

Educational leadership in Europe: A transcultural approach¹

El liderazgo educativo en Europa: Una aproximación transcultural

DOI: 10.4438/1988-592X-RE-2015-371-309

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Abstract:

Leadership in education is one of the factors relevant to the study of educational capital of a country and a fundamental variable in the analysis of academic performance is especially distributive leadership and instructional leadership. The aim of this paper is to analyze the relationship of some fundamental factors, derived from TALIS report (human resource structure in each center, training needs, level of collaboration and cooperation among faculty for academic activities and professional involvement of teachers) with leadership styles (instructional or distributive) in some European countries. For each school we have obtained a series of global indicators to characterize each of those factors. Thus, data have been derived for a total sample of 3,835 centers 21 countries. Using the factor scores from a confirmatory factor analysis model a whole cluster was estimated using the Mahalanobis distance finding similarities between European countries and analyzed using regression coefficients were estimated variables that are related to leadership styles. The results indicate that the impact of exogenous factors between the two types of leadership styles are not the same as the geographical area under consideration and, specifically, the Spanish centers show an intermediate behavior between more developed

⁽¹⁾ Acknowledgements: to the Spanish National Institute for Educational Evaluation for providing the data and for the trust in this group.

educational models such as North Europe and the more diffuse areas of southern and central Europe.

Key words: TALIS, OCDE, Europe, Distributional leadership, Instructional leadership, Educational management.

Resumen:

El liderazgo en el ámbito educativo es uno de los factores relevantes para el estudio del capital educativo de un país, y una variable fundamental en el análisis del rendimiento académico, es especial el liderazgo distributivo y liderazgo instruccional. El objetivo de este trabajo es analizar la relación de algunos factores fundamentales, derivados del informe TALIS (estructura de recursos humanos en cada centro, necesidad de formación, nivel de colaboración y cooperación entre profesorado para las actividades académicas e implicación profesional del profesorado) con los estilos de liderazgo (instruccional o distributivo) en algunos países europeos. Para cada centro escolar se han obtenido una serie de indicadores globales para caracterizar cada uno de los factores citados. De este modo, se han derivado datos para una muestra total de 3.835 centros de 21 países distintos. Mediante las puntuaciones factoriales de un modelo de Análisis Factorial Confirmatorio se estimó una agrupación de conglomerados mediante la distancia de Mahalanobis encontrando similitudes entre los países europeos analizados y mediante coeficientes de regresión se estimaron que variables están relacionadas con los estilos de liderazgo. Los resultados indican que el impacto de los factores exógenos entre los dos tipos de estilos de liderazgos no son iguales según la zona geográfica que se considere y, en concreto, los centros españoles muestran un comportamiento intermedio entre modelos educativos más desarrollados como los del norte de Europa y los más difusos de las zonas del sur o de centro Europa.

Palabras Clave: TALIS, OCDE, Europa, Liderazgo distributivo, Liderazgo instruccional, Gestión educativa.

Introduction

OECD has developed the TALIS project (Teaching and Learning International Survey) aiming to offer a comparative international perspective on the teaching and learning conditions in Compulsive Secondary Education and on some of the main factors that make it possible to explain the differences in educational results revealed by PISA.

In the present study, we will examine important aspects of learning and teaching through surveys administered to Compulsive Secondary Education teachers and directors from the 31 countries participating in TALIS 2013.

A significant, documented relationship exists between academic performance and the teachers' collaborative behavior (Sergiovanni, 2008; OECD, 2009), where this is one of the most influential factors (Gajda and Koliba, 2008). It is worth studying, therefore, how the leadership model can influence the teacher's collaborative behavior. Based on our experience on education management, we verified that leadership is a factor deserving some analysis due to its great repercussion on the academic performance and results of students, as it is one of the efficiency factors in the tasks of educational centers.

Our paper intends to study the relationship created by the managerial style that favors collaborative work and, hence, results. Although a direct relationship has not been found between leadership and academic results, a mediated relationship does exist through the work atmosphere in the generated educational center (Mulford, 2003; OECD, 2009). The purpose is to place – in this regard – the Spanish case within its nearest political-economic context. The main goal is to identify second-order variables that help make more structured generalizations based on previously validated critical variables in the discrimination between countries.

