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**The Impact of Pedagogical Leadership on Pedagogical Coordination in Secondary Schools**

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**Abstract**

Educational Leadership has an international recognition as a factor for school improvement (OECD, 2009, 2014). The international investigations guarantee this. Within the multiplicity of investigative lines that concern this factor, there is one that alludes to its impact on school improvement, especially in contexts of the social inequality. Within the pedagogical leadership, it has been evidenced that the shared modalities of leadership that invite other members of the educational organization to be involved in a common project, are associated with a greater commitment for the improvement and inclusion of all the students. At the same time, other factors come into play, such as the professional identity of both management and staff (García-Martínez & Tadeu, 2018), professional capital (Hargreaves and Fullan, 2014) or the inclusive practices outlined in this type of context. This intervention oscillates around these issues, offering a vision about studies carried out in the international sphere that associate, on one hand, the impact of leadership on the educational organization and on the other, positive effects in challenging contexts. Finally, the results obtained from a questionnaire designed specifically for this research will be presented, in which secondary school teachers were asked to respond to questions related to the collaboration in the center, if they received support from the management team to improve their practices, if they perceived themselves as school leaders or teachers. Among the results found, it is observed that there is a positive trend towards the construction of a common educational project in secondary schools by the management team. Likewise, there is a positive predisposition on the part of the teaching staff to be more involved in the initiatives of the educational center and towards collaboration and coordination with other colleagues.

**Key words:** *Pedagogical leadership; teacher leadership; pedagogical coordination; teacher collaboration; secondary education*

**Introduction**

Secondary education is one of the most complex levels of the educational system due to the inherited school cultures (Bolívar, 2012). The fact that the teachers who teach at this educational level become specialists increase their tendency to the isolation. For this reason, it is necessary to reconvert the educational system from within, in which those collaborative conditions are favored

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that facilitate communication and the exchange of practices within the educational organizations (Albashiry, Voogt & Pieters, 2016).

For this, in recent decades, is betting on the establishment of pedagogical leadership in schools as a way to improve them from within. The distribution of leadership from the direction implies a greater involvement of the teaching staff to work towards common goals, related to the improvement of the teaching and learning processes of the students (Shaked & Schechter, 2017). In fact, recent research points to distributed and shared leadership (Harris, 2014) as to the ideal modalities to optimize the professional capacity of teachers (Hargreaves & Fullan, 2014). Likewise, it has been verified how distributed leadership is a catalyst to improve teacher involvement and develop a collaborative culture in secondary school (Klar, 2012).

Numerous international investigations have inquired about the positive effects of distributed leadership modalities on school improvement capacity, the professionalism of the teaching staff (García-Martínez & Tadeu, 2018; Wieczorek, 2017), the climate and school coexistence (Piyaman, Hallinger & Viseshsiri, 2017), and, of course, on the processes of teaching and learning of students (Day, Gu, & Sammons, 2016; Sheppard & Dibbon, 2011).

Most of them coincide in pointing out the hierarchical organizational structures that characterize secondary education as the main impediment to carry out the school reforms, both internally and externally. Around these questions, a line of research called "Learning Communities" was developed (Stoll et al, 2006), which subsequently and, under the influence of "Organizations that learn" movements (Krichesky & Murillo, 2011), it turned to what is now known as "Professional Learning Communities" (Leclerc, Moreau & Lépine, 2009; Stevenson, Hedberg, O'Sullivan & Howe, 2016). However, all the processes that move these currents are not applicable to the complex Spanish case, especially at the secondary education level (García-Martínez, Higuera-Rodríguez & Martínez-Valdivia, 2018). For this reason, it is necessary to resort to other approaches more related to the reality and complexity that await the rigid structures of Secondary Education, initiating small actions within the organization that seek to strengthen the pedagogical coordination and, therefore, the processes of school teaching and learning (Piyaman, Hallinger & Viseshsiri, 2017; Seashore-Louis, Leithwood, Wahlstrom & Anderson, 2010).

Currently, there is an emerging line of the research that advocates the intermediate leadership as a means to alleviate the organizational rigidity (Hauge, Norenes & Vedøy, 2014; Hulpia, Devos, Rosseel & Vlerick, 2012; Kilinc, 2017; Liljenberg, 2015; Poultney, 2012; Tarman, 2012).

