

Higher Officials' Training Needs on Managerial Competencies in Spanish Universities: Preliminary Findings

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Abstract

Problem Statement. What the self-perceptions of higher officials in Spanish universities are about the main competencies required in their daily tasks.

Purpose of Study. To analyze what the main competencies are in the professional behaviour of higher officials at Spanish universities. The improvement of their competencies through a systematic educative framework would be based on what gaps are found to exist in their competencies.

Methods. Principal component analysis: After dealing with sample size, we have analyzed the Kaiser-Meyer-Olkin (KMO) statistic of sampling adequacy and the Bartlett's Test of Sphericity. After that, we ran the component extraction and the interpretation of the components based on oblique rotation. The last task was to check the reliability of the scale used.

Findings and Results. Spanish universities' higher officials consider that four competencies have paramount relevance now: organizational transformation (command of change management models, total quality management, and Higher education finance models); strategic management (strategic planning, general and team management); leadership (self-confidence, impact and influence on others); theoretical reflection previous to action (command of achievement orientation, conceptual thinking, information seeking, and directiveness/assertiveness).

Conclusions and Recommendations. Context is a key issue of leader effectiveness in order to develop an attuned scheme of competencies, that

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is, a set of competencies aligned with stakeholders' perceptions about what effective leadership is. In the past, academic leaders exerted their role by applying routine behaviours based on command-and-control schemes within the limits established by the principal stakeholder surveillance. However, the literature increasingly recognizes that single prescriptions for leadership excellence no longer work.

When the winds of change blow harder, leaders must be equipped with a broad and complex array of knowledge and skills, that is, a brand-new portfolio of leadership competencies. This must be the goal for any formal training program.

Keywords: *Spanish universities, higher education, leadership competencies.*

An academic leader is a person in a position to make a difference—in the quality of the institution; in the lives of the faculty, staff, and students; and in the community served by the university, as well as in other constituents (Diamond, ed., 2002). She or he must be committed to this change process, which requires inspiration, motivation, aspiration, relationship building, and creative capabilities (Brown, 2001). This commitment requires a dynamic relationship between individual, social, and organizational spheres (Bolden, Petrov, & Gosling, 2008) where a number of competencies will be required.

Brownell (2006) considers that several “common competencies” combined with “distinctive competencies” define the leadership role within higher education (HE) environments. This indicates that fundamental knowledge and skills are combined with key personal characteristics present in every HEL (Higher Education Leader). Common and distinct competencies can be built to attain the distinctive features of leadership effectiveness in HE (Bryman, 2007a). The expectations among university employees define what effective leadership represents. For Kızıltepe (2010), to promote an “active citizenry” approach among students should be a main purpose of higher education institutions. Tierney (1989) considers that symbolism plays a central role. If HELs must manage the symbolic organizational aspects, then it would be useful to know what characteristics leaders perceive themselves to need and what activities are involved to realize university constituents' perceptions. We advocate for this argument in our research by using a survey administered to HELs on their perceptions about competencies.

The Literature on Academic Leaders' Competencies

In order to understand the job of HELs, we first reviewed definitions of “leader” to clarify what an academic leader is. Then, we offered an overview of the study of leadership in higher education institutions. This first section of the literature review ends with a reference to leadership typologies. In the second, we offer a summary of key findings related to the content of HE leadership focused on required competencies.

The Job of HELs: Leading Colleges and Universities

Leadership is exceptionally complex and multifaceted (Chafee, 1989; Richards, 2008) in the specific HE environment. The primary roles of HELs are creating vision, communicating policy, and deploying strategy throughout the institution (Davies, Hides, & Casey, 2001). One of the salient characteristics of specific environments in HE is a strong resistance to leadership (Birnbaum, Bensimon, & Neumann 1989) related to the existence of dual control systems, conflicts between academic and administrative authority, and goals that are not well defined. Mech (1997) underlines the ambiguity of the HE academic management process. Neumann and Bensimon (1990) rationalize about the blurred borders of desired university leadership. If college and university constituencies do not agree on what sound leadership must be (Pounder, 2001), then different versions of the presidential role will be developed. A possible way to analyze these different versions consists of revising the general purposes of leadership typologies relevant to HE environments.

