Innovation Under Pressure? Education Authorities, Families, and Professionals and Educational Innovation

¿Innovación bajo presión? Autoridades educativas, familias y profesionales e innovación educativa

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Abstract: INTRODUCTION. Educational innovation is experiencing in Catalonia (Spain) what has begun to be called a "third pedagogical spring" that is leading to a significant increase in schools that make changes at different levels. METHOD. In this context, taking as a reference classifications of types of educational innovation (innovations in the formative structure, pedagogical, process, teacher training and the educational chain), the article presents the analysis of questionnaire carried out on the whole of the population (N) of non-university educational centers of the Territorial Education Service of Lleida (Catalonia). The intention of the questionnaire, and of the research project, was to detect: the degree of innovation of the non-university educational centers as a whole (differentiating the different educational levels), the degree to which this innovation is sustainable over time, the reasons that lead to innovation and its degree of success. In summary, the RESULTS indicate that there really is an "innovative spring" (although some levels of education are higher than others) that can be generalized, as other studies indicate, to the whole of Catalonia. This spring focuses mainly on the implementation of pedagogical actions, formative structure and with the educational chain and is motivated by the interest of improving results, motivation, learning... of students. Although entering into DISCUSSION with other studies also responds to pressure from society and families for educational change.

Keywords: Educational innovation, Non-university education, Survey/questionnaire, Lleida, Spain.

Resumen: INTRODUCCIÓN. La innovación educativa está viviendo en Cataluña (España) lo que se ha comenzado a llamar una "tercera primavera pedagógica" que está provocando un aumento significativo de escuelas que realizan cambios a diferentes niveles. MÉTODO. En este contexto, tomando como referencia clasificaciones de tipos de innovación educativa (innovaciones en la estructura formativa, pedagógica, proceso, formación docente y la cadena educativa), el artículo presenta el análisis de cuestionario realizado sobre el conjunto de la población (N) de los centros educativos no universitarios del Servicio Territorial de Educación de Lleida (Cataluña). La intención del cuestionario, y del proyecto de investigación, era detectar: el grado de innovación del conjunto de los centros educativos no

universitarios (diferenciando los diferentes niveles educativos), el grado en que esta innovación es sostenible en el tiempo, el razones que conducen a la innovación y su grado de éxito. En resumen, los RESULTADOS indican que realmente hay una "primavera innovadora" (aunque algunos niveles educativos son superiores a otros) que se puede generalizar, como indican otros estudios, a toda Cataluña. Esta primavera se centra principalmente en la implementación de acciones pedagógicas, estructura formativa y con la cadena educativa y está motivada por el interés de mejorar los resultados, la motivación, el aprendizaje... de los estudiantes. Aunque entrar en DISCUSIÓN con otros estudios también responde a la presión de la sociedad y las familias por el cambio educativo.

Palabras clave: Innovación educative, Educación no universitaria, Encuesta/Cuestionario, Lleida, España.

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1. INTRODUCTION: EDUCATIONAL INNOVATION

Educational innovation involves making changes to learning and training to improve learning outcomes. For the process to be considered educational innovation, it must meet certain needs, be effective and efficient, be sustainable over time, and have transferable results beyond the specific original context (Garcia-Peñalvo, 2015). Innovative practices meet both sustainability criteria (the innovation must be prolonged in time, lasting more than two years, without the need for additional resources) and transferability criteria (the innovation must have been adopted by another year at the same school or by a different school) (Owston, 2007). Owston's (2007) sustainability model is based on two categories: *essential conditions* and *contributing conditions*. *Essential conditions* are those that are necessary, but not sufficient, for innovations to be sustained, while *contributing conditions* are those that facilitate innovation sustainability. Among the essential conditions, that author includes: *teacher support* for the innovation (without teachers,

innovation cannot occur); the need for the innovation to have *perceived value*, especially with regard to its potential to positively impact students; *teacher professional development*, *administrative support*, and *student support* and *enthusiasm* for innovative actions. Among the contributing conditions, he includes: support from others at the school (*support within school*); *support from outside the school*; *innovation champions*; and policies – at different levels – that support and adequately fund the educational innovation (*support plans and policies*; *funding*). In other words, the role of teachers, the management team, and students' response are essential. However, they are fostered and facilitated by others agents within and external to the school, as well as by supportive policies.

