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<http://www.tandfonline.com/10.1080/08841241.2018.1488334>.

Published paper:

Trullas, I., Simo, Pep, Fusalba, O. R., Fito, A., Sallan, J. Student-perceived organizational support and perceived employability in the marketing of higher education. "Journal of Marketing for Higher Education", 2018. doi: [10.1080/08841241.2018.1488334](https://doi.org/10.1080/08841241.2018.1488334)

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Recto running head: JOURNAL OF MARKETING FOR HIGHER EDUCATION

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Student-perceived organizational support and perceived employability in the marketing of higher education

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History: received: 2017-02-17 accepted: 2017-11-22

ABSTRACT

In the current context, the need for marketing in institutions of higher education is undeniable. The specification of the student not merely as a 'customer' means that traditional marketing no longer has sufficient capacity to explain the behavior of the student body. In this study, a four-level relationship marketing model is tested to check the influence of perceived organizational support (POS) and perceived employability on identification with the institution and the perceived price-quality ratio and how these influence student satisfaction. In addition, the constructs prior to POS and perceived employability are identified, which are explicit enough to enable specific marketing actions to be carried out. As POS is a construct defined for the labor market, its use applied to relational marketing comes up as something innovative.

To this end, Likert scales have been designed and validated to measure these constructs. The results of this test show how the perception of organizational support depends on the relationship of the student body with the administration and management of the center. Likewise, the perception of employability depends on the perceived reputation and the perception of the promotion of employability. Furthermore, it is confirmed that satisfaction is positively related to identification and the perceived price-quality ratio, which in turn are positively related to organizational support and perceived employability.

KEYWORDS: University marketing; perceived organizational support; perceived employability; satisfaction; higher education

1. Introduction

In a context in which university institutions are encountering greater competition, cutbacks in public financing and a more heterogeneous body of incoming students, the need to improve efficiency and effectiveness in the process of recruiting and retaining students is evident. Put another way, 'customer' acquisition is paramount, in spite of the fact that this is not a concept that can be directly associated with students. Due to this competitiveness, universities also find themselves forced to compete to attract students (Comm & Labay, 1997; Landrum, Turrisi, & Harless, 1999; Luque & Del Barrio, 2007), and as a result, students are faced with complex decisions arising from the great availability of alternatives (Maringe, 2006). Generally speaking, the improvement of society is considered one of the main objectives of universities (UNESCO, 1991). As proposed by Luque Martínez and Doña Toledo (2013), one of the ways to achieve this objective is by improving the satisfaction of its different constituencies, in order to thus improve the performance of service to the benefit of society.

However, associating university education with the experience of consuming a typical service has its specificities, and it is essential to understand the processes of recruitment and retention (Fielder, Hilton, & Motes, 1993). According to Helgesen (2008), it is precisely the retention processes in which relationship marketing is particularly effective, and improving student satisfaction involves using tools traditionally associated with a service industry (Desheids, Kara, & Kaynak, 2005). It is when universities understand this context that they can take actions to improve their image, expand their budget and prestige and, as a result, increase the number of registered students (Beerli Palacio, Díaz Meneses, & Pérez Pérez, 2002). In addition, given that the marketing activities are aimed at such a heterogeneous public, it is crucial to identify the unique needs of each segment in order to be able to better direct the strategy to be implemented (Ghosh, Javalgi, & Whipple, 2008).

The aim of this study is to propose and test a relational model of antecedents of student satisfaction (Trullas & Enache, 2011). Together with antecedents such as corporate ability, student identification and perceived employability, this study has considered the inclusion in the student's perceived organizational support from the organization (POS). The concept of POS is drawn from social exchange theory (Cropanzano & Mitchell, 2005), widely used in organizational behavior research to explain phenomena such as employee performance and well-being (Kurtessis et al., 2017). This model can be a guideline to develop specific student recruitment and retention actions for each of the phases that students go through in their relationship with their university.

2. Identification of the model

As a point of departure, the model proposed by Trullas and Enache (2011) uses the study by Bigne-Alcañiz and Currás-Pérez (2008), according to which the image of corporate ability has a direct and positive influence on consumer behavior. In the present study, corporate ability is identified by the price-quality ratio of the university institution (Trullas & Enache, 2011). Furthermore, Bigne-Alcañiz and Currás-Pérez (2008) show that customer identification with the company is also significant for the consumer and has an enormous potential to generate positive behaviors towards it (Bhattacharya & Sen, 2003).

Hypothesis 1: Corporate ability, measured as the perception of quality (Q), is significantly and positively related to satisfaction (S).

Hypothesis 2: Student identification with the university (ID) is significantly and positively related to satisfaction (S).

