

Transformation of school assessment. Approaches within an educational innovation process: A cross-case analysis of schools in Catalonia (Spain)

David Martinez Maireles

Università degli studi di Enna “Kore”

Abstract

This study aims to characterize transformations in assessment approaches accompanying inclusive educational innovation processes. A multiple case study design was employed to examine assessment framework modifications in seven Catalan schools undertaking significant pedagogical reform initiatives. Semi-structured interviews and document analysis explored shifts in evaluation paradigms at both the institutional and classroom levels, encompassing organizational and curricular elements. While changes at both levels were investigated, the current paper focuses exclusively on modifications at the school level. The findings indicate an urgent need for increased collaborative and coordinated work among educators. A key result highlights the necessity of realigning assessment practices to be congruent with transformations to instructional philosophies and methods. This exploratory cross-case synthesis provides new insights into an under-studied facet of reform efforts with relevant implications for the strategic development of balanced evaluation models that facilitate sustainable curriculum innovations on a long-term basis.

Questo studio intende caratterizzare le trasformazioni negli approcci valutativi che accompagnano i processi di innovazione educativa inclusiva. È stato adottato un disegno di studio di casi multipli per esaminare le modifiche nei quadri valutativi di sette scuole catalane che stavano intraprendendo significative iniziative di riforma pedagogica. Interviste semi-strutturate e analisi documentale hanno esplorato i cambiamenti nei paradigmi valutativi a livello sia istituzionale che di classe, comprendendo elementi organizzativi e curricolari. Sebbene siano stati investigati i cambiamenti ad entrambi i livelli, il presente articolo si focalizza esclusivamente sulle modifiche a livello scolastico. I risultati indicano un'urgente necessità di un lavoro collaborativo e coordinato sempre più intenso tra gli educatori. Un risultato chiave evidenzia la necessità di riallineare le pratiche valutative per renderle coerenti con le trasformazioni delle filosofie e dei metodi di insegnamento. Questa sintesi esplorativa cross-case fornisce nuovi spunti su un aspetto poco studiato degli sforzi di riforma con implicazioni rilevanti per lo sviluppo strategico di modelli valutativi bilanciati che agevolino innovazioni curricolari sostenibili nel lungo periodo.

Keywords: assessment approach; school improvement; organizational changes; curricular changes; educational innovation

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Parole chiave: approccio valutativo; miglioramento scolastico; cambiamenti organizzativi; cambiamenti curriculari; innovazione educativa

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1. Introduction

Changing educational practices with the aim of improving them and making them more inclusive necessarily involves deciding what the contents or focus of the innovation will be. In the case of the seven schools included in the sample of this study, the contents of improvement revolve around three axes: cooperative learning, teaching and learning competences and didactics through interdisciplinary learning itineraries. However, introducing and implementing changes in some elements of educational practices leads, in turn, to changes in other elements that are not directly part of the contents of the improvement. In other words, changing some aspects has an impact and influence on others. It is for this reason that the hypothesis put forward in this research is that the implementation of changes and improvements in relation to the aforementioned contents will lead to changes in assessment practices at different levels. These changes can be identified at both the school and classroom levels and, in turn, can be both organizational and curricular. Therefore, the question guiding this study is: what kind of elements/aspects of assessment practices change as a result of the introduction of non-assessment focused, content-based educational improvement and innovation?

This study aims to identify changes to assessment approaches at the school level resulting from an educational innovation process implemented through a multi-faceted improvement project. Specifically, the innovation incorporated cooperative learning, competency-based teaching/learning, and interdisciplinary learning itineraries.

The goal is not to examine innovation itself or the three improvement dimensions directly. Rather, the research seeks to explore how assessment frameworks are being adapted at the institutional level to align with evolving teaching and learning as part of this comprehensive reform initiative.

By characterizing assessment practice modifications accompanying pedagogical changes, insights may be gained around supportive evaluation strategies for sustainable curriculum reforms. The analytical focus on assessment aspects changes complements previous research by illuminating an understudied yet critical component of transformation efforts.

In summary, this exploratory examination of school-level assessment approach transformation aims to contribute practical knowledge for balancing evaluative strategies with innovative curricula, without independently assessing specific reform elements or their implementation processes.

2. The processes of educational innovation at school

A paradigm-shift in thought regarding a more inclusive school and society has been underway for some time now. This change is introduced in educational centres through different proposals for innovation of their practices that are modifying the way of approaching both the organization and functioning and teaching methodology of the school and classroom, incorporating, for example, heterogeneous groups, peer learning, shared teaching, interdisciplinary work, competency learning and learning through projects.

One of the problems that exist when educational policy proposes educational initiatives of improvement or innovation is that they are inconsistent with the nature of the education system (Shen, 2020). It is necessary to understand, as Fullan (2016) points out, that educational changes are a multidimensional process that includes the use of new or revised materials, teaching approaches and the change of beliefs (pedagogical assumptions and theories underlying particular new policies or programs). All of these changes mean that all the actors who participate in them have to change their subjective meanings, if they want the change to be sustainable.