There are diverse approaches to this issue in the literature. Bess and Goldman (2001) offer a comprehensive framework to explain leadership behaviour throughout the entire educational sector. Their scheme comprises five leadership theories (situational, charismatic, transformational, path-goal, and leader-member exchange). Some of them are found also in other papers. One of the more pervasive is the transformational model of leadership. Its main characteristics are idealised influence or charisma; inspirational motivation; individual consideration; intellectual stimulation; behavioural integrity; status quo challenging (risk taking, encouraging other's ideas, fostering experimentation, and accepting mistakes as opportunities to learn); and acts of caring directed toward subordinates (Pounder, 2001). Smith and Wolverson (2010) develop a higher-education leadership model with five components (leadership competencies): analytical, communication, student affairs, behavioural, and external relations. Some interesting leadership typologies that can be developed in HE environments are summarized here in Table 1.

Table 1

Leadership Typologies and Higher Education

<i>Typology</i>	<i>Conceptualization</i>	<i>References</i>
Transformational	Charisma, inspirational motivation, individual consideration, intellectual stimulation, behavioural integrity.	Pounder, 2001
Transactional	To highlight the positive features of transformational leadership.	Pounder, 2001
Adaptive	Adaptive challenge is complex, answers are not known, implementation requires learning.	Glover, Friedman, & Jones, 2002; Heifetz, Kania, & Kramer, 2004
Distributed	Development of leadership talent at all organizational levels is related to	Gregory, 1996; Petrov, Bolden, & Gosling, 2006

	organizational culture and context, control and autonomy, and organizational structures.	
Blended	An effective kind of leadership in higher education guided by a mix of individual and collective leadership.	Collinson & Collinson, 2007; Bolden, Petrov, & Gosling, 2008
Dynamic	The result of a leader's work is focused on people and process.	Brown, 2001
Servant	An inclusive type of leadership involving everyone on the campus.	Kezar, 2001

Is it possible to offer an integrated vision of leadership in HE? An advisable answer is to look for that model showing the best fit with HE environments. It is clear that these environments have very distinct characteristics worldwide. Thus, it can be argued that leadership is contingent to specific environments. However, these models must be capable of generalization (Chafee, 1989; Birnbaum, Bensimon, & Newman, 1989). For instance, faculty expects that leaders do not restrict their autonomy (Erdem, Erendağ Sümer, Aktaş Alan, & Baser, 2011). Commitment and team work within the institution are also needed to develop leadership (Gazi, Silman, & Birol, 2008). Autonomy allows academicians to devote their time and efforts to research, as well as to instruction in order to complement it (Odabaşı, Kurt, Kabakçı Yurdakul, Firat, & İzmirli, 2012). Perhaps leadership integration could be based on the consideration of the intensity of the expectations among university employees and constituencies (Bryman, 2007a). Different expectations of the leadership role are held at different levels of a university's organizational hierarchy. At the academic leadership level, people agree on the importance of the visionary aspects of the role, but faculty and staff are prone to a leadership style that respects their autonomy. Then, as Kerr and Jermier (1978) suggest, certain aspects of the individual or the organization reduce the importance of formal leadership by "neutralizing" the effects of the tasks of relationship-oriented leadership behaviours. Other situational variables not only neutralize those behaviours but also have a direct impact of their own on criteria variables through their influence over subordinates' attitudes, behaviours, and perceptions (Howell, 1997; Podsakoff & MacKenzie, 1997).

In summary, expectations about what the leadership role must be differ within the university, as do the perceptions of its realization. Faculty and staff show resistance to highly directive leadership models. Then, combinations of transformational, distributed, and "substitutes for leadership" are adopted in a dynamic path influenced by the environmental turbulence level. For Pounder (2001, 288), more-stable university environments are related to transformational leadership, and those that are less stable are linked to transactional leadership. In any case,

Mumford and his colleagues advocate for a “skills-based model of leader performance.” Within this model, skills are seen as developing as a function of the interaction between traits and the experience accumulated passing through several environments (Mumford et al., 2000). The key to the model is creative problem-solving skills, and leaders must command these in order to identify significant organizational problems and formulate solutions to those problems (Mumford, Zaccaro, Connelly, & Marks, 2000).