In order to find antecedents to these constructs, the role played by the variables already studied in the identification and the perception of quality in association with corporate ability has to be determined. One of the first factors that appears is employability, which in general is considered to be an aspect that influences the perceived quality in the university setting (Storen & Aamodt, 2010). According to Hillage and Pollard (1998), employability has two dimensions: internal (individual skills, internal job market) and external (job demand, external job market). In spite of the fact that a university education has value in and of itself, society places an increasingly greater value on this training allowing for an appropriate transition to employment. Therefore, if the training received by the student permits a good perception of employability, this will translate into a good perception of the quality of the training received and will increase the student's identification with the center. That is to say, while students pursue their education, what they will evaluate is their perceived employability, defined by Rothwell, Jewell, and Hardie (2009) as the perception of the personal capacity to obtain appropriate employment in terms of the level of qualification that is expected to be acquired during their studies.

Hypothesis 3: The employability perceived by the student of an institution (E) contributes significantly and positively to the identification of the student with the university (ID).

Hypothesis 4: The employability perceived by the student of an institution (E) contributes significantly and positively to the corporate ability, measured as the perception of quality (Q).

In general, in marketing there is a tendency to consider the customer as an external interest group, while in the scope of business organization, it is more customary to define the identity, image or reputation of the organization in terms of the interest groups, regardless of whether they are internal or external (Walker, 2010). It is here where the main difference between a traditional service customer and a university student lies: while a customer is clearly an external interest group, students are fully integrated into the heart of the university, thus constituting an internal interest group. In the search for the construct that defines the perceptions of students, several aspects could be defined, such as the quality of the facilities, relations with the faculty and institutional communications, among others. However, the proposal by Trullas and Enache (2011) has been followed in this study, who justify that a more appropriate and innovative approach is to consider it analogous to perceived organizational support (POS), a typical construct in the literature of the organizational behavior sciences. POS is defined as the degree to which the employees of an institution believe that the organization in which they work values their contributions and is concerned about their well-being (Eisenberger, Huntington, Hutchinson, & Sowa, 1986). According to Riggle, Edmondson, and Hansen (2009), organizations with high levels of support will have employees who are closer to the company. These authors conclude in their studies that POS has a strongly positive effect on commitment and job satisfaction, a moderately positive effect on employee development and a strongly negative effect on the intention of employees to leave the company. From a theoretical standpoint, it could be justified that the construct is adaptable to students, i.e. students' perceived organizational support (S-POS), considering that it has a positive influence on identification with the university and the perception of the quality of the institution, in a way that is analogous to its use by the employees of an organization.

Hypothesis 5: The students' perceived organizational support (S-POS) contributes significantly and positively to the perception of quality (Q).

Hypothesis 6: The students' perceived organizational support (S-POS) contributes significantly and positively to the identification of the student with the university (ID).

In order to implement specific policies, it is still necessary to identify more specific constructs, and therefore it is necessary to find the antecedents of S-POS and perceived employability. However, in this study, only the initial survey carried out by Trullas and Enache (2011) is considered, which proposes two antecedents to perceived employability and three antecedents to S-POS.

In the case of the antecedents of perceived employability (E), it is reasonable to expect that it will depend on the support for employability that originates from the university itself, as well as its dissemination of these acts, thus creating a perception on the part of the students in terms of employability promotion (EP). Furthermore, it is undeniable that the reputation of the institution attributed to it by society will cause employers to perceive that hiring former students of a certain institution guarantees the quality of the staff members. In this way, students also possibly judge perceived employability in a similar manner. Furthermore, the management of this reputation is considered an essential aspect for recruiting and retaining students (Bush, Ferrell, & Thomas, 1998; Standifird, 2005), as it is believed to be an indicator of quality.

Hypothesis 7: The students' perception of employability promotion (EP) during their education contributes significantly and positively to perceived employability by the student (E).

Hypothesis 8: A good perceived reputation (REP) contributes significantly and positively to perceived employability by the student (E).

To finish the model, some antecedents of S-POS are proposed. As fundamental bases, Trullas and Enache (2011) propose analyzing corporate communication and relations between internal actors at the university as part of relationship marketing, based on three antecedents: corporate communication (COM), the relationship between the institution and the students (university-student relationship, USR) and the support for the relationship among the students themselves (promotion of student relationships, PSR). However, this study proposes three subdimensions to USR, given that the relationship between the university and the students seems to be multidimensional, as it influences both the faculty and its teaching methodologies and the regular administrative personnel relation and the more occasional, critical and personalized dean's office relation (Marzo-Navarro, Pedraja-Iglesias, & Rivera-Torres, 2005). Therefore, it is proposed that the university-student relationship construct has three subdimensions: university administration-student relationship (UASR), university professorate-student relationship (UPSR) and dean's office-student relationship (DOSR).

Hypothesis 9: The corporate communication (COM) of an educational institution contributes significantly and positively to the students' perceived organizational support (S-POS).