Existing structures, attitudes, processes and cultures need to be considered an important factor in explaining the success or failure of a reform, because the participants react well or badly to every educational change, which

affects its sustainability. It is necessary for those who propose educational changes, politicians or educational administrators, to consider the culture of the school and not only focus on their actions (Baglibel et al., 2018) because the influence of the context inside the teaching-learning process shapes who is learning and what is relevant to teach and learn (Paniagua & Istance, 2018).

Thus, according to Shen's (2020) theory of the bifurcated educational system in order to introduce educational improvements, emphasis should be placed on the integrity of the application of the educational program. This means that the emphasis is on the internal conditions of the school and the classroom and external pressures rather than on the accurate application of the program (Shen, 2020). The educational program needs to change and adapt to the reality of the school, to consider factors such as the reaction of the people involved in the change or how the process can affect current school and class conditions (Baglibel et al., 2018). If that is done, it empowers all the participants to rethink, reconceptualize and adapt the program to their unique reality, which makes the new activities sustainable.

For these reasons, the practices used in the implementation are created on two levels: central and local, policy and school. If they are not, they can be negative and of no use to the school, and schools and teachers will not use them in the long term just because they are obliged to do so. The school must also see the need and usefulness of the practices in order to implement them (Liljenberg & Andersson, 2021).

According to different studies (Granvik et al., 2018; Harris & Jones, 2019; Jarl et al., 2021; Liljenberg & Andersson, 2021), what makes a school successful, especially when implementing educational improvements and changes, are its organizational and curricular characteristics. One of the organizational characteristics of successful schools is that the leadership focuses on providing everything required to accomplish the school's goals, including in terms of educational improvement and innovation, providing guidance and opportunities for development. They should also put students' learning at the center of their work, introducing structures for teacher collaboration and teaching to facilitate this (Jarl et al., 2021). In other words, principals need to provide the necessary conditions for achieving the goals of effectiveness and improvement of the school (Granvik et al., 2018).

One of the organizational practices that can be used for making improvements in schools is to promote spaces of communication between schools, between principals and between principals and teachers. These spaces provide the opportunity to share the principals' and teachers' experiences with others to increase knowledge and to distribute leadership (Jarl et al., 2021; Liljenberg & Andersson, 2021).

Another way is for the school administrators or principals to listen to the opinions of teachers and students in order to make the educational changes sustainable and effective. Teachers must be seen as the co-constructors of educational change as they are at the forefront of educational reform and improvement, and so policies need to take them into account (Harris & Jones, 2019). For these reasons, there needs to be a bidirectional communication, top-down and bottom-up (Baglibel et al., 2018; Harris & Jones, 2019), to reach a consensus between principals and teachers regarding the educational goals they wish to achieve and the way to do it (Granvik et al., 2018). As Liljenberg and Andersson (2021) highlight, it is important to have "a shared vision, a learning-oriented organizational improvement process, and opportunities for job-embedded professional learning for leaders for enabling beneficial change" (p. 158). These also help to improve the relations between principals and teachers and also between teachers.

A third practice recommended by policymakers is collaboration and cooperation between teachers. To achieve this, the principal needs to provide teachers not only with the space and time to do it (Hargreaves & Fullan, 2012; Hattie, 2012; DES, 2016) but also stimulate such cooperation by promoting learning and teaching communities in which to learn and practice and using cooperative structures inside meetings to organize the

participation and content (Paniagua & Istance, 2018). This is important because no matter how much space is given for collaborative work, if participation is not organized and the themes are not planned, teachers often focus on how students learn and not on how they teach. They also tend to remain at the level of logistics, story-sharing or help-seeking and rarely engage in critical, theoretically informed discussions and systematic experimentation with new ideas (Shavard, 2021). They can even end up working on their own and only take responsibility for their own classrooms (Jarl et al., 2021).

If this cooperation and sharing of experiences is done properly, it would help in two ways. First with the teacher's insecurity and with their wrong assumptions about educational innovation. And second, teachers can reach a consensus regarding the essence of the task, which is to give the students the opportunities to learn and to realize what constitutes a high performance (Paniagua & Istance, 2018). If the organization of teaching does not focus on students' learning outcomes and needs, the school will have failed (Jarl et al., 2021).

One of the many problems in implementing curriculum changes is a lack of internal consistency; that is, changing the contents but not the related pedagogy, assessments, participants.

Thus, the curricular characteristics of successful schools includes not only setting up teachers' groups to lead innovation and creativity in curriculum and teaching, but also including students in decision-making (DES, 2016; Moynihan & O'Donovan, 2021). The lack of cooperation between all the actors that participate in the changes can lead to the failure of educational improvement, so it is important to build connections between all the stakeholders that participate in it. By promoting cooperation between teachers and learners, the new curriculum can be adapted together, and its implementation can be more sustainable (Van den Akker, 2018; Van den Boom-Muilengurg et al., 2021).

