 2. Construct Discriminant and Convergent Validity

INDICATORS	'Pre-COVID-19' model				During-COVID-19 Model			
	Loads (λ)	CA	CR	AVE	Loads (λ)	CA	CR	AVE
COMPETITIVENESS		0.818	0.872	0.578		0.756	0.832	0.502
COM_1	0.731				—			
COM_2	0.742				0.554			
COM_3	0.851				0.755			
COM_4	0.771				0.752			
COM_5	0.700				0.646			
COM_7	—				0.808			
SATISFACTION		0.828	0.879	0.592		0.852	0.891	0.577
SAT_1	0.807				0.792			
SAT_2	0.755				0.754			
SAT_3	0.721				0.714			
SAT_4	0.811				0.744			
SAT_5	0.748				0.678			
SAT_6	—				0.861			
EMPLOYABILITY SKILLS		0.927	0.936	0.533		0.909	0.922	0.478
EK_3	0.717				0.629			
EK_4	0.700				—			
EK_5	0.684				0.682			
EK_6	0.773				0.692			
EK_7	0.754				0.686			
EK_8	0.706				0.617			
EK_9	0.760				0.742			
EK_10	0.591				—			
EK_11	0.752				0.677			
EK_13	0.724				0.689			
EK_14	0.789				0.713			
EK_15	0.780				0.662			
EK_16	—				0.730			
EK_17	—				0.768			
EK_18	0.734				0.685			
CA = Cronbach Alpha; CR = Composite Reliability; AVE = Average Variance Extracted Source: Own based on SmartPLS								

Source: Own based on SmartPLS

4.2 Discriminant validity

The results obtained when testing the discriminant validity of the constructs applying the Fornell-Larcker criterion (Fornell & Larcker, 1981) are shown in Table 3. We observe that the discriminant validity of each construct is different from the rest of the constructs to which it is not related.

Table 3. Fornell–Larcker Criterion

	Pre-COVID-19 Model			'During-COVID-19' model		
	Competitiveness	Satisfaction	Employability Skills	Competitiveness	Satisfaction	Employability Skills
COMPETITIVENESS	0.761			0.709		
SATISFACTION	0.690	0.769		0.674	0.760	
EMPLOYABILITY SKILLS	0.671	0.672	0.730	0.653	0.564	0.691

Source: Own based on SmartPLS

Henseler et al. (2016) showed that the lack of validity is detected through the heterotrait-monotrait ratio indicator (HTMT). In our study, the HTMT was lower than one, which is consistent with the study by Gold et al. (2001), which would even consider a value of 0.90. The proposed constructs are fully compliant, as seen in Table 4.

Table 4. Heterotrait-Monotrait Ratio (HTMT)

	'Pre-COVID-19' model			During-COVID-19 Model		
	Competitiveness	Satisfaction	Employability Skills	Competitiveness	Satisfaction	Employability Skills
COMPETITIVENESS						
SATISFACTION	0.813			0.772		
EMPLOYABILITY SKILLS	0.736	0.740		0.747	0.621	

Source: Own based on SmartPLS

We found no significant residual values in the residual correlation matrix that would indicate substantial prediction error for indicators or manifest variables.

4.3 Evaluation of structural model

The structural model assessment includes various evaluations (Hair et al., 2014; Henseler et al., 2009). We studied multicollinearity in the structural model through tolerance evaluation (below 0.20) and the variance inflation factor, with values below 5. The following table shows the results obtained, where it can be observed that all of them are below (Table 5).

Table 5. VIF values

	'Pre-COVID-19' model		During-COVID-19 Model	
	Competitiveness	Satisfaction	Competitiveness	Satisfaction
COMPETITIVENESS		1.818		1.742
SATISFACTION				
EMPLOYABILITY SKILLS	1.000	1.818	1.000	1.742

Source: Own based on SmartPLS

Table 6 shows the results of the beta (β) coefficient results and the degree of significance and importance of the value distribution using the student's t-test. To test the hypotheses, a bootstrapping procedure with 5,000 subsamples was used (Chin et al., 2003). Regarding the first model, the results provide empirical support for the hypotheses used to structure the research. The H1, H2, and H3 results confirm the positive and significant effects of the variables

($p < 0.000$). Employability skills lead to greater student satisfaction and improved competitiveness. In the second model, the empirical results also confirm all the hypotheses. In the case of hypotheses H2 and H3, the significance level is $p=0.000$. For the case of H1, the effects of employment skills on satisfaction are also positive and significant ($p < 0.05$), significantly mediated by variable competitiveness (indirect effect of 0.348).

In statistical terms, the direct effect of employability skills on satisfaction is 0.380, and the mediator of competitiveness is 0.292, so the total effect is 0.672. In the second model, this relationship is even stronger because the mediating effect of competitiveness is 0.348, and the direct effect is 0.216, so the total effect is 0.564.