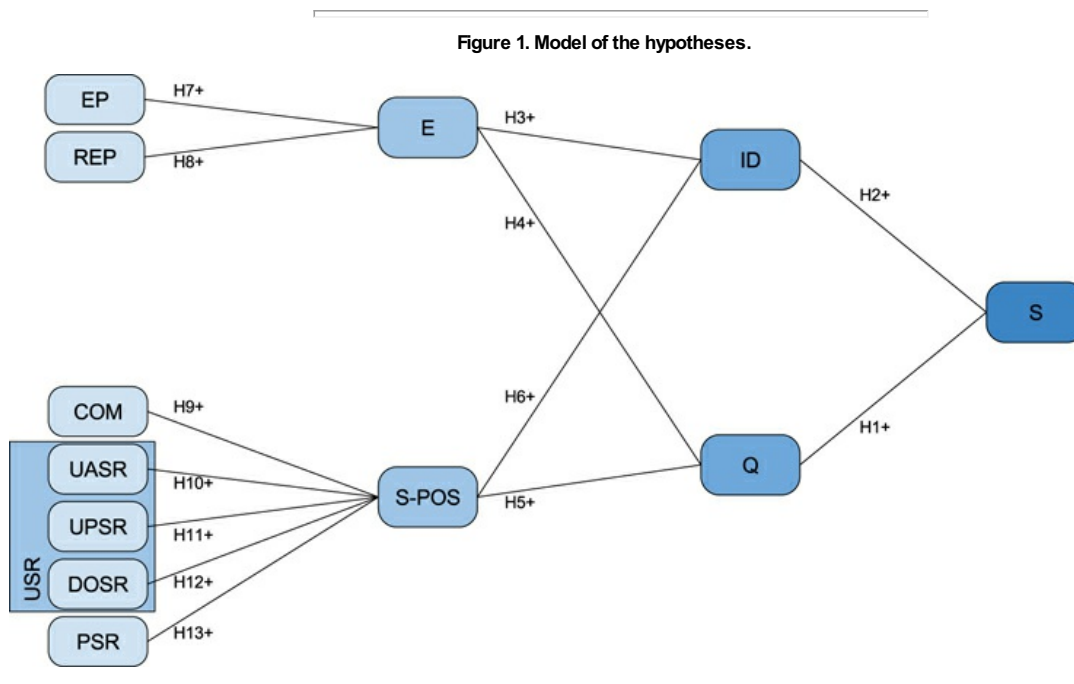
Hypothesis 10: An appropriate university administration-student relationship (UASR) contributes significantly and positively to the students' perceived organizational support (S-POS).

Hypothesis 11: An appropriate university professorate-student relationship (UPSR) contributes significantly and positively to the students' perceived organizational support (S-POS).

Hypothesis 12: An appropriate dean's office-student relationship (DOSR) contributes significantly and positively to the students' perceived organizational support (S-POS).

Hypothesis 13: An appropriate promotion of student relationships (PSR) contributes significantly and positively to the students' perceived organizational support (S-POS).

Therefore, the theoretical model resulting from these 13 hypotheses is as follows (Figure 1):



3. Methodology

In order to measure the constructs, 5-point Likert (1932) scales were used. Specifically, the scales to measure corporate communication, the university-student relationship, the promotion of student relationships, employability promotion and reputation were designed especially for the present study. The employability, identification, quality and satisfaction scales were

adapted from Rothwell et al. (2009); Bhattacharya and Sen (2003); Bergami and Bagozzi (2000); Berens, Van Riel, and Bruggen (2005); and Putrevu and Lord (1994), respectively. The scale used for the student's perceived organizational support deserves separate attention, since it is adapted from the POS scale (Eisenberger et al., 1986), in which the references to the company and customer have been replaced by references to the university and the student, respectively.

To ensure the validity of the content, focus groups were held with four scholars. Notably, three meetings were conducted, with participation of administrative personnel in the first meeting and students in the second meeting. The last one was intended as a wrap up, to write the final version of the questionnaire.

The sample of this quantitative study included 359 students from various technical faculties at a public university in Catalonia. The organizational structure of the university allows faculties to undertake their own academic and promotion policies, complementary to the university policy. So although belonging to the same university, the participants were exposed to differentiated promotion and academic policies. The surveys were administered in person during a class session. Participation was voluntary and anonymous, and was considered ethically acceptable by the university's regulations. In addition to questions asked to measure the model, the surveys also included questions of a demographic nature, specifically, gender, age, years registered at the university and in the current program of study, the year in which the students were registered, and the perception of the academic results.

To validate the model, methodology based on structural equations (SEM) was used, and an exploratory and confirmatory factorial analysis was used to validate the scales, as well as a reliability test to confirm internal consistency. The software R, version 3.2.1 was used for all calculations, along with the psych (Revelle, 2015) and lavaan (Rosseel et al., 2015) packages, to assist with the statistical calculations and structural equations.

4. Results

First, the descriptive analysis of the demographic data was carried out on the sample and the variables were considered. Next, the psychometric properties of the scales were checked for both the designed and adapted scales. Finally, the model proposed in Figure 1 was fitted using SEM.

The sample presents the following distribution: 84% of those surveyed were men, 62% of them were under age 21, 67% had been registered at the university for three years or less, 71% had been studying the same major for three years or less and 60% were first or second year students. In terms of academic results, 51% considered them to be good, 22% considered them to be very good or better, and 27% thought they were mediocre or worse. The means, medians and standard deviations for each variable can be seen in Table 1.