According to Haelermans and Blank (2012), educational innovation is a synergistic combination of creating something new, the process in which it is applied, and the achievement of an improvement as a result of the process, all of which depends on the context in which the innovation is developed and implemented. In their view, school innovations can be classified into five major groups: innovations in course profiles, i.e., the formative structure (innovations consisting of changes in the curricula and the development of training profiles); educational innovations (innovations focused on teaching, i.e., how classes are taught and the use of specific educational services); process innovations (innovations that facilitate students' learning processes, such as broader use of information technology or improvements in infrastructure and equipment); teacher professionalization innovations (those related to teachers); and education chain innovations (those connecting the different levels of education with the community and, more specifically, with company internships).

But what leads schools to innovate? What motivates them to make changes? First, the role played by education authorities as promoters of change and the need for them to facilitate it (Stevens, 2004; Chaminade and Edquist, 2005) must be taken into consideration. However, for Greany and Waterhouse (2016), leadership by school principals and their professional teams is more important to ensuring curricular innovation than the degree of leeway

afforded by legislation and policy (Sagnak 2012; Afandi and Effendi 2019; Villa 2019). Greany and Waterhouse (2016) claim that leaders' ability and confidence to shape an alternative innovative curriculum addressing structural limitations is highly relevant and, in fact, that these leaders become "rebels against the system." One could argue that education system administrative structures hamper, rather than promote, change and innovation.

However, it is also true that the professionals themselves and their interests (their own and those of their students, as indicated by Owston (2007) and also Emo (2015)) play an important role. According to Emo (2015), teachers innovate mainly out of a desire to enhance student learning through better (i.e., higher-quality) teaching. That author argues that teachers have two common circumstances that allow them to initiate innovations: participation in training activities outside their school that serve as an inspiration (especially freely chosen training activities, separate from those that the teacher must complete as part of his or her school's program) and interactions (through the creation of social networks) with other teachers (with similar concerns, whether within the context of their school or outside it) with whom they can speak "informally" about these issues and concerns. For Ching and Hursh (2014), peer support also enables the emergence of innovative processes, and teacher learning is more meaningful when teachers carry out actions with a real purpose (i.e., with specific application objectives, for example, to students). In other words, the relationship among colleagues fosters an innovative climate at schools. However, it is still necessary to reflect on how to encourage teachers to build relationships and join these networks (Moolenaar et al., 2014).

Often, teachers do not participate in the design of educational innovations. Their reactions to the implementation of such innovations largely depend on whether they perceive the proposed changes to reinforce or threaten their identities. Therefore, for these changes to work, teachers must feel that they own the innovation in which they will be investing mental and physical effort. Additionally, it must be meaningful in terms of their own knowledge, beliefs,

experiences, and the extent to which they feel they control their actions, since teachers need to experience a certain autonomy and degree of negotiation within their school to make their own decisions (Ketelaar et al., 2012). The attitudes of the teachers involved in innovative actions must be taken into account (Afandi and Effendi 2019; Knight 2020), for instance, to design the training they will need throughout the implementation process, as it cannot be uniform (Bitan-Friedlander, Dreyfus, and Milgrom, 2004). This is not always easy, since changing teachers' performance requires extensive cultural reform to modify how they understand and perceive their own professional role (Kırkgöz, 2008).

In Spain, educational renewal and innovation in general should not be viewed as mere didactic or methodological changes, but rather the result of social changes intended to transform society through better education (Stephen, 2016). The educational authorities (Gairín, Armengol, and Muñoz, 2010) and school management teams have managed countless projects in a climate of change, regularly reporting on them to other professionals, the education authorities, families, and the education community in general (Barrios, Camarero, Tierno, and Iranzo, 2015). All of this happens within a context of social pressure for change (Alvarez, 2010). Nevertheless, the major regulatory change that Spanish teachers have had to deal with (which has created a culture, ideas, attitudes, and feelings that are not conducive to innovation) has hindered the achievement of greater educational change (Monarca and Fernández, 2016; Zubillaga 2019). For Monarca and Fernández (2016), policies seeking to introduce innovation or educational changes tend to place too much emphasis on the political and regulatory level of change, without addressing the procedural logic that would involve actions at different levels or taking into account the various players (see also: Pascual 2019).

