Evaluation of Academic Competencies Through Standardized Instruments: A Comparison of CompeUEM, LPA-Q, and ESCI-U

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Submitted: December 7, 2017 | **Peer reviewed:** December 9, 2017 | **Accepted:** December 20, 2017 | **Published:** February 2, 2018

Abstract

The aim of this investigation is to assess the correlation among different competencies-assessment systems available on the market to measure social skills in the university environment. In order to carry out the research, three self-perception competency tests were used, and 30 competencies were evaluated in a Likert scale with several response levels: the LPA-Q, the ESCI-U, and the CompeUEM. The three questionnaires were completed by 57 university students. The results show a low degree of agreement among the different questionnaires in relation to measuring the same competencies, as well as an unclear factor structure.

Keywords: competencies, university, test, assessment

Introduction

In this current knowledge and communication age, there is considerable concern for training people capable of adapting to the demands of the modern world (Fragoso-Luzuriaga, 2015). In the European Higher Education Area, universities have set as one of their main objectives the need to implement forms of education oriented toward the professional world and the needs of companies (Morgado, Peñalvo, Ortuño, & Hidalgo, 2013); the university-student-company alignment and learning by competencies are key to achieving this. In this context, the term *competencies* has undoubtedly been established permanently (Hernández, 2007), and educational institutions' awareness of the term will enable them to support their students in acquiring necessary means for their development (Barrientos Piñeiro, Silva García, & Antúnez Marcos, 2016). Several authors (Sánchez, Romero, & Hernández, 2017; Lázaro, León del Barco, Castaño, & Polo del Río, 2016) have described the skills of social interaction and digital competencies as key for students' performance in the professional world.

The incorporation of graduates into the professional world presents a number of difficulties. Moreno (2005) states that the European business community demands a range of personal attributes and competencies in hiring professionals from certificate, bachelor's, or graduate degree programs. For employers, obtaining employees and candidates with high levels of competencies is vital to their success (Alles, 2006) and to achieving rapid integration into their work teams, their organizational culture, and the job requirements of a position, thus bringing added value to the organization (Díaz Barriga, 2005). Therefore, company recruiters lay more importance on these types of general competencies in recent graduates than on other, more specific skills, such as English and informatics (OIE, 2014).

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Suggested Citation: Santiago Gómez, G., Redondo Duarte, S., & Garcia López, O. (2017). Evaluation of academic competencies through standardized instruments: A comparison of CompeUEM, LPA-Q, and ESCI-U. *Higher Learning Research Communications, 8*(1), 1–15. http://dx.doi.org/10.18870/hlrc.v8i1.395

Official bachelor's degree programs implement a competencies model as one of the most innovative elements of the curriculum for introducing basic competencies and life skills (Casanova, 2016). The objective is to provide the student with an education suited to developing different skills needed to function appropriately in society (Jubany & Jurnet, 2016) and "to perform competently as part of the final product of the educational process" (Santos Rego, 2005, p. 8).

The assessment of competencies is used increasingly in the assessments that teachers make in their lesson plans and in the business sector. Currently there are not enough tools to show this type of evidence (Ruiz Morales, 2007), and the lack of standardized indicators in the evaluation systems does not help the teaching work (García San Pedro, 2013). For this reason, the use of suitable tests for specific objectives is more necessary than ever (Olea, Abad, & Barrada, 2010) as is the use of a common language, with a definition of criteria, indicators, levels, etc., of transversal skills (Corominas Rovira, Tesouro i Cid, Capell Castañer, Teixidó Saballs, Pèlach Busom, & Cortada, 2006).

With regard to assessment techniques for workplace competencies, Gil Flores (2007) distinguishes between those techniques that mainly focus on personality traits, which are based on the behaviors of people in the workplace, and techniques that combine the collection of data from the above with assessments made by the workers themselves and other members of the organization.

