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**International Academic Mobility. A Study
About the Assessment of Two Social
Competencies: Leadership and Resilience**

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ABSTRACT

The objective of this qualitative study was to observe what importance is assigned by university doctors, that is, those who achieved the highest level of education, to two of these social competencies: Resilience and Leadership. The population was comprised of PhDs from Argentina and other countries who participated in internationalization programs in France. The hypothesis is that the highest level of education achieved, added to the immersion in another culture after having undergone a national process of selection before the mobility academic programme, could result in a greater valuation of the so-called social and management competencies. The assessment of Resilience and Leadership was observed through different techniques, specially the hierarchical evocations technique. The findings show a) Resilience is almost not mentioned despite the fact that the Emotional-Relational dimension enters the core of the representations of PhDs about the fundamental competencies to be developed by universities and companies in the field of hard and soft sciences; b) the same happens with Leadership. These results reveal the gap or distance between the University with respect to the needs of the scientific and productive system.

Keywords:

Academic Mobility, Resiliency, Leadership, Social Competencies, PhDs

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The author's research, starting in the 1990s, is framed in the factors linked to the Quality of the University in its relationship with the productive and scientific context. At that moment, Quality and Quality Assessment became the axis of the political-educational agenda in Argentina. The interest was placed in the analysis of the factors that impact – positively and negatively – the achievement of university students (graduates, delayed subjects in the system, and dropouts) and, indirectly, the quality of educational institutions and national innovation. The investigations covered more than 20 cohorts and 18 careers. They were carried out from a sui generis systemic perspective, which involves several psychosocial micro-theories as well as three levels: macro, meso and micro; observed in a self-sustained manner ([Aparicio, 2003, 2005, 2012, 2015a, 2015b](#)). The models included baseline, pedagogical-institutional, psychosocial, organizational and structural variables. We also worked with other populations (State and health personnel, teachers, students of different levels, magistrates, scientists, etc.)¹.

These investigations already showed the important weight that the competencies that I called two decades ago, “social” and “collective” had, both in Achievement and in facing adversity. Furthermore, the socializing instances were asked for their formation because they are not innate: the context influences their “co-construction” alongside the subject, feeding each other. The interactive perspective crystallized into its own theory in its latest version called “The Three-Dimensional Spiral of the Sens” ([Aparicio, 2015a, 2015b](#)).

Twenty-five years have passed, and in recent years, the OECD has shown the impact of these competencies in terms of learning among the 10 countries best located in the international ranking ([Agasisti et al., 2018; Mo, 2018; OECD, 2017a, 2017b, 2018a, 2018b, 2018c, 2018d](#)). In our context, however, both the findings of a first princeps study carried out with delayed university students and those obtained in three more recent complementary investigations – carried out with university students who were carrying out academic exchange in Europe – continue to show that some of these “psychosocial” competencies, they were not trained sufficiently. At least, the subjects were not made aware of the importance of some of them to face the adaptations required by the rapid changes and the “new normal” after Covid-19.

Furthermore, at an international level, efforts have been made to promote international mobility in a framework of increasing globalization in which insertion and permanence in the market depend, to a large extent, on the competencies developed. This transformation also required working at the level of what is recognized as Curriculum Internationalization. In 1998, the governments of Germany, France, Italy, and the United Kingdom signed the Sorbonne Declaration. The European Education Area (European Higher Education Area, EHEA, [Prague Declaration, 2001](#)) was created. This Declaration was preceded by the [J. Delors document \(1996\)](#) / Report to UNESCO of the International Commission on Education for the 21st Century. The constitution of a flexible university system was agreed upon in order to facilitate greater possibilities of training and employment through the recognition of degrees obtained in other countries.

¹ The findings were presented in multiple investigations, a 2nd doctorate at the Sorbonne University (France) and led to the obtaining of 2 qualifications (HDR) to direct research in Europe (field of Education and Organizational Psychology).

In the case of Latin America, the Alfa Tuning Latin America Project (2004-2007 and 2011-2013) was generated, a high-impact program that seeks inter-university collaboration between Europe and America. The objective was to train, particularly, generic and specific competencies to promote the personal and professional development of students (cf. Aparicio, 2024; Glavinich et al., 2020). According to the Merriam-Webster Dictionary, a verb “to tune” is to consider: a) generic competencies or abilities that every subject needs to implement in order to effectively resolve personal and professional life situations, being common to any university degree (ability to learn, to solve problems, to make decisions, interpersonal skills); b) specific competencies of each thematic area (for an analysis of the 27 generic and specific competencies, their descriptors and indicators), cf. Beneitone, (2007). Kallioinen (2010), in the context of European Higher Education, points out that the development of knowledge not only implies the acquisition of more knowledge but also operational and other skills that favor interaction, problem solving and professional development. It is not only about knowing to know (knowing how to know) but also about achieving knowledge for action (knowing how to do) and knowledge to live together (knowing to live together) (see Alonso et al., 2009; Alexander et al., 2017; Bingimlas & Hanrahan, 2010; Boekaerts & Cascallar, 2006; Blanco, 2009; Boix Mansilla, 2016; Boix Mansilla & Gardner, 2007; Bringle & Clayton, 2012; González & Wangenaar, 2003; Henseke & Green, 2016; Jimeno et al., 2016; OECD, 2016a, 2016b, 2017a, 2017b; OECD & ILO, 2018; Palmer et al., 2009; PISA, 2015; Roegiers, 2008; Villa & Poblete, 2011; Villarroel & Bruna, 2014; Magaña Medina, 2022). Among these competencies are Resilience and Leadership.

Literature Review

Resilience

Below, the aspects related to the notion of resilience and the transition from a static conception to a dynamic and processual one are discussed.

Resilience may be defined as the individual’s capacity to react to and endure adversities due to an adaptation process and in spite of the risks and such adversities themselves. All these elements are essential in terms of success and failure. We will not deal with the theory; on the contrary, we should clearly state that the capacity to resist pressure and lead a healthy life within an unhealthy environment *implies social and intrapsychic processes in which institutions and primary socializing instances play a fundamental role* (Aparicio, 2020a, 2020b; Cyrulnik, 2001, 2002; Puerta de Klinkert, 2002). Resilience is a personal and institutional construction, not inborn but shaped within a context. That is why it was included in our theoretical model and analyzed using our *sui generis* systemic approach. The context in which the individual is inserted into the factors enhances or disperses the chances to overcome obstacles. In view of the “relative” failure of students who are delayed in their studies, two questions arise: Does a weak level of resilience influence? Does the university community, with its dominant system of beliefs and values, influence the possibilities of being successful? Without knowing the situation based on empirical information, it should be quite difficult to cause changes at the level of intervention. In the following, its history was briefly reviewed.

The concept of resilience is not new. It was first used in metallurgy and engineering to describe certain materials' ability to restore themselves to their original shape after being

subjected to distorting pressure (Royal Spanish Academy, *Salvat Encyclopedia of Science and Technology*, 1964). Dyer and McGuinness (1996) define it as the flexible or elastic quality of a substance.

In positive psychology, the notion of resilience appears in the 1960s and even more so in the 1970s and 1980s². At the beginning, in early psychiatric literature, Anthony (1974) made no distinction between Resilience and Resistance, confusing “invulnerable” and “invincible” with resilience. Later, the longitudinal studies of Werner and Smith (1982), carried out with multiracial groups (exposed to risks in Hawaii), were decisive in establishing the differences between the two concepts³.

Briefly, the concepts of invulnerability and invincibility – referring to “fixed” or “static” qualities – lost ground in favor of resilience, which is a dynamic notion that implies a process. Moreover, the authors discover that protective factors, such as self-esteem, independence, connections, initiative, and critical thinking, are considered pillars of resilience. They highlight the difference between physics and psychology. In physics, resilience refers to the ability to return to a state prior to changes applied by extreme forces. In psychology, on the other hand, the concept is broader as it does not involve returning to a previous state. It implies the reconstruction of the psychic apparatus, with a more efficient organization that is capable of facing the future after the impact of trauma (Lorenzo, 2010).