Normalmente, el director invierte la mayor parte de su tiempo en realizar tareas administrativas y burocráticas, que dejan poco tiempo a responsabilizarse de las cuestiones eminentemente pedagógicas. In these cases, if the direction empower other figures, getting them to lead the pedagogical processes, a double benefit will be obtained. On the one hand, the fact that management empowers others is an act of trust that makes staff feel important and motivated to assume pedagogical responsibilities. On the other hand, organizational decentralization entails greater participation, shared decision-making, the strengthening of trust in the educational center and fluid and effective relationships among all educational agents. These factors represent an important advance in the initiation of internal change processes necessary for any school to achieve school improvement (García-Martínez, Higuera-Rodríguez & Martínez-Valdivia, 2018). In an investigation carried out by Shaked & Schechter (2017), it was found that the systemic thinking of intermediate leaders are characterized by four characteristics: “(1) seeing wholes; (2) using a multidimensional view; (3) influencing indirectly; and (4) assessing significance” (p. 699). In this sense, a large research corpus points to the department heads and the heads of studies as to the potential leaders in schools, due to their intermediate position in the organization (De Angelis, 2013; Leithwood, 2016). Likewise, the establishment of a pedagogical leadership in the center, with a distributed cut, causes the role of the management to undergo profound modifications, changing from a mere manager of the organization to a dynamizer of internal change processes (Hanuscin, Chen, Rebello, Shina, & Muslu, 2014), whose main mission is to offer the necessary coverage and support so that other members assume the leadership and ensure the continuity of such processes (Paranosic & Riveros, 2017). In this sense, it seems plausible to gather the perception of the teaching staff about the internal functioning of the organization and to verify if, indeed, the director as formal leader of the secondary school, empowers other members of the organization, giving rise to the conditions of collaboration and of shared decisions within the research (Rigby, 2015).

The research in this work addresses all these issues, highlighting the perception of teachers about the internal functioning of secondary schools. Specifically, they were asked about their opinion about the role of the director as responsible for the collaborative conditions, the tendency to extend or not the center's decision-making to all the staff. In turn, they were also asked about their involvement in the center and their willingness to collaborate with their peers, as well as if there was a tendency for collaboration in the institute.

### **Method**

The design carried out for this research has sought to present an overview of the impact of pedagogical leadership on pedagogical coordination in secondary schools. For this, the focus was on the existence or not of a culture of collaboration in this kind of schools, facilitated by the management, according to the perspective of the teaching staff.

In this sense, the research problem is formulated around the following questions: Is there a pedagogical leadership in secondary schools? Does management dilute the leadership throughout the organization, giving way to conditions of collaboration in the centers? Does leadership influence pedagogical coordination?

To answer these questions, a non-experimental descriptive and cross-sectional design has been followed on a final sample of 300 secondary teachers from Eastern Andalusia. For access to the sample, secondary schools located in the provinces of Jaén, Granada and Almeria were contacted through the institutional email, requesting the voluntary collaboration of the teaching staff. Therefore, it can be said that the sampling procedure followed corresponds to a non-probabilistic sampling, for convenience, because despite extending the participation to the whole sample adhered to the pre-defined criteria (secondary school teachers working in public institutes), the accepting sample could not be controlled.

The collection of information was carried out through a Likert-type scale, with four response options, one corresponding to 'totally disagree' and four to 'total agreement', aimed at secondary school teachers. In addition, the questionnaire was adapted in an online version, using the google form tool, to guarantee the anonymity of the respondents. Specifically, the designed instrument had 30 items, in which teachers were asked questions related to the dynamics of the center, the tendency to isolation or teacher collaboration, the role of the director as a catalyst for good practices and support for staff. For the calculation of the internal consistency, Cronbach's alpha was made, whose score was 0.946. The statistical treatment and analysis of the data obtained was carried out through the statistical program SPSS® 24.0.

### **Findings**

The following table (Table 1) presents the characterization of the items: 3, 6, 7, 10, 11, 13 and 14. The absolute and relative frequencies of the responses obtained were used, as well as the calculation of the mean, standard deviation and median for each element.

Regarding the item (Q3) it is observed that the majority, 60% (180), of the professors affirmed that the Director stimulates the collective work a lot. Based on the average value (3.25) and the median (3.00), we can affirm that the collaborative work is duly stimulated by the director.