However, despite the great relevance of these competences in the academic world, there is no consensus among the different evaluation systems. The same happens with personality studies. There is no common model agreed upon by the scientific community that enables the establishment of a coherent and shared model. Thus there are models and instruments that evaluate competences in differet ways. In the field of education, there is a wider range of evaluation techniques, from formal to semi-formal to informal systems. Standardized tests are at one end of the spectrum of formal assessment systems.

Among the principal batteries for the evaluation of competencies in education are SOSIA (TEA Ediciones, 1998), the Mayer-Salovey-Caruso Emotional Intelligence Test, and the Bar-On Emotional Quotient Inventory (EQ-i) for a set of stable personality features, social-emotional competencies, motivational aspects and different cognitive skills (Bar-On, 2000; Goleman, 1995; Zafra, Martos, & Martos 2014). Other types of assessment systems for competencies, although less standardized, are, for example, the competencies interview, 360 degree evaluation, direct observation, assessment centers, Objective Structured Clinical Evaluation (ECOE in Spanish), rubrics, and portfolios.

The purpose of this journal article is to analyze the measurement of competencies through different standardized instruments and to compare whether each measurement is coherent across the different instruments.

Method

Subjects

The sample was composed of 57 undergraduates, of whom 25 were men and 32 were women. The study participants were 24 sports and physical sciences students, 31 nursing students, a single business administration student, and a single medical student. The students' age ranged between 21 and 35 years (*SD* = 4.57), the majority of the participants were aged 25 or younger (88.5%).

Instruments

The measurement instruments used in this study were as follows:

CompeUEM. This questionnaire is an adaptation for university students of CompeTEA (TEA Ediciones, S. A. U., 2015), a tool distributed by TEA Ediciones, that is often used for the assessment of competencies in the workplace. This self-completed test consists of 80 items. The students are presented with a list of sentences, and they respond according to the frequency with which they exhibit certain behaviors and their level of agreement with a series of statements. A Likert Scale is used with values between 1 (*disagreement* or *not very often*) and 5 (*agreement* or *very often*). The variables evaluated by CompeUEM are *communication*, *leadership*, *teamwork*, *adaptability*, *initiative*, *problem-solving*, *decision-making*, *planning*, and *organization*. The internal consistency of the test is a Cronbach's alpha score of 0.74.

LPA-Q. This questionnaire is an adaptation for university students of LPI (MySkillsProfile.com, 2014). This is a normative internationally assessment test that is often used for the evaluation of managerial and leadership competencies. LPA-Q consists of 120 items, a Likert Scale for answers from 1 (*disagreement* or *not very often*) to 5 (*agreement* or *very often*), and an internal consistency of 0.70. It is distributed by the company MyskillsProfile. The questionnaire evaluates the following competencies: *communication*, *teamwork*, *self-learning*, *capacity for applying knowledge in practice*, *capacity to adapt to new situations*, *leadership*, *entrepreneurial spirit*, *global thinking*, *management and time management*, and *enthusiasm and passion*.

ESCI-U. This questionnaire is an adaptation for university students of ECI-2, a tool distributed by Hay Group (Boyatzis, 2007). The variables are related to emotional intelligence, and this test allows for collection of information from multiple sources or a self-source. In this study the self-source version is used. This test is comprised of 70 items in which the respondents, valuing their own recent behaviors, identify the degree of frequency with which they perform certain behaviors. Responses are on the Likert Scale between 1 *(never)* and 5 *(consistently)* and a *don't know / no reply* option. The test obtains a score for four factors (*self-awareness*, *self-management*, *relationship management*, and *social awareness*) and 12 subscales: *emotional self-awareness*, *achievement orientation*, *adaptability*, *emotional self-control*, *positive outlook*, *empathy*, *organizational awareness*, *conflict management*, *coaching and mentoring*, *influence*, *leadership*, and *teamwork*. The questionnaire has a Cronbach's Alpha score of 0.75.

The aim of our investigation is to find the degree of correlation between these three questionnaires in relation to measuring the same competencies. These competencies form the theoretical model, which is divided into four axes (as detailed in Table 1): teamwork, adaptation to change, initiative, and leadership.