Gairín, Armengol, and Muñoz (2010) show that the Catalan education authorities are willing to innovate and that innovation sharing and dissemination takes place. In fact, since the end of the first decade of the 21st century, the Catalan education authorities have published calls for innovation projects that schools can participate in to obtain additional resources and

recognition. However, these authors also report that many schools and teachers innovate on their own, in addition to through these calls, and that, in both cases, the projects undertaken are based on the schools' needs and aim to foster relationships between professionals and increase commitment. More specifically, Article 84.1 of the Catalan Education Act (Catalan Law 12/2009) provides that the Catalan Education Department shall promote educational and curricular innovation to stimulate all students' learning ability, skills, individual potential, and academic success, the improvement of educational activities, and the implementation of schools' educational plans, as well as to enhance the relationship between schools and universities. Article 52 of Catalan Law 10/2015 similarly underscores the need to facilitate and enhance innovation in vocational training, especially with regard to content, training programs, methodologies, and materials. Under that law, innovation is defined as a planned process of change and renewal based on research, which reflects the evolution of society, leads to improvements in the quality of the education system, and can be transferred to other schools.

The aforementioned public calls for recognition of educational innovation projects at Catalan schools are carried out in this context. As a result of this positioning of the education authorities, as well as the characteristic dynamics of other organizations (foundations, educational reform movements, and schools), the educational innovation map has evolved significantly, especially in the last decade (see Tejada and De La Torre, 1995; for the most current map see the Escola Nova 21 innovative school network, created in 2016, at https://www.escolanova21.cat/castellano/ or https://educaciodema.cat). As suggested by Carbonell (2016), Catalonia has undergone three "pedagogical springs": the "republican" spring (early 20th century), the "resistance" (under the Franco government), and the "civil society spring," which began when the Escola Nova 21 network was founded (2016) but which we would dare to anticipate at the end of the first decade of the 2000s, with actions stemming from the aforementioned Law 12/2009. Nonetheless, as noted, not only is the government promoting innovation, but organizations such as the Jaume Bofill Foundation (Magnet and Centres Educatius 360 projects) and school networks such as the Jesuit schools

(Horizon 2020 project presented during the 2012-13 academic year) are also making changes in Catalan education. Carbonell's most recent stage, in which the region is currently immersed, is based on greater independence of schools, which, with projects adapted to their specific realities, undertake micro-innovations with the support of handpicked or volunteer school networks.

In this context, given the significant increase observed in schools in Catalonia (Spain) that present themselves to society and, in particular, to potential students and their families as innovators (Baena, Collet-Sabé, García-Molsosa and Manzano 2020), and the fact that educational innovation seems to be a positive value for the education community (policymakers, education officials, teachers, families, and other organizations related to education), this study aims to determine whether that is actually the case, what kinds of innovations are being implemented, whether they differ depending on the education level, and the reasons why this innovation is pursued.

2. DESIGN AND METHODOLOGY

In this framework, the initial hypothesis is that the aforementioned value placed on educational innovation by all sectors has had a positive effect and has considerably strengthened the presence of innovation at the different education levels, partly due to professionals' own initiative and partly to the pressure of a (social and family) environment that demands changes. To carry out the study, a survey was conducted by means of a quantitative methodology, to identify and understand the degree of innovation, the types of innovations implemented (Haelermans and Blank, 2012), their degree of sustainability (Owston, 2007), the motivation for the innovations, and their success. As transferability was difficult to determine through the survey, it was not considered. Instead, it will be explored in depth, along with the real changes brought about by the innovations, in subsequent research using a qualitative methodological approach.