Table 1. Mean, median and standard deviation of each measure.

Variable	Mean	Median	SD
REP	3.827	3.833	0.477
S-POS	3.027	3.143	0.706
COM	3.468	3.6	0.748
UASR	3.172	3.25	0.953
UPSR	3.611	3.75	0.681
DOSR	3.094	3.25	0.761
PSR	3.646	3.75	0.447
EP	3.222	3.2	0.684
E	3.518	3.6	0.709
ID	3.518	3.6	0.694
Q	3.448	3.667	0.789
S	3.592	3.667	0.991

To check the psychometric properties of the scales, an exploratory and confirmatory factorial analysis was used. Similarly, to validate the internal consistency of the measurement items of each variable, Cronbach's alpha (1951) was applied. To perform the factorial analysis, the model was divided into 4 levels, as shown in Figure 2. For each level, an exploratory factorial analysis was conducted to check whether the latent variables were those expected, and to confirm that each question loaded satisfactorily on the expected variable. This can be seen in Tables 2-4.

Figure 2. Levels of the structural equations model.

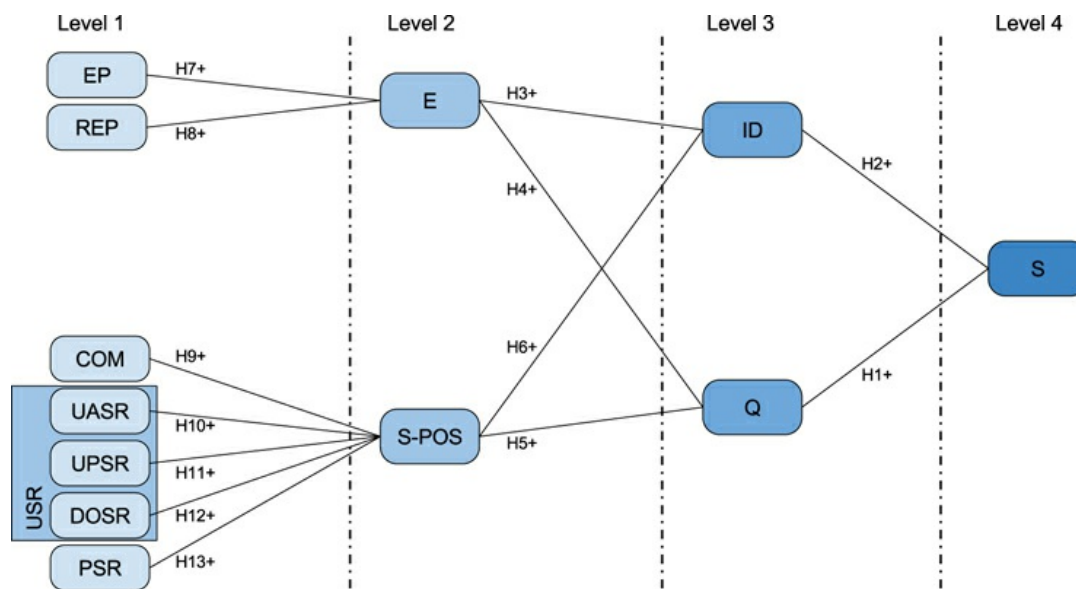


Table 2. Level 1 EFA.

	Item	Question	PC1	PC2	PC3	PC4	PC5	PC6	PC7
COM	COM1	La universidad tiene un buen sistema de comunicación con los estudiantes (The university has a good communication system with students)	0.28	0.21	0.58	0.03	0.13	0.16	0.22
	COM2	No tengo que esforzarme para enterarme de los hechos y noticias que me pueden interesar de mi universidad (I do not have to make an effort to find out about the facts and news that may interest me about my university)	0.14	0.11	0.78	0.00	0.15	0.08	0.09
	COM3	Es fácil acceder a la información que me interesa (It is easy to access the information that interests me)	0.24	0.17	0.68	0.03	0.19	0.02	0.13
	COM4	Por lo general, aunque quiera, no me entero de los hechos relevantes que suceden en mi universidad (Usually, even if I want, I do not find out about the relevant events that happen at my university)	-0.06	0.09	0.71	0.15	-0.05	0.17	-0.02
	COM5	No recibo la información con la frecuencia que desearía (I do not receive the information as often as I would like)	0.07	0.01	0.77	0.01	0.02	-0.04	0.14
UASR	UASR1	Sé que en esta escuela/facultad seré correctamente atendido cuando tenga que realizar algún trámite administrativo (I know that this school/faculty will properly give attendance when I have to perform some administrative procedure)	0.22	0.82	0.15	0.04	0.19	0.10	0.06
	UASR2	Creo que el personal administrativo que hay es competente (I think the administrative staff is competent)	0.19	0.87	0.17	0.02	0.10	0.13	0.12
	UASR3	Si tengo alguna duda relacionada con temas administrativos sé que seré bien atendido (If I have any questions related to administrative issues I know that I will be well taken care of)	0.15	0.89	0.12	0.03	0.15	0.12	0.10
	UASR4	Tengo una opinión positiva del personal de administración de esta escuela/facultad (I have a positive opinion of the administration staff of this school / faculty)	0.17	0.87	0.08	0.01	0.07	0.15	0.17
UPSR	UPSR1	Creo que los profesores y tutores en general tratan correctamente al alumnado (I think that teachers and tutors in general treat students correctly)	0.17	0.18	0.20	0.08	0.15	0.07	0.75
	UPSR2	Creo que los profesores y tutores atienden correctamente las dudas de sus alumnos (I believe that the teachers and tutors correctly answer the queries of their students)	0.12	0.14	0.12	0.08	0.16	0.01	0.78
	UPSR3	Mi relación con los profesores la podría clasificar globalmente satisfactoria (My relationship with teachers could be classified as satisfactory overall)	0.18	0.00	0.10	0.12	0.15	0.18	0.78