Table 1. *Theoretical Model of Competencies*

CompeUEM	LPA-Q	ESCI-U
Teamwork: Participate, collaborate, and contribute to the decisions and initiatives of the group to carry out a collective task.	Teamwork: Works effectively with other people.	Teamwork: This is about working cooperatively with others, being part of a team and working together—as opposed to working separately, competitively. Teamwork is about enjoying shared responsibility and rewards for accomplishments.
Adaptation to change: An up-to-date person who faces and adapts skillfully to the social situations that surround him or her.	Ability to adapt to new situations: Adapts quickly, responds with flexibility to people and situations.	Adaptability: Flexibility and ability to adapt to change.
Leadership: Has a leader's charisma to influence others or represent the actions of an individual or group.	Leadership: Ability to propose new ideas, approaches, and interpretations through strategies that provide solutions to real problems. It expresses a vision of what can be achieved and motivates others in order to create a team culture.	Influence: This is the ability to have a positive impact on others. It involves persuading or convincing others in order to get them to support your ideas and suggestions. This is about grabbing someone's attention and getting others to listen.
Initiative: Take actions outside the strictly established functions and show more concern for improving the quality, profitability, or effectiveness of the results of an activity than the others.	Entrepreneurial spirit: Ability to detect new opportunities, face difficult or dangerous actions, anticipate problems, propose improvements, and persevere in their achievement. Willingness to try new experiences or do things differently.	Achievement orientation: Strives to improve or meet a standard of excellence.

Tests were conducted face-to-face on different days, always within the same time slot. Prior to the completion of each of the tests, students were informed that they were participating in a study that aims to analyze systems of transversal competences for higher education levels. The voluntary nature of the participation was specified. All the questions that students had about items were answered by the same person. All students were evaluated in the same way. The original data were recorded on paper and later transferred to a database.

All assessments were administered in class and in person over three different days, but always during the same time slot. In order to motivate the students to participate, they received the test results at the same time as the test reports. They were provided with expert help to analyze the end results, as well as a personalized consultation to optimize strengths and to reinforce possible areas for improvement.

Results

Table 2 displays the statistical results of the CompeUEM test.

Table 2. *Median, Standard Deviation, Skewness, and Kurtosis of the Competencies Assessment With CompeUEM Test*

	Median	*SD*	Skewness	Kurtosis
Communication	20.5	2.6	0.64	1.49
Leadership	21.3	3.8	0.52	-0.03
Teamwork	21.1	2.9	-0.64	1.97
Adaptability	16.1	3.2	0.07	0.19
Initiative	28.8	2.6	0.71	0.31
Problem-Solving	28.5	3.6	1.02	1.48
Decision-Making	21	3.3	0.34	0.17
Planning and Organization	21.9	3.3	0.11	-0.34

The competency variables are in keeping with normal parameters both in terms of skewness and kurtosis. Initiative shows the highest median score at 28.8 points, followed by problem-solving with 28.5 points. The lowest score is in adaptability, with 16.1 points. The remaining competencies obtained fairly similar scores, lying between 20.5 and 21.9 points. The competencies that show a significant variation between the minimum and maximum scores are leadership and problem-solving, with 17 points each.

Table 3 shows the statistical scores for LPA-Q.

Table 3. *Median, Standard Deviation, Skewness, and Kurtosis of the Competencies Assessment With the LPA-Q Questionnaire*

	Median	*SD*	Skewness	Kurtosis
Written and Verbal Communication	33.7	5.1	0.29	0.02
Adaptability	31.0	3.8	-0.21	0.21
Teamwork	33.6	4.5	0.50	0.40
Applying Knowledge in Practice	30.3	4.9	-0.21	-0.32
Self-Learning	33.2	4.5	0.43	2.78
Leadership	34.8	4.5	0.41	-0.24
Global Thinking	34.7	4	0.40	0.33
Entrepreneurial Spirit	32.1	5.6	-0.36	-0.02
Planning Time Management	32.0	6.6	-0.97	1.45
Enthusiasm and Passion	37.0	5.4	-0.28	0.47

According to the skewness and kurtosis indicators all competencies lie within normal parameters. The highest scores are for enthusiasm and passion (37), followed by global thinking (34.7) and leadership (34.8). The competency with the lowest rating is applying knowledge in practice, with 30.3 points. The competencies that show the greatest difference between the minimum and maximum scores are planning and time management, with 30 points, entrepreneurial spirit with 23 points, and enthusiasm and passion with 24 points.

