Journal of Pedagogical Research
Volume 7, Issue 5, 2023
https://doi.org/10.33902/JPR.202322764

Research Article

The role of external evaluation control mechanisms and the missing loop of innovation

Lídia Jesus Pecegueiro Serra[1], José Matias Alves[2] and Diana Rafaela Soares[3]

[1]*Portuguese Catholic University, Faculty of Education and Psychology, Research Centre for Human Development, Portugal (ORCID: 0000-0003-4720-2665)*
[2]*Portuguese Catholic University, Faculty of Education and Psychology, Research Centre for Human Development, Portugal (ORCID: 0000-0002-9490-9957)*
[3]*Portuguese Catholic University, Faculty of Education and Psychology, Research Centre for Human Development, Portugal (ORCID: 0000-0002-0379-2213)*

School accountability is transitioning and incorporating socioeconomic narratives regarding inclusion, responsiveness to societal challenges, improving performance, and continuous adjustments through innovation. Considering external evaluation mechanisms of regulation, this study provides evidence of the schools' lack of strategic orientations towards innovation that may leverage coherent and lasting improvements. A mixed research method was used to analyse 60 external evaluation reports concerning Portuguese school clusters. The study aims were to depict the school's strengths and improvement areas and identify associations between the school's organisational and pedagogical options that can promote or impede transformation. It used the odds ratio to quantify the associations' strengths and assess educational system practices. The results evidence that leadership and management appear as a robust valency in the Portuguese educational system, and self-evaluation and innovation are aspects of the school organisation that need to be developed and impactful. The findings also suggest that innovation appears as a missing loop when considering the external evaluation control mechanisms of action.

Keywords: External evaluation; School self-evaluation; Innovation; School improvement; Leadership; Odds ratio

Article History: Submitted 26 June 2023; Revised 16 September 2023; Published online 12 October 2023

1. Introduction

In a competitive technological society marked by innovation and globalisation, the value conceded to the possession and the ability to use knowledge places school organisations under new challenges. Strengthened accountability is assumed to enhance education quality and promote school development (Donaldson, 2013; OECD, 2015). Thus, the reconfiguration of public policies and the transition from a bureaucratic model to a post-bureaucratic model enhanced (Barroso, 2018; Bellei & Munoz, 2021; Helgøy et al., 2007; Lima & Torres, 2020; Maroy, 2009). This new social order determined the transition to the "era of measurement" in education (Biesta, 2012) and new paths of political regulation of schools. According to Barroso (2018), comparability became a tool for political persuasion and a criterion for conceiving judgment about the schools' quality and efficacy and even countries' educational systems. A culture of performativity in education emerged and became easily applied to academic results. In contrast, instrumental rationality was

Address of Corresponding Author

Lídia Jesus Pecegueiro Serra, Portuguese Catholic University, Faculty of Education and Psychology, 1649-023 Lisbon, Portugal.

✉ lidiajpserra@gmail.com

How to cite: Serra, L. J. P., Alves, J. M., & Soares, D. R. (2023). The role of external evaluation control mechanisms and the missing loop of innovation. *Journal of Pedagogical Research, 7*(5), 156-182. https://doi.org/10.33902/JPR.202322764

not easy to use for promoting the development of skills, attitudes, and competencies desired for society.

The increased education measurement culture by combining control- and improvement-oriented evaluation systems may promote the schools' development and enhance education quality (Hanberger et al., 2016). Hence, this paper presents empirical research concerning the schools' inspective action developed in Portugal between 2018 and 2021. This period matches the introduction of an educational reform that values and promotes school autonomy, curricular flexibility, and innovation to meet globalisation's twenty-first-century needs and challenges. The study's methodology used documental analysis concerning the external evaluation reports produced by the Inspectorate and combined qualitative and quantitative techniques. This research intends to describe the modes of organisation of Portuguese schools and looks for the comprehension of associations between the schools' organisational orientation and the pedagogical options and performance. Therefore, the article begins by exposing a theoretical context that sustains this research and leads to exploring the research questions: *Which are the modes of Portuguese schools' organisation and functioning perceived by the Inspectorate? Is there interconnectedness between the dimensions evaluated by the Inspectorate – Leadership and Management, Self-evaluation, Providing Educative Service, and School Results? Which school organisational options act as promoters or hindrances to innovation?*

2. Background

2.1. The Perspective of Educational Policies

Accountability is a "process aimed at helping individuals or institutions meet responsibilities and reach their goals" (UNESCO, 2017, p.2). This concept places the policy emphasis on the transparency of information and the inputs of the education process instead of its outcomes (Torres, 2021). This approach emphasises an accountability process focused on schools' organisational aspects, leadership and strategic vision, teachers' professional cultures and classroom practices, inclusion and openness to community, self-regulation processes and reflection, and human and material resources management instead of students' assessment results. Accountability, as a construct, points to responsibility at several levels. According to Portz (2021), accountability is provided on two planes: first, the governmental level exercised through control over education policy; second, the level of accountability systems design that faces the challenge of highlighting broader conceptions of student learning, continuous improvement, and developing school capacity. The "next generation of accountability" values the supportive interventions at the schools' organisation (Donaldson, 2013; Portz, 2021; Simeonova et al., 2020) and the emergence of a genuinely co-professionalism as opposed to the co-existent pattern of interactions between the inspectorate and schools (Brown et al., 2018). Self-evaluation emerged as a third element needed for the "collective capacity of the profession and its responsibility for continuous improvement and success of all students" (Fullan et al., 2015, p.6). Harvesting a culture of evaluation will support schools as organic structures capable of creating and recreating systemic strategies for transformation and responsiveness to social change.