The Content of HE Academic Leadership

A set of competency models has been applied, or specifically developed, within the HE realm. Before we discuss them, two issues must be addressed. First, what a competency is, and second, if it is recommended to use competency models to study leadership roles. Within the vast literature on the concept of competencies, Shippmann et al. (2000) offer a useful starting point. They consider that “competencies” today is a term “... [T]hat has no meaning apart from the particular definition with whom one is speaking.” (p. 706). The lack of a proper definition could be overcome by confronting some of the more generally used definitions. Thus, it is possible to gather the following descriptions for the term “competencies”:

- A combination of knowledge, skills, abilities, motivation, beliefs, values, and interest (Fleishman, Wetrogan, Uhlman, & Marshall-Mies, 1995). Knowledge, skill, ability, and other characteristics (the so-called KSAOs) associated with high performance on a job (Mirabile, 1997).
- A mixture of motives, traits, self-concepts, attitudes or values, content knowledge, or cognitive behaviour skills; any individual characteristic that can be reliably measured or counted and that can be shown to differentiate superior from average performers (Spencer, McClelland, & Spencer, 1994), and
- A written description of measurable work habits and personal skills to achieve work objectives (Green, 1999).

We deal now with the plausibility of using those models to study leadership roles. Hollenbeck, McCall, and Silzer (2006) offer an interesting set of pros and cons about the use of those models. When competency models are accepted uncritically and are used to build around the “great person with great results” idea, avoiding the particular circumstances of the organization (Yammarino, 2000), a specific part of the equation that represents leadership effectiveness is obliterated. In summary, competency models have proved extremely useful in describing effective action within unstable environments (Mumford et al., 2000). Leadership depends on an interactive package of complex skills (Mumford, Zaccaro, Connelly, & Marks, 2000) that must be studied while taking into account the additional competencies demanded by university leadership, a requisite not widely considered (Spendlove, 2007). Some relevant HE competency models’ main issues are displayed in Table 2.

Table 2:
Competency Models Useful for Higher Education Institutions

<i>Reference (Author, year)</i>	<i>Highlights</i>
Brown, 2001	Effective leaders show both managerial and leadership behaviours and qualities.
Blancero, Boroski, & Dyer, 1996	Competency model composed of three parts: core competencies, leverage competencies, and role-specific competencies (in a much larger number)
Bryman, 2007a	11 Facets of Leadership (direction, trustworthiness, role model, participation, communication, representation, values instillation, protecting autonomy, integrity, support-structures creation, collaboration)
Bryman, 2007b	List of behaviours associated with leadership effectiveness at departmental level (adds to the 11 facets the following: advancement of the department's cause with respect to internal and external constituencies, resource provision for adjusting workloads to stimulate scholarship and research, and department's reputation enhancement)
Holland, Chait, & Taylor, 1989	Board of trustees competency model (understand institutional context, build capacity for learning, board development, complexities recognition, guard the governance process, shape institutional direction)
Martinez, 2008	25 competencies for HE policy analyst (comprising qualitative and quantitative analytical, team working, communication, negotiation, project management, budget, awareness of public concerns, knowledge of HE environment, and networking skills)
McDaniel, 2002	Four competency categories: leadership context, leadership content, leadership processes, and leadership communication competencies
Ruben, 2006a	Leadership Competencies Scorecard Inventory (LCSI) comprised of analytic, personal, communication, organizational, and positional competencies
Ruben, 2006b	Leadership Style Inventory (LSI) for leaders self-assessment (questions about providing vision and direction, communication and collaboration, asking for feedback, group work, challenging ideas, confidence and self-assurance, ethics)
Spencer & Spencer, 1993	A Generic Competency Model of Managers (13 competencies: impact and influence, achievement orientation, teamwork and cooperation, analytical thinking, initiative, developing others, self-confidence, directiveness/assertiveness, information seeking, team leadership, conceptual thinking, organizational awareness and relationship building, expertise/specialized knowledge)

We have used some ideas gleaned from the main investigation trends to design our research, and, specifically, the quantitative scale. Three research trends can be observed in the vast quantity of literature related to leaders' competencies (Martinez, 2008). First, some studies follow the seminal work by Hemphill (1960), which asks an expert group to devise a list of competencies. Other researchers combine literature reviews with experts' opinions. And, lastly, some use an empirical approach based on exploratory factor analysis. The advantages of this kind of analysis are listed by Martinez (2008) as follows:

- Research designs are focused on specific groups of professionals, with some unknown aspects in their work.
- These researches do not try to test some hypothesized model but rather seek to know more about the ill-defined issues. So, it is not advised to employ confirmatory factor analysis.
- The main benefit of exploratory factor analysis is to gather competencies. Then, when groupings emerge from the data, researchers can propose ways of classifying the models.