The geographic and political sphere was an important aspect to determine. Once our total sample had been observed, we noticed that Spain is part of the group of best represented countries. Out of the total 31 countries or regions participating in TALIS 2013, 19 are part of the EU. This evidence led us to realize that the best available reference framework for Spain is the European framework. Moreover, this is justified by numerous political and cultural arguments.

The results focus on visualizing a model that explains the behavior of centers and countries regarding the leadership style so that similarities and differences can be established with other countries and several areas of Europe. The main agents interested in this study might be education directors, educational center directors, and Secondary Education teachers. Mostly it has a heuristic function, that is, fostering reflection and analysis for a more thorough discussion by the diverse interested parties and the relationships between them. When studying the grey literature in educational leadership, we found the scarce amount of literature on

Secondary education particularly odd, despite the importance granted to the leadership style as a determining factor of quality. However, we have included studies on leadership at the organizational – company – level in order to focus, then, on educational leadership.

Background and theoretical grounds

The role of the leader in an organization is one of the keys to understand adaptability, flexibility, change processes, and efficiency in the crucial moments of its history. For each sector – productive, social-educational, or service provision – leadership is one of the aspects most worth studying and analyzing. However, understanding leadership styles, from the perspective of organization management literature, requires identify several approaches presented over time. Some are more focused on personal features, power, influence on the organization, and behavior within the organizations. Others refer to the situation where this leadership is being applied. In a context where several cultures and ways to understand one Europe but with cultural milestones which are similar and different at the same time, analyzing leadership in the organizations is strategically interesting for the effective integration of states. This paper presents certain aspects of educational leadership in Europe, with its differences and similarities.

In the late 1940s, it was assumed that leaders were “born” and, therefore, it was believed that certain personal features favored leadership in some people over others. Several authors studied this topic, such as Bass’s popular *Stogdills Handbook of Leadership* (1990). Hersey and Blanchard (1993), in their classic manual *Management of Organizational Behavior. Utilizing Human Resources*, remark the special attention the context requires and the factors that define it for each organization. They claim that leadership should depend on the environment, on the project, and on the people one is working with. Through an evolution of Blake and Mouton’s theories (1964), and their managerial grid model, these authors present two dimensions of organizational leadership: people management and work efficiency. Knowledge and applications from the perspective of psychology have been important to analyze this managerial aspects. Authors like Fiedler (1994) have made contributions on the leader’s cognoscitive resources – intelligence and experience – in the groups and collectives he runs and in relation to the situations where the

management is applied. On the other hand, the vision of group leadership – not focused on the individual – has been studied by behavior and organizational design authors. Kotter (1988), in his book *Leadership factor*, sets forth a vision of leadership as a process in which a group (or groups) is led in a direction without coercive means, thus provoking long-term actions in the interest of the group. Leadership, thus understood, is not an individual's personality, but a process in which several people take part. Differences are established between management and leadership, as pointed out by Chamberlin (2012) in a recent article. Educational center directors have played an important role in designing and identifying school leadership (Mulford, 2003). TALIS identifies a double typology based on the aforementioned literature: instructional and distributive.

The several types of leadership applied by directors and teachers also have potential for active collaboration in educational centers, improving the quality of teaching, and student performance (Sergiovanni et al., 2008; OECD, 2010). Distributive leadership focuses on the specific ways to perform, including interactions with others, whether they are teachers, directors, parents or students. This way, both the decision-making and the sharing of information and the control process are included in a participatory way (Spillane, 2006; Hallinger and Heck, 2010; OECD, 2013). For this reason some directors have tried to get the teachers involved in the sustained dialogue and the decision-making (Marks and Printy, 2003). Staying central agents for the change, these directors grant the teachers a role in this process, thus acknowledging their professionalism as well as the capitalization of their knowledge and skills (Darling-Hammond, 2012). Marks and Printy (2003) examined these qualities based on two conceptions of leadership.

Instructional leadership has been identified as the style of those people making decisions to foster growth in the student's learning process (Flath, 1989; OECD, 2013). Instructional or transformational leadership, moreover, intends to raise the organization's and its members' level of commitment and develop their collective capability in order to encourage them to reach their maximum potential and to support them in transcending their own interest for the greater good (Bass and Avolio, 1993; Leithwood, Steinbach and Jantzi, 2002; Sagor and Barnett, 1994; Silins, Mulford, Zarins and Bishop, 2000). It tries to disseminate authority and support teachers in their decision-making (Conley and Goldman, 1994; Leithwood, 1994). It provides intellectual direction, as it has innovation within the organization as a goal. It focuses on verifying,

problem-solving, and collaborating with the parts involved in order to improve organizational achievement (Hallinger, 2003).