2.1.1. Educational deregulation versus re-regulation

Deregulation in education implied a reduction of government centrally directed activity, in a process where responsibility was devolved to municipalities or schools and introduced re-regulation (Helgøy et al., 2007). Conversely to schools' autonomy, performance measurements through educational quality indicators characterise re-regulation conducted by governments and international programs like PISA. The internationalisation movement of educational policy and transnational regulation, with its cross-national comparisons of countries' educational systems, introduces (coercive) suggestions for national regulation through the diagnoses and orientations provided. The transnational, national, municipal, and school levels of control of education operate, respectively, to evaluate results, management of procedures, administrative autonomy, and

pedagogical autonomy (Barroso, 2018). Besides this multi-regulation process worked in a composite way, Maroy (2009) identified two post-bureaucratic models, the 'evaluative state model' and the 'quasi-market model'. According to the same author, the state defines objectives and programs in both models. In the latest model, schools enjoy considerable autonomy to choose means to carry out the goals, and quality is assured through competition between schools to meet those objectives. In the 'evaluative state model', schools have autonomy and goals are contracted with the state, becoming the school's mission.

External school performance evaluation and a system of incentives and sanctions become the mechanism of state control. Bellei and Munoz (2021) described four types of effects related to neoliberal models applied to education: (i) 'naïve', by assuming that interventions focus on the quality of education are ruled by the market laws; (ii) 'bureaucratic', once it aspires to regulate and establish rules for the negative behaviour; (iii) 'economical', for saving purposes; (iv) 'technocratic', when operated by a system of evaluation that ensures quality. "Deregulation emphasising increased local autonomy seems to accommodate mechanisms which, paradoxically, tend to increase central control" (Helgøy et al., 2007, p.198), making schools and teachers more accountable. Hence, comparisons of countries' educational systems performance, standardised national exams, quantified indicators of students' assessment results, and inspectorate auditing sustain the process of educational re-regulation. However, a more organic regulation is necessary to improve education quality due to the educational system's complexity and because schools are not natural market systems. It requires a new role for the state: developing capacity for leadership, coordination, and support to foster systemic improvement and innovation in the educational field (Bellei & Munoz, 2021). Thus, we argue that:

Hypotheses 1: A positive relationship exists between school self-evaluation practices and leadership.

Hypotheses 2: A positive relationship exists between school self-evaluation practices and the educative service provided by the school.

2.2. A New Generation of Accountability

Educational accountability is clearly in transition. The 'next generation' of accountability is finding a way to meet more robust systems (Portz, 2021) to sustain school cultures of continuous improvement and quality education. An overview of the 'new accountability' may include three focuses – professional capital, organisational capital, and innovation – key elements for improving interdependency within each school organisation.

2.2.1. Focus on organisational capital

Organisational capital corresponds to the purview of leadership for devising new forms of producing high-leverage teaching and learning strategies, enabling transformation (Dimmock, 2011; Yakavets et al., 2017). Effective leaders act through structural capital, the internal processes and information that belongs to the organisation (Sujudi et al., 2020). In successful organisations, leaders lead through a strategic vision, follow a clear mission and goals, promote engagement and trustful environments, provide distributed and mobilising leadership, and generate collaborative cultures (Anselmus Dami et al., 2022; Azorín & Fullan, 2022; French et al., 2022; Khaola & Oni, 2020; Pellegrini et al., 2020). The leaders' job is to build a culture where people come to embrace a focus on continuous improvement as something they have to do and prove to themselves and others (Fullan, 2020). Furthermore, the leaders aim to build rich learning environments that promote collective and organisational learning besides the teaching and every student's education.