Therefore, Martinez uses exploratory factor analysis because it is employed by most of the peer-reviewed literature on the topic. In his research on competencies of HE policy analysts, he started from a Delphi method with an advisory group of five. Their responses allowed Martinez to devise a list of 25 competencies, and then to develop a questionnaire according to a 5-point scale. With 135 responses, he obtained an effective response rate of 20.1% and ran an exploratory factor analysis. As a consequence, certain competencies were "grouped" together in a four-factor solution. Following Kachigan's (1991) advice about the interpretation of factor loadings on the researcher's subject-matter knowledge, Martinez (2008) considers four factors (*external-technical, internal-technical, internal-interpersonal, and external-technical/interpersonal*).

This article aims to investigate the following research question:

1. What are the self-perceptions of higher officials (Planning and Quality Vice Presidents and General Managers) in Spanish universities concerning the main competencies present in their daily tasks?
2. Any effort to improve their skills with a systematic educative framework requires knowing what those competencies are.

Method

Participants

A sample of 400 university higher officials representing all 50 Spanish public universities was randomly selected. We have obtained 80 valid responses to the questionnaire. The overall response rate was 20 %.

Instruments

The base for the instrument development was twofold: a literature review and discussion groups with HELs. The project was initiated in April 2008 and ended in October 2010. Discussion groups held preliminary sessions in order to analyze the first draft of the questionnaire. Following their work, a 1-to-5, Likert-based scale was prepared, where 1 means “this competency/skill is alien to my behaviour,” and 5 means “I always use this competency/skill in my behaviour.”

Procedure

The survey was administered online, and the data was analyzed and discussed with the experts up until October 2010. Then, the suitability of the data for factor analysis was examined. The first issue in this stage was to study sample size adequacy. Then the analysis was done using *SPSS 19 for Windows*[®] to decide how many factors to retain and, lastly, to pick up item loads on factors. Following the usual considerations, those items with loadings less than 0.4 were eliminated in the output. To determine the number of components, we have applied the usual criterion of selecting those components with eigenvalues exceeding 1. The accumulated variability explained by the four components selected rose to 68.51%. To facilitate the interpretation of the results and taking into account that some of the factors might correlate, an oblique rotation (direct oblimin) was employed. Thus, it is possible to verify the independence between factors analyzing the pattern matrix and the structure matrix obtained from the splitting of the factor matrix as well as the component correlation matrix (Table 3). With these data, it is not possible to assume independence between factors, so it is advisable to apply the obliquely rotated solution. Our procedure has an exploratory character, derived from the adopted methodology, and also from the size of our data set. So, the results can suggest future research avenues, and we must be cautious about direct applications of them on real institutions.

Table 3

Component Correlation Matrix

Component	1	2	3	4
1	1.000	-.268	.073	.493
2	-.268	1.000	-.078	-.269
3	.073	-.078	1.000	.277
4	.493	-.269	.277	1.000

Extraction Method: Principal Component Analysis

Rotation Method: Oblimin with Kaiser Normalization

Results

The twenty variables that constitute the scale were analyzed through principal component analysis. Following Field (2006), we have eliminated those variables for which the majority of the significance values are greater than .05. So, we have retained twelve variables. The first issue to study is sample size. In the factor analysis literature, it is easy to find a "rule of thumb" about sample size based on the idea that the researcher has at least ten participants per variable. However, several authors offer a quite different view. Arrindell and van der Ende (1985) consider that changes in the participant-to-variable ratio have little impact on the stability of factor solutions. Guadagnoli and Velicer (1988) underline that the absolute magnitude of factor loadings has a relevant impact in determining reliable factor solutions; that is, if a factor has four or more loadings greater than .6, then results are reliable regardless of sample size. MacCallum, Widaman, Zhang, and Hong (1999) conclude that when communalities become lower, a higher sample size is needed. With all communalities above .6, small samples (less than 100) may be perfectly adequate. Hogarty et al. (2005) agree and show that there is not a minimum sample size to attain an acceptable quality in factor analysis, although they suggest examining multiple indices of the quality of factor solutions. MacCallum, Widaman, Preacher, and Hong (2001) consider that, when communalities are high, the recovery of population factors in sample data is usually very good for almost any sample size, level of over-determination of the factors, or the presence of model error. They say that researchers can be confident when using samples with a size that is smaller than that traditionally recommended if communalities are high. Mundfrom, Shaw, and Ke (2005) think that there is little empirical evidence for the traditional "rule of thumb," so trying to offer an absolute minimum necessary sample size is probably unrealistic. They show that with high communalities and a "variable-to-factors" ratio of 7, samples with a size of $n = 55$ allow researchers to attain good results. In summary, taking into account that variables in our data register a mean of communalities slightly below .7, we can consider that a sample size of $n = 80$ is adequate to the component analysis.