Another important factor is that the teachers have high expectations of the students and share with them the curriculum's objectives and what they expect from them (Jarl et al., 2021). It is also necessary to map and follow up on students' achievements using initial and formative assessments, to realize the lack of alignment between assessment and curriculum, to adjust teaching to students' present achievements and needs, and to provide learners with knowledge about their performance (Cornoldi et al., 2020; Fullan, 2016; OECD, 2013; Van den Akker, 2018; Van den Boom-Muilengurg et al., 2021).

To achieve this, teachers must relinquish some of the responsibility of the learning process to students, making them active learners and giving them methods to engage their skills of self-regulation. For example, a systematic and daily discussion about their achievements; using cooperative/collaborative learning; presenting or co-building the learning objectives together; connecting the domains and subjects so that new content and skills that are inherently in the subjects can emerge; using authentic tasks in the assessment; giving detailed, positive and constructive feedback; accompanied by a metacognitive process to reflect on the process and performance (Jarl et al., 2021; OECD, 2013; Li & Grion, 2019; Paniagua & Istance, 2018). Carrying this out requires professional development activities (Jarl et al., 2021).

It must not be forgotten that there are also problematic organizational and curricular development strategies, like the pressure of policies that can lead to a symbolic rather than an in-depth implementation and to a superficial understanding or misunderstanding of the innovation by the users. The changes can also trigger an emotional reaction (Fullan, 2016; Van den Akker, 2018; Van den Boom-Muilengurg et al., 2021). If we want educational policy changes to be adopted by the school, it is necessary to offer more flexible and adaptive strategies to the schools, teachers and learners (Van den Akker, 2018).

In order for educational improvement and innovation to be sustainable over time, the assessment that has been carried out so far needs to be reviewed given that assessment practices play a key role due to their link with the teaching and learning process. Furthermore, in order to give continuity and validity to the educational

improvement and innovation introduced in the school, it is necessary to review/check that there is an alignment and coherence between all elements of the teaching, learning and assessment process (Ciani et al., 2020; Cizek et al., 2018).

This change in the educational approach means that the assessment approach that has been carried out until now is, fundamentally, no longer valid, because it runs the risk of ceasing to be aligned with the new organizational and curricular proposal. It is therefore essential, from this perspective, that in educational innovation processes new approaches are built on the assessment practices that are already developed.

As previously mentioned, this article does not focus on either studying the improvement process or its three areas (see below), although it does consider it important to contextualize them. The improvement processes are promoted through an educational-constructive counselling process based on a joint and collaborative construction between the counselled and counsellors, in which the complementarity of resources and joint responsibility of tasks is prioritized (Monereo & Solé, 1996, Lago & Onrubia, 2011). The basis of the assessment model is the proposal of Lago and Onrubia (2011), which is organized into different phases and tasks, carried out by both the assessor and the teachers, in addition to joint tasks that accompany reflection on educational practice and lead to its revision and improvement. With regard to the three areas of improvement in educational practice, the first is cooperative learning (Johnson & Johnson, 2014), which was developed from the *Programa CA/AC*¹ that is based on cooperation as a teaching-learning resource and as curricular content to teach and learn. The second area of improvement, competency-based teaching and learning, involves teaching how to mobilize personal resources to successfully solve a task (Alonso & Garrido, 2012; Capperucci, 2011; Carless, 2014; Koenen et al., 2015; Martínez-Abad et al., 2017; Moretti et al., 2019). Finally, the interdisciplinary learning itineraries are oriented towards the development of competencies, through cooperative learning, where the different subjects are linked in an interdisciplinary manner (Agudelo & Salinas, 2015; Folch et al., 2020). These innovative contents possess common characteristics that promote inclusion, such as positive interdependence, face-to-face interaction, the practice of soft skills, and the promotion of intercultural education (Ainscow, 2012; Ellerani, 2014; Johnson & Johnson, 2014; Lotti, 2020).

2.1. Assessment approaches at the school level: Organizational and curricular changes

The development of educational innovation processes causes changes, sometimes unforeseen, at different levels. Based on the structure established by the 2014 OECD study on education innovation, below we provide a tour of some different aspects identified as susceptible to change, at the school level, from an organizational and curricular perspective.

The assessment approach at the school level

Reviewing and evaluating the school's assessment practices means reflecting on different aspects that not only involve the classroom but also other elements of the school that entail joint decision-making (Koenen et al. 2015). Among other aspects, different studies show that the most important are:

- *The assessment policy of the school.* First, the school's assessment policy must accompany innovation through an organizational and curricular change of the institution itself and of the classrooms (Boulay & Goodson, 2018). This change takes place in the assessment approach; that is, in the transition from a “test culture” to an “assessment culture”, which, in contrast, promotes the pedagogical function over the social function. As a result, it is a type of assessment that does not give weight only to the grades obtained at the end of an educational process (Carless, 2011).