A leader's role is to shape a collective vision of the student's success and to create a school culture that promises success for each student. The challenge is purposefully distributing leadership roles and responsibilities to middle leaders and teachers to improve teaching and learning (Young, 2013). Several studies describe the relationship between the ability of leaders to promote teachers' engagement and the innovative behaviour of the leads (Anselmus Dami et al., 2022; Tian & Zhang, 2020) and teachers' professional learning (Tayag & Ayuyao, 2020). However,

principals must realize that to engage teachers in professional learning, they must first impact the school culture through agency and trust (Tayag & Ayuyao, 2020). Establishing trust is a must for school principals to have positive effects on teachers (Atik & Celik, 2020). Additionally, sustainable organisational change is promoted by embedding distributive leadership and shared power (Thompson, 2020) because it allows for teachers' engagement while providing the principal with institutional legitimacy (Fink, 2010). Collaborative cultures are endeavours for better school performance (Park & Ham, 2016), teachers learning with each other (Sinnema et al., 2022), responding to challenges and embracing innovation (French et al., 2022). Promoting collaborative school cultures, according to Azorín and Fullan (2022), has been happening "over the decades, but they were limited in three ways: they were in the minority; were mostly intra-school with a smattering of school districts; and they did not become an established part of a new culture" (pp.139-140). Thus, we argue that:

Hypothesis 3: A positive relationship exists between strategic leadership vision and the external evaluation domains of the service the school provides and results.

Hypothesis 4: A positive relationship exists between distributed and mobilising leadership and the external evaluation domains of the service provided by the school and results.

Hypothesis 5: A positive relationship exists between a climate of school involvement and the external evaluation domains of the service provided by the school and results.

2.2.2. Focus on professional capital growth

Policymakers must shift from interventions that lead to superficial structural solutions to others that conduce to leveraging internal accountability and building the professional capital of teachers and leaders through the system (Fullan et al., 2015). Professional capital includes three interrelated components (Hargreaves & Fullan, 2012). First, human capital refers to individuals' competence, knowledge, qualifications, and commitment (Hargreaves, 2019). Second, decisional capital conduces to developing judgment and expertise over time (Fullan et al., 2015). Finally, social capital is about teachers learning and evolving with each other by strengthening mutual support, shared professional development, and firm foundations of trust (Fullan et al., 2015; Hargreaves, 2019).

Lack of school accountability and control is the primary underlying issue related to low-performing teachers (Küçükbere & Balkar, 2021). An endeavour toward professional capital development is accountability nurtured through the system, external and internal accountability. Self-evaluation provides continuous knowledge about a school, stimulating and challenging the system to adapt and to work collaboratively to build solutions through professional capital development. Self-evaluation is intrinsic to a school's development planning (Brown et al., 2018). Therefore, improving teachers' professional capital is inseparable from intelligent, comprehensive, constructive, and participative accountability. Küçükbere and Balkar (2021) presented a study evidencing that teachers' improved understanding of accountability determined the increased use of emotional labour strategies to fulfil duties and contribute to the school processes. In a sense, internal accountability increases assessment literacy by developing "professional expertise" and promoting the use of its meaning for school improvement (Fullan, 2020). Thus, we argue that:

Hypotheses 6. A positive relationship exists between the schools' pedagogical options and results.

2.2.3. Focus on innovation

Innovation has become a buzzword in education, creating strong expectations regarding the adaptability of schools to changes in society (Blömeke et al., 2021). "Innovation culture seeks to apply new teaching methods by developing ideas and educational programs enthusiastically and in an exploratory fashion in response to changes in the external environment" (Lee, 2020, p.208). Innovation must become a strength and a tool to promote systemic and structural transformation that embraces the whole school organisation. However, introducing sustainable innovations in schools is a challenge. "A teaching innovation is then an improvement if there is evidence that it

can support students' progress towards the identified learning goals more effectively than the typical forms of instruction in a country or region" (Maass et al., 2019, p.304).

At the organisational level, innovations are an interdependence between leaders, self-knowledge generated in school, and school cultures. Literature is rich in describing factors that promote or hinder innovation regarding professional cultures, teachers' characteristics, collaborative cultures, leadership styles, and organisational features (Blömeke et al., 2021; Domanski et al., 2020; Hargreaves & Fullan, 2012; Khun-Inkeeree et al., 2021; Konst & Kairisto-Mertanen, 2020; Pathak & Mishra, 2019; Runhaar et al., 2016; Serdyukov, 2017). School transformation is an interdependency between the school organisation and the innovation initiatives. It is an equation of how schools get along with promotors and obstacles to innovation to introduce, diffuse, and accommodate technological, pedagogical, organisational, and cultural improvements. Thus, we argue that:

Hypothesis 7: A positive relationship exists between the school innovation initiatives and the self-evaluation practices, leadership, organisational-pedagogical options, and school results.

3. Methodology

This research was developed in Portugal and included formal and organised groups of schools that were a target in the third cycle of evaluation of the Inspectorate services, which started in 2018. The data was obtained from the Portuguese Ministerial Platform of Statistics of Basic and Secondary Education and included External Evaluation Reports of schools' clusters evaluated between 2018 and 2021. The research excluded the schools' clusters from the pilot phase of implementation of the third cycle of external evaluation and professional, artistic, and private schools. Hence, the study considers a population of 60 school clusters.

The study follows a mixed method design and, according to Edwards (2010), a multi-stage methodology in which qualitative research was a preliminary stage that informs the quantitative research. The qualitative approach was used to obtain data to be analysed quantitatively according to the conceptual model in Figure 1. This section presents the data collection, sample procedures, and analysis methods.