Table 4 shows the statistical scores for ESCI-U.

Table 4. *Median, Standard Deviation, Skewness, and Kurtosis of the Competencies Evaluated With the ESCI-U Questionnaire*

	Median	*SD*	Skewness	Kurtosis
Emotional Self-Awareness	4.1	0.5	-0.58	0.19
Achievement Orientation	4.3	0.5	-0.64	0.09
Adaptability	4.1	0.5	0.15	-0.87
Emotional Self-Control	3.7	0.7	-0.24	-0.80
Positive Outlook	4.0	0.6	-0.24	-0.55
Empathy	4.2	0.5	-0.37	-0.42
Organizational Awareness	4.2	0.4	-0.21	-0.30
Conflict Management	4.0	0.4	-0.06	-0.71
Coach and Mentor	3.7	0.5	0.22	-0.27
Influence	3.7	0.6	0.11	-0.29
Leadership	3.9	0.5	0.16	-0.71
Teamwork	4.5	0.5	-1.24	0.70
Global Thinking	3.8	0.6	-0.06	-0.21
Recognizing Patterns	3.7	0.6	0.14	-0.78

Of the 12 competencies evaluated with the ESCI-U questionnaire, the highest score obtained was in teamwork (4.5 points) followed by achievement orientation (4.3 points) The lowest measures were in coach and mentor, influence, and emotional control (3.7 points each). The competency with the greatest difference between the minimum and maximum scores is emotional control with 3 points, second is positive outlook (2.4 points), and then influence (2.6 points), recognizing patterns (2.4 points), and global thinking (2.6 points). All variables are within normal parameters.

Pearson correlations were calculated to compare similar competencies among the different tests.

Table 5 shows the correlations among the variables of CompeUEM and LPA-Q.

Table 5. *Pearson Correlation Among the Variables of CompeUEM and LPA-Q*

		CompeUEM							
		C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**
LPA-Q	Q1	0.36	0.21	-0.06	0.03	-0.03	0.28	0.30	0.21
	Q2	0.06	0.21	**0.51****	0.34	-0.27	0.08	0.26	0.07
	Q3	0.11	0.37	0.33	0.11	**-0.38***	0.16	0.23	0.27
	Q4	**0.44***	**0.38***	0.24	0.16	0.19	**0.48****	**0.52****	0.24
	Q5	0.21	0.35	0.43*	0.36	0.20	**0.50****	**0.62****	-0.10
	Q6	**0.53****	**0.42***	0.19	0.34	0.35	**0.64****	**0.73****	0.05
	Q7	0.35	**0.38***	0.34	0.15	-0.04	0.28	0.32	0.30
	Q8	0.32	**0.44***	0.40*	0.36	0.35	**0.62****	**0.59****	-0.05
	Q9	0.3	0.32	0.36	0.22	-0.02	0.21	0.35	0.22
	Q10	0.32	0.36	**0.51****	0.2	-0.02	0.32	**0.45***	0.18

Note. C1 = communication. C2 = leadership. C3 = teamwork. C4 = adaptability. C5 = initiative. C6 = problem-solving. C7 = decision-making. C8 = planning. Q1 = written and verbal communication. Q2 = adaptability. Q3 = teamwork. Q4 = applying knowledge in practice. Q5 = self-learning. Q6 = leadership. Q7 = global thinking. Q8 = entrepreneurial spirit. Q9 = planning and time management. Q10 = enthusiasm and passion.