The educational style specifies the several possibilities with which each individual prefers to use their aptitudes (Pulido et al., 2009). This is an important matter, not only for the person using their own teaching style, but because of the repercussions these have on the interaction with others. Identifying leadership and leadership styles in the reality of European educational centers is the subject of study of this paper. The multiplicity of the realities making up Europe, the diverse rhythms of integration, each member's problems and circumstances, and the cultural diversity fully covered in the educational system are the subject of study of a multidimensional reality.

The several types of leadership admit multiple classifications, such as the one presented at the presentation on Leadership and Education (Gros, B., 2013). Three styles or aspects were outlined there that define the managerial function. Firstly, pedagogical leadership, which matches Talis instructional leadership; secondly, distributed leadership, which matches distributive leadership; and thirdly, moral leadership, specifically intended to encourage a set of values shared by all, although in line, too, with the Talis distributive leadership. In any case, we understand that the classification used includes the several usual classifications.

In the second Teaching and Learning International Study (TALIS, 2013), where over 30 countries took part – Spain among them –, teachers and directors provided information by means of a questionnaire on professional development, as well as observations and acknowledge of their work, and other matters in reference to managing centers and school atmosphere. In order to analyze educational leadership, the questionnaire's items referred to personal aspects, initial and continuous training, on leadership, qualities of the center, work satisfaction, and collaborative work.

This study is an important source of comparative data analysis between countries to identify the ones dealing with similar or different challenges, in addition to learning about other approaches to educational policy. Some of the results presented by the OECD in reports such as "Improving School Leadership" (Pont et al., 2008), "Teachers matter" (OECD, 2005), or "TALIS, Teaching and Learning International Study. Spanish Report, 2009" (Ministry of Education, 2009) highlight these circumstances in addition to a great interest – not without difficulty – in attracting and retaining good directors and teachers. This presentation

intends to emphasize the data that allow us to learn more about the Spanish educational processes by means of teachers' and directors' opinions, thus comparing the Spanish to the European reality.

Europe is made up by countries with long traditions and it comprises an amalgam of cultures and traditions, delimited by many years of history, within a unified territory since the 1999 Amsterdam treaty came into force. However, it would come as no surprise if this cultural diversity entailed diverse styles of school leadership, too. Consequently, we must wonder whether several geographic behavior patterns exist within this community. We wonder if Europe is united as regards the evolution of educational leadership, even though a diversity can be identified in the field of education. As an example, the paper by María José Navas (2014) carries out a descriptive study of the work satisfaction of Spanish teachers and it concludes that the teachers with a highest index of satisfaction work at centers with a culture of collaboration and shared responsibility in decision-making.

In the light of these results we must wonder whether the role of leaders is changing in the countries participating in this study. What we can conclude – based on research that examined the evolution of leadership in Australia and compared it to that of certain leading countries – is how the role of leaders has changed over time. Key to the analysis is the fact that the leaders of educational centers are still essential for a continuous improvement of education (Mulford, 2003). As an example – and as a reference from other studies which also used a multilevel data structure and hierarchical linear modeling technique – we find the study by Chanberlin in the United States (Chanberlin, 2012). This study focused on the school leadership relationships of directors and teachers, as it examined the potential for active collaboration regarding issues of instruction to confer the quality of teaching and the performance of students. It analyzed instructional and distributive leadership in primary- and secondary-education centers. The study revealed that distributive leadership is necessary but insufficient for educational management. In actuality, when the distributive leadership coexisted with the instructive one in an integrated way, there was a significant influence on school performance – as measured by the quality of its pedagogy and its students' achievement. The early conceptions of teaching on leadership focused on the role of the director in school management processes and procedures regarding instruction and supervision. As the director was required to become an agent of change, the role of the instruction leader lost its centrality.