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- *Shared reflection among the school agents.* Second, opportunities for joint reflection among the different school agents must be provided within the educational institution (Folch et al., 2020). This formal, systematized and organized exchange of assessment practices is necessary for their analysis and improvement, as well as for building a common and shared idea among all the members involved. This has an impact on teaching and learning and also on the institution (Capperucci, 2011; Estrada, 2009) and increases the collaborative and cooperative skills of the teachers (Quesada et al., 2017), providing spaces for co-planning, co-teaching and co-assessment (Ianes & Cramerotti, 2015; Suárez-Díaz, 2016).
- *Redefinition of the relations between the elements of the educational process.* Third, a redefinition of the relations between the different elements of the teaching-learning-assessment process is pertinent at the school level to achieve their alignment. It is especially important to check the alignment between the curriculum and the learning objectives, as well as their alignment with the assessment practices and between the latter and the teaching process carried out (Ciani et al., 2020; Cizek et al., 2018). The implementation of educational practices aims to promote a more competency-based learning, develop other abilities and skills, and foster a greater connection of the curricula (Agudelo & Salinas, 2015). In this regard, it is important for teachers to be aware of the discrepancy that exists between the information from their regular assessment and the competencies that students must acquire (Alonso & Garrido, 2012).
- *Report cards.* Fourth, and as a consequence of the third aspect, this whole process causes a change in the report cards, which broaden the focus of attention from just the grade linked to the curricular content to contemplating the competencies, abilities and skills of the pupils in order to increase their self-efficacy, autonomy and self-regulation (Aklharusi et al., 2019).

3. Methods and materials

3.1 Objective

The research question is: What aspects of the assessment approach change at the school level as a result of an educational innovation process?

In order to answer this question, the specific objectives of this research are:

- to identify the elements/aspects that change in assessment practices at the level of the whole educational institution
- to identify the specific nature of the changing elements/aspects of educational assessment: whether they are organizational or curricular

To respond to the objective of this research, a qualitative case study methodology is used (Merriam, 1998; Stake, 1995).

3.2 Participants

This study included seven participating schools undergoing an educational innovation project over four academic years. The evidence-based counselling process incorporated two parallel training and advisory paths: 1) cooperative learning based on the *Programa CA/AC* framework (Pujolàs et al., 2011) and 2) creation of interdisciplinary, competency-focused learning itineraries. University researchers specializing in relevant educational research led both.

A phased implementation strategy targeted classrooms and schools, initially involving a teacher group with participation expanding schoolwide by year three. Schools were selected meeting two criteria: 1) In the third year of innovation counselling to ensure development, 2) Including multiple educational stages from early to secondary education.

Within schools, twenty-three teachers participated in interviews selected based on: 1) Representation of educational levels, 2) Advanced innovation implementation, and 3) Role as year tutors. Table 1 outlines teacher distribution across cases.

Table 1. Distribution of the participants

Case	Educational stage			Class groups
	Early Education	Primary	Compulsory Secondary	
1	1	1	1	4
2	1	1		3
3	2	1	1	1
4		1	3	2
5	1	2	1	3
6		3	3	3
7	1	3		2

3.3 Data collection instruments

Two instruments were used for data collection: in-depth semi-structured interviews and document analysis. Interviews with teachers were divided into three sections: 1) General assessment practices, 2) Assessment changes relating to the three pre-defined dimensions, and 3) Aspects impacted by innovation.

Documentation was collected to explore different aspects of assessment practice changes. Documents from two areas were gathered. First, the *school* area, which included assessment reports for families, the school curricular project, calendar of teachers’ work-meetings, minutes of teachers’ meetings, minutes of the assessment board, assessment/qualification reports, students’ academic record, reports of the results of the local educational administration’s core competencies assessment and reports of abilities and skills assessment. And second, the area of *teaching and learning and assessment activities*, which included evidence of the tasks carried out by the students. Participants selected documents judged to demonstrate school-wide assessment practice changes, relating to researchers’ requests.

3.4 Categories of analysis and operative criteria

Through an iterative inductive-deductive process informed by literature and participant responses, two levels of change in assessment approaches resulting from educational innovation implementation were identified: school level and classroom level. This study focuses on the school level.

Within each level, two aspects of change were delineated: *aspects of organizational changes* – variations in assessment organization from broad to specific dimensions (Table 2), and *aspects of curricular changes* (Table 3).