The dynamic perspective has as its “founding father” Michael Rutter (1985, 1991, 1992). From a psychological perspective, the author conceives of protecting factors not as being opposite of risk factors but rather as the two form a dynamic that allows the strengthening of the individual when faced with situations of adversity, respecting personal characteristics at all times.

Grotberg (2003) defines Resilience as the interaction of factors at three levels: social support (I have), abilities (I can) and internal strength (Here I am and I have). The important element is *interaction*, with people always playing an active role in events and contexts. Barnard (1994) and Manciaux (2003) share the same perspective: resilience is a dynamic process. Other authors also make important contributions that we cannot dwell on in detail. For a synthesis, cf. Aparicio, 2022.

The second stage consists of replacing the concept of invulnerability with that of resilience. The difference resides in the fact that resilience can be formed/consolidated, while invulnerability is considered an intrinsic characteristic (Rutter, 1991).

Aparicio analyzes resilience as a “psychosocial competency” within sustained macro-meso-micro-macro interplay. In its conception, we may not understand an individual outside of his immediate and mediate contexts, gaining feedback from a particular dialectic that implies spiral movement, with effects that may be both positive and negative (Aparicio,

² In Spanish, the concept is introduced later, between 2001 and 2005 (Aparicio, 2007a, 2009a, 2009b; Grotberg, 2006; Kotliarenco et al, 1997; Luthar, 2003).

³ Dyer & Minton McGuinness explain the longitudinal study of Werner and Smith (1982), carried out with a group of 698 children born in 1955 in Hawaii. Several families lived in poverty and their members had different mental and physical abilities. Researchers combined biological, social and psychological factors considered predicative of vulnerability and invulnerability when faced with serious problems. They observed that the “invulnerable” youth that had suffered shorter separations from their mothers during their first year of life were active and socially receptive and reached development milestones.

2005, 2007a, 2007b, 2009a, 2009b, 2012, 2015a, 2015b). This is very different from the hyperfunctionalist and deterministic spiral, as “each situation” deserves to be analyzed in its own time, in its own space and according to its own circumstances in dynamic interplay or self-sustained giving and taking of “individuals and their contexts”.

Nevertheless, this development may or may not be achieved, depending on the existence or lack of responsibility on the part of socializing instances (family, peers, school, university), the influence that the social and cultural contexts have and, fundamentally, on the richness of connections. For this reason, and considering its essential development, it includes the Resilience variable as a factor to analyze within the framework of its research.

Finally, let us point out that there are many authors who emphasize the importance of resilience training in educational institutions, from early childhood to university: Becoña, 2006; Melillo et al. (2004), Coronado-Hijón (2017). The latter is a special place for the higher education (Aparicio, 2009a, 2009b).

Leadership

Aparicio conducted a study about the role of Leadership in scientific communities (UNESCO, 1971, as cited in Andrews & Aichholzer, 1979; Aparicio, 2014, 2022). An analysis of the role of leaders is carried out based on the studies of “founding fathers” (; (Aparicio, 2002, 2005, 2007a, 2007b, 2014, 2015a, 2015b, 2022; 2024; Argyris, 1975; Bennis, 1959; Burke, 1965; Dansereau et al., 1975; Dessler & Valenzi, 1977; Etzioni, 1965; Fiedler et al., 1982; García Carreño, 2021; Greene, 1975; House & Wigdor, 1965; King, 1990; Kwiek, 2018; Mehra et al., 2006; Meltzer, 1965; Meyer, 1976; Rossel, 1970; Spillane, 2005).

Here, you can see the role of the leaders in scientific organizations and the level of acceptance/valuation by team members – both in “soft sciences” and “hard sciences” – in relation to Professional Mobility and Satisfaction. It is important to note that the Nomenclature of Science and Technology Fields (UNESCO, 1971, as cited in Andrews & Aichholzer, 1979) was used in the present study. The “disciplinary homogenization” (system of beliefs, values, and assessments associated with socialization and traditions) differs according to the disciplinary field to which it belongs, which is “hard” or “soft” sciences. This will lead to a different level of satisfaction regarding the different psychosocial factors at stake in the grids created: Merton (1968); Crane (1972); Bourdieu (1976) (“invisible college”).

More recently, the author made two (2) qualitative investigations with doctors from UNCuyo (PICO – Oriented Scientific-Technological Innovation Programme) and with PhDs and PhD Students who carried out Academic Mobility (IAM), cf. Aparicio, 2024).

The PICO project (Aparicio, 2016-2022) was carried out in Argentina with three (3) actors from the National University of Cuyo – scientists, professors, and administrative/academic support staff – in order to observe the strengths and weaknesses of the system according to the shared representations regarding the competencies, and which were developed or “lacking” in those who had gone to university.

Among the studies with Doctors and Students Exchange, the author carries out three investigations⁴: a) the first was carried out in France with PhD graduates and PhD students from Argentina and other countries who participated in Academic Mobility Programs in France within the framework of Bilateral Cooperation Programs. The hypothesis considered is that the highest level of education achieved, added to the immersion in another culture after having undergone a process of selection, where competencies other than disciplinary were assessed, could show a higher level of development of some psychosocial competencies (IAM - International Academic Mobility), [Aparicio, 2016-2021, 2019a, 2019b, 2020a, 2020b](#)). b) The second was carried out at UNCuyo in 2023 with exchange students who came to UNCuyo from abroad (Argentine university that receives the largest number of students from abroad who carry out academic mobility) and with those who receive UNCuyo; c) A third investigation was carried out with Brazilian students (students exchange) who carry out Academic Mobility in France. The third research, focused on Internationalization and International Academic Mobility, was started in Paris in 2024. University students from different universities in Brazil participated⁵.

The findings, taking into account that the same techniques were used and common items were included, allow inter- and intra-comparisons to be made in the respective populations/samples and observe convergences and divergences in the case at hand in terms of training and/or assessment of what Aparicio calls “social and management competencies” and, in particular, the role of Leadership and Resilience.

Regarding Leadership, literature abounds. We refer only to some “founding fathers”, such as [Avolio and Bass \(2004\)](#), with their distinction between Transformational and Transactional Leaders and other authors such as [Burn \(1978\)](#) and [de Vries et al. \(1997\)](#). Other models can be consulted in [García Carreño \(2021\)](#).

Objectives

To observe the importance of the different groups of PhDs and PhD students who have experienced professional mobility, social and management competencies are among the achievement factors that they prioritize when considering professional demands and, in particular, leadership. To observe the importance that groups of university students who carry out academic mobility attach to resilience, both for their integration into a new culture and for facing the new demands of the world of work. To know their shared representations regarding the articulation or gap of current university education in relation to labor demands and quick changes.

Hypotheses

PhD and PhD students do not sufficiently recognize the role played by non-disciplinary competencies, particularly leadership, with institutional differences. In the social representations of PhDs and PhD students who carry out international academic exchange, Resilience emerges as an important adaptation factor: a) at the time of entry into another macro and

⁴ It should be noted that Mobility has been a central axis in the author's research since the 1980s. Multiple publications of results found in different populations, spaces and times can be consulted. Cf. Specially Aparicio, link [CONICET](#); 2016-2022; 2022. An overview of the axes of the different investigations can be seen in Aparicio, 2024.

⁵ This research was motivated by the following fact: the author won a contest as Senior Researcher and Doctoral Professor at the Federal University of Rio Grande do Norte (UFRN), Brazil.

organizational context; b) when facing the World of Future Work and its demands⁶. Among the competencies that they point out as essential to develop and/or consolidate – both in the field of hard sciences and soft sciences, in universities and companies – Leadership and Resilience – do not occupy a central place.