*Significant to level 0.05 (bilateral). **Significant to level 0.01 (bilateral).

Leadership, problem-solving, and decision-making are the variables with the most significant correlations with other variables. In general the correlations are low to moderate (less than .70) among the different variables analyzed in both questionnaires, except between decision-making and leadership, the highest with (0.73). The competency decision-making is quite significantly correlated to applying knowledge in practice (0.52), self-learning (0.62), and entrepreneurial spirit (0.59). It correlates with low significance to enthusiasm and passion (0.45). In addition to correlating with applying knowledge in practice and leadership, problem-solving has an average correlation with self-learning (0.50) and entrepreneurial spirit (0.62) and shows a low correlation with applying knowledge in practice (0.48). In addition to the variables mentioned above, leadership correlates with applying knowledge in practice, leadership in LPA-Q, global thinking, and entrepreneurial spirit, although all these correlations are low (0.48, 0.42, 0.38, and 0.51, respectively).

Table 6 shows the correlations among the CompeUEM and ESCI-U.

Table 6. *Pearson Correlation Among the Variables of the CompeUEM and the ESCI-U Questionnaires*

		CompeUEM							
		C1	**C2**	**C3**	**C4**	**C5**	**C6**	**C7**	**C8**
ESCI-U	**E1**	-0.04	-0.04	-0.03	-0.07	-0.09	0.06	0.01	0.14
	E2	0.06	0.24	0.18	-0.04	-0.19	0.20	0.15	0.38*
	E3	0.23	0.42**	0.44**	0.28	-0.02	0.39*	0.42**	0.29
	E4	0.40*	0.35*	0.35*	**0.66****	0.45**	0.37*	0.36*	-0.21
	E5	0.40*	0.18	0.324*	0.38*	0.13	0.38*	0.27	0.21
	E6	0.35*	0.12	0.15	0.23	0.29	0.30	0.20	0.04
	E7	0.06	0.30	0.22	0.14	-0.07	0.17	0.23	0.18
	E8	0.39*	0.33*	0.38*	0.25	0.03	0.39*	0.31	0.36*
	E9	0.30	0.39*	0.43**	0.25	-0.04	0.28	0.21	0.25
	E10	0.32*	**0.53****	0.25	0.22	0.31	**0.54****	0.49**	0.10
	E11	0.19	0.45**	0.43**	0.26	0.18	0.46**	0.46**	0.20
	E12	-0.23	-0.03	0.12	0.08	-0.33	-0.03	0.05	0.26
	E13	0.47**	0.45**	0.41*	0.23	0.29	**0.55****	**0.55****	0.27
	E14	0.33*	0.08	0.15	0.10	0.03	0.23	0.07	0.13

Note. C1 = communication. C2 = leadership. C3 = teamwork. C4 = adaptability. C5 = initiative. C6 = problem-solving. C7 = decision-making. C8 = planning. E1 = emotional self-awareness. E2 = achievement orientation. E3 = adaptability. E4 = emotional self-control. E5 = positive outlook. E6 = empathy. E7 = organizational awareness. E8 = conflict management. E9 = coach and mentor. E10 = influence. E11 = leadership. E12 = teamwork. E13 = global thinking. E14 = recognizing patterns.
*Significant to level 0.05 (bilateral). **Significant to level 0.01 (bilateral).

Despite the high number of significant correlations, they are either low or medium level. The correlation between influence and communication is lowest (0.32) and the highest is emotional control and adaptability (0.67). Empathy also shows a low correlation, only correlating to communication (0.35); recognizing patterns shows a low correlation to communication (0.33); and teamwork only correlates to initiative (0.33). Furthermore, emotional control shows more significant correlations than the other variables, seven in total, although all of them are of low type (varying between 0.35 with leadership and 0.45 with initiative).