Table 2. Dimensions of analysis of the organizational changes at the school level

Dimensions of change	Subdimensions	Operational analysis criteria
Organizational changes	<i>School assessment policy:</i> Changes in assessment approaches and decision-making that accompany the introduction of educational innovation.	<i>High:</i> the assessment policy of the school is committed to the innovation that is being carried out <i>Low:</i> the assessment policy of the school is not committed to the innovation that is being carried out
	<i>Shared reflection of assessment practices among teachers:</i> Awareness and joint decision-making process on the assessment practices among teachers at the school of the same and/or different stage/cycle ² and in the teachers meeting.	<i>High:</i> a space is established and scheduled in which the main focus is reflection on the assessment practices of the different teachers at a school <i>Medium:</i> a space is not established or scheduled in which the main focus is reflection on the assessment practices of the different teachers at a school, but it is carried out in a more informal manner <i>Low:</i> a space is neither established nor scheduled in which the main focus is reflection on the assessment practices of the different teachers at a school, and it is not carried out informally
	<i>Collaborative/cooperative work among teachers related to assessment:</i> Introduction of cooperation resources, which are introduced into the classroom, in common work situations between professionals of the school.	<i>High:</i> the teachers always work cooperatively together using the different resources of this type of work in meetings and carrying out programming, among others <i>Medium:</i> the teachers sometimes work cooperatively together using the different resources of this type of work in meetings and carrying out programming, among others <i>Low:</i> the teachers never work cooperatively together using the different resources of this type of work in meetings and carrying out programming, among others

Table 3. Dimensions of analysis of the curricular changes at the school level

Dimensions of change	Subdimensions	Operational analysis criteria
Curricular changes	<i>Competency-based qualification:</i> Introduction of changes in grades reflecting the implementation of learning by competencies.	<i>High:</i> the change in the report cards drives assessment practices <i>Low:</i> the change in the report cards drives assessment practices
	<i>Assessment of skills and abilities:</i> Introduction of an assessment of the level of development/learning of students' abilities and skills.	<i>High:</i> the introduction of the assessment document on abilities and skills modifies the assessment practices <i>Medium:</i> neither high nor low <i>Low:</i> the introduction of the assessment document on abilities and skills does not modify the assessment practices
	<i>Interdisciplinarity between subjects and areas:</i> Teaching and learning of the different subjects and areas with a program that links them together.	<i>High:</i> all subjects and areas are interrelated with each other in the different assessment activities <i>Medium:</i> some subjects and/or areas are interrelated with each other in the different assessment activities <i>Low:</i> no subjects and/or areas are interrelated with each other in the different assessment activities
	<i>Competency-based programming:</i> Linking the competencies with the different elements of the curricular program.	<i>High:</i> each of the core competencies is linked to a specific activity that assesses it <i>Medium:</i> some of the core competencies are linked to a specific activity that assesses them <i>Low:</i> none of the core competencies are linked to a specific activity that assesses them

3.5 Instruments of analysis

To analyse the collected data, an ad hoc instrument was developed through an iterative inductive-deductive process, utilizing responses from participating teachers in semi-structured interviews as well as relevant literature. The aim was to identify aspects of assessment practices that underwent organizational and curricular changes at the school level.

Operational criteria below evaluated the degree to which assessment practice changes were realized at school level. This “degree of realization” informed subsequent analyses, defined as the extent aspects of assessment practice changes were implemented. Degree of realization was categorized as: high (H) - fully realized, medium (M) - partially realized, or low (L) – not realized. Definitions for each category were determined based on the specific aspect of assessment practice change under analysis.

The instrument facilitated systematic, reliable coding and analysis of case study data regarding phenomenon of interest – changes in schools' assessment frameworks and procedures. Rigor was established through iterative refinement according to expert consensus processes and empirical grounding in multiple qualitative data sources. Robust categorization schemes enabled comparative examination of implementation successes and limitations across cases.

Here are some examples. In organizational changes at the school level in the aspect of *shared reflection of assessment practices among teachers*, a high degree of realization is given when a space is established and scheduled in which the main focus is reflection on the assessment practices of the different teachers of a school; a medium degree is given when it is carried out in an informal way; and a low degree is given when a space is not established and scheduled. In curricular changes at the school level in the aspect of *competency-based qualification*, a high degree is given when all the qualifications in the report are qualitative and with comments on competences; a medium degree when there are both qualitative and quantitative qualifications in the report; and a low degree when the report had not changed at all and the qualifications are still quantitative.

3.6. Procedure

Data were collected over a 3-month period. First, the 23 semi-structured interview participants across the 7 case studies provided informed consent. Documentation of assessment practices from the 7 institutions was also gathered for subsequent inductive-deductive analysis. Using this approach, all interview contributions and excerpted documentation implicitly or explicitly relating to stated objectives were identified. Initial broad categories were generated from these coding units and iteratively refined. The finalized categories, presented in the preceding section, constitute one research outcome as they summarize themes emerging from the qualitative analysis.

An expert consensus procedure established a common coding protocol. Independent coders assigned categories and checked results, discussing disagreements and refining operational criteria. Persistent disagreements were adjudicated by a third coder, further improving criteria. Mean intercoder reliability (Cohen's Kappa) exceeded 0.9 for all dimensions after independent coding of a 40-unit sample using the finalized instrument. With the final instrument that was obtained, all the data collected from the interviews with the teachers and from the documentation collected was analysed.

This instrument analysed all collected interview and documentation data using Atlas.ti. Interview transcripts were categorized dimensionally. Participants mentioned documents exemplifying explanations; these and other examples demonstrating assessment changes were collected. Documents were also entered into Atlas.ti and categorized dimensionally to corroborate interview data and uncover additional precision on introduced changes.