2.1. Participants

The research presented here consisted of the design of questionnaire administered to representatives of primary and secondary schools in the province of Lleida. The aim was not to work with a sample, but rather to survey one representative from each existing school, provided, of course, that they agreed to answer the pollsters. Ultimately, the sample of this research includes 40 people respondents (n) (out of a possible total of 298, N), of which 180 were from schools offering pre-K and kindergarten (3-6 years) and primary (6-12 years) education; 43 were from schools offering only secondary education (compulsory education for students aged 12-16 and non-compulsory professional training or upper secondary education for students over the age of 16); and 15 were from schools offering all three levels (early childhood, primary, and secondary, including, in the latter case, compulsory education for students ages 12-16 and non-compulsory education for students over the age of 16). More specifically, most of the people surveyed were members of school management teams: 68.3% were principals; 21.7%, were head teachers, and 10% had another responsibility within the team. As for the respondents' gender, 76.3% were women, and 23.7% were men.

2.2. Instrument

The instrument used to collect the information, i.e., the questionnaire, was designed by the project's research team based on a preliminary theoretical-empirical phase. In the theoretical phase, in addition to further researching the subject at the international and Spanish level, the study analyzed the Catalan education authorities' discourse and policies concerning educational innovation. This, along with a documentary interview phase (total of six interviews) with officials from the Education Department, enabled the design of an instrument consisting of various types of questions: open-ended, closed, single-answer, and multiple-answer. Before being applied, the questionnaire was validated by three experts from the fields of educational psychology and sociology. It was also tested by asking 25 representatives of management teams from schools in the territory of Lleida to ensure the correct

understanding, structure and order of the questions. This allowed a final validation of the questionnaire before its application.

2.3. Procedure

The empirical work was conducted from February 19, 2018, to May 10, 2018, and consisted of a telephone survey with a minimum duration of 35 minutes. Once the empirical work was completed, the questionnaires obtained were coded and tabulated and statistical analysis was performed using software by Pulse Train, with which univariate and bivariate analyses were performed and statistical significance tests were applied (t-test of proportions to 95%).

3. RESULTS

One of the main aims of this study was to identify the innovations implemented at schools. In keeping with the classification proposed by Haelermans and Blank (2012), the most frequent types of innovation were educational, followed by innovations affecting the formative structure, and innovations in the relationship between education levels and the community, i.e., the *education chain*. Specifically, educational innovations were the most common, although they declined the higher the education level (81.5% of early childhood schools carry out such innovations, 75.9% of primary schools, and 61.8% of compulsory secondary schools versus just 23.7% of upper secondary schools and 15.8% of vocational training schools). This relationship was less clear with regard to formative structure innovations, although they were still more common in early childhood and primary education than in compulsory secondary education (63.6% at the early childhood level, 64.1% at the primary level, 54.5% at the compulsory secondary level, 28.9% at the upper secondary level, and 15.8% in vocational training). Finally, innovations in the education chain followed the same logic, although with fewer innovations overall (45.6% in early childhood education, 41.5% in primary education, 23.6% in compulsory secondary education, and 21.1% in upper secondary education). It is worth highlighting that such innovations were significant in the case of vocational training, as they were pursued in 57.9% of cases (mostly through company and institutional internship projects, 47.4%). Additionally, the aforementioned Law 10/2015

highlights the need, among other things, to improve learning paths. As can be seen, process and teacher professionalization innovations were generally a minority at schools.

More specifically, educational innovations were mainly carried out at the early childhood, primary, and compulsory secondary levels and consisted, primarily, of project-based learning. The two lower levels (early childhood and primary) also work with learning corners/environments and, to a lesser extent, not using textbooks. In vocational training and upper secondary school, where fewer educational innovations were implemented, innovations consisted mostly of project-based learning.

Formative structure innovations also differed between schooling up to the age of 16 (i.e., early childhood, primary, and compulsory secondary education) and subsequent levels. Once again, vocational training and upper secondary education were the least innovative levels, and, when they did innovate, it was mainly through the introduction of "workshops and language projects." At the lower education levels, half the schools conducted these types of workshops and projects, and one third of early childhood and primary schools also included "workshops and specific reinforcement projects," which were less often mentioned at the higher levels.