Influence has a low correlation with leadership (0.53), problem-solving (0.54), and decision-making (0.49). Global thinking shows low correlation with problem-solving (0.55), decision-making (0.55), communication (0.44), CompeUEM-leadership (0.48), and CompeUEM-teamwork (0.41). Positive outlook has a low correlation with communication (0.4), teamwork (0.32), adaptability (0.38), and problem-solving (0.38), and coach and mentor with CompeUEM-teamwork (0.43) and leadership (0.39). The correlation is low between the medians of both questionnaires in leadership (0.45) and problem-solving (0.39) and nonexistent in teamwork. Self-awareness and organizational awareness do not correlate with any other variables.

Table 7 shows the correlations between the LPA-Q and ESCI-U.

Table 7. *Pearson Correlation Between the Evaluated Competencies With the LPA-Q and ESCI-U Questionnaires*

		LPAQ									
		Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
ESCI-U	**E1**	0.01	0.04	0.07	0.25	0.05	0.40*	0.13	0.26	0.01	0.04
	E2	0.29	0.31	0.50**	0.50**	0.61**	0.37*	0.64**	0.59**	0.29	0.31
	E3	0.29	0.56**	0.67**	0.53**	0.42*	0.54**	0.59**	0.32	0.29	0.56**
	E4	0.11	0.23	0.28	0.14	0.04	0.31	0.06	0.19	0.11	0.23
	E5	0.15	0.15	0.22	0.27	0.28	0.37*	0.51**	0.45*	0.15	0.15
	E6	0.41*	0.29	0.21	0.10	0.13	0.30	0.18	0.33	0.41*	0.29
	E7	0.38*	0.40*	0.62**	0.47**	0.48**	0.44*	0.51**	0.39*	0.38*	0.40*
	E8	0.30	0.14	0.52**	0.27	0.15	0.46**	0.48**	0.39*	0.30	0.14
	E9	0.33	0.36*	0.62**	0.44*	0.25	0.57**	0.57**	0.58**	0.33	0.36*
	E10	0.32	0.12	0.27	0.20	0.07	0.39*	0.15	0.12	0.32	0.12
	E11	0.32	0.28	0.46*	0.46**	0.46**	0.51**	0.43*	0.43*	0.32	0.28
	E12	0.22	0.29	0.43*	0.26	0.51**	0.48**	0.14	0.34	0.22	0.29
	E13	0.47*	0.20	0.42*	0.48**	0.14	0.59**	0.21	0.23	0.47*	0.20
	E14	0.39*	0.25	0.14	0.06	-0.01	0.26	0.39*	0.15	0.39*	0.25

Note. Q1 = written and verbal communication. Q2 = adaptability. Q3 = teamwork. Q4 = applying knowledge in practice. Q5 = self-learning. Q6 = leadership. Q7 = global thinking. Q8 = entrepreneurial spirit. Q9 = planning and time management. Q10 = enthusiasm and passion. E1 = emotional self-awareness. E2 = achievement orientation. E3 = adaptability. E4 = emotional self-control. E5 = positive outlook. E6 = empathy. E7 = organizational awareness. E8 = conflict management. E9 = coach and mentor. E10 = influence. E11 = leadership. E12 = teamwork. E13 = global thinking. E14 = recognizing patterns.
* Significant to level 0.05 (bilateral). **Significant to level 0.01 (bilateral).

As the data show, the correlations between the evaluated variables in both questionnaires are mainly low and moderate types, with the highest correlations between flexibility and teamwork (0.67), achievement orientation and global thinking (0.64), and teamwork and organizational awareness (0.62). The lowest correlation is registered between positive outlook and leadership (0.37).

LPA-Q-leadership has the highest correlation with other variables, although of low and moderate types: self-awareness (0.40), achievement orientation (0.37), flexibility (0.54), positive outlook (0.37), organizational awareness (0.46), problem-solving (0.46), coach and mentor (0.57), leadership (0.51), teamwork (0.48), and global thinking (0.6). There is a moderate correlation between both questionnaires' measures in teamwork (0.43), and leadership (0.51). In general, significant correlations exist among the competencies of different questionnaires, but they are very low. Moderate correlations only exist between problem-solving and leadership (0.64), decision-making and leadership. (0.73), adaptability and emotional control (0.64), achievement orientation and global thinking (0.64), and flexibility and teamwork (0.67).