	Item	Question	PC1	PC2	PC3	PC4	PC5	PC6	PC7
	UPSR4	Mi experiencia hasta la fecha me indica que la relación entre profesorado y estudiantado es la correcta (My experience to date tells me that the relationship between teachers and students is correct)	0.23	0.10	0.07	0.07	0.13	0.13	0.77
DOSR	DOSR1	Creo que la dirección de esta escuela/facultad tiene en cuenta la opinión del estudiantado (I believe that the direction of this school / faculty takes into account the opinion of the student body)	0.74	0.14	0.20	0.02	0.20	0.15	0.21
	DOSR2	Creo que la dirección de esta escuela/facultad atiende correctamente las necesidades del estudiantado (I believe that the direction of this school / faculty correctly meets the needs of the student body)	0.76	0.20	0.17	0.02	0.22	0.20	0.25
	DOSR3	Sé que si tengo algún problema que requiera hablar con alguien de dirección de la escuela/facultad será correctamente atendido (I know that if I have a problem that requires talking to someone in the school/faculty, I will be properly attended to)	0.72	0.29	0.07	0.12	0.18	0.05	0.17
	DOSR4	En general estoy satisfecho con el equipo directivo de la escuela/facultad (Overall I am satisfied with the school/faculty management team)	0.75	0.22	0.15	0.06	0.11	0.09	0.22
PSR	PSR1	Valoro positivamente mi relación con otros estudiantes de esta escuela/facultad (I value positively my relationship with other students of this school/faculty)	-0.02	0.05	-0.01	0.84	0.03	0.06	0.06
	PSR2	Creo que aquí se genera buen ambiente para el estudio entre los estudiantes (I think that there is a good environment for study among students)	0.15	0.12	0.17	0.77	0.11	0.15	0.12
	PSR3	En esta carrera he encontrado compañeros/as que comparten mis mismos intereses (During my studies I have found friends who share my same interests)	0.05	-0.07	0.04	0.79	0.08	0.04	0.09
REP	REP1	Esta universidad tiene una buena imagen en el entorno empresarial (This university has a good image in the business environment)	-0.05	0.05	0.08	0.09	0.14	0.69	-0.03
	REP2	Esta universidad es reconocida externamente por lo bien preparado que sale el estudiantado al finalizar la carrera (This university is recognized externally for how well prepared the student are at the end of their studies)	0.07	0.05	0.03	0.02	0.16	0.74	0.12
	REP3	Esta universidad cuenta con un profesorado que da una buena imagen externa (This university has a faculty that gives a good external image)	0.26	0.09	0.07	-0.06	0.15	0.52	0.43
	REP4	Esta universidad cuenta con una buena reputación investigadora (This university has a good research reputation)	0.12	0.12	0.02	0.07	0.07	0.65	0.14
	REP5	Esta universidad da una buena imagen al resto de la sociedad (This university gives a good image to the rest of society)	0.19	0.18	0.15	0.12	0.09	0.63	0.04
EP	EP1	Mi universidad fomenta las redes de ex alumnado (My university promotes networks of former students)	0.08	0.15	-0.08	0.14	0.63	0.10	0.07
	EP2	La universidad realiza actos para que nos podamos poner en contacto con empresas que puedan estar interesadas en contratar estudiantes que finalizan la carrera (The university holds events so that we can get in touch with companies that may be interested in hiring students once they finish their studies)	-0.01	0.10	0.12	0.09	0.75	0.11	0.15
	EP3	La universidad nos facilita que podamos desarrollar prácticas en empresa que luego faciliten la inserción laboral (The university facilitates take up of internships with companies that later facilitate success in the labor market)	0.24	0.10	0.19	0.02	0.76	0.19	0.18
	EP4	La universidad expone ofertas de trabajo exclusivas para estudiantes que están finalizando la carrera en mi universidad o para aquellos que ya han finalizado (The university exhibits exclusive job offers for students who are finishing their studies at my university or for those who have already graduated)	0.13	0.05	0.11	0.04	0.79	0.15	0.10

	Item	Question	PC1	PC2	PC3	PC4	PC5	PC6	PC7
	EP5	Mi universidad está preocupada en crear una buena red de ex alumnado y actuales profesionales para facilitar a los actuales alumnos poder encontrar trabajo en un futuro próximo (My university is concerned to create a good network of former students and current professionals to facilitate current students finding work)	0.26	0.09	0.09	-0.03	0.73	0.09	0.14

Note: Spanish Likert scales validated, English Likert scales versions not validated.