Method

Participants: For this study, we turned to the data available for European countries in the teachers and educational centers databases in TALIS. We decided to identify each of the educational centers from the participating European countries. Therefore, out of the total 6,654 centers identified, we discarded those belonging to non-European countries and those presenting anomalies in the aforementioned data coding and selection. The final sample comprised a total of 21 countries with a total sample of 3,835 centers with the following distribution (Table I):

TABLE I. Description of the number of centers by European country analyzed

	Absolute frequency f_i	Absolute percentage P_i
Bulgaria	197	5.13
Croatia	200	5.21
Czech Republic	220	5.73
Denmark	163	4.25
Estonia	197	5.13
Finland	152	3.96
France	250	6.51
Iceland	130	3.38
Italy	203	5.29
Lithuania	119	3.10
Netherlands	140	3.65
Norway	155	4.04
Poland	195	5.08
Portugal	194	5.05
Serbia	192	5.00
Slovak Republic	195	5.08
SPAIN	198	5.16
Sweden	193	5.03
England (UK)	172	4.48
Flanders (Belgium)	173	4.51
Romania	197	5.13

Source: Compilation based on TALIS

Instruments

We used the indicators of the TALIS study. The framework period for the data collection – each country defined the deadline within it – were the first three months of 2013. For Spain, the main test was applied between the 4th and 22nd of March, 2013. For each educational center, we identified the variables' values listed in Table II.

TABLE II: List of TALIS indicators used in this study

Indicator	Variable	TALIS description
Average support staff per center.	TC2G12B	School Background/ Number of staff/ Personnel for pedagogical support, irrespective of the grades/ages they support.
Average number of teachers per center.	TC2G12A	School Background/ Number of staff/ Teachers, irrespective of the grades/ages they teach.
Average number of directors per center.	TC2G12D	School Background/ Number of staff/ School management personnel.
Average number of administrative staff per center.	TC2G12C	School Background/ Number of staff/ School administrative personnel.
Average number of other management staff per center.	TC2G12E	School Background/ Number of staff/ Other staff.
Average index of need for training for teaching for diversity.	TPDDIVS	Need for PD for Teaching Diversity/STSTDS.
Average index of need for specific training in the subject matter and pedagogy.	TPDPEDS	Need for PD in Subject Matter and Pedagogy/STSTDS.
Proportion of centers with directors aged over 60.	PRAGEGR	Principal Age Groups.
Average age of the teachers.	TT2G02	Background/ How old are you?
Average index of teacher co-operation.	TCCOOPS	Teacher Co-Operation/STSTDS
Average index of Coordination and Change for teaching among teachers.	TCEXCHS	Exchange and Coordination For Teaching/STSTDS
Average index of professional collaboration for teaching.	TCCOLLS	Professional Collaboration/STSTDS
Proportion of teachers with education over ISCED 5A or 6 level.	TT2G10	Background/ What is the highest level of formal education you have completed?
Average index of Instructional Leadership Degree per center.	PINSLEADS	Instructional Leadership/STSTDS.
Proportion of teachers who completed a teacher training program.	TT2G11	Background/ Did you complete a <teacher - training program>?
Average index of Distributive Leadership degree per center.	PDISLEADS	Degree of Distributed Leadership in the School/STSTDS.
Proportion of full-time teachers.	TT2G04	Background/ Why do you work part-time?
Average index of Effective Professional Development.	TEFFPROS	Effective Professional Development/STSTDS.

Source: Compilation based on TALIS

Procedure

In the case of quantitative scale variables, we estimated the mean for every center through Tukey's and Humpel's robust estimators to prevent the biases of possible strange or anomalous values. As for categorical values, the indicator was estimated through the observed proportion in the selected group. Accordingly we obtained, for example, the observed proportion of women in each center or the proportion of directors in each center aged 60 or more. This way, we obtained observed distributions for all the indicators defined, which facilitated the later analysis conducted through IBM SPSS 21.0, Mplus for the structural models, and some R routines for the distance estimations.

Results

For the comparative analysis of the countries under study, we opted to set a simple measurement model by means of structural equation models so as to propose a second-order factoring based on the indicators described by TALIS, given they are based on the first-order configurational invariance described by the TALIS report itself. The list of indicators and factors was compiled based on certain theoretical models previously mentioned and on the partial results obtained in exploratory analyses applied to random samples extracted from the TALIS general database. Therefore, we put forth (Table III) the following measurement model to be evaluated by a Confirmatory Factor Analysis (CFA):

Once the confirmatory models had been defined, the factor loadings were estimated for every indicator, leaving aside INS and DIST factors, as they are one-indicator factors and, therefore, we assume their saturations are perfect ($\lambda = 1$). We must point out that this assumption reduces the possible bias due to these factors being underrepresented. Likewise, we assumed orthogonality (independence among factors) among the four exogenous factors ($\Phi = I$) which, given the goal of the present paper, will become the variables considered exogenous (RR.HH, FORM, COOP, IPP), and the remaining two will be endogenous (INS and DIST).