Education chain innovations partially diverged from this logic, as the most active schools in this regard were those offering vocational training (57.9%), followed by early childhood (45.6%) and primary schools (41.5%). The most important vocational training action was company and institutional internship projects (47.4%), an innovation also undertaken by 15.8% of upper secondary schools. As shown in the table, early childhood and primary schools engaged in inter-level work and, to a lesser extent, sought to enhance the relationship with the community. One initial conclusion that can be drawn is that, in general, the level of educational innovation is very high, especially in early childhood, primary, and compulsory secondary education. The level is slightly lower in upper secondary education and vocational training.

Table 1. Innovation types (by education level)

	Early childhood	Primary	Compul-sory secondary	Vocational training	Upper secondary
Formative structure innovations	63.6	64.1	54.5	15.8	28.9
Introduction of workshops and language projects	50.8	55.4	49.1	15.8	28.9
Introduction of other workshops and specific reinforcement projects	32.3	34.4	14.5	5.3	2.6
Other formative structure innovations	7.2	8.7	5.5	5.3	5.3
Educational innovations	81.5	75.9	61.8	15.8	23.7
Project-based work	61.5	61.5	56.4	15.8	21.1
Learning corner/environment work	32.3	26.7	5.5	-	-
Incorporation of research into the classroom	1.5	2.1	-	-	-
Peer mentoring among students	3.6	4.1	3.6	-	-
Mediation among students	0.5	0.5	5.5	-	-
Non-use of textbooks	16.4	16.4	-	-	-
More use of tutorials	2.1	3.1	3.6	-	-
Other educational innovations	3.1	1.0	1.8	-	5.3
Process innovations	14.4	17.4	20.0	5.3	7.9
Provision of computers for all students	-	0.5	-	-	-
Improved ICT equipment in classrooms	4.6	5.6	5.5	-	-
ICT incorporation	12.8	15.9	14.5	5.3	5.3
Changes in the use of space	1.5	1.5	-	-	-
Other process innovations	-	2.1	-	-	2.6
Teacher professionalization innovations	5.6	5.6	1.8	-	10.5
Teacher training	5.1	5.1	1.8	-	7.9
Other teacher professionalization innovations	0.5	0.5	-	-	2.6
Education chain innovations	45.6	41.5	23.6	57.9	21.1
Inter-level work	27.7	25.1	5.5	-	-
Enhancement of the relationship with the community	10.8	10.3	3.6	-	2.6
Involvement in environmental sustainability	8.2	9.7	7.3	10.5	-
Company/institutional internship projects	-	-	3.6	47.4	15.8
Other education chain innovations	0.5	-	-	5.3	-
None	3.1	3.1	5.5	15.8	36.8
Does not know/Does not answer	-	-	-	5.3	2.6

As for when these innovations were initiated (equivalent to Owston's (2007) sustainability, albeit limited to a question about when the innovative experience began), the average start year was 2012. The exceptions were compulsory secondary education, where innovations began, on average, two years later, and early child education, where they began one year later. In short, a huge share of these experiences began in the 2011-12 and 2012-13 school years. This suggests that they have been in place for a relatively long time. Only 20.5% of innovations at the early childhood education level, 18.5% at the primary education level, 23.6% at the compulsory secondary education level, 15.8% at the vocational training level, and 7.9% at the upper secondary education level had been recently implemented, defined as launched in 2016 or after. Of course, the implementation of innovations, their success or failure, etc., must be examined in greater detail from a qualitative point of view. For the purposes of this study, only the survey respondents' opinions were taken into account. Additionally, in too many cases, they either did not know or did not wish to identify the start date.