To determine if there is any agreement among different instruments, a factor analysis was performed on the main axes with a Varimax rotation on the predictor variables. The master adequacy measure obtained was the KMO (Kaiser-Meyer-Olkin): 0.903. Bartlett's test of sphericity is significant, Chi- squared = 3972.79 < 000. The factor analysis was performed with 30 transversal competencies. The factor solution obtained shows four factors that explain 74.21% of the variance. Table 8 shows the rotated component matrix.

Table 8. *Rotated Component Matrix*

	Component						
	1	2	3	4	5	6	7
LPA-Q - Enthusiasm and Passion	**.891**	-.071	.200	-.020	.153	.097	.103
LPA-Q - Planning and Time Management.	**.872**	.046	.112	.041	.149	.182	.096
ESCI-U - Achievement Orientation	**.783**	.095	-.028	.281	.060	.005	.111
LPA-Q - Applying Knowledge in Practice	**.767**	.156	.449	.046	-.094	.106	.140
LPA-Q - Global Thinking	**.762**	.253	.081	.121	.028	.026	.219
LPA-Q - Teamwork	**.759**	.279	-.140	-.078	.093	.393	.096
LPA-Q - Self-Learning	**.741**	.038	.414	-.034	.143	.242	-.228
LPA-Q - Entrepreneurial Spirit	**.617**	.014	**.588**	.180	.158	.013	-.080
ESCI-U - Flexibility	**.574**	.499	-.092	.235	.254	.225	.055
ESCI-U - Teamwork	**.397**	.239	.204	.231	.357	.299	-.131
ESCI-U - Influence	-.093	**.885**	.227	.012	-.058	.008	.001
ESCI-U - Conflict Management	.250	**.765**	.027	.278	.175	.006	.263
ESCI-U - Global Thinking	.079	**.733**	.357	.016	-.131	.234	.232
ESCI-U - Leadership.	.350	**.667**	.217	.213	.049	.098	-.056
ESCI-U Organizational Awareness	.476	**.628**	-.077	.210	.000	.147	.007
ESCI-U - Emotional Self-Control	-.081	**.588**	.173	-.087	**.508**	-.005	-.379
ESCI-U - Empathy	-.161	**.490**	.118	.396	.292	.347	-.088
CompeUEM - Leadership	.346	**.465**	.204	-.293	.412	-.055	.304
CompeUEM - Decision Making	.277	.174	**.800**	-.094	.240	.197	.017
CompeUEM - Initiative	-.196	.100	**.798**	-.109	.207	-.295	-.200
CompeUEM - Problem Solving	.193	.270	**.782**	.109	.116	-.078	.162
LPA-Q - Leadership	.462	.242	**.662**	.259	.022	.286	.036
ESCI-U - Self-Awareness	.121	-.015	.156	**.859**	-.225	-.060	.044
ESCI-U - Positive Outlook	.253	.080	.063	**.825**	.248	-.104	.071
ESCI-U - Recognizing Patterns	-.090	.438	.149	**.768**	-.045	.178	.054
ESCI-U - Coach and Mentor	.474	.284	-.036	**.559**	.272	.093	.243
CompeUEM - Adaptability	.071	.109	.374	.072	**.830**	-.007	-.139
CompeUEM - Teamwork	.384	-.116	.146	.001	**.703**	.080	.176
LPA-Q - Written and Verbal Communication	.041	.187	.259	-.054	-.120	**.828**	.203
LPA-Q - Adaptability	.351	.092	-.169	.051	.443	**.688**	-.044
CompeUEM - Planning and Organization	.185	.124	-.152	.113	-.124	.097	**.860**
CompeUEM - Communication	.129	.064	**.513**	.098	.173	.077	**.669**

The factor structure obtained could be associated with the following definition of factors: Factor I (management skills), Factor II (social skills or relations with others), Factor III (problem-solving), Factor IV (self-management), Factor V (resilience), Factor VI (conciliation), and Factor VII (structuring of information).