TABLE III. Proposal of measurement model (CFA) based on the indicators selected.

FACTOR	DESCRIPTION	ASSIGNED INDICATORS
1	Human Resources structure in each center. (RR.HH)	Average pedagogical support staff per center. Average number of teachers per center. Average number of directors per center. Average number of administrative staff per center. Average number of other management staff per center. Proportion of centers with directors aged over 60. Average age of the teachers.
2	Need for training. (FORM)	Average index of need for training in teaching for diversity. Average index of need for specific training in the subject matter and pedagogy.
3	Level of collaboration and co-operation among teachers for academic activities. (COOP)	Average index of teacher co-operation. Average index of Coordination and Change for teaching among teachers. Proportion of teachers with education over the ISCED 5A or 6 level.
4	Instructional Leadership (INS)	Average index of Instructional Leadership degree per center.
5	Distributive Leadership (DIST)	Average index of Distributive Leadership degree per center.
6	Professional Involvement of the Teachers (IPP)	Average index of professional collaboration for teaching. Proportion of teachers who completed a teacher training program. Average index of Effective Professional Development. Proportion of full-time teachers.

Source: Compilation based on TALIS

The parameter estimation was carried out by means of Maximum Likelihood (ML) estimators, likewise assuming the independence of measurement errors. The measurement model fit resulted adequate, and it presented the following fit values with $\chi^2 = 112.44$; $gl = 104$; $p = .34$ and the following global indexes CFI = .944 (*Comparative Fit Index*); TLI = .961 (*Tucker Lewis Index*); AIC = -1451.23 (*Akaike Information Criteria*); BIC = -1592.17 (*Bayesian Information Criteria*); GFI = .96 (*Goodnes of Fit Index*); AGFI = .95 (*Adjusted Goodness of Fit Index*); SRMR = 0.02 (*Confidence Interval at 90% between 0.01 and 0.03*) (*Standardized Root Mean Residual*). All these values ensure the fit of the measurement model proposition and with factorial saturations statistically significant ($p < .001$) according with the Table IV results. This table show each factorial coefficients (λ_{ij}) for each observable variable and factor.

TABLE IV. Factor saturations for each factor and indicator. All the estimations ($p < .001$)

INDICATOR	RR.HH	FORM	COOP	IPP
Average pedagogical support staff per center.	.862			
Average number of teachers per center.	.840			
Average number of directors per center.	.772			
Average number of administrative staff per center.	.717			
Average number of other management staff per center.	.840			
Proportion of centers with directors aged over 60.	.788			
Average age of the teachers.	.801			
Average index of need for training in teaching for diversity.		.951		
Average index of need for specific training in the subject matter and pedagogy.		.753		
Average index of teacher co-operation.			.801	
Average index of Coordination and Change for teaching among teachers.			.778	
Proportion of teachers with education over the ISCED 5A or 6 level.			.781	
Average index of professional collaboration for teaching.				.802
Proportion of teachers who completed a teacher training program.				.746
Average index of Effective Professional Development.				.857
Proportion of full-time teachers.				.781