Figure 1
Hypotethesed research model

3.1. Sample and Data Collection

The 60 school clusters evaluated by the Inspectorate between 2018 and 2021 integrated the sample, assuming a saturated sampling procedure. Hence, a documental corpus of 60 external evaluation reports was analysed. The analyses focused on the executive summary of the reports concerning improvement areas and strengths observed by the Inspectorate. The content analysis used an open

and flexible referential. It included four theme blocks aligned with the domains defined in the Inspectorate evaluation framework of Portuguese schools - self-evaluation, leadership and management, providing educative service, and schools' results. There were no predefined categories of analysis for each theme block. They emerged from the systematic content analysis, obeying the mutual exclusion, homogeneity, exhaustivity, pertinency, objectivity, and fidelity criteria (Bardin, 2009). The exploratory process of data enumeration considered (i) the presence or absence of the category and (ii) direction, being considered favourable when referred to strengths and unfavourable when it was an improvement area. Each category found was assumed as a qualitative dichotomic variable used in the quantitative study of hypotheses 1 to 7. The data concerning the school clusters' characteristics and evaluation, obtained from the external evaluation reports, were used to describe the sample.

3.2. Measurements and Data Analysis

A descriptive statistical analysis was developed to portray the sample, including frequencies, median, and interquartile range. Then, considering the external evaluation obtained in each domain, we controlled three variables due to the school clusters, namely, the context (favourable, intermediate, or unfavourable), size of the cluster (not grouped, <5, [5,9], [10,14], >14), and region (North, Centre, and South). Schools' evaluation per domain varies from insufficient to excellent. Hence, the Kruskal-Wallis test was performed for an unrelated k-sample and, when statistical significance was detected, was complemented with the Mann-Whitney U test for two unrelated samples. This *post hoc* test applied for pairwise comparison included Bonferroni's p-value correction. This non-parametric study allows us to understand if the schools' cluster characteristics determined the external evaluation in each domain.

Finally, for testing the research model at the expense of the referential described, a pairwise comparison was made using the odds ratio to measure the association between variables corresponding to the categories that emerged from the external evaluation reports' content analysis. The criteria applied to select the variables for the study were: first, observed in at least 10% of the schools' cluster; second, correspondence to emergent categories pointing to innovation, self-evaluation consistency, teaching and learning-oriented school self-evaluation, leadership features, a climate of organisational involvement, teaching and learning methodologies, curricular articulation, and school results. Once the odds ratio evidence bias in small samples, it was considered the confidence interval because it exhibits a less asymmetric distribution (Pestana & Gageiro, 2014). The odds ratio null hypothesis is H0: θ =1, meaning the inexistence of association between the pairwise variables in the analysis. Additionally, for each pairwise of variables, Cramer's V was determined to comprehend the association's strength between variables, set with a significance level of α =.05.

4. Results

4.1. Descriptive Statistics of the Sample and Control Variables

Tables 1 and 2 describe the 60 schools' clusters studied. 56.7% are groups of 5 to 9 schools led by the same school principal, 41.7% belong to an intermediate socioeconomic context, 33.3% to a favourable context, and 25.0% to an unfavourable context. The north inspectorate delegation evaluated 40% of the schools' clusters, 33.3% by the south, and 26.7% by the centre. Globally, the most favourable domain of external evaluation was leadership and management (N=60; Med=4). Conversely, the self-evaluation was the weakest domain evaluated by the Inspectorate (N=60; Med=3), with 70% of good or very good evaluations in opposition to the others that exhibit values over 90%.

Table 1
Descriptive statistics of the sample concerning size, region, and sociocultural context (N=60)

Nº of schools in the cluster		*Territorial Area*		*Context*	
NG	1 (1.7%)	North	24 (40.0%)	Unfavourable	15 (25.0%)
< 5	9 (15%)	Centre	16 (26.7%)	Medium	25 (41.7%)
[5;9]	34 (56.7%)	South	20 (33.3%)	Favourable	20 (33.3%)
[10;14]	11 (18.3%)				
>14	5 (8.3%)				

Note. NG – Non-grouping school.