Regarding the item (Q6), it can be seen that the highest response rate is "a lot", which means that 55.3% of the teachers surveyed consider that the management makes it possible to take participatory decisions in the center. In turn, one aspect to highlight is that none of the respondents is against such a statement. In addition, the average of the answers in this question amounts to 3.36, being the median 4. These results reveal that the management takes into account the contributions of the teachers and there has been some consensus reached when making decisions in the center.

The item (Q7) "You assume responsibilities and take initiatives to improve the quality of teaching-learning processes", on the contrary, you get the lowest scores, with an average of 2.51 and a median of 2. However, a considerably moderate percentage (33.3%) of the teaching staff affirms that if they assume responsibilities to improve teaching and learning processes.

In the item (Q10), most of the answers (77.3%) are in a lot, which confirms that there is a consolidated culture of collaboration in the educational centers of the participants in this research. Proof of this is its high average, 3.77, as well as its median 4, with the item being the best valued. High scores also received the item (Q11), concentrating in "a lot" to 52.3% of the answers, followed by "enough", with 36.3%. The average of this item is 3.40 and the median is 4.

On the contrary, the item (Q13) "You consider that you receive support from the management team to improve their practices", receives scores moderately lower than most, with an average of 2.62. Regarding the response trend, there is a great variability in the responses (1,131), distributing the teachers' opinions almost equally in the four response options.

Finally, most of the answers to the item (Q14) adhere to the "much" option, which means that 71% of teachers assume and recognize their identity as a leader.

**Table 1:**

Absolute and relative frequencies, mean, standard deviation and median per item

Item	Not at all n(%)	Little bit n(%)	Quite n(%)	A lot n(%)	Average (standard deviation)	Median	
Q3	2 (0.7%)	20 (6.7%)	180 (60.0%)	98 (32.7%)	3.25 (0.600)	3.00	
Q6	0 (0.0%)	59 (19.7%)		75 (25.0%)	166 (55.3%)	3.36 (0.790)	4.00

Q7	94 (31.3%)	60 (20.0%)	46 (15.3%)	100 (33.3%)	2.51 (1.244)	2.00
Q10	0 (0.0%)	0 (0.0%)	68 (22.7%)	232 (77.3%)	3.77 (0.490)	4.00
Q11	4 (1.3%)	30 (10.0%)	109 (36.3%)	157 (52.3%)	3.40 (0.722)	4.00
Q13	70 (23.3%)	59 (19.7%)	85 (28.3%)	86 (28.7%)	2.62 (1.131)	3.00
Q14	38 (12.7%)	4 (1.3%)	45 (15.0%)	213 (71.0%)	3.44 (1.018)	4.00

Since the variables under study are of the ordinal type, we used the Spearman correlation coefficient.

Analysis of the following table shows that Q3 shows a statistically significant correlation with Q6, Q7, Q11 and Q13 and positive. With the exception of the correlation with Q13 that is considered moderate, the remaining ones present low intensity.

This means that there is a relationship between the director's willingness to establish a collaborative environment in the secondary school and the support that the headmaster provides to the teachers to improve their practices. Likewise, a relationship is observed, albeit weak, between the actions of the management to create a collaborative environment in the educational organization and the distribution of responsibilities and joint decision-making in the secondary school. The "relatively low" score given to the issue that concerns the involvement of the teachers in this decision-making, can reduce, in some way, the direct relationship with the collaborative work of all the staff to achieve a common project.

Indeed, It is observed that Q6 is also positively correlated and statistically significant and of low intensity with Q7 (0.350) and Q13 (0.436). That is, it is observed that there is a relationship between the degree of participation promoted by the management and the degree of involvement of the teaching staff. However, the weakness of this relationship may be due to the lack of involvement of the teaching staff when it comes to taking the responsibility for the improvement of the teaching and learning processes. In turn, one aspect to highlight is the relationship between the degree of participation promoted by management, that is, the empowerment and support that management offers teachers to improve their educational practices. Visualizing the scores obtained in both items shows how the teachers perceive that the management has conditions of collaboration in the secondary school, although it does not finish giving them the tools they need to be able to assume them.