4. Results

Across all cases, the results show that there are common changes in both organizational and curricular aspects aimed at supporting educational innovations. Specifically, schools are adapting their assessment policies to be more competency-based, often incorporating qualitative feedback derived from predefined phrases. Furthermore, interdisciplinary approaches are typically introduced in the innovation slot, although full integration into the broader curriculum is less common. Moreover, leadership plays a crucial role in facilitating these changes, providing resources and guidance. Additionally, teacher collaboration is a consistent theme, albeit varying in depth and formality, with cooperative work practices generally being informal or minimal. However, where more structured approaches are implemented, positive impacts are observed.

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The results obtained in each of the cases will now be presented, divided into two groups: the results at the school level of 1) the organizational changes and 2) the curricular changes.

4.1. Results of the organizational changes at the school level

To sum up, only three cases are carrying out a complete change of the school assessment policy promoted by the school management and the teachers. There are also three of them that the changes are proposed by the teachers and the management provides the means to carry them out. One case is carrying out this change only in the innovation slot (Table 4).

The results thus indicate that the schools’ assessment policies accompany the innovation, and in some cases, they are distributed in teaching teams, as exemplified below:

“Here we already function as teaching teams, we are no longer individuals; therefore, being teams of three people as classroom tutors, the assessment is already shared. And, apart from being like this, there is also the stage assessment and the end-of-stage assessment; I mean everything is agreed upon” (Case 7).

In six cases there was a lack of reflection regarding the assessment practices and sharing with other schools. Moreover, collaboration and cooperation among teachers takes place at a low level. However, this latter aspect increased with the use of a cooperative learning instrument, with an average degree of overall success.

Table 4. Results of the organizational changes at the school level

Cases	Results
Case 1	The school assessment policy accompanies the innovation, even though there are scheduled meetings to share reflections on assessment practices only for the innovation slot and not for the rest of the practices, and not in high school. Moreover, they do not visit other schools to share their practices. The cooperative work among teachers related to assessment is unregulated, although they introduce some cooperative documents (team plan) and cohesion dynamics to start.
Case 2	The school leadership tries to provide the means to carry out the changes proposed by the teachers. Reflection on the assessment practices is scheduled every fifteen days, but it is not enough. They visit other classes in the same school and other schools. The collaborative work between teachers is minimal; they divide the work to be done and then share it.
Case 3	The school assessment policy is a school project that is currently being carried out. Reflection on the assessment practice needs to be shared among all the teachers, because right now it is done only by those who are part of the cooperative learning commission, which helps to implement the innovation. This is also the case with respect to cooperative work among teachers, which occurs only when they program the interdisciplinary learning itineraries, although cooperative structures are not used and the meetings are not regular, and it is a one-class school for each age group.
Case 4	The school assessment policy has changed the organization setting out a more competency-based assessment of all subjects and they also change the schedule. But the shared reflection on assessment practices among teachers is relegated to the global teachers

meeting, and it is not always done. The cooperative work between teachers is related to the innovation slot using teaching teams.

Case 5 The school assessment policy has especially changed the schedule so that the hours of the innovation slot were together. In primary school, reflection on the assessment practices is shared by the teachers of the same year, and in high school it is shared more informally. They also share these reflections with other schools and that is valued positively. In this case, cooperative work among teachers is not specified.

Case 6 The school leadership makes changes in the school assessment policy based on the experiences and proposals of the teaching practices and provides guidance for developing the interdisciplinary learning itineraries. In primary school, they share reflection on assessment practices especially in the innovation slot, it is carried out at the end of the interdisciplinary learning itineraries year, as well as in the interdisciplinary learning itineraries teacher’s notebook, where every teacher leaves an evaluation comment about the activities and how they can improve talking about it in their meetings. This teacher’s notebook is also used in high school. They work in a cooperative way in the two hours of coordination per week, in primary school, but in high school it is informal.

Case 7 The school leadership has promoted a total organizational and curricular change throughout the school. There has been organizational, pedagogical and methodological change. In this case, the teachers work in teaching teams of three tutors, and they have regular coordination meetings so they can exchange opinions and reflections on assessment practices. This also helped them to implement cooperative work between them, with cooperative structures in meetings and workshops.

4.2. Results of the curricular changes at the school level

In the curricular aspects, the most notable change was the introduction of the new qualification report, in which a grade appears that ranges from just a quantitative nomenclature to a more qualitative one with a more competency-based character that also includes the degree of development and learning of abilities and skills, with an average degree of success in most cases. As a teacher in Case 2 comments on the abilities and skills assessment: “I do see that everything we have from the school regarding abilities and skills, we have seen more how to assess these things, because learning by itineraries gives us a lot of footing to see how children behave, first in a team, then collaborating, and then the way in which they become autonomous etc.”

The assessment of skills and abilities is still in the process of implementation in primary school, although it has not yet been introduced in high school. It is only fully implemented in two cases, and in most cases, it is introduced in the innovation slot, not in all the other moments of the schedule.