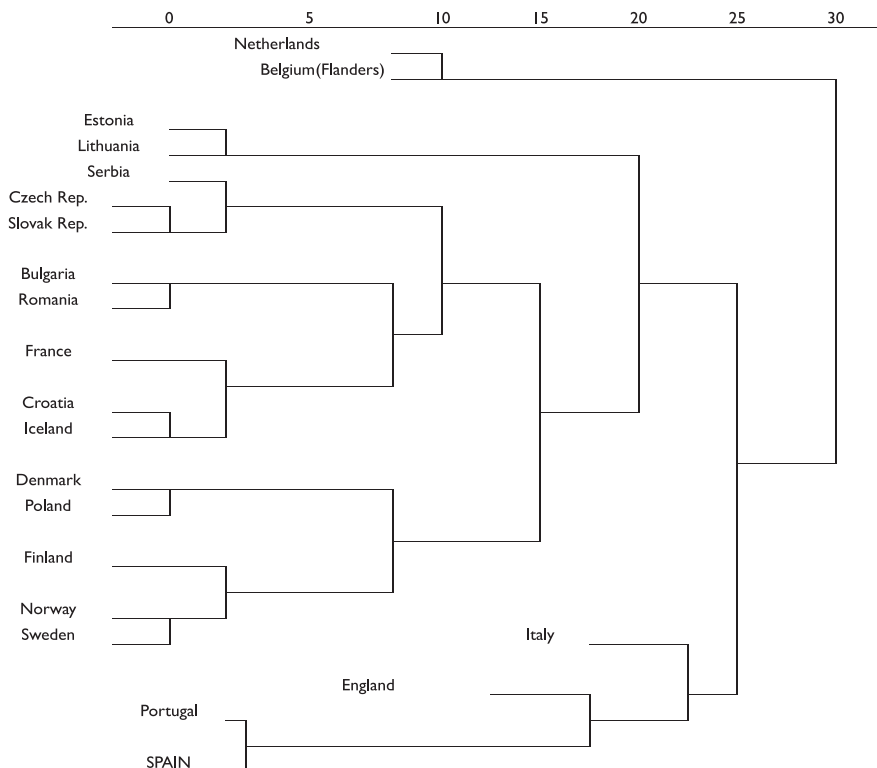
Source: Compilation

Once the viability of the proposed measurement model was verified, we proceeded to generate the normalized and standardized score for each center $[N(0,1)]$ in each factor (both exogenous and endogenous, in the latter case by direct transformation) to enable an identical metric which will make descriptive comparison between countries easier.

Exploratory study of hierarchical conglomerates

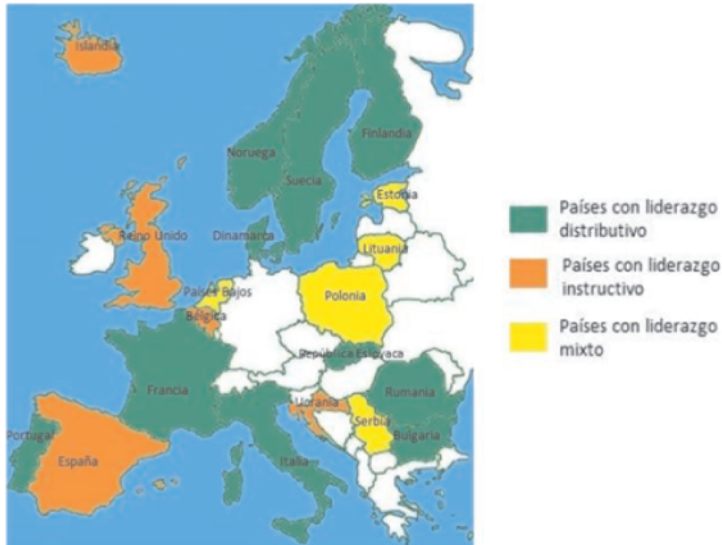
With the scores derived this way, we pondered the possibility to estimate similarities among the countries under study. Accordingly we subjected the groupings by countries to a study of distanced estimated through the Mahalanobis distance and generating groupings through the Nearest Neighbor technique. The goal of such procedure was to verify the possible groups from similar countries with regard to the variables measured. The results is shown in the following graph I.

GRAPH I. Dendrogram among countries based on the similarities between the variables considered second-order exogenous and endogenous factors.



In light of the above result, we can infer the existence of three clearly identifiable blocks and a series of countries with disparate behavior. Among the latter we can identify Bulgaria, Belgium (Flanders), Portugal, Italy, and SPAIN. In any case, as regards the variables under consideration, SPAIN's values do not make us similar to leading countries such as the Nordic ones or the Netherlands and England (UK). A complementary way to present this information is to identify, in every country analyzed, what type of leadership style may characterize the majority of educational centers. Accordingly, the following graph (graph II) indicates each country's characteristic style of leadership, grouping them by matching predominant styles.

GRAPH II. Trends of leadership types in the European countries analyzed.



Source: Compilation

Estimation of the impact of exogenous on endogenous factors

For this last analysis, we proceeded to estimate the structural parameters associated to each exogenous factor for each endogenous factors. To avoid an exceedingly detailed analysis by country which might yield a list and data difficult to interpret, we opted to assume the groupings derived from the conglomerate study and group the 21 countries in zones of interest defined according to the aforementioned results and specific geographic areas. Thus, they were grouped into Northern European Countries (Norway, Sweden, Finland, Denmark, and Iceland); Southern European Countries (France, Portugal, and Italy); Central European Countries (Czech Republic, Slovak Republic, Serbia, Poland, Estonia, Lithuania, Bulgaria, Belgium, Croatia, and Romania); Anglo-Saxon Countries (England and the Netherlands); and SPAIN, which was singled out for this study. This way, the impact values (β_{ij}) of each exogenous factor on each endogenous factor estimated by maximum likelihood appear in Table V.