Research Questions

How strongly does Leadership emerge as a factor associated with academic-professional achievement in groups and in relation to organizational and national macro innovation? (Akrich et al., 2006; Alter, 1999).

How important is resilience as a competence in the group of PhDs and PhD students who participate in mobility programs abroad, which already entails a particular capacity to adapt to another global, institutional, and disciplinary culture?

What role did the university students interviewed in Paris give to Resilience in relation to the demands of the “World of Work”?

Their social representations (manifested in their responses) reveal the importance that Resilience will assume in the face of the changes and innovation that the Post COVID-19 world of work will demand.

What value do they attach to the prioritization and/or strengthening of the competencies addressed – Resilience and Leadership – in the field of universities and companies and depending on whether the training is in the field of “soft” or “hard” sciences, always observed through of their “shared” social representations?

Design

We will not stop at the analysis of all the items/questions incorporated in this research related to the valuation of leadership and resilience of the social and management competencies by doctors and PhD students.

In strict relation to Resilience, taking into account our objective – to observe what importance Resilience assumes in relation to the current demands of the “World of Work” as well as the essential aspects that define it –we will show, in 2 instances: a) what the importance given by this group of university students who carry out the international exchange to this competition, resorting to the technique of hierarchical evocations; b) the importance accorded to 4 aspects related to it: i) the links; ii) the ability to adapt to changes/flexibility; iii) its role in the face of rapid adjustments, d) the ability to solve problems.

This shows the extent to which there is awareness of the role that this variable has among PhDs and that, in the face of the already observed effects of the pandemic, they will become decisive in overcoming adversities in the world of work. Their representations will also reveal what skills they consider should be reinforced as a priority among students in view of the abrupt changes, both in the field of hard and soft sciences and by universities and companies.

⁶ The previous findings, reached in research with delayed university students (2009a and 2009b), Resilience appeared as a factor with a high impact on the low level of achievement. In essence, it showed along the same lines that neither the university nor previous educational institutions had formed this competence.

It should also be noted that both the responses and the “silences” will be analyzed because “silences” as such do not exist: they speak for themselves of ignorance, lack, lack of involvement, and disinterest, among other aspects. Not knowing which competencies should be prioritized – according to the experience of the countries that top the learning ranking – is already worrying at a time when the “new normal” will require a lot of capacity for adaptation and firm links (Agasisti et al., 2018; Mo, 2018; OECD, 2000, 2016a, 2016b, 2018a, b, c, d).

Finally, it should be noted that, linked to the problem addressed, other qualitative dimensions were observed in which it is investigated – always based on the representations shared by the PhDs and PhD students – to which competencies the university attaches greater importance to in its task of training, and companies (field of “hard” and “soft” sciences).

The use of hierarchical evocations made it possible to observe which categories emerged as central and which were secondary. This is visualized by the location in the different quadrants: P2, P3, P4, and P1.

Specifically, in the latter, we only return to some very representative qualitative item(s) in the research, presenting the Summary Table, the 4-plane or quadrant Figure, and the 3D Figure (3 dimensions). In others, for brevity reasons, we will summarize the result and/or recover a figure. In these items, the importance given to social and management competencies is observed. Regarding the Leadership variable, the hierarchical evocation technique was used. The order of presentation is Resilience and Leadership.

Materials and Methods

Quantitative and qualitative methodology was used, although in this article we focus on the second. The axis of analysis is not the skills or “know to know” but, particularly, of those related to “procedural knowledge” and “knowing how to be/live together”: social and management competencies (OECD, PISA, 2017a, 2017b, 2017c, 2018 a, b, c, d).

The scientific literature on studies carried out with quantitative methodologies abounds. However, the same does not happen with qualitative research carried out “in situ”, which involves the use of special techniques and face-to-face work with the participants, always with informed consent. For this reason, in this research, an attempt was made to go beyond the long list of “generic and specific competencies” proposed by Tuning to investigate what, *in the daily reality of the different sample groups and higher education institutions*, were the central concerns, strengths, vacancies, the most valued competencies and the “absent” competencies. These aspects can only be achieved through qualitative methodologies.

Sample IAM

The sample is made up of PhD students who have participated in university or business exchange programs since 2018 in Paris. We worked with different cohorts (2002-2003; 2013-2014 and 2018-2019) (quantitative descriptive level / percentages). Also, on a qualitative level, we worked face-to-face with some volunteers in the last period (2018-2019) (20% of the total). This last group included some foreigners who lived there for internal exchanges (“brassage”). Finally, 10 voluntary interviews were then added. This provided other views and perspectives, influenced both by training and contextual imprint.

Techniques

A semi-structured survey with open sentences and hierarchical evocations techniques was used. Moreover, an interview with a voluntary group was also carried out. Upon combining the frequency with which some words were named and the order of importance given to them by the respondents, that interview made it possible to observe which representations were a priority (central core) and which were peripheral (Abric, 2001). From this combination, four categories, which already enter the quadrant of the nucleus of representation or priority aspects (P2), emerged in the peripheral quadrants (P3, P4, and P1). Here, we only focus on the “Social/Relational” category, which includes Leadership and Resilience.

Below, we show the four quadrants (the abscissa axis corresponds to the frequency of the evoked words, and the ordinate axis corresponds to the order of importance of these terms, as supported by the actors, See Figure 1 (cf. Aparicio, 2020a, 2024).

Figure 1

Quadrants (Hierarchical Evocation Technique)

P 1 (-+)	P 2 (++)
P 4 (--)	P 3(+)

P2 (++) quadrant: that is the nucleus of the representation and it shows the most frequent and most important categories.

P3 (+-): quadrant where categories of low frequency and high importance are located.

P4 (- -): the least important, which are also the least frequent categories are shown here.

P1 (-+): in the P1 quadrant are the low-frequency and high-importance categories.

Briefly: the importance that each category has for each group is expressed by the position reached by the emerging categories shown in each quadrant.

Procedures

In the research, we worked face-to-face with the actors. The time for the application was unlimited and opinions were provided at the same time that the semi-structured survey was answered. They were complemented by an interview conducted by those who were really interested in continuing with the research. The interviews were recorded and then transcribed. In the research, informed consent was requested, and the material was collected personally.

Results

Resilience

Instance 1: Analysis of Central and Peripheral Categories of the “World of Work”

Dimension

The “Motivational – Relational” Dimension is located in the nucleus or heart of the representation (P2). It is, therefore, the most important as the majority of responses are concentrated here: F = 43.5%; I = 44%. In other words, almost 50% of the responses are found in this category. Practically all of the rest are located in the “Organizational/Sociopolitical/Structural” category: F = 28.3%; I = 28%. What stands out is

that in the first category, where Resilience should be located, the word did not appear even once (See Table 1).