Table 5. Results of the curricular changes at the school level

Cases	Results
Case 1	There are more qualitative comments so it can be said that they have a competency-based qualification, but they are taken from a bank of phrases previously formulated by the



teachers. In the assessment of skills and abilities they collect more grades throughout the didactic unit of activities in the innovation slot. It has not yet been introduced in high school. There exists interdisciplinarity between subjects and areas but only in the innovation slot. The programming is competency-based, although it is more specified in the activities of the innovation slot.

- Case 2** The qualifications have more qualitative comments, but it cannot be considered competency-based because they are taken from a bank of phrases. Furthermore, sufficient and good qualifications have been grouped into sufficient achievement. The introduction of education innovation has made it possible to assess skills and abilities. Only in the innovation slot do they introduce interdisciplinarity between subjects and areas. The change into competency-based programming is being made so that all the activities are linked to competencies, even if they are still in an initial stage. Above all the link is provided by the book that is competency-based.
- Case 3** In primary school, competency-based qualifications and assessment of skills and abilities cannot be assessed due to lack of evidence. It has not been introduced in high school, despite the fact that in the reports there are qualitative and competency observations of each subject for each student. The introduction of interdisciplinarity between subjects and areas has been done especially in the innovation slot. In primary school, competency-based programming has been carried out based on the curriculum provided by the Directorate-General of schools. High schools do it in the innovation slot, although not fully.
- Case 4** A more daily assessment has been carried out since the introduction of competency-based qualifications and also more comprehensive and competency-based comments. For the introduction of assessment of skills and abilities in primary school, grades are more qualitative. It has not yet been introduced in high school. Interdisciplinarity between subjects and areas has been done in the innovation slot. In primary school the assessment is generated from the competencies, so they have competency-based programming. In high school, the content still carries more weight than competencies.
- Case 5** In primary school the competency-based qualifications have made changes in the qualification report, which is done by achievement and personal comments that are added to each pupil. It will be introduced in high school next year. The assessment has been further personalized and a change in the document is proposed, so the skills and abilities are reflected, adding more comments. It will be included in high school next year, although it is included in the programming section of the assessment of abilities and skills. More exhaustive work is done in the innovation slot, also introducing interdisciplinarity between subjects and areas and competency-based programming. In high school, with regards to competency-based programming, the link between competencies, areas, assessment activities and so forth is vaguely contemplated.
- Case 6** The introduction of the competency-based qualification modified the assessment agent in primary school, and more teachers and students have been added, thanks to a document that assesses the way this competency is performed in each class and in the families if at
-

home. The assessment of skills and abilities is especially done in the innovation slot, which is easier to assess. Interdisciplinarity between subjects and areas has also been introduced in the innovation slot, as has the competency-based programming, which can be seen in primary and high school activities because they are linked to the learning objectives, the competencies and the assessment activities but not the percentage of the assessment.

Case 7 They changed to a more competency-based assessment but, nevertheless, have difficulty in linking the curriculum with assessment dimensions rather than with assessment activities. Assessment of skills and abilities has been implemented in early education, primary and high school education, working by blocks not by subjects. They work in a multidisciplinary educational project, and some subjects - the social and natural sciences and the arts - are worked entirely in educational innovation. Competency-based programming is carried out throughout the whole school. Only in the first and second grade of primary school is the percentage of the activity assessment not specified.

5. Discussion

The discussion and conclusions of the study are presented below. To do this, we provide a comprehensive response to the proposed objectives, which were:

- to identify the elements/aspects that change in assessment practices at the level of the whole educational institution
- to identify the specific nature of the changing elements/aspects of educational assessment: whether they are organizational or curricular.

The structure of the discussion follows the same logic as the theoretical framework and the results of the study. First, organizational changes at the school level; second, curricular changes at the school level.

With regards to the *aspects of organizational change* at the *school level*, the need for both the alignment of the school policy with the process of innovation in the assessment practices is highlighted, so that the implementation is realized and maintained over time (Shen, 2020). Koenen et al. (2015) and Boulay and Goodson (2018) point out that the institution needs to be constantly evolving in order to adapt and respond to professional practice. The adaptations of the proposed educational innovations are essential for their sustainability and require the involvement of various stakeholders collaborating on these adaptations, thereby empowering and motivating them to carry them out (Baglibel et al., 2018; Harris & Jones, 2019). What is not taken into consideration so much is the exchange of experiences with different work colleagues, between principals, between principals and teachers and between teachers, which is neither systematized nor allocated any space within the schedule and ends up being done informally. If this exchange were actively promoted, it could have an impact at an institutional level (Capperucci, 2011; Folch et al., 2020; Jarl et al., 2021; Liljenberg & Andersson, 2021; Paniagua & Istance, 2018; Quesada et al., 2017).