Table 2
Descriptive statistics of the sample concerning the schools' external evaluation (N=60)

Domains	*Evaluation*	*Frequency*				*Median*	*IQQ*
		Inspectorate Delegation					
		North	Centre	South	Total		
Self-evaluation	Insufficient	2 (8.3%)	---	---	2 (3.3%)	3	1
	Sufficient	7 (29.2%)	1 (6.2%)	8 (40.0%)	16 (26.7%)		
	Good	14 (58.3%)	11 (68.8%)	7 (35.0%)	32 (53.3%)		
	Very Good	1 (4.2%)	4 (25.0%)	5 (25.0%)	10 (16.7%)		
Leadership and management	Insufficient	1 (4.2%)	---	---	1 (1.6%)	4	1
	Sufficient	1 (4.2%)	---	2 (10.0%)	3 (5.0%)		
	Good	11 (45.8%)	4 (25.0%)	10 (50.0%)	25 (41.7%)		
	Very Good	11 (45.8%)	12 (75.0%)	8 (40.0%)	31 (51.7%)		
Providing educative service	Insufficient	---	---	---	---	3	0
	Sufficient	2 (8.2%)	---	2 (10.0%)	4 (6.6%)		
	Good	20 (83.3%)	7 (43.7%)	16 (80.0%)	43 (71.7%)		
	Very Good	2 (8.3%)	9 (56.3%)	2 (10.0%)	13 (21.7%)		
Results	Insufficient	---	---	---	---	3	0
	Sufficient	3 (12.5%)	1 (6.2%)	1 (5.0%)	5 (8.3%)		
	Good	19 (79.2%)	9 (56.3%)	18 (90.0%)	46 (76.7%)		
	Very Good	2 (8.3%)	6 (37.5%)	1 (5.0%)	9 (15.0%)		

The Kruskal-Wallis test was performed for an unrelated k-sample to determine if statistically significant differences exist between the external evaluation of the schools' clusters per domain according to context, size, and inspection delegacy (Table 3). The results exhibit no statistically significant differences, according to the context and size of the school cluster, regarding the four domains of external evaluation. However, the results point to a statistically significant difference between the evaluation conceded by inspectorate delegations according to the self-evaluation domain with H(n=60)=6,096, p <.05. The domain providing educative service also evidences a statistically significant difference with H(n=60)=14.565, p <.05.

A Mann-Whitney U test was conducted for two unrelated samples to compare the effect of evaluation due to the pairwise comparisons of the Inspectorate's north, centre, and south areas. This analysis was extended to data concerning the domain of the school results with a p-value of .05, considered a borderline of statistical significance. Bonferroni correction was applied in these analyses to counteract the multiple comparisons problem and avoid Type 1 Error (p − value=0.05/3=.0167). According to Table 3, there are statistically significative differences in evaluation: (i) between north and centre concerning the self-evaluation domain with U(n=60)=108.500, p <.0167; (ii) according to providing educative service domain, between north and centre with U(n=60)=93.000, p <.0167, and the centre and south with U(n=60)=79.000, p <.0167.

Table 3
Results of Kruskal–Wallis and Mann-Whitney tests for the control variables

External evaluation domains	*Self-evaluation*		*Leadership and management*		*Providing educative service*		*Results*	
Kruskal-Wallis	H	*p*	H	*p*	H	*p*	H	*p*
Context	1.262	.532	.012	.994	2.194	.334	4.630	.099
School clusters' size	1.433	.698	.653	.884	2.499	.475	1.906	.592
Inspection area*	6.096	.047	5.239	.073	14.565	.001	5.984	.050
Mann-Whitney	U	*p*			U	*p*	U	*p*
North / Centre	108.500	.008			93.000	.001	132.000	.040
North / South	206.500	.392			240.000	1.000	230.500	.725
Centre / South	119.500	.161			79.000	.002	112.500	.045

Note. *North / Centre / South.

4.2. Documental Analysis Data

The data from the external evaluation report analysis of schools' strengths and improvement areas are presented in Tables 4 and 5. The data considering the self-evaluation domain of analyses reveal that consistency is the most valuable strength, with 85% frequency. Regarding the leadership and management domain, the most observed strengths of schools are partnership networks with institutions from the community (65.0%), strategic vision (55.0%), shared and mobilising leadership (51.7%), and climate of organisational involvement (46.7%). In opposition, communication within the schools' cluster is the less frequent strength. Concerning the service provided by the school domain, active teaching and learning methodologies (53.3%), a diversity of educational paths offered to students (48.3%), fostering an inclusive school (46.7%), and a citizenship school culture (41.7%) are the prevailing strengths observed by the Inspectorate. On the opposite, the practices of teachers' supervision (1.7%), students' formative assessment (1.7%), horizontal curricular articulation (6.7%), and teachers' collaborative work (11.7%) are scarce. Academic results and opening to the community are identified as a strength in 55.0% and 56.5% of the schools' clusters, respectively. Conversely, transversal analyses of organisational aspects related to innovation denote a low degree of observation in schools, namely innovation-oriented practices (1.7%), a vision of innovation (13.3%), and an innovative and stimulating climate (13.3%).