Table 3. Level 2 EFA.

	Item	Question	PC1	PC2
S-POS	S-POS1	Mi universidad se preocupa en general que esté satisfecho como estudiante (My university is generally concerned that I am satisfied as a student)	0.83	0.23
	S-POS2	Mi universidad se enorgullece cuando un alumno obtiene algún logro (por ejemplo un premio, un buen resultado académico) (My university is proud when a student obtains some achievement (for example a prize, a good academic result))	0.51	0.09
	S-POS3	Mi universidad realmente se preocupa por mi bienestar (My university really cares about my well-being)	0.86	0.21
	S-POS4	Mi universidad valora nuestra contribución como estudiantes al bienestar global de la universidad (My university values our contribution as students to the global welfare of the university)	0.81	0.12
	S-POS5	Mi universidad considera firmemente mis objetivos y mis valores (My university firmly considers my goals and my values)	0.79	0.12
	S-POS6	Mi universidad estaría dispuesta a ayudarme si realmente necesito ayuda (My university would be willing to help me if I really need help)	0.70	0.29
E	E1	Estoy seguro que cuando acabe los estudios encontraré trabajo (I am sure that when I finish my studies I will find work)	0.19	0.78
	E2	Cuando deje la universidad creo que será difícil encontrar trabajo de lo que he estudiado (When I leave university I think it will be difficult to find a job in what I studied)	-0.03	0.76
	E3	Las empresas se fijan en mi universidad a la hora de contratar a personas con mis estudios universitarios (Companies look at my university when hiring people with my degree qualifications)	0.37	0.61
	E4	El haber estudiado en esta universidad es positivo para buscar trabajo (Having studied at this university it is very positive when seeing work)	0.29	0.68
	E5	En el mercado laboral hay una alta demanda para titulados de la carrera que estoy estudiando (In the labor market there is a high demand for graduates in the career related to what I am studying)	0.12	0.69

Note: Spanish Likert scales validated, English Likert scales versions not validated.

Table 4. Level 3 EFA.

	Item	Question	PC1	PC2
S-POS	ID1	Me siento algo asociado a mi universidad (I feel an association with my university)	0.71	0.26
	ID2	Me considero dentro del grupo de personas que están a favor de esta universidad (I consider myself within the group of people who are in favor of this university)	0.70	0.39
	ID3	Otros estudiantes de esta universidad probablemente sean similares a mí (Other students at this university are probably similar to me)	0.62	-0.08
	ID4	Las personas que trabajan en esta universidad probablemente sean similares a mí (The people who work in this university are probably similar to me)	0.73	0.05
	ID5	Esta universidad comparte mis valores (This university shares my values)	0.71	0.41
	ID6	Ser estudiante de esta universidad, en parte, da sentido a cómo soy (Being a student of this university, in part, gives meaning to who I am)	0.68	0.28
	ID7	Formar parte de esta universidad me ayuda a expresar mi identidad (Being part of this university helps me express my identity)	0.73	0.32

	Item	Question	PC1	PC2
Q	Q1	Creo que esta universidad ofrece unos estudios con una buena relación calidad-precio (I think study at this university offers good value for money)	0.19	0.71
	Q2	Esta universidad tiene una adecuada experiencia en los estudios que ofrece (This university has adequate experience in the studies it offers)	0.06	0.79
	Q3	Esta universidad ofrece unos estudios de calidad (This university offers quality studies)	0.26	0.82

Note: Spanish Likert scales validated, English Likert scales versions not validated.

The Cronbach's alpha values for each construct are as follows: S (0.87), Q (0.72), ID (0.86), E (0.78), S-POS (0.87), EP (0.84), REP (0.73), COM (0.80), UASR (0.94), UPSR (0.86), DOSR (0.87), PSR (0.76). Likewise, values for the Bartlett's sphericity test for each level are: level 1 ($\chi^2 \approx 5478$, d.o.f. = 435, p -val < .000), level 2 ($\chi^2 \approx 1722$, d.o.f. = 66, p -val < .000), level 3 ($\chi^2 \approx 1565$, d.o.f. = 45, p -val < .000), level 4 ($\chi^2 \approx 586$, d.o.f. = 3, p -val < .000). The KMO index is 0.90 for level 1, 0.89 for level 2, 0.84 for level 3, and 0.70 for level 4.

The confirmatory factorial analysis later conducted shows that the chi-square value is 2,469.536 (d.o.f. = 1311, p -value < .000). Other fit indexes also demonstrate the good behavior of the model (IFI = 0.892, GFI = 0.798, AGFI = 0.771, CFI = 0.891, TLI = 0.881, RMSEA = 0.05).