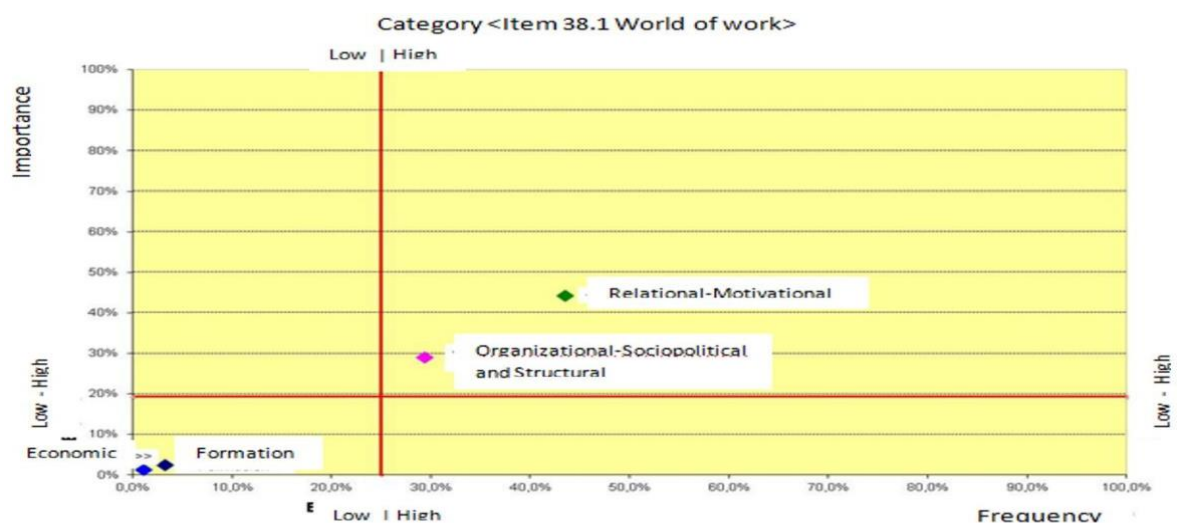
Table 1

Category « World of Work» (IAM) - Item 38.17

Subjects		23	
Sub-categories		4	
Frequency	Maximum	92	100%
	High	23,00	25%
	Maximum	230	100%
Importance	High	45	19%
Importance	<<Education>>	<<Organizational- Socio- political and Structural>>	<<Economic>> <<Relational- Motivational>>
1	0.0%	6.5%	0.0% 13.0%
2	1.1%	6.5%	1.1% 9.8%
3	1.1%	10.9%	0.0% 8.7%
4	1.1%	5.4%	0.0% 12.0%
Frequency	3	27	1 40
	3.3%	29.3%	1.1% 43.5%
	Low	High	Low High
Importance	6	67	3 102
	3%	29%	1% 44%
	Low	High	Low High

Figure 2

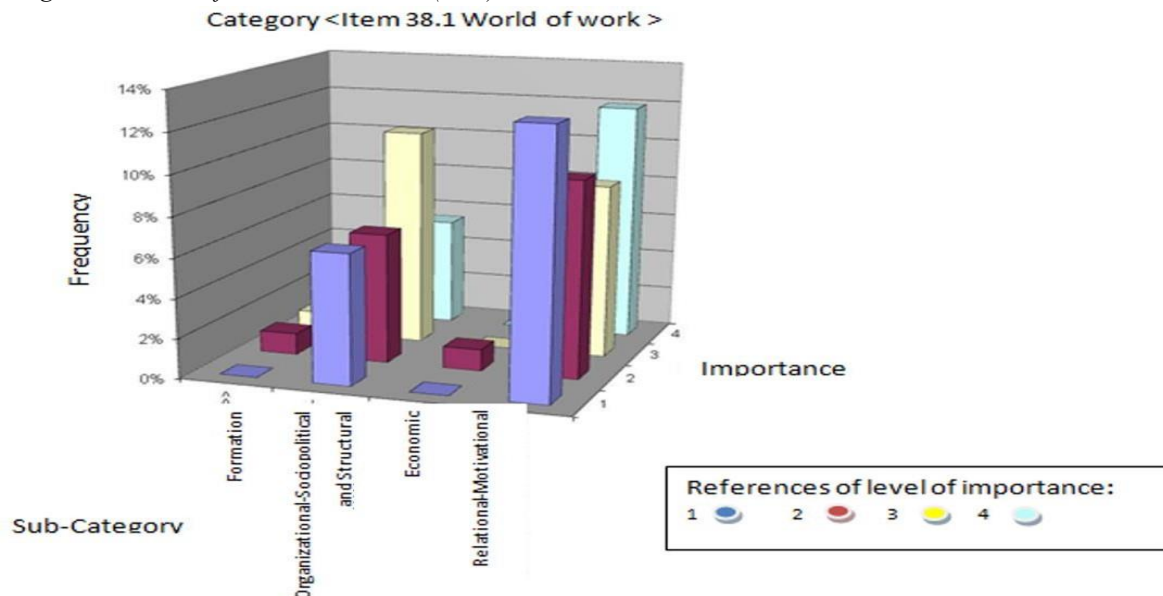
Categories « World of Work » Item 38.1 (IAM)



⁷ Here we recover several items (the item number at the end takes up the item number in the semi-structured survey).

Figure 3

Categories « World of Work » Item 38.1. (IAM)



In the “**Motivational – Relational**” category (Figure 2 and 3), we observe that the majority of the responses see the world of work as something positive. Respondents describe it as: “factor of fulfilment” and “identity” (these were the most-used words), but also as: “interesting”, “dynamic”, “visibility factor”, “satisfaction”, “socialization”, “a place to apply what you’ve learned”, “essential”, “construction”, “challenge”, “something that gives personal and social value”, “respect for others”, “a reason for happiness”, etc.

On the other hand, in the “Organizational-Socio-Political-Structural” category, the majority of words evoked were negative: “negative”, “imposed”, “exploiter” (repeated frequently), “destructive”, “unequal”, “precarious”, “cage”, “slavery”, “racist”, “ungrateful”, “little respect for minorities”, “meritocracy”, “bad compensation for another’s work”, “unjust” (repeated frequently), “with shortcomings in evaluation and in work conditions” (“many hours daily”, “little time for rest”, “little vacation time”, “unequal treatment”), “competitive”, “closed”, “leading to low quality of life”, etc. This reflects certain nonconformities in the functioning of workplace organizations and the macro policies adopted in the field.

Two respondents finally pointed out that it presents “many changes” which would imply that it will require adjustment, the ability to adapt and, indirectly, Resilience.

Focusing on the issue at hand, the word “**resilience**” was **never** mentioned as an ability nor, according to the author’s conception, as a “**psychosocial competency**” important to carrying out one’s work daily under current conditions, conditions which have already had negative effects at the level of health, such as increases in burnout, low levels of satisfaction, decreases in wellbeing and falling expectations, among others.

Instance 2: Number of times words referring to Resilience Appeared

These words included Adjustment/Change, Adaptation, Resolve, Connections, and Flexibility.

Once again, the word Resilience never appeared. In the “**World of Work**” Dimension, only 2% of respondents mentioned the word adjustment/change. The other words listed are not the focus of this analysis; however, the percentages of mentions of words that could refer to Resilience are extremely low⁸ (See Table 2).

Table 2
Frequency of Appearance of Words Related to Resilience

Competencies valued	Words Analyzed						% Total
	Resilience	Adjust/ Change	Adaptationon	Resolve	Connecton	Flexibilityty	
37.a. Competencies valued by companies – Hard Sciences	0	0	1	0	0	0	1
%	0	0	1	0	0	0	
37.b. Competencies valued by companies – Soft Sciences	0	0	4	0	0	2	7
%	0	0	4	0	0	2	
37.c. Competencies valued by the university – Hard Sciences	0	0	1	0	0	0	1
%	0	0	1	0	0	0	
37.d. Competencies valued by the university – Soft Sciences	0	0	3	0	0	0	3
%	0	0	3	0	0	0	
38.1 World of work	0	2	0	0	0	0	
%	0	2	0	0	0	0	2
500.d. Competencies to be developed in educators	0	0	0	1	0	0	1
%	0	0	0	1	0	0	
500.e. Competencies to be developed in students	0	1	1	0	0	1	3
%	0	1	1	0	0	1	
Total responses = 100%	92	92	92	92	92	92	

Leadership

The Relational-Motivational Dimension is the only one that is located in the nucleus; thus being the most significant (FH = 53.3%; IH = 57%), followed very distantly by the other dimensions located on the periphery (See Table 3, Figure 4, Figure 5).

The subjects who participated in International Exchange Programs mentioned the Relational-Motivational dimension 49 times in total, followed by the Socio-Cognitive dimension. That is, they recognized its importance regarding employability and their future. They also mentioned different terms related to social and management competencies. However, they did not reach the core of the representation; that is, they were considered secondary.