Table 2. Start date of educational innovations (by education level)

	Early childhood	Primary	Compulsory secondary	Vocational training	Upper secondary
Before 2000	0.5	0.5	-	5.3	2.6
2000-2005	3.6	4.6	-	-	-
2006-2010	13.8	14.4	12.7	10.5	5.3
2011-2015	37.4	38.5	47.3	31.6	13.2
2016 or later	20.5	18.5	23.6	15.8	7.9
Does not know/Does not answer	24.1	23.6	16.4	36.8	71.1
Average	2,013	2012	2014	2012	2012
Standard deviation	4.00	4.54	2.53	5,13	5.36

The reasons for innovating were diverse, although the innovations were often pursued to improve learning and student motivation. In other words, students were central to the motivation to innovate. Answers in this regard included: improving student learning (26.2% in early childhood education, 25.1% in primary education, 18.2% in compulsory secondary education, 15.8% in vocational training, and 23.7% in upper secondary education), enhancing motivation (9.2%, 12.3%, 12.7%, 10.5%, and 2.6%, respectively), improving student performance (7.2%, 7.2%, 20%, 15.8%, and 5.3%) and better

addressing diversity (6.2%, 8.7%, 0%, 5.3%, and 0%). The search for new ways of working, a more professional motivation, was also cited here (30.8%, 26.2%, 25.5%, 0%, and 5.3%). So was responding to pressure from society and families "demanding" changes in the education system (20.5%, 20%, 18.2%, 5.3%, 15.8%). The table below shows that, in addition to these motivations, schools innovate for other reasons as well.

Table 3. Motivations for educational innovation (by education level)

	Early childhood	Primary	Compulsory secondary	Vocational training	Upper secondary
Finding new ways to work	30.8	26.2	25.5	-	5.3
Improving student learning	26.2	25.1	18.2	15.8	23.7
Social and family pressure	20.5	20	18.2	5.3	15.8
Enhancing student motivation	9.2	12.3	12.7	10.5	2.6
Improving student performance	7.2	7.2	20	15.8	5.3
Better addressing student diversity	6.2	8.7	-	5.3	-

As noted, the actions carried out were targeted, mainly, at students (86.7%, 88.7%, 83.6%, 68.4%, and 55.4%), followed at some distance by teachers (7.7 %, 6.2%, 7.3%, 0%, and 7.9%), families (3.6%, 0.5%, and 0% at the other education levels), and the school community (2.1%, 1.5%, and 0% at the other levels). It can thus be concluded that the actions are, generally, specific actions for specific groups, as another option was for the action to target the educational community as a whole, or a large part thereof. This latter type of action was only performed in 0.5% of cases. It is also worth noting that the representatives of vocational training and upper secondary schools had a high non-response rate, suggesting a lack of knowledge of the subject and, also, in keeping with their pursuit of fewer innovations.

Table 4. Target of the innovations (by education level)

	Early childhood	Primary	Compulsory secondary	Vocational training	Upper secondary
Students	86.7	88.7	83.6	68.4	55.3
Faculty	7.7	6.2	7.3	-	7.9
Families	3.6	0.5	-	-	-
School community	2.1	1.5	-	-	-
Whole educational community	0.5	0.5	-	-	-
Others	0.5	-	-	-	-
Does not know/Does not answer	11.8	10.8	16.4	31.6	44.7

Table 5. Success of educational innovations (by education level)

	Early childhood	Primary	Compulsory secondary	Vocational training	Upper secondary
Yes	89.7	88.7	83.6	73.7	52.6
No	-	-	1.8	-	2.6
It depends	0.5	0.5	3.6	5.3	-
Does not know/Does not answer	9.7	10.8	10.9	21.1	44.7

The success rate was high. Some 89.7% said the innovations had been successful at the early childhood education level, 88.7% in primary school, and 83.6% in compulsory secondary school. The response was less positive with regard to vocational training (73.7%) and upper secondary education (52.6%). Upper secondary education was also the level for which negative responses were most common (2.6%), although they were also given by some respondents (1.8%) in relation to compulsory secondary education. The response "it depends," indicating partial success, was mentioned by 0.5% of respondents in the case of early childhood education, 0.5% in primary education, 3.6% in compulsory secondary education, and 5.3% in vocational training. Again, there was a high non-response rate at the upper secondary (44.7%) and, to a lesser extent, vocational training (21.1%) levels.