Factor II (social skills and relations with others) groups 10 of the competencies (33.33% of the competencies) and therefore has a heavier weighting than all others, followed by Factor III (problem-solving), which combines eight competencies (26.67% of the competencies studied). Next, two factors, Factor III (problem-solving) and Factor IV (self-management), show a similar weighting, with each grouping five competencies (16.67% of the competencies studied, respectively). Finally, Factor V (resilience), Factor VI (conciliation), and Factor VII (structuring of information) have the same weighting, with two competencies each (6.67% of the competencies studied, respectively).

DISCUSSION

The results that emerge reveal the lack of commonality with regard to the assessment of competencies across different assessment measures. The factor structure revealed does not show a clear structure, and the different correlations found among the different aspects demonstrate a high degree of overlap.

The different competencies are very interrelated, and it is difficult to believe that enthusiasm is not related to achievement orientation, empathy to emotional control, and decision making to problem-solving.

When we speak of competencies we are not talking about pure concepts. If we start from the basis that the competencies' own definitions can vary from one model to another, then it causes the systems to evolve and behave in different ways.

As we have been able to observe, significant correlations do exist among the competencies of different questionnaires, but they are very low. The only moderate correlations are between problem-solving/leadership, decision-making/leadership, adaptability / emotional control, achievement orientation / global thinking, and flexibility/teamwork.

No significant correlations were demonstrated among the competencies that formed part of the theoretical model, which indicates that these variables, despite the similarities in naming and describing the competencies, were measuring different constructs. As Corominas et al. (2006) states there is conceptual and terminological confusion and imprecision in the competency concepts. The low significance of the correlation between the competency assessment performed by the university teaching staff through a study plan, the self-evaluation of the students and academic performance, evidences the difficulties entailed in the proper implementation of a competency-based learning model even in the programs that are being adopted in the European Higher Education Area.

These results are similar to those found by Ayza, Rodríguez, Dubreuil, and Cebrián (2010), who considered that these differences were produced regardless of knowledge discipline, gender, and level of studies. Villa and Poblete (2007) indicated that the origin of the difficulties was the deficient definition and clarification of the competencies in the lesson plans, as well as the assessment model by which the competencies were subsequently measured. Similarly, Tyler (1942) had already pointed out the importance of the definition of the learning objectives and the testing as key to the success of educational programs. The work to correctly evaluate the

competencies is in itself difficult. Millán Nuñez-Cortés, Palés Argullós, and Rigual Bonastre (2014) indicate the poor accessibility of the traditional instruments to evaluate behaviors with such a high level of complexity of an emotional and cognitive nature.

In the specific case of the questionnaires and test, Urbina (2007) points out that they might be suitable as a predictor but inadequate for the assessment of performance in higher education, where a multitude of different factors have to be taken into account. Neither, it appears, is the shortage of clear and standardized indicators in the universities' competency assessment systems helping the teaching staff (García San Pedro, 2013), and therefore, it might be expected that the teaching staff feel better prepared to evaluate technical competencies in their professional field than general competencies that have a greater psychological component and do not reflect the level of development obtained in the student's final mark.

The low correlation among the same competencies evaluated under different tests demonstrates how complex the definition and measurement of these constructs is. Lévy-Leboyer (2000) had already affirmed that this was one of the principal concerns of the management competency models. This problem has long been understood in the domain of psychology in defining personality factors, which has been conceptualized from a multitude of theoretical perspectives with various levels of abstraction and extent (John and Srivastava, 1999).

There is no doubt that as regards competencies, there is still a need for research projects in the academic world that enable a more nuanced and in-depth approach to the concept in an objective and scientific manner (Marín, Berrocal Berrocal, & Sanz Gómez, 2003), as well as to understand the current problematic that underlies the concept, of its implementation as a learning model, and to the correct assessment of the competencies.

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