Table 4
Results of qualitative content analysis of "school strengths" identified by the Inspectorate (N=60)

	Number of reports				
Domains / Latent construct	North	Centre	South	Frequency	*Example*
Self-evaluation					
Consistency	19	13	19	85.0%	Consistency of the self-evaluation process; is oriented toward identifying strategic domains and building improvement plans.
Strategic vision	8	5	2	25.0%	The school cluster evidences a strategic vision oriented toward the quality of learning, which is clearly set out in the guiding documents.
Reflection practices	5	3	3	18.3%	A culture of reflection instituted in several sectors of the school cluster's life has consistently contributed to improving results and inclusion.
Innovation-oriented	1	–	–	1.7%	Studying emerging themes per year (curriculum development, behaviour and indiscipline, inclusive school and institutional relations) contributes to organisational improvement.
Participated process	5	6	3	23.3%	All groups of the educational community are involved in the self-evaluation process.
Leadership and management					
Shared and mobilising leadership	8	8	15	51.7%	Exercise of the leadership of proximity, marked by openness and dialogue, positively impacts the motivation of professionals and the mobilisation of the educational community.
Strategic vision	14	8	7	48.3%	Clear and coherent goals are directed at developing competencies of the Students' Profile and guiding the action of professionals.
Vision of innovation	4	1	3	13.3%	The strategic vision is oriented to improve the quality of learning based on technological and pedagogical innovation and to mobilise the educational community in its achievement.
Organisational engagement climate	8	12	8	46.7%	The organisational climate is guided by people's strong motivation and commitment to their professional development and educational objectives and goals.
Partnership network	15	10	14	65.0%	Projects and local, national and international activities are developed, consistently and consolidated, with a recognised impact on learning quality.
Focus on teachers' training	3	2	3	13.3%	Scope of human resources training dynamics, positively impacting professional development and educational service quality.
Resources management	2	4	5	18.3%	Careful management of human resources ensures the proper functioning of services and promotes collaborative practices among teachers.
Climate for student learning	4	3	3	16.7%	Concerted actions of teachers and staff result in a quiet, safe, ecological, and socially welcoming school environment for students.
Communication	–	4	–	6.7%	Internal and external information circulates with celerity, effectiveness, and accuracy, respecting ethical principles.

Table 4 continued

Domains / Latent construct	*Number of reports* North	Centre	South	Frequency	*Example*
Providing educative service					
Inclusive school	12	3	13	46.7%	Intercultural diversity is an opportunity for learning due to the development of a policy of respect for difference.
Curricular horizontal articulation	2	2	–	6.7%	Implementing pedagogical teams by grade of schooling allows shared work that sustains horizontal curricular articulation.
Teaching and learning active methodologies	9	10	13	53.3%	Active methodologies that focus students' work on the proposed tasks contribute to classroom environments conducive to learning.
Innovative and stimulating climate	5	–	3	13.3%	Educational approaches to curricular and pedagogical innovation involve students in activities that articulate knowledge and develop creativity and critical thinking.
Citizenship school culture	13	5	7	41.7%	Foster students' autonomy, responsibility, civic participation, and personal, emotional and social development by involving them in activities specially designed for that purpose.
Student's educational paths	4	12	13	48.3%	The school cluster offers a diversified educational path, responding to the interests of children and pupils and the local business context.
Teachers' collaborative work	1	5	1	11.7%	The teachers' collaborative work positively affects the curriculum's management, including planning, diversification of teaching strategies, and evaluation of learning.
Students' formative assessment	–	1	–	1.7%	Teachers implement different assessment modalities and use diverse instruments for each course's purposes and contexts.
Teachers practice supervision	–	–	1	1.7%	Monitoring and supervision mechanisms between peers and middle leaders in the classroom enhance personal and professional enrichment and promote better teaching and learning processes.
Results					
Academic results	15	14	4	55.0%	Academic results evidencing sustainable work for the quality of learning and educational success.
Encouraging participation in school life	11	5	9	41.7%	Encouraging participation in school life is associated with a culture of critical, creative, and collaborative student intervention in promoting active citizenship.
Inclusive school	12	7	4	38.3%	An integrative and inclusive educational action reduces failing causes due to unjustified absences and indiscipline.
Recognition of merit	6	1	6	21.7%	The community recognises the contribution of the school cluster to developing the region through initiatives that reward merit and excellence.
School opening to the community	8	11	15	56.7%	The good relationship between the schools' cluster and the environment is observed as cooperation between several institutions.

Table 5

Results of qualitative content analysis of "areas of school improvement" identified by the Inspectorate (N=60)