TABLE V. Values of the standardized parameters (β_{ij}) and statistical signification of the model by group of countries and type of leadership. Underlined estimations are not statistically significant.

Factor	Countries	RR.HH	FORM	COOP	IPP	Model Fit	R ²
INSTRUCTIONAL	Northern	.784	.696	.379	.352	p < .001	.814
	Southern	.407	.296	.181	-.751	p < .001	.623
	Central	.744	.432	.612	.141	p < .001	.795
	Anglo-Saxon	.632	.577	.402	.812	p < .001	.878
	SPAIN	.432	.377	.453	.412	p < .01	.604
DISTRIBUTIVE	Northern	-.309	.558	-.784	-.824	p < .001	.833
	Southern	.779	-.371	-.412	-.376	p < .001	.577
	Central	<u>.233</u>	<u>-.128</u>	<u>.139</u>	<u>.212</u>	p = .881	.201
	Anglo-Saxon	.512	.481	.582	.799	p < .001	.871
	SPAIN	.236	-.322	-.370	-.390	p < .01	.514

Source: Compilation

As can be inferred from table V, clear differences exist among the areas of Europe. It is enough to review the role of Human Resources (RR.HH) in generating instructional leadership (INS) as compared to, for instance, Southern European countries, or the case of Spain, where this circumstance is distributed somewhat differently, with a clearly lower incidence. This table is useful to show the deep differences in the matter of leadership analyzed from the viewpoint of the impact offered by the second-order factors explained here.

In order to assess the aforementioned results in a simpler way, we provide a table with the means of the standardized values of the predicting variables of the types of leadership depending on the geographic area and distinguishing between types of leadership.

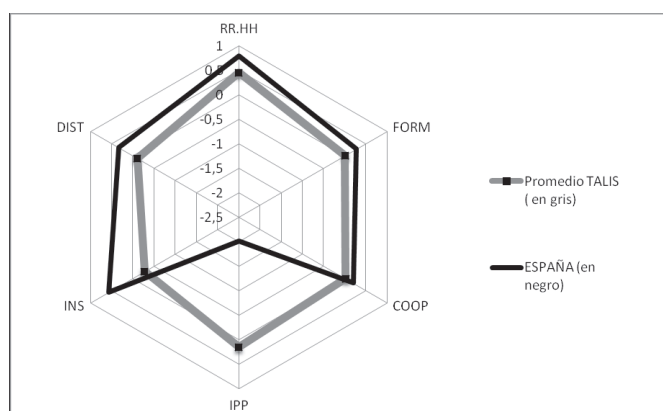
TABLE VI. Mean of every variable involved in the regression models according to the European areas considered.

	RR.HH	FORM	COOP	IPP	INS	DIST
Northern	-0,49	0,12	0,45	-0,7	-0,7	0,1
Southern	1,02	1,15	-0,54	0,26	-0,5	0,53
Central	-0,51	-0,24	-0,16	0,33	0,59	0,24
Anglo-Saxon	1,75	-1,01	0,34	0,74	-0,5	-1,31
SPAIN	0,79	0,27	0,2	-2,01	0,56	0,33

Source: Compilation

Graph III shows the average of each of the variables in table VI, which allows us to analyze Spain’s position in relation to the average of the countries analyzed. Spain’s behavior pattern is, in general, somewhat higher than the average, except for the variable IPP which is associated to the Teachers’ Professional Involvement. This index comprises four aspects: the average of teacher collaboration, the proportion of teachers who completed a teacher training program, the average index of Effective Professional Development, and the proportion of full-time teachers.

GRAPH III. Diagram comparing the means of Spain’s variables to the average of the other countries.



Source: Compilation

Conclusions

The level of analysis we chose was the Secondary Education center in the environment of each country's educational system. The first conclusion is that such choice is a level segmentation very appropriate to understand the relationship under study. We can claim that the singularity of each system, and of the centers it comprises, is perfectly defined, on the one hand, by the endogenous factors human resource, need or training, teacher collaboration and co-operation, and professional involvement; and on the other, by the exogenous factors instructional leadership and distributive leadership from our model.