Indeed, only one (1) subject mentioned the term Leadership. He comes from a state-of-the-art university and is an engineer (he is doing a PhD in France). In many other items that respondents were inquired about, the results were along the same line.

⁸ The item number from the semi-structured interview is maintained.

Table 3*Values of a Person Leading an Organization (Item 38.4)*

Subjects		23		
Sub-categories		4		
Frequency	Maximum	92	100%	
	High	23.00	25%	
Importance	Maximum	230	100%	
	High	40	17%	
Importance	<<Educational Dimension>>	<<Socio-Cognitive – Management Dimension>>	<<Economic Dimension>>	<<Relational-Motivational Dimension>>
1	33%	4.3%.	1.1%	16.3%
2	1.1%	8.7%	0.0%	14.1%
3	4.3%	4.3%	0.0%	12.0%
4	1.1%	4.3%	0.0%	10.9%
Frequency	9	20	1	49
	9.8%	21.7%	1.1%	53.3%
	Low	Low	Low	High
Importance	24	52	4	131
	10%	23%	2%	57%
	Low	Low	Low	High

Source: own author's production

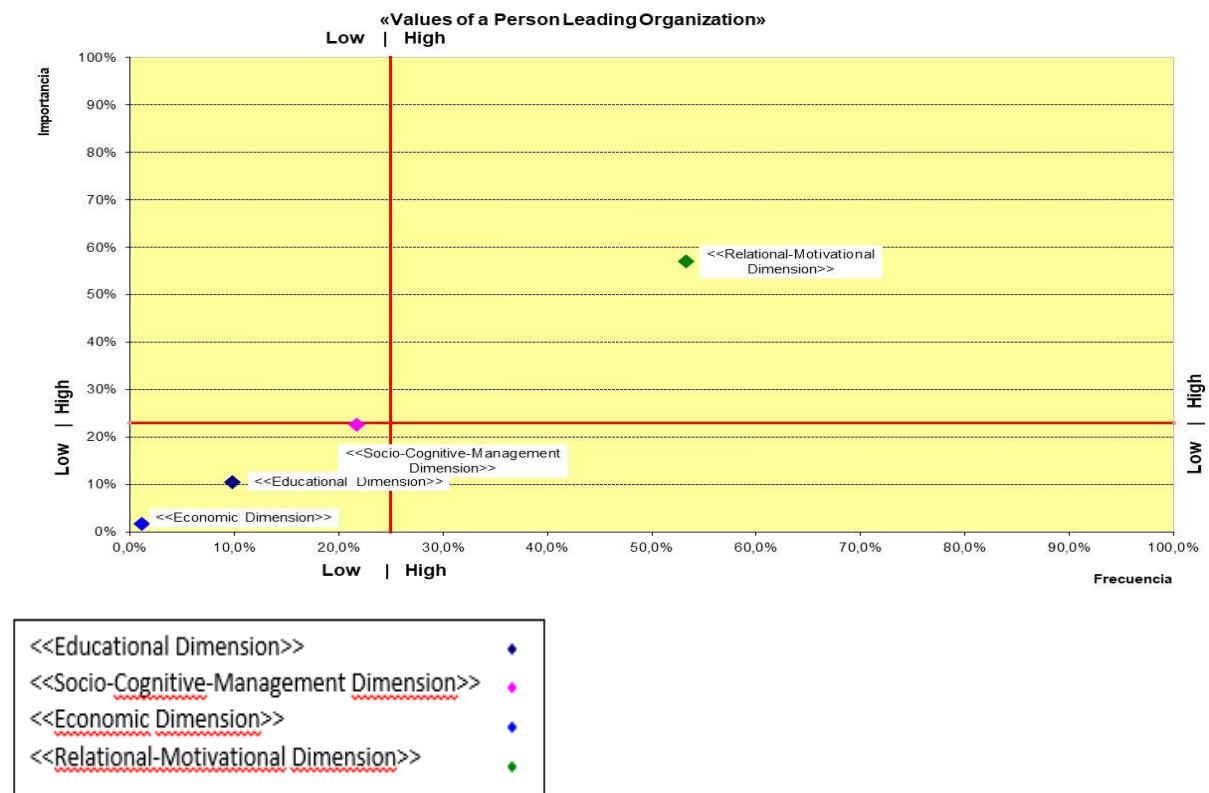
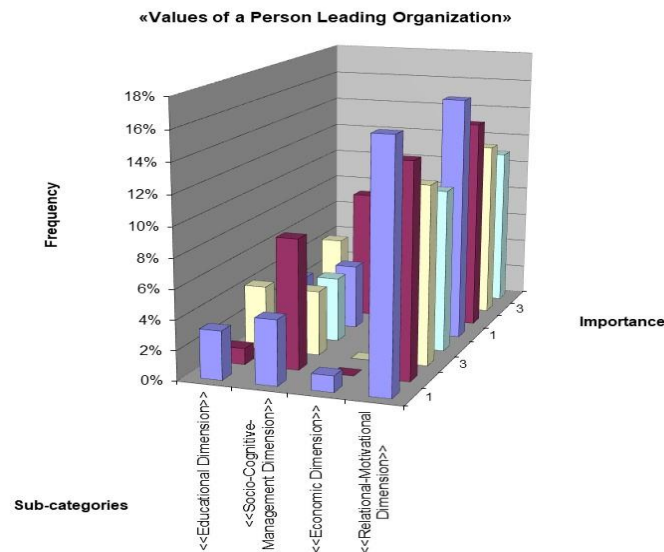
Figure 4*4-Planes*

Figure 5
3D

The values in Table 4 entitled “Competencies to be Developed in Students” exempt from comment: no category entered the nucleus of the representation shared by PhDs and PhD students (IAM). The silences “speak” for themselves. The response rates were very low. In general, they did not know what the term competencies strictly alluded to. Consequently, they could not say which competencies the university system should prioritize in order to respond to the current demands of the world of work (See Table 4, Figure 6, Figure 7).

Table 4
Competencies to be Developed in Students (Item 500.d)

Subjects		23		
Sub-categories		4		
Frequency	Maximum	92	100%	
	High	23.00	25%	
Importance	Maximum	230	100%	
	High	34	15%	
Importance	<<Training Dimension>>	<<Social-Competencies Dimension>>	<< Socio-Cognitive-Procedural Competencies Dimension>>	<<Competencies for Life>>
1	2.2%	4.3%	7.6%	1.1%
2	3.3%	6.5%	5.4%	0.0%
3	2.2%	5.4%	5.4%	1.1%
4	1.1%	7.6%	1.1%	1.1%
Frequency	8	22	18	3
	8.7%	23.9%	19.6%	3.3%
	Low	Low	Low	Low
Importance	22	51	54	7
	10%	22%	23%	3%
	Low	High	High	Low