In terms of the fit of the structural equations model, Figure 3 shows the standard coefficient value for each hypothesis and its p -value, indicating that the SEM network partially fits the sample. Furthermore, the statistical analysis of the SEM reveals that

the chi-square value is 2060 (d.o.f. = 1225, χ^2 /d.o.f. = 1.6817). Other fit indexes also show the good behavior of the SEM (IFI = 0.920, CFI = 0.919, TLI = 0.912, RMSEA = 0.044) (Table 5).

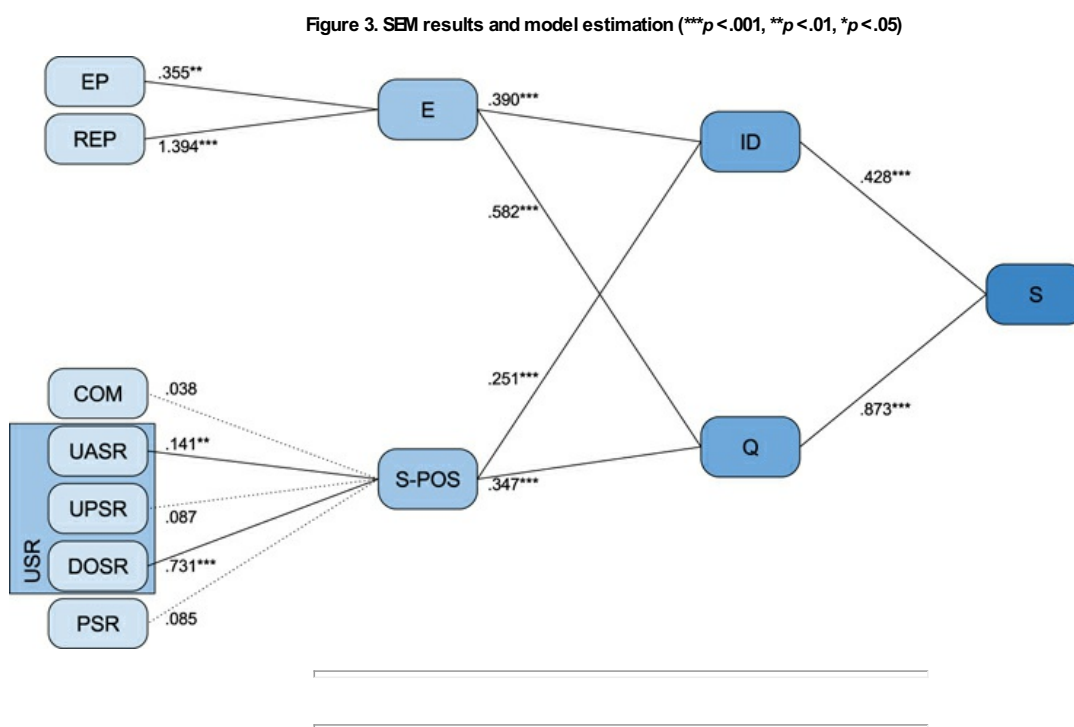


Table 5. Level 4 EFA.

	Item	Question	PC1
S	S1	Si tuviera que volver a empezar estos estudios, volvería a elegir esta universidad (If I had to start these studies again, I would choose this university again)	0.90
	S2	Si alguien al que aprecio quisiera estudiar los estudios que yo estoy cursando, le recomendaría realizarlos en esta universidad (If someone I like is considering studying what I am studying, I would recommend this university)	0.93
	S3	Si alguien me pregunta por mi universidad, siempre hablo bien de ella (If someone asks me about my university, I always speak well of it)	0.84

Note: Spanish Likert scale validated, English Likert scale version not validated.

5. Discussion, limitations and future lines of research

First of all, it is clear that three of the hypotheses are not confirmed, i.e. communication, the university professorate-student relationship and the promotion of student relationships do not affect the students' perceived organizational support.

Especially curious is the case of communication, as previous studies (Maignan & Ferrell, 2004; Scott & Lane, 2000) found a relationship between corporate communication and identification. However, it could be considered that by having found more antecedents of identification, corporate communication loses significance in favor of others, such as S-POS and USR. Likewise, and in reference to USR, it may seem strange that the subdimension university-professorate-student relationship has absolutely no effect. This can be explained by the large amount and variety of instructors that the students encounter throughout their academic life. In other words, it can be explained given that the students may have had both positive and negative experiences with the faculty, which is very extensive and varied, and therefore on average, it may not have as much influence as would be expected. Therefore, future research should investigate these findings in greater depth, possibly analyzing extreme cases. Furthermore, and along the same lines, it is logical for the subdimensions university administration-student relationship and dean's office-student relationship to have influence, as the administrative and management staff have little or no rotation throughout the duration of a student's time at the university. In the case of the promotion of student relationships, it can be considered that these questions correctly measure a variable that quantifies the relationship among students, but not the support that this relationship receives from the institution. Subsequent studies should look for another approach to this concept.