	Number of reports				
Domains / Latent construct	North	Centre	South	Frequency	*Example*
Self-evaluation					
Centrality to the teaching and learning process	16	6	7	48.3%	Implementing a consistent and systematic self-evaluation process focused on teaching and learning that contributes to the student's success and sustains organisational growth.
Improving reflection practices	4	5	3	20.0%	Improve internal reflection mechanisms on self-evaluation results with a view to organisational development.
Deepening self-evaluation practices	7	11	16	56.7%	Deepening self-evaluation practices, with the regular and systematic implementation of monitoring mechanisms and improvement actions to improve the quality of learning.
Deepening community participation	6	3	6	25.0%	Deepening the participation of the educational community in the self-evaluation process enhances its impact on the improvement of the school.
Leadership and Management					
School vision	2	–	1	5.0%	Reconfigure the educational project, giving it a strategic, contextualised, and more identity character of the school cluster.
Strategic vision	12	10	9	51.6%	Reconfigure the educational project, identifying the guiding principles of the action and the hierarchical and temporalis goals.
Mobilisation of middle leaders	7	–	7	23.3%	Concerted action among leaders and pedagogical structures drives the school cluster on a work-oriented to the quality of learning and the student's success.
School culture	1	3	3	11.7%	Deepen the sense of belonging to the school cluster against individualised views.
Supervising teachers' practices	1	–	1	3.3%	Trigger mechanisms for regular monitoring of the teaching practices.
Improving intervision practices	2	–	–	3.3%	Initiate mechanisms for regularly monitoring teaching practices in collaborative and professional development work.
Resources management	5	1	2	13.3%	Manage existing material resources to integrate them into teaching and learning and promote more active methodologies.
Innovative solutions	6	–	1	11.7%	School structures reflect and debate the quality of innovative practices introduced and their impact on improving learning.
Improving teachers' participation	2	–	2	6.7%	Promote the participation of the educational community by investing daily in motivation and appreciation actions.
Intencional training plans	5	4	6	25.0%	Develop a training plan appropriate to the needs of the teaching and non-teaching staff.
Improving students' and parents' participation	2	2	2	10.0%	Strength the participation of students in organisational and pedagogical decisions to develop a critical spirit and capacity for initiative.
Communication	3	4	3	16.7%	Assure more agile and effective internal and external communication processes to increase school community participation.

Table 5 continued

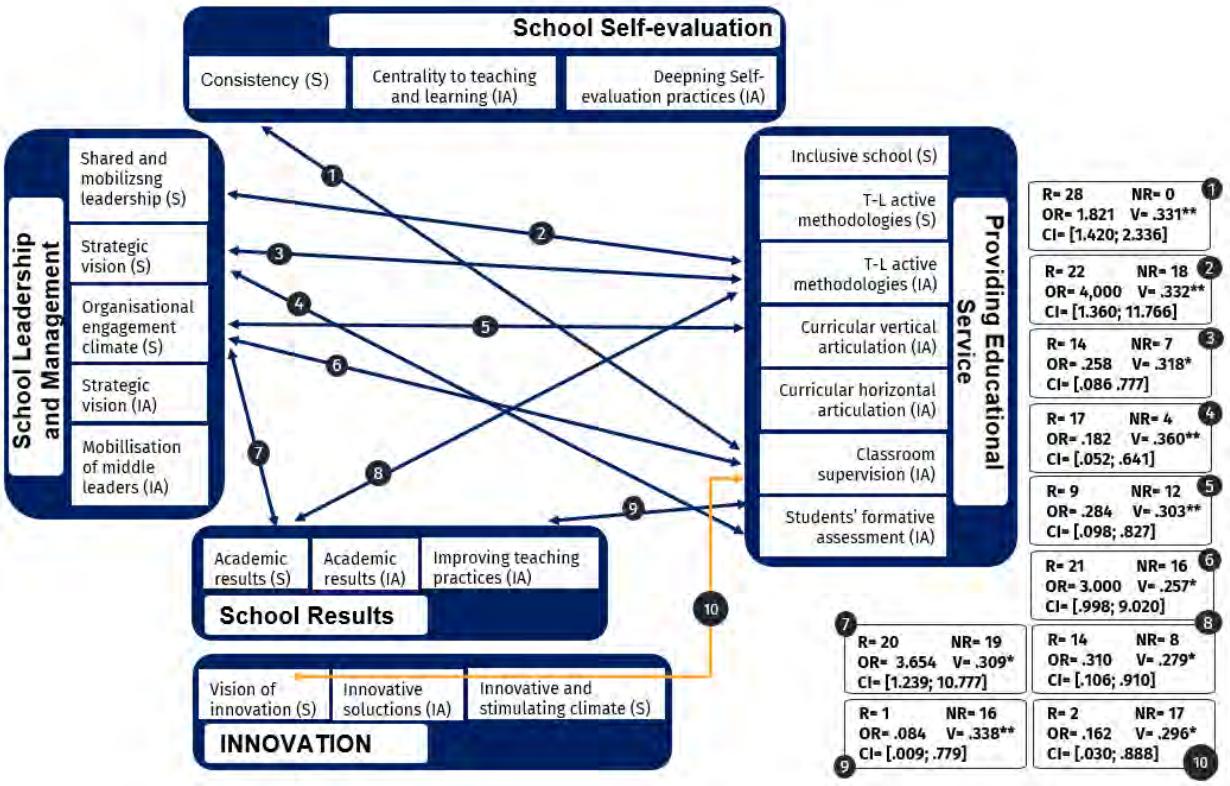
Domains / Latent construct	*Number of reports* North	Centre	South	Frequency	*Example*
Providing Educative Service					
Vertical curriculum articulation	12	5	12	48.3%	Deepen the vertical articulation in planning and knowledge construction to impact the teaching and learning process.
Active teaching methodologies	10	7	15	53.3%	To consolidate strategies for developing teamwork, regular experimental work, problem-solving, and critical spirit.
Promoting innovative teaching practices	3	–	1	6.7%	Intensify the development of strategies promoting educational success and encouraging pedagogical innovation.
Investing in formative assessment practices	12	11	15	63.3%	To generalise formative assessment practices, gauge measurement criteria and evaluation instruments, and define performance profiles.
Articulation between strategic documents	2	–	1	5.0%	Deepen the articulation between the activities proposed in the Annual Plan of Activities and curriculum development planning.
Classroom supervision	14	13	10	61.7%	Strength mechanisms of monitoring, regulation, or supervision of pedagogical practices in the classroom, among peers, as a form of self-regulation and professional development.
Horizontal curricular articulation	6	4	11	35.0%	Invest in pedagogical dynamics that allow crossing and integrating the knowledge of different subjects and using active and meaningful methodologies.
Inclusion	3	1	–	6.7%	Ensure personalised responses to all children and pupils, according to their needs and potential, by easing and monetising the learning support centre.
Results					
Students' participation in school life	5	3	6	23.3%	Promote effective and regular participation of students in school life, particularly in exercising active and responsible citizenship.
Inclusive education	12	9	2	38.3%	Promote a practical action that addresses the results' internal asymmetries between classes, subjects, and students of the same course to ensure inclusion.
Improving students results	15	3	3	35.0%	Promote pedagogical/curricular actions that have visible effects on the external evaluation results.
Improving teaching practices	2	3	1	10.0%	Increase the effectiveness of educational and school practices to sustain improvement of learning and student outcomes.
Monitoring the school path	1	1	0	3.3%	Implement mechanisms for monitoring the school and students to know the impact of the work carried out by the school cluster.
School merit incentive	1	0	1	3.3%	To implement initiatives that value and recognise the merit of students and reveal better academic and social results for their fixation in the school.
Discipline	1	3	5	15.0%	Optimise indiscipline preventive measures in the classroom so that all students have conditions conducive to learning.
Deepening reflection	–	–	9	15.0%	Deepen the analysis and reflection on students' academic results, considering the data provided by the central administration to implement improvement actions.