Source: own author's production

Figure 6
4 Planes

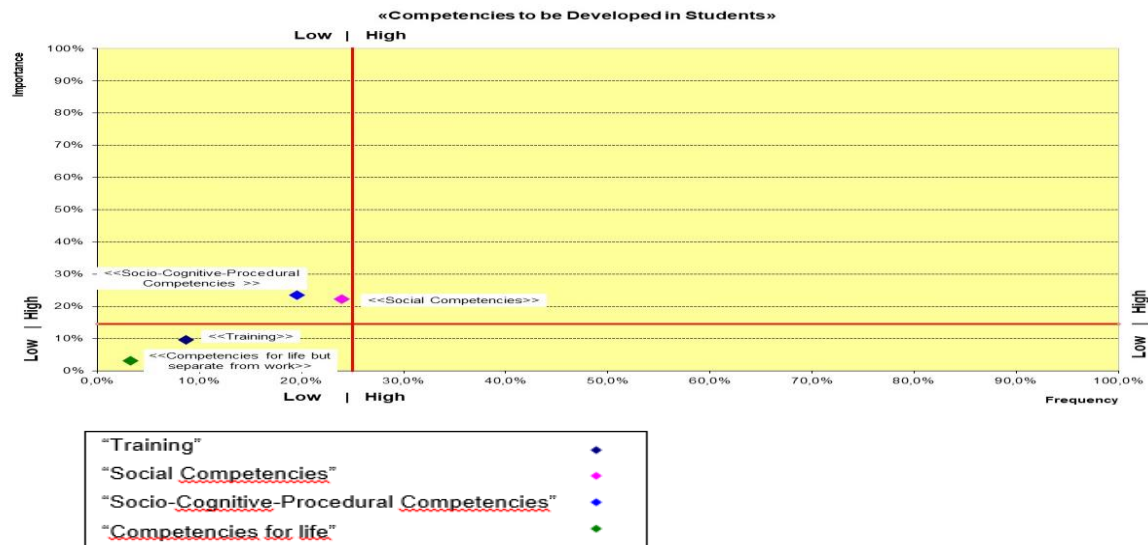
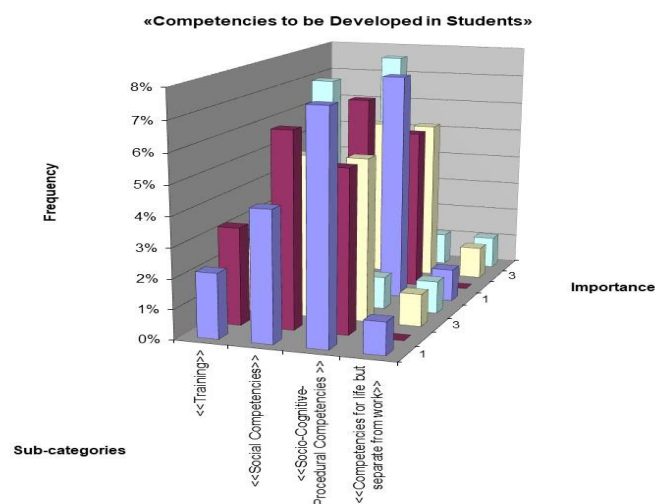


Figure 7
3D



Finally, it should be noted that, linked to the problem addressed, the following qualitative dimensions were observed:

1. What competencies do companies value most among PhDs in the “hard” sciences area? (item 37.a) (See Table 5, Figure 8 and 9)
2. What competencies do companies value most among PhDs in the “soft” sciences area? (item 37.b) (See Table 6, Figure 10 and 11)
3. What competencies do university value most among PhDs in the “hard” sciences area? (item 37.c) (See Table 7, Figure 12 and 13)
4. What competencies do university value most among PhDs in the “soft” sciences area? (item 37.d) (See Table 8, Figure 14 and 15)

The responses were the following:

Item 37.a: the word Resilience is not mentioned and the word Leadership is cited 1 time;

Item 37.b: the word Resilience is not mentioned and the word Leadership is cited 1 time;
 Item 37.c: the word Resilience is not mentioned and the word Leadership is cited 1 time;
 Item 37.d: the word Resilience is not mentioned and neither the word Leadership.

The results “speak for themselves”: neither of the two competencies observed emerges as a highly cited and highly important social competency according to the assessment made by the PhDs and PhD students. In other words, they observe that neither the educational institution (higher education) nor the organizations in the world of work value these competencies.

Let's see it:

Table 5

Competencies Valued by the Company (“hard” sciences area) (item 37.a)

Subjects		23		
Sub-categories		4		
Frequency	Maximum	92	100%	
	High	23,00	25%	
Importance	Maximum	230	100%	
	High	38	17%	
Importance	<<Training>>	<<Investigative>>	<<Cognitive-Procedural>>	<<Relational-Motivational>>
1	4,3%	3,3%	7,6%	2,2%
2	6,5%	1,1%	6,5%	3,3%
3	2,2%	1,1%	7,6%	4,3%
4	2,2%	0,0%	4,3%	7,6%
Frequency	14	5	24	16
	15,2%	5,4%	26,1%	17,4%
	Low	Low	High	Low
Importance	40	17	64	32
	17%	7%	28%	14%
	High	Low	High	Low

Figure 8

4 Planes

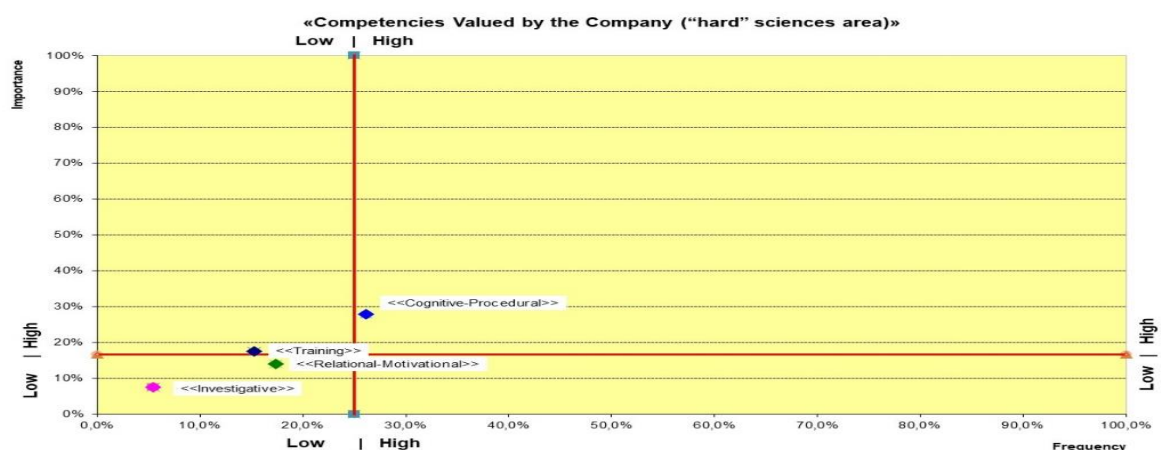


Figure 9
3 D

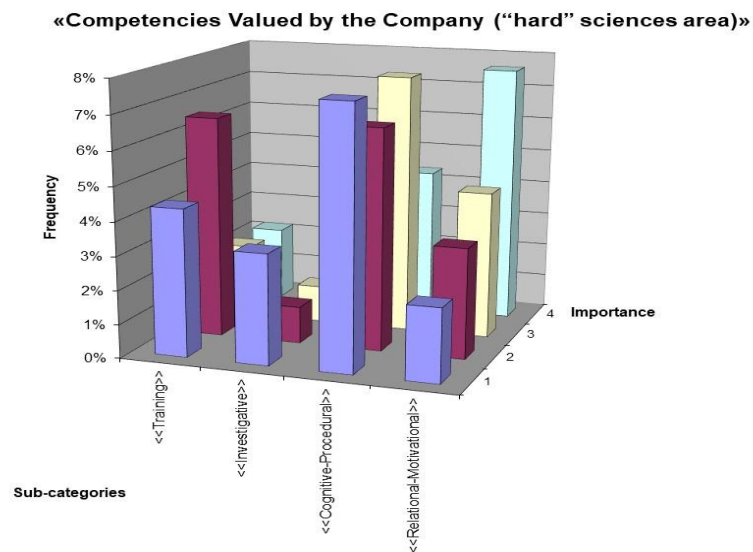


Table 6

Competencies Valued by the Company (“soft” sciences area) (item 37.b)

Subjects		23		
Sub-categories		4		
Frequency	Maximum	92	100%	
	High	23,00	25%	
Importance	Maximum	230	100%	
	High	43	18%	
Importance	<<Training>>	<<Investigative>>	<<Cognitive- Procedural>>	<<Relational-Motivational>>
1	6,5%	2,2%	4,3%	6,5%
2	7,6%	0,0%	4,3%	7,6%
3	3,3%	0,0%	4,3%	9,8%
4	2,2%	0,0%	2,2%	8,7%
Frequency	18	2	14	30
	19,6%	2,2%	15,2%	32,6%
	Low	Low	Low	High
Importance	53	8	38	71
	23%	3%	17%	31%
	High	Low	Low	High