Table 6. Hypothesis Comparison

Hypotheses		'Pre-COVID-19' model			During-COVID-19 Model			Supported
		β Coefficients	t-values	p-values	β Coefficients	t-values	p-values	
H1	EMPLOYABILITY SKILLS> SATISFACTION	0.380	3.770	0.000	0.216	2.229	0.026	Yes
H2	EMPLOYABILITY SKILLS> COMPETITIVENESS	0.671	13.547	0.000	0.653	10.824	0.000	Yes
H3	COMPETITIVENESS> SATISFACTION	0.434	4.388	0.000	0.534	6.373	0.000	Yes

Source: Own based on SmartPLS

4.4 Predictive relevance of the model

According to the obtained R^2 results, the predictive power of reputation is moderate in both models. Specifically, for competitiveness, 45% and 42.6% of the variability in each model is explained by the latent variable employability skills. For satisfaction, 55.5% and 48.2% of the variability is explained by the latent variable Employability skills and competitiveness, respectively.

The size of f^2 measures the effects of an exogenous construct on an endogenous one by the change in R^2 of the endogenous construct when excluding the exogenous one. We obtained remarkable results in our model for f^2 . The effect of employability skills on competitiveness is high in both models ($f^2 = 0.818$ and $f^2=0.742$, respectively) and medium in satisfaction ($f^2 = 0.233$ in the first model). The effect of competitiveness on satisfaction is considered medium in the second model ($f^2=0.315$)

According to the results obtained, the model has predictive relevance due to the positive value for each endogenous variable according to the Q2 criterion of Stone (1974) and Geisser (1975).

Table 7. Construct cross-validated redundancy

VARIABLES	'Pre-COVID-19' model		'During-COVID-19' model	
	Q ²	R ²	Q ²	R ²
COMPETITIVENESS	0.243	0.450	0.199	0.426
SATISFACTION	0.314	0.555	0.264	0.482

Source: Own based on SmartPLS

5. Discussion and Conclusions

The role of higher education is becoming even more critical given the increasing demand for highly qualified and socially responsible people in the labour market. Moreover, today's higher education faces significant transformations caused by integrating new technologies into academic activity and the active demand for effective training models.

Therefore, HEIs must be more responsible for the future career path of their graduates and should strive to respond to employer demands, as graduate employability has increasingly become the critical measure of university value (Argos & Ezquerro, 2014). Some authors question the role of HEIs in the challenge of training their students in an increasingly digitalized, discontinuous, and global market (Martínez-Clares & González-Lorente, 2021).

Thus, it is necessary to train students in employability skills that will enable them to successfully meet the challenges of their professional future, whether they work in large companies, small and medium enterprises (SMEs), or as entrepreneurs. However, these competencies only sometimes guarantee professional success (Baruch & Bozionelos, 2011). Encourage innovative teaching activities that promote the acquisition of employment skills should be a priority for universities, primarily when curricula do not always provide an agile response to the incorporation of the skills needed to achieve employment for future graduates (Jackson, 2013; Argos & Ezquerro, 2014; Jiracheewong et al., 2019).

The relationship between employability and education has been studied from the perspective of stakeholders such as university recruiters (Moy, 2006), faculty members (Aistrich et al., 2006) and employers (Finch et al., 2013).

Our study was conducted from the student's perspective, being an interesting approach since research studies exploring student satisfaction with academic and university life are limited (Argos & Ezquerro, 2014; Martínez-Clares & González-Lorente, 2021). Moreover, it was conducted at two essential points in time. The first collected information from the pre-pandemic year in Spain (Sept 2019–Jan 2020), while the second considered students living in quarantine who had to learn digitally (Sept 2020–Jan 2021). Both models confirm the direct effect of employability skills on competitiveness and student satisfaction, which are significant according to the results. We also confirmed the impact of competition on student satisfaction. These findings are essential and novel because of the established relationships. Therefore, we recommend that academic authorities focus on employability skills due to the improvements they provide to university students and their impact on student competitiveness and satisfaction. It is necessary to promote the implementation of fundamental challenges to enhance employability skills, as academic curricula are not sufficiently agile to achieve them (Jiracheewong et al., 2019).

Our findings suggest that the need for students to learn employability skills in HEI is independent of the pandemic, as they influence competitiveness and student satisfaction, regardless of working in a more virtual world. Therefore, we have covered the gap in the literature related to Employability skills and, in a more novel way, incorporated variables on which it impacts in a country where, in comparison with other geographical areas, there is a significantly smaller number of empirical studies. In addition, our empirical results are carried out considering more novel and less studied teaching methodologies in terms of the improvement to be achieved for the acquisition of employability skills by university students.

6. Limitations and future research lines

We know that an innovative activity's contribution does not imply the total acquisition of employability skills among university students, but it is a good start. Furthermore, we empirically demonstrated how employability skills increased student competitiveness and satisfaction. Further studies could increase the sample with more students participating in the activity to obtain more robust results. Therefore, we propose expanding both the sample of students and the activities that improve the acquisition of employability skills. Although some studies related to competitiveness and soft skills try to analyze the impact of using an educational action as a sample only one university (Pérez-Rivero & Ubierna 2021), we consider that our study could be carried out in more universities, also considering different types of degree so that results could be compared.

Another proposal would be to conduct studies that assess the acquisition of employability skills of students from the perspective of employers and academic leaders, considering whether there is a relationship with variables such as future career success, the time horizon for obtaining a first job, or better job performance.

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