With regards to *aspects of curricular change* at the *school level*, it is evident that the introduction of the new educational practices causes changes in the report card: the nomenclature of the qualifications is more competency-based and is aligned both with the teaching-learning process and the changes introduced due to the innovation (Agudelo & Salinas, 2015; Ciani et al., 2020; Cizek et al., 2018). In teaching-learning contexts where educational innovation is introduced, there is a more precise and detailed programming of the curricular area: the subjects are linked to the competencies and assessment tasks; and the percentage that will be allocated to the

qualification of each subject is indicated. This planning and linking is one of the basic elements for the development of learning itineraries and competency-based learning (Alonso & Garrido, 2012). Furthermore, the need to introduce other communication documents of assessment results more in line with the new educational practice was identified. For example, by making the link between curriculum goals and the outcomes of initial and formative assessments more transparent, it can help provide targeted assistance aligned with students' needs and accomplishments and to promote improvement in their performance (Cornoldi et al., 2020; Fullan, 2016; OECD, 2013; Van den Akker, 2018; Van den Boom-Muilengurg et al., 2021).

6. Conclusion

In summary, proposals for educational innovation or improvement at the policy level should place greater emphasis on the objectives aimed to be achieved through such changes, rather than the specific actions required for implementation. This would allow schools more freedom to adapt innovations according to their unique cultural contexts, a necessity for sustainability over time as opposed to perceptions of obligations among involved stakeholders (Baglibel et al., 2018; Liljenberg & Andersson, 2021; Paniagua & Istance, 2018). To facilitate this, school leadership must provide resources enabling objectives' fulfillment through a revised vision positioning all stakeholders as co-constructors. This revises communication approaches, helping understand each member's real needs, innovation-prompted emotions, optimal capacity-building, and cooperation promotion (Granvik et al., 2018; Harris & Jones, 2019; Jarl et al., 2021; Van den Akker, 2018; Van den Boom-Muilengurg et al., 2021). Shared understanding of organizational and curricular changes' orientations at the institutional level may thus emerge, fostering more sustainable implementation schemes. Re-orienting innovation directives towards objectives over directives and empowering school community co-ownership could optimize conditions for lasting, contextually meaningful reforms.

We cannot conclude this study without commenting on its main limitation, which is the small sample size of seven participating schools. With such a limited number of cases, a comprehensive identification of changes occurring at the school level was not possible, as contrasts with additional situations and larger samples would be needed.

Finally, this research may provide two useful insights for education professionals. First, it highlights the importance of reflective, joint decision-making processes around determining which assessment aspects should be modified to ensure coherence with evolving teaching and learning elements within an innovation process. Second, the analytical instrument developed in this study serves not only as a tool for evaluating organizational and curricular changes at the school level. It can also facilitate reflection on teachers' own practices within training or advisory roles supporting educational innovation initiatives. This leads to improvements not just for individual teachers, but also, and more importantly, at the institutional level. Moreover, with potential adaptations, the analytical framework could be applied in schools' internal assessment activities as recommended by the European Commission or more broadly across other educational assessment contexts.

Note

1. The *Programa Cooperar para Aprendre/Aprendre para Cooperar* (Cooperate to Learn / Learn to Cooperate Program) was created by the *Grupo de investigación GRAD* (Grad Research Group) of the University of Vic – Central University of Catalonia, by Dr. Pere Pujolàs, Dr. José Ramón Lago

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(Coordinators), Dr. Mila Naranjo, Dr. Gemma Riera, Dr. Teresa Segué, Dr. Jesús Soldevila and Dr. Verónica Jiménez, of the University of Vic.

2. In the Spanish education system, a cycle refers to two years or grades. In primary school, for example, there are three cycles, of two years, between the ages of 6 and 12.

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David Martinez Maireles is professor of Research and Educational Assessment in the Bachelor's Degree in Primary Education and the Degree in Physical Activity and Sports Sciences at the Faculty of Classical, Linguistic, and Educational Studies at the Kore University of Enna. He is also professor in the Specialization Course for Educational Support Activities for Students with Disabilities and is responsible for the subject Developmental and Educational Psychology. Furthermore, he serves as the Erasmus coordinator for the Primary Education program.

He is a member of Italy's leading scientific societies in the field of pedagogy and education (Siped, Sipes, Sird). His research focuses on educational innovation in inclusive teaching and learning processes, as well as transformations in assessment practices.

He is an active researcher in several national and international projects in collaboration with institutions such as the University of Florence, Kore University of Enna, and the University of Vic-UCC, among others. His most recent publications include *Contextual contrast of assessment practices in Catalonia (Spain) and Tuscany (Italy)* (2022); *La competenza valutativa secondo gli insegnanti: un'indagine condotta con gli insegnanti di scuola dell'infanzia e del primo ciclo d'istruzione in quattro istituti comprensivi della Toscana* (2022); *Aportaciones y dificultades valoradas por las personas participantes en un proceso de innovación educativa de infantil a secundaria obligatoria* (2022); *The assessment process: A multi-level model for configuring and analyzing assessment practices* (2023); *La valutazione: il grande tabù educativo e sociale* (2024).

Contatto: david.maireles@unikore.it