Figure 10
4 Planes

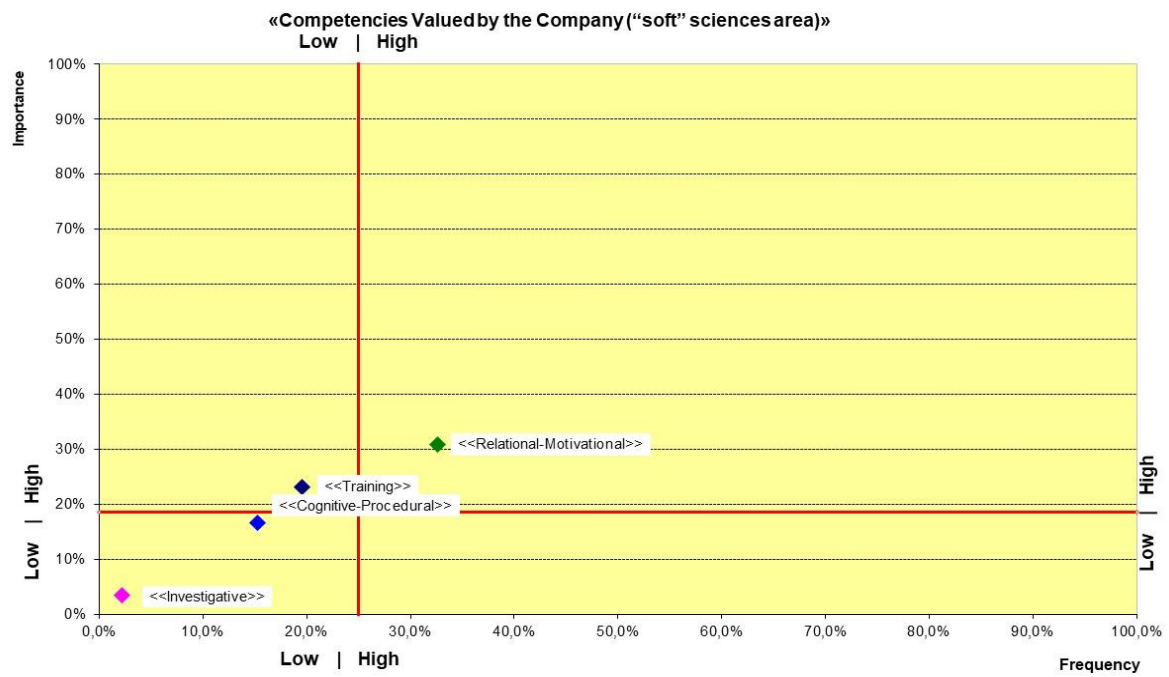


Figure 11
3 D

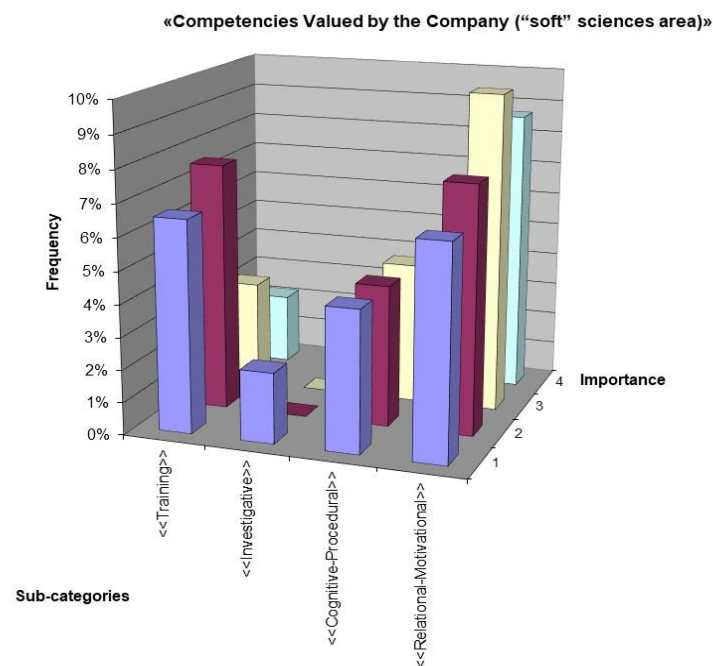


Table 7*Competencies Valued by the University ("hard" sciences area) (item 37.c)*

Subjects		23		
Sub-categories		4		
Frequency	Maximum	92	100%	
	High	23,00	25%	
Importance	Maximum	230	100%	
	High	38	16%	
Importance	<<Training>>	<<Investigative>>	<<Cognitive- Procedural>>	<<Relational- Motivational>>
1	3,3%	1,1%	12,0%	0,0%
2	7,6%	0,0%	7,6%	2,2%
3	1,1%	0,0%	8,7%	6,5%
4	1,1%	1,1%	4,3%	6,5%
Frequency	12	2	30	14
	13,0%	2,2%	32,6%	15,2%
	Low	Low	High	Low
Importance	36	5	85	24
	16%	2%	37%	10%
	Low	Low	High	Low

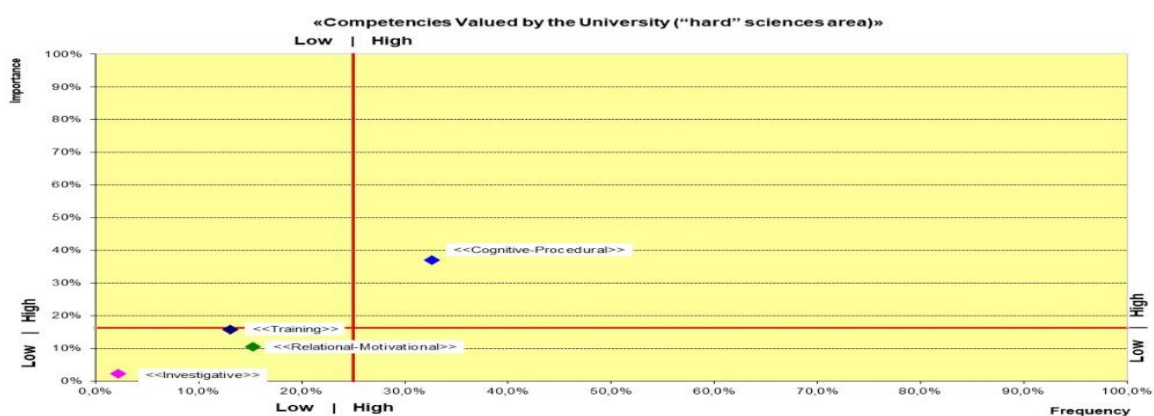
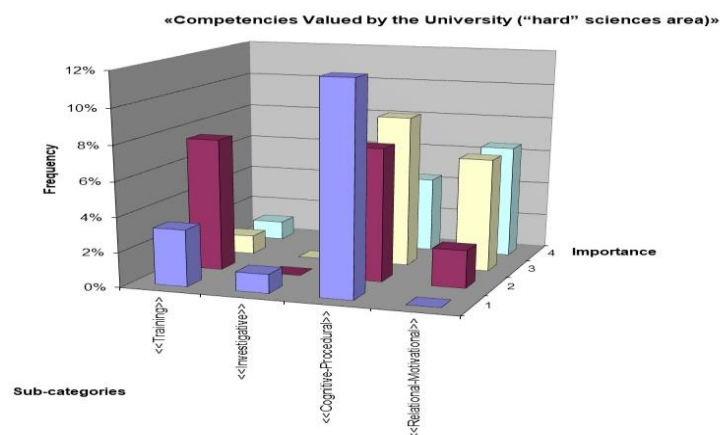
Figure 12*4 Planes***Figure 13***3 D*