Then we must examine the Kaiser-Meyer-Olkin (KMO) statistic of sampling adequacy, the diagonal elements of the anti-image correlation matrix, and the Bartlett's Test of Sphericity. Following the usual criteria, our KMO statistic can be labelled as "good." In the anti-image correlation matrix, all the diagonal elements are above .5, thus we cannot consider excluding any variable from the analysis. Lastly, the Bartlett's Test of Sphericity examines the null hypothesis that the original correlation matrix is an identity one. Our Bartlett's result is highly significant ($p < .001$), and therefore there are some relationships between variables that we can analyze.

Table 4
KMO and Bartlett's Test of Sphericity

Kaiser-Meyer-Olkin measure of sampling adequacy	.753
Bartlett's Test of Sphericity	
Approximate χ^2	331.839
Df	66
Sig.	.000

The following step in the analysis is component extraction. We decided to retain all those with eigenvalues greater than 1, applying the Kaiser's criterion. This one is accurate when the number of variables is less than 30, and the resulting communalities are all greater than .7 (Field, 2006). In our data, seven communalities are below that cutoff point of .7. However, the same author also suggests calculating the average of communalities before the application of Kaiser's criterion. In our data, this average attains .685, that is, slightly below .7. Consequently, we accept cautiously the extraction of four components from our data. In order to validate this decision, we have also checked the percentage of non-redundant residuals with absolute values above .05. Following Kaiser, this percentage should be less than 50%. Our result is 47 %, with 31 residuals above the .05 limit.

Then we worked with the interpretation of the components. To facilitate this task, we ran the component rotation. Thus, the variable loadings clarify the structure of the model. The method most commonly used is orthogonal rotation, since it tends to be easier to interpret its results. In factor analysis, orthogonal rotation allows the rotation of factors, keeping them independent. Before rotation, all factors do not correlate at all, and with orthogonal rotation they are still independent, but with oblique rotation the factors are allowed to correlate.

We have selected the oblique rotation alternative because the theoretical discussion in section 2 shows that factors might correlate due to their interrelationships. As a consequence, we have found four factors. When oblique rotation is done, the factor identification can be based on the results showed in the *pattern matrix*, as well as in the *structure matrix*. For each variable, we have observed the component for which the variable has the highest loading; also, for each component, we have seen the variables that load highly onto it (that is, loadings above .4 in absolute value). The results appear in Table 5. The items in each component, along with their means, standard deviations, item total values, component and oblimin factor load, are shown in Table 6.

Table 5
Results of The Factor Analysis: Total Variance Explained

Component	Initial eigenvalues			Extraction sums of squared loadings			Rotation sums of squared loadings
	Total	% of variance	Cumulative %	Total	% of variance	Cumulative %	Total
1	4.069	33.912	33.912	4.069	33.912	33.912	3.256
2	1.606	13.382	47.294	1.606	13.382	47.294	2.023
3	1.469	12.243	59.537	1.469	12.243	59.537	1.952
4	1.077	8.973	68.510	1.077	8.973	68.510	3.097
5	,874	7.283	75.793				
6	,587	4.890	80.684				
7	.526	4.381	85.065				
8	.469	3.905	88.969				
9	.442	3.687	92.656				
10	.398	3.316	95.972				
11	.336	2.797	98.769				
12	.148	1.231	100.000				

Extraction method: Principal component analysis

Table 6*Means, Standard Deviations (SD), item total, component, and rotation loadings*