Also, it exist a correlation positive and moderately intense (0.601) between the items Q6 and Q11, that is between the shared decision making promoted by the management and the collaborative

work of all the staff around a common project. So the greater the degree of participation in the center's decision-making, the higher the collaboration indexes to work together towards a common goal.

However, the correlation with Q10 is weak (-0.266) and in the opposite direction, that is, if we check the increase of frequency in Q10, the decrease in Q6 is expected. These results are certainly incongruent, since they affirm that the more the management favors the consensus in the center's decision-making, the less is the consolidation of a culture of collaboration in it.

As for Q7, it can be observed that it presents positive and statistically significant correlations with Q11, Q13 and Q14. The coefficients observed with Q11 (0.540) and Q13 (0.631) show moderate intensity, which implies that the degree of the involvement of the teachers to assume responsibilities and propose change initiatives is related to the degree of collaboration prevailing in the center to work together to achieve the educational goals and the support that management gives them to implement this improvement.

However, respect the correlation between Q7 and Q14 the intensity is weak (0.299), so, there is no intense relationship between the involvement of teachers in the improvement processes and their perception of the school leader.

On the other hand, it is observed that Q10 presents a significant correlation in the opposite direction and of low intensity with Q11 (-0.165), that is, between the existence of a culture of collaboration in the center and the tendency to work together to achieve common goals.

Statistically significant correlations of Q11 with Q13 (0.458) and Q14 (0.302) were positive and of low intensity. Therefore, weak correlations are observed between the collaborative work of the staff to achieve common objectives, the support facilitated by management and the perception that the teachers have about leadership.

Similar is the case of the correlation between Q13 and Q14 (0.434), that is, the support of the headmaster to the teachers and the development of the teacher leadership identity.

**Table 2:**

Spearman correlation

	Q3	Q6	Q7	Q10	Q11	Q13	Q14
Q3	1	0.464**	0.481**	0.051	0.473**	0.553**	0.069
Q6		1	0.350**	-0.266**	0.601**	0.436**	0.050
Q7			1	-0.066	0.540**	0.631**	0.299**

Q10	1	-0.165**	0.061	-0.008
Q11		1	0.458**	0.302**
Q13			1	0.434**
Q14				1

\*-significant at 5%; \*\*-significant at 1%.

### **Discussion**

In this research, a relationship was determined between the headmaster's willingness to establish a collaborative environment in the secondary school and his capacity to offer support to the teaching staff to improve their practices. In this line, authors such as Leithwood (2016), Harris (2014) or Krichesky & Murillo (2011), agree that the establishment of a culture of collaboration in the educational organization facilitates teachers to develop their professional capacity (Hargreaves & Fullan, 2014), improving their teaching practices. At the same time, they point out the decisive role that management plays in the establishment of collaborative conditions in the center (Javadi, Bush & Ng, 2017; Mifsud, 2017; Wang, 2016). In addition, there is a relationship, albeit weak, between the actions of the management to create an environment of collaboration in the educational organization and the distribution of responsibilities and joint decision-making in the center. These results coincide with other studies that have pointed to "empowering" as a means of school improvement (García-Martínez, Higuera-Rodríguez & Martínez-Valdivia, 2018; Harris, 2014). According to some authors, the direction as the formal leader of the center must empower teachers to assume pedagogical responsibilities, which motivate them to work towards a common project. In turn, this empowerment would mobilize ways of collaboration and communication in the center, having to work together, with a view to a common goal. However, as has been reported in this paper, the "relatively low" score received by the issue that concerns the involvement of teachers in this decision-making, can reduce the ability of the staff to collaborate to work towards achievement of that common project (Geda, 2015).

In contrast with our results, Li, Hallinger, Kennedy & Walker (2016) argue that "among the array of school capacity factors, school environment featuring trust, communication and collaboration have been conceptualized as conditions that mediate the influence of leadership on the professional progress of teachers" (p. 3).

In our research we can see the existence of a weak relationship between the degree of participation promoted by the management and the degree of involvement of the teaching staff. The weakness



of this relationship may be due to the lack of involvement of the teaching staff when it comes to taking responsibility for the improvement of the teaching and learning processes. At the same time, an aspect to be highlighted is the relationship between the degree of participation promoted by management, that is, the empowerment and support that management offers teachers to improve their educational practices (Stevenson, Hedberg, O'Sullivan & Howe, 2016; Wingrave & McMahan, 2016). Visualizing the scores obtained in both items shows how the teaching staff perceives that the management has some conditions of collaboration in the secondary school. Although he does not finish giving him the tools he needs to be able to assume them. In other words, management presents a good disposition to offer optimal conditions that give way to internal changes. Consistent with the point made by Day, Gu, & Sammons (2016), who stress the need for management to assume a transformative role that impacts the individual and collective practices of teachers to produce such improvements.