Concerning the areas of school improvement, the prevailing practices identified are: regarding the self-evaluation domain, deepening self-evaluation practices (56.7%) and centrality to the teaching and learning practices (48.3%); strategic vision in leadership and management domain (53.3%); investing in formative assessment (63.3%), classroom teachers' supervision (61.7%), active teaching methodologies (53.3%), and vertical curriculum articulation (48.3%) due to provision of educative service domain; concerning the results domain, inclusive school (38.3%) and academic results (35.5%). Innovation is not largely referred to as an area that cares for improvement measures. The references restrict the need for innovative solutions to 11.7% of schools and the promotion of innovative practices at 6.7%.

4.3. Hypothesis Test

Figure 2 summarises statistically significant results regarding Cramer's V and the odds ratio concerning the pairwise association of variables that emerge from the content analysis of schools' external reports. According to the model of research, most of the associations did not depart the possibility of the odds ratio being 1 (n=60, gl=1) once the 95% confidence interval includes 1, meaning that the pair of variables are independent. A detailed register of this analysis aligned with the research model, including statistically non-significant associations between variables, is presented in Appendixes 1 and 2.

Figure 2
Results of pairwise association between variables



Note. N=60**;** Degrees of freedom *gl*=1; Number of co-occurrences: *R* referenced, *NR* non referenced; *OR* odds ratio; *CI* odds ratio confidence interval for an α=95%; *V* Cramer's V with a significance * $p < .05$, ** $p < .01$.
T-L teaching and learning; *S* strengths; *IA* improvement areas.

According to Cramer's V, the results of the intensity of the association of pairwise categorical variables are moderate between: consistency of self-evaluation practices and classroom supervision (V=.331, gl=1, $p < .01$); shared and mobilising leadership, and teaching and learning active methodologies (V=.332, gl=1, $p < .01$); strategic vision due to leadership and management and teaching-learning active methodologies (V=.318, gl=1, $p < .05$), and with students formative assessment (V=.360, gl=1, $p < .01$); organisational engagement climate provided by leadership and

vertical curricular articulation (V=.303, gl=1, p <.01), and academic students results (V=.309, gl=1, p <.01); students' formative assessment and improving teaching practices (V=.338, gl=1, p<.01). We also found weak associations concerning Cramer's V between organisational engagement climate and classroom supervision (V=.257, gl=1, p <.05); the need to improve teaching and learning active methodologies and academic students' results (V=.279, gl=1; p <.05); classroom supervision and the vision of innovation (V=.296, gl=1, p <.05).

Furthermore, measures of odds ratio between the variables inferior to 1 mean a lower probability of co-occurrence. It occurs between the