<i>Factors and Items</i>	<i>M</i>	<i>SD</i>	<i>Item total</i>	<i>Component factor load</i>	<i>Oblique factor load</i>
Factor 1: Organizational transformation ($\alpha = .835$)					
20 Change management model skills	3.86	.93	.252	.693	.650
17 Total quality management skills	3.94	1.07	.376	.750	.974
14 HE finance models	4.06	1.02	.324	.768	.867
Factor 2: Strategic management ($\alpha = .617$)					
18 Strategic planning	4.03	.90	-.367	-.578	-.586
13 General management capabilities	3.84	.89	-.332	.416	-.527
15 Team management skills	3.85	1.11	-.544	-.878	-.894
Factor 3: Leadership ($\alpha = .622$)					
2 Self confidence	4.10	.83	.379	.456	.674
8 Impact and influence capability	4.14	.86	.453	.774	.760
Factor 4: Theoretical reflection previous to action ($\alpha = .677$)					
4 Total quality management skills	3.91	.87	.312	.677	.744
10 Achievement orientation capability	3.75	.90	.347	.781	.838
11 Conceptual thinking capability	3.76	.83	.287	.736	.687
12 Information-seeking capability	3.86	.89	.309	.473	.699

Finally, we must check the reliability of the scale used. If our questionnaire is reliable, then any one item will not affect the overall reliability significantly. The results show that any item causes a great decrease in Cronbach's Alpha if it is deleted.

Discussion and Conclusions

We have tried to avoid the error of focusing on only the traits and capabilities of individual leaders, instead of considering the significance of the context for leadership, in line with Bolden, Petrov, and Gosling (2008). Context is a key ingredient of leaders' effectiveness through *cursus honorum*, that is, a collection of jobs probably chained, similar to the "presidential career ladder" concept coined by Wessel and Keim (1994). Leaders' self-perceptions must be aligned with stakeholders' perceptions about what the right amount of top-down teleological leadership is. These perceptions are related to the culture mix present in the university. When the collegial culture dominates, to foster mutual supportiveness and to maintain autonomy are generally perceived as the main desiderata for HE leaders. Developmental culture calls for the creation of an environment for faculty and staff to fulfil their potential and interest in their work (Bryman, 2007a).

We have found four main competencies present in the professional behaviours of HE officials at Spanish universities. To know them is a prerequisite to designing an integrated education program. However, further research is needed to determine what the necessities are, that is, what the differences between competencies exerted and competencies needed nowadays are. It is also important to know if the self-perceptions correspond with the competencies shown in office.

The first factor, *organizational transformation*, explains 33.9 % of the total variance of the whole questionnaire. According to Spencer and Spencer (1993), items included are the skills on change management models, Higher education finance models, and total quality management. All of these items must be considered in a fragmented and hostile environment characterized by powerful forces trying to change the status quo. A new culture designed to face the need for change must be developed to transform the *collegial culture* (Bergquist & Pawlak, 2008), which is the traditional and most pervasive culture in academia.

The second factor, *strategic management*, gathers competencies and skills on general management, team management, and strategic planning, and explains 13.4% of the total variance of the whole questionnaire. These items are clearly related to the *managerial culture* (Bergquist & Pawlak, 2008). Historical and environment-related reasons could explain this result (the fast pace of Spanish universities towards a growing internationalization, the wide impact in the last decades of the New Public Management, and a narrow theoretical vision of higher officials implicitly based on a

mechanistic organization model). Thus, they think that their daily work is developed with a traditional-tools array applied from a top-down perspective.

The third factor, *leadership*, is comprised of skills and competencies on self-confidence, impact and influence, and explains almost all of the 12.2% of the total variance of the whole questionnaire. As a matter of fact, competencies linked to motivation focused on people's commitment to a vibrant vision, as well as on people's growth within large teams based on working long hours, are seen as key success factors.

The fourth factor, *theoretical reflection previous to action*, is composed of competencies on achievement orientation, directiveness/assertiveness, conceptual thinking, and information-seeking. It explains 8.9% of the total variance of the whole questionnaire. Here rest some competencies linked to long-term management, as long-standing influence over subordinates, initiative, self-confidence, and result orientation.

While this study provides a survey instrument that the researchers could use in studying higher education leaders, the strength of this instrument should be considered in light of this study's limitations. The return rate was low and, as a result, the statistical analyses were conducted with a small sample size. Future research could replicate this study with a larger sample and test to see if the structure of the questionnaire holds the same.

In summary, we have presented the self-perceptions of higher officials in Spanish universities of the main competencies used in their work. Their improvement through a systematic educative framework could be based on these results. Furthermore, additional comparative research could be done on the lessons derived from other higher education systems.

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