In addition, a positive and intense correlation was found between the shared decision making promoted by the management and the collaborative work of all the staff around a common project. So the greater the degree of participation in the center's decision-making, the higher the collaboration indexes will be to work together toward a common goal. This relationship has already been observed by authors such as Bandur (2012), who says that “how devolution of power and authority to school level are credited with creating partnerships in participatory school decision making such as setting a school mission, shared vision, annual programs (...) school buildings, school-based curriculum, and even students' discipline policies” (p. 869). This author continues to point out that “devolving power and authority to school level is seen to have created several changes in schools, including in-school culture changes, and increased participation of school communities. These factors have led to the improvements identified in teaching-learning environments and student achievements” (p. 869).

The indirect relationship glimpsed between the establishment of a participatory culture in the center and the achievement of a culture of collaboration is contrary to that found in other similar studies. While in this case, there has been some incongruity in obtaining that the more the management favours consensus in the center's decision-making, the less is the consolidation of a culture of collaboration in it. Studies such as the one carried out by Harris (2014), point out the opposite effect, stating that when management opens decision-making throughout the organization

and empowers staff, internal links are strengthened that give way to a collaborative environment, mutual trust and respect.

In addition, there is some agreement with other similar investigations (Marco-Bujosa & Jurist Levi, 2016; Sharma, Rifkin, Tzioumis, Hill, Johnson, Varsausky et al, 2017) in the establishment of a moderately correlated intense between the degree of involvement of teachers to assume responsibilities and propose initiatives for change and the trend towards collaborative work to achieve educational goals and the support and support offered by management to initiate those improvement processes.

Contrary to what was found by other investigations, in the present study (Bolívar, 2012; OECD, 2009), paradoxically, it has been found that there is an indirect relationship between the prevalence of a collaborative culture in the center and the degree of involvement to join forces and work together around a common project. To reduce the lack of involvement of teachers, Low & Lotter (2016) designed a model to achieve professional teacher development. According to these authors, the training in the distributed leadership modalities has a remarkable impact on the professional capacity of teachers, in the sense that these experiences allow teachers to "see their instructional expertise and content knowledge improve through collaborative interactions. High-quality professional development should not stop with improved teacher practice, but should strive to produce teacher leaders that share this growth with others as part of a systematic implementation of best practices "(p. 344).

Finally, our study established a slightly moderate relationship between the support and support provided by the management to the teachers and the development of a leader identity in the teaching staff. Find that coincide with other studies that affirm that the dynamics that prevail in the organization, as well as the hallmarks of the center, result in the identity of the teaching staff as professionals (Garza, Drysdale, Gurr, Jacobson & Merchant, 2014; Rigby, Larbi-Cherif, Rosenquist, Sharpe, Cobb & Smith, 2017).

### **Conclusions**

Among the results found, it is observed that there is a positive trend towards the construction of a common educational project in secondary schools by the management team. In addition, it has been noted that the headmaster as the formal leader of the Secondary school has fully assumed its new role as a catalyst for change processes, instead of a manager. This is shown by the teachers' perceptions when they have been asked if there is a culture of collaboration in the center promoted

by the management. Also their response to whether the management promotes shared decision-making in secondary schools. Although the work of management is acknowledged to create suitable working conditions to initiate internal processes of change, teachers do not finish assuming all the responsibilities that are expected of them in practice. However, there is a positive predisposition on the part of the teaching staff to be more involved in the initiatives of the educational organizations and towards collaboration and coordination with other colleagues, which supposes the beginning of processes of internal change that result in an improvement of the organization as a whole. In future research, a contrast will be made between the teachers' perception of these issues and the perception of both the management and other intermediate leaders, in order to observe whether there is convergence in the opinions. Equally, it would be interesting to use qualitative techniques that allow a more detailed analysis of the inherent reasons for these results, offering a mixed design.

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