Secondly, it is evident that there are three factors with weak loadings (between 0.5 and 0.6) (Bagozzi & Yi, 1988). These factors are question 1 of the COM variable, question 3 of the REP variable, and question 2 of the S-POS variable. Question COM1 'The university has a good system of communication with students' may be too direct, and another way of expressing it must be evaluated. Furthermore, the question REP3 'This university has a faculty with a good external image' may have the same problem as the UPSR subdimension, namely that the variability of the faculty prevents it from having a direct effect on reputation. With regard to the question S-POS2 'My university takes pride in its students when they achieve something (for example, winning an award or good academic results)', the expression 'takes pride' could have a connotation that is too intense and conditions the student's response. In this case, another softer way of expressing the question might have a better effect on the measurement of the construct.

Thirdly, considering the results obtained, level 1 of the model (the antecedents of S-POS and E) requires further investigation to detect other antecedents, especially in the case of S-POS. Given that the use of POS is innovative in relationship marketing, a wide spectrum of future research can be opened up, as this study has merely proposed some antecedents according to the literature and previous research, which are by no means exhaustive. Along this line, some intermediate results of the exploratory factorial analysis of the ID variable show signs that identification is really a multidimensional variable. Subsequent studies should try to identify these subdimensions of identification.

Finally, the study should be extended to other populations in order to make it more generalizable, specifically for non-STEM majors (due to its gender bias and other particularities), but also in regard to geographic terms (other countries with a different public price structure or a lower student-to-classroom ratio) and in its application to private universities, among other aspects.

6. Practical implications

In spite of the fact that further research can be conducted in this area, the present study already enables some actions to be taken in terms of student relations, improving the educational institution where there is the greatest room for improvement.

First of all, it is evident that perceived employability is one of the key factors (as indicated by its larger relational coefficient with both ID and Q) in satisfaction. Of the two antecedents to employability, perceived reputation has a greater influence than employability promotion; however, improving the reputation requires very long-term policies that are generally already implemented on a regular basis in most universities.

In addition, students' perceived organizational support has a noticeable influence. The antecedents of this are crucial to improving satisfaction with the institution. The dean's office-student relationship is a key factor for improving satisfaction, given that generally when students need to contact the management team, it is because they have a particular situation to resolve, which is important to them. This is the key reason why DOSR has a greater influence on S-POS than UASR, since the relationship with the administrative personnel is more constant and is not perceived as being so crucial. In this aspect is where there are greater opportunities for further enhancements, such as developing student-centered, personalized and more efficient administrative offices. Consequently, in universities with student-centered and personalized administrative offices, the need for help from the dean's office should decrease due to the complex situations where it was needed being solved by the administrative offices.

Finally, there is evidence that any university policy aimed at treating students as members of the community, and not merely as customers, positively affects both identification and perceived quality. In other words, the perceived organizational support construct, which has traditionally been considered in personnel policies, is also very important to consider and promote in marketing processes aimed at achieving student loyalty.

7. Conclusions

The current article presents a structural equation model to explain student satisfaction. The relationships proposed in the study are coherent with the existing literature and the new proposals have been validated. To validate them, empirical data from a survey of 359 students from different faculties at a public Catalan university were used. The present study shows precedents for student satisfaction, with up to three levels of antecedents. After the first level of precedents, the price-quality and identification relationships, the study took a step back to examine the previous level, identifying perceived employability and student-perceived organizational support. Some of the antecedents of both constructs were identified, and the relationship of the students with administrative personnel and the management team proved to be antecedents to the students' perceived organizational support, just as perceived reputation and the perception of the promotion of employability were shown to be antecedents to perceived employability.

This research is pioneering in introducing constructs coming from organizational behavior, such as perceived organizational support and employability, to build a model of student satisfaction and identification, including antecedents of the aforementioned constructs. Participants were enrolled in the same university, offering technical studies, but coming from faculties empowered to develop specific promotion and academic policies. Although the latter aspect allows testing the hypothesis in a large range of contexts, future studies can benefit from samples of participants coming from different

universities and majoring in a more heterogeneous mix of subjects. Secondly, it would be interesting to evaluate this study's findings from other perspectives. It would be important to evaluate the perceptions of former students and parents, given that they play an essential role in the process of selecting the institution, as indicated by recent studies such as that by Schlesinger, Cervera, and Pérez-Cabañero (2016). Finally, in light of the evidence, it is crucial to review the antecedents of S-POS, given that we have only found two antecedents with a significant positive relationship. Likewise, other antecedents of satisfaction could be considered, as well as those of any other construct used in this study.

In conclusion, the main contribution made by this research is to explain the relationships between variables that improve the satisfaction of students in higher education. Among them, the novelty is the contribution of concepts such as students' perceived organizational support and the development of scales appropriate for measuring perceived employability, as well as its promotion. The most practical applications of the present study serve to identify aspects that are explicit enough to be used to develop specific improvement policies at university centers. The extensive body of literature available enables specific policies to be designed to promote employability and the relationship between students and administrative/management personnel.

Disclosure statement

No potential conflict of interest was reported by the authors.

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