The reasons for considering an innovation to be successful varied, although they were similar. By level, early childhood education respondents highlighted that the innovation improved students' educational performance (47.2%), motivation (42.6%), learning (29%), and autonomy (7.4%), while at the same time responding to pressure from families and society (10.8%) and from the education authorities (2.3%). Some 4.5% referred to teacher satisfaction. Although this assessment was highly student-focused, it also took families, government requirements, and job satisfaction into account.

In contrast, primary education respondents highlighted that innovation had made it possible to seek out new ways of working (26.2%) and improve student learning (25.1%) and motivation (12.3%). Some 20% also mentioned that it has responded to pressure from society and families, and 5.6%, to pressure from the education authorities. The answers were similar at the compulsory secondary level, as shown in the table below. At the vocational training level, answers were student-focused (improving educational performance (40%) and motivation (40%)). In contrast, at the upper secondary level, the answers focused on improving learning (23.7%) and responding to pressure from society and families (15.8%).

Table 6. Reasons for considering innovation successful (by education level)

	Early childhood	Primary	Compulsory secondary	Vocatio-nal training	Upper secondary
Improved students' educational performance	47.2	7.2	20	40	5.3
Improved students' learning	29	25.1	18.2	6.7	23.7
Fought truancy/dropout	1.1	0.5	-	-	
Improved student motivation	42.6	12.3	12.7	40	2.6
Improved student autonomy	7.4	-	-	-	-
Improved student responsibility	1.4	-	-	-	-
Better attention to diversity	0.6	8.7	-	-	-
Better attention to students	-	-	-	-	2.6
Improved internal coordination	0.6	1.5	-	-	-
Improved teachers' self-esteem/satisfaction	4.5	0.5	1.8	-	2.6
Improved school climate	4.5	-	-	-	-
Introduced ICT	0.6	-	-	-	-
Responded to pressure from the education authorities and curricular changes	2.3	5.6	3.6	-	-
Responded to pressure from society and families	10.8	20	18.2	-	15.8
Made it possible to seek new ways to work	-	26.2	25.5	-	5.3
Made it possible to compete with other schools	-	2.6	3.6	-	-
Other answers	-	-	-	13.3	-
Does not know/Does not answer	0.6	2.1	-	-	42.1

4. DISCUSSION AND CONCLUSIONS

Changes in education policy in Spain have been too frequent, and educational innovation policy has placed too much emphasis on the regulatory and political level without making sure that actions are adapted to particular needs and take all stakeholders into account (Monarca and Fernández, 2016; Gairín, Armengol, and Muñoz, 2010; Pascual 2019; Knight 2020). Nevertheless, the results of the present research show that educational innovation in the country seems to have experienced a renaissance in recent years and has begun to take root in schools at different educational levels, albeit more at some than others.

In keeping with the classification proposed by Haelermans and Blank (2012), the most frequently implemented innovations at schools are *educational*,

followed by those affecting the *formative structure* and those related to the relationship between education levels and the community, i.e. the *education chain*. The fact that more than two thirds of early childhood education and primary schools carry out educational innovations, more than 60% formative structure innovations, more than 40% education chain innovations, around 15% process innovations, and a little over 5% teaching professionalization innovations indicates that the level of innovation at these schools is high, especially the first two types. Nonetheless, innovation declines in compulsory secondary education, and even more so in upper secondary education and vocational training. (It is worth noting that legislation on innovation in vocational training appeared later, in 2015.) Fewer innovations are implemented in upper secondary education, probably because it consists of two years of preparation for an important exam (the university entrance examination). The same is true of vocational training, where those innovations that are carried out are related to the labor market and focus on company and institutional internship projects (education chain).