Table 8*Competencies Valued by the University ("soft" sciences area) (item 37.d)*

Subjects			23	
Sub-categories			4	
Frequency	Maximum	92	100%	
	High	23,00	25%	
Importance	Maximum	230	100%	
	High	45	20%	
Importance	<<Training>>	<<Investigative>>	<<Cognitive- Procedural>>	<<Relational-Motivational>>
1	5,4%	1,1%	7,6%	4,3%
2	8,7%	1,1%	4,3%	6,5%
3	5,4%	1,1%	7,6%	6,5%
4	4,3%	0,0%	6,5%	7,6%
Frequency	22	3	24	23
	23,9%	3,3%	26,1%	25,0%
	Low	Low	High	High
Importance	58	9	60	53
	25%	4%	26%	23%
	High	Low	High	High

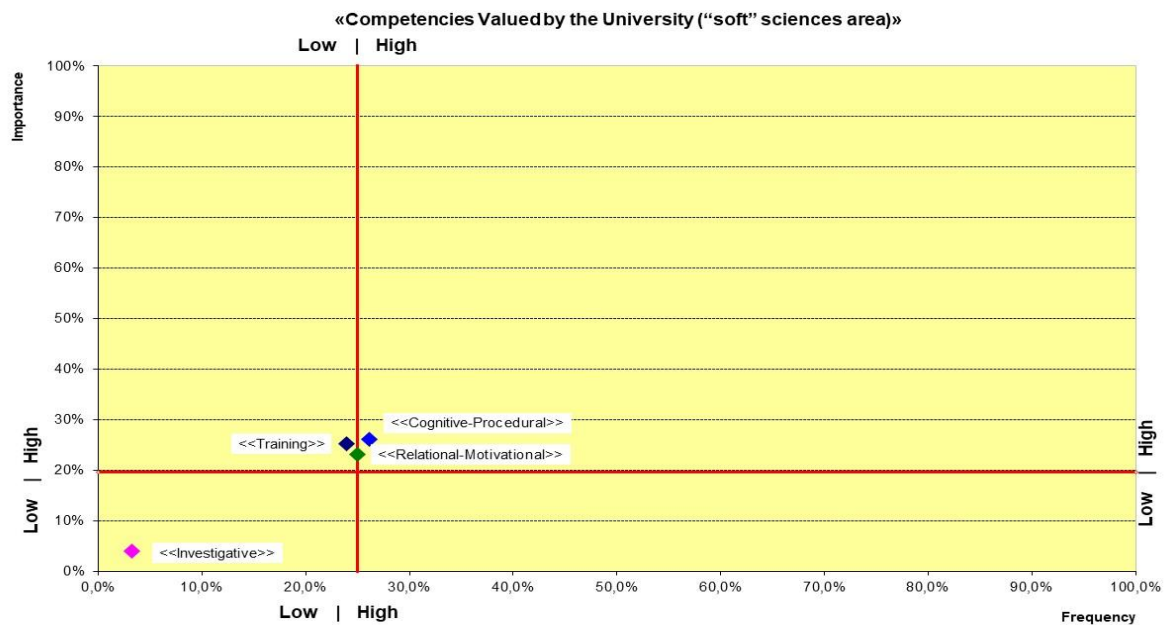
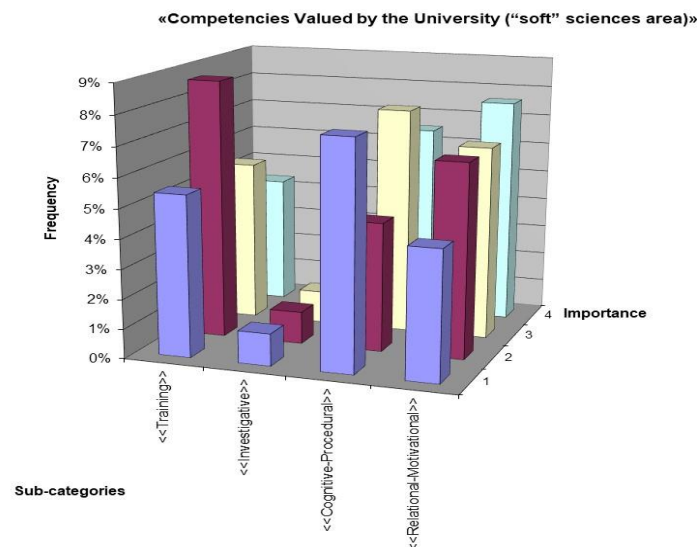
Figure 14*4 Planes*

Figure 15
3 D



Discussion

The low appreciation of leadership shows a shortcoming in terms of university training and by companies. In Latin America, in general, and also in our country, the disciplinary aspects continue to be emphasized. On the contrary, the countries that lead the ranking in terms of learning (OECD, 2000, 2016a, 2016b, 2017b, 2018a, b, c, d), the focus is on procedural knowledge and knowledge for life, on action knowledge. The same can be said regarding the assessment of Resilience.

Finally, you can see other relevant publications on the problem of competencies and, particularly, social competencies (Bentley, 2017; Ehlers & Kellerman, 2019; Grayling, 2017; Laukonen et al., 2018; OECD, 2015a, 2015b, 2015c, 2015d, 2015e, 2017a, b, c, 2018a, b, c, d, 2022a, 2022b, 2023a, 2023b; OECD & Ilo, 2018; Raiz et al., 2017; Rychen, 2016; Shoon, 2021)

Conclusion

Concerning Leadership, among the Argentine exchange PhD students and PhDs who participated in international academic mobility programs in France (IAM), the word was only mentioned once; a word that was expressed by a graduate from one of the universities considered excellence in the country. This indicates a low awareness of its importance in the current work context, seen from the shared/social representations of the subjects (micro plane). This is linked to this low awareness inferred from training institutions (meso level), all of which will impact the possibilities of macro-national development and innovation (Aparicio, 2015a, 2015b). This confirms our hypothesis.

In summary, Argentine doctoral students and doctors do not mention leadership as such, despite recognizing the importance of psychosocial and relational competencies, among other factors to develop or prioritize when considering employability.

If we return to the hypotheses, the findings are nonetheless surprising because, in academic debates and in daily life itself, this factor is frequently linked to achievement and innovation at the national micro, meso, and macro levels; three planes that, in their self-sustaining interplay,

constitute the pillars of the author's theory "The Three-Dimensional Spiral of the Sense" (Aparicio, 2015a, 2015b).

This low appreciation of Leadership among university members of the highest level (doctorate/master) places the university institutions before a challenge: to reaffirm essential competencies currently for the management of organizations and for the development of individuals and countries. The same can be said regarding training to face adversity (Resilience), both globally and in the world of work.

In relation to Resilience, in this research (IAM group), on the one hand, there is little awareness of the role of Resilience in the current World of Work, a world that demands strong connections, great flexibility, and the ability to adjust. Likewise, respondents value this "psychosocial competency" very little as it relates to Professional and Personal Achievement, despite what has been shown by numerous studies. On the other hand, knowing that resilience is not innate and that it must be "constructed" through interaction with a context (family, university, etc.), the findings show a debt on the part of educational institutions in terms of the formation of social, collective and psychosocial competencies, as they have focused solely on disciplinary learning.

In other words, when it is addressed from the valuation of individuals, Resilience is an undeveloped "absent competency", whereas it is well-developed in the ten countries that lead educational rankings (Aparicio, 2011a, 2011b). This allows us to predict that it will have a high impact on levels of achievement, much more so in the post-COVID-19 world.

Faced with this "absence of education" and looking to overcome the emergency generated by COVID-19, we invite universities to act to create new protocols of action, guides of best practice, and programs for psychosocial support of different actors (including resilience consolidation programs). In relation to the companies' assessment of this competency, we once again found a gap. The findings challenge both the university and companies in their training task to allow subjects to respond to current demands.

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