Secondly, we verified the functionality and efficacy of the second-order indicator system generated and, with the scores derived from the model's six factors, we conducted an automatic classification to check whether the result of such automatic classification matches the logic of the systems in themselves and the European regions. Indeed, we can see how similar socio-economic systems and regions group themselves with a high degree of isomorphism. Thus, for instance, the Netherlands and Belgium are grouped with a certain degree of coherence. Such is the case of Estonia and Lithuania; Serbia, the Slovak Republic, the Czech Republic, Bulgaria, Romania, France, Croatia, and Iceland; Denmark, Poland, Finland, Norway, and Sweden; and lastly, England, Italy, Portugal, and Spain.

When conducting the study on the 21 European countries that participated in TALIS, we should note that, due to the diversity of each of the national units regarding their cultural, social, political, and educational characteristics, the conclusions on the differences or similarities among the countries compared must respond to the context where they can be understood (Egido et al., 2014). On the other hand, big differences exist between the groups of countries. For example, we found very high values for Human Resources instructional leadership in Northern countries, while the distributive leadership values are very high in Southern European countries. We also found a lesser impact of training in Southern countries, more specifically in both leadership styles. The group with no significant values in the distributive style is the one comprising Central European countries, as there is a lack of a type of leadership in the establishment.

Spain falls into the same group as Portugal and, as mentioned above, near Italy. It all confirms the applied consistence of our analysis model.

Another conclusion is that Europe – even if it is undergoing a convergence process – is very far from being a coherent, homogeneous space in the definition of its educational model. In the aspects we studied within the participating countries, there seem to prevail very diverse idiosyncrasies and very differentiated areas according to socio-educational traditions and levels of income. Fourthly, we should analyze the specific situation of Spain in each of the endogenous and exogenous factors. As regards the endogenous factors, countries with well-defined leadership models such as Lithuania, Estonia, Serbia, Poland, and the Netherlands tend to a rather instructional leadership model, while Bulgaria, Denmark, Finland, France, Italy, Norway, Portugal, the Slovak Republic, Sweden, and Romania have a rather distributive model. Unlike these, Spain has very similar values to both styles near the European mean. This may reflect a low definition of the system as well as dualities in organizational models.

As for the exogenous factors, Spain's situation is signified by a lower value than the rest of Europe. Such is the case in Professional Involvement (IPP). The data do not allow us to isolate the variables differing from the mean of the countries, which come down to three: teacher collaboration, teacher training or effective professional development, and the proportion of full-time teachers. The people responsible for centers' teams of directors will know how to identify the degree to which they may need to improve in each of them. The remaining factors are close the European mean, or slightly above it in the case of human resources (RR.HH). This comparison reveals emerging aspects towards more efficient models, but still far from considering it in a relevant position within the group of European countries.

A fifth conclusion is the fact that Spain is placed basically with the Southern European countries with similar values for RR.HH and FORM in the instructional model. In the distributive management model, Spain also agrees significantly with the Southern countries. Consequently, we can claim that Spain has no well-defined profile.

Although the present study does not provide details on how the directors and teachers share educational leadership, follow-up research on educational centers would provide data to show how instructional and distributive leadership is developed.

It would also be interesting, in future research, to include the variables related to performance based on PISA, and the model verification with one of the causal chains that restrict the way academic performance

functions. Likewise, it seems necessary to generate a higher number of indicators in the future in some of the latent factors so as to improve their operational definition.

A second inference of this study's conclusions is the need to promote training in the directors of the centers more intensely. The traditional vision of leader training will have to be left behind and a wide conception of direction will have to be embraced that goes beyond the technical and formal spheres. Training based on orientation and accompaniment must be encouraged with benchmarking, mentoring, and coaching activities which result in training supported on experience and good praxis.

In any case, encouraging leadership oriented to promote a modern culture of management for educational centers would be a good recommendation within the European Educational Space. It would be advisable to make a proactive diagnosis of educational organizations, along with designing effective incentives to pursue change and improvement in leadership. It would undoubtedly improve the global identity of the European Educational Space and it would foster the system's improved results in favor of the economic and social progress of citizens.

As for the distributive leadership, it emerged as the model the directors needed to run schools. Research suggests that the director's strong distributive leadership is essential to support teacher commitment. Educational leadership in itself can get to be transforming.

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