At the same time, with regard to intra-group innovation, some practices are more common than others. Among educational innovations, project-based work at the early childhood, primary, and compulsory secondary education levels, as well as learning corner/environment work stand out. Although the latter was mentioned less in relation to early childhood education and primary schools, it was still significant. In fact, families are well-acquainted with these methodologies, with project-based work in particular being perceived as "the newest" at these education levels (see Garreta et al., 2018). Among the formative structure innovations at these education levels, the introduction of workshops and the implementation of language projects were the most frequently mentioned, as well as, to a lesser extent, workshops and specific learning reinforcement projects. These innovations are also present at higher levels, but, in keeping with the shown logic, they were mentioned far less, as their degree of innovation is lower. The main education chain innovations were inter-level work and, to a lesser extent, strengthening of the relationship with the school community and its sustainability. Once again, such actions were less frequent at higher levels, although the aforementioned company

and institutional internship projects undertaken in vocational training stand out well above the rest. (Although such projects were also mentioned in relation to upper secondary education, they were far less common at that level.) Process innovations (which, in the case at hand, involved the incorporation and better provision of ICT) and teacher professionalization innovations (limited to teacher training actions) were far less common than what is done at non-university educational centers in the territory studied. In short, the actions being undertaken suggest that schools are working in a similar direction, although the pace of implementation and need to do so due to the student profile (intended more to professionalize or to prepare students for the university entrance examination) reveal the existence of differences and the adaptation to particular needs.

In most cases, the innovations are not recent, but rather were implemented some years ago (without delving deeper, as Owston (2007) would do, and which should be done in the future, from a qualitative perspective in order to better grasp the specific innovations, their ups and downs over time, and the degree of change at the schools). In fact, on average, they were begun in 2012 or 2013 in general, and in 2014 at the compulsory secondary school level. This may be related to Catalan Law 12/2009, which encourages innovation with a view to enhancing the learning ability, skills, individual potential, and success of all students, etc. The "third pedagogical spring" (Carbonell 2016) has been positively received by families, teachers, management teams, and the education authorities in terms of educational change and the greater adaptation of what is done to the specific circumstances of each school, even as that school also collaborates with others, creating a network (Ching and Hursh, 2014; Moolenaar et al., 2014). This educational change is highly focused on students at different education levels, although it is much more evident at the early childhood, primary, and compulsory secondary levels, which were found to be far more innovative within the education system.

The reasons for innovating are not surprising: the aim is to find new ways of working, to improve student learning, motivation, and performance (Emo,

2015), and, more surprisingly, to respond to existing societal and family pressure. In other words, the aforementioned innovative dynamics, as well as competition among schools for enrollment (Baena, Collet-Sabé, García-Molsosa and Manzano 2020) and to obtain social and family recognition, are important motivation factors. This has been called "innovation under pressure." An analysis of the reasons why respondents believe that innovations are successful confirm this. High percentages of respondents considered the innovations successful, and, while differences were found at the non-compulsory levels, i.e., upper secondary education and vocational training, the assessments were nevertheless always positive. In addition to the positive impact on students, respondents once again stated that the innovations responded to pressure from society and families. The education authorities were also mentioned, albeit by a minority, insofar as they enable competition with other schools. Obviously, students were the main motivation, but the aforementioned pressure to change (Alvarez, 2010) and innovate must not be neglected.

5. CONCLUSIONS

Based on the definition of educational innovation (Garcia-Peñalvo 2015) and a previous classification of innovation types (Haelermans and Blank 2012), this study shows that the territory of Catalonia, exemplified through an empirical study in one of its educational administrative demarcations (Lleida), is experiencing a "third pedagogical spring," entailing a significant increase in innovation. In most cases, these innovations have already been in place for more than five years,and have been mainly carried out in the areas of educational actions, the formative structure, and the education chain. The reasons they have been implemented are mainly related to the beneficiary, i.e., whom they are intended and designed for, namely students, and to improve student performance, motivation, learning, and autonomy. However, these are not the only reasons, since innovation-friendly social and educational discourses show that there is pressure (from society, families, and the education authorities) to change and, therefore, to implement innovation at schools (although it is not yet given the same importance as students). This pressure, along with competition among schools for

enrollment, has contributed to a significant increase in innovative projects and actions. It is now necessary to assess whether these actions are a mirage or truly represent a significant change. However, that is a question for a far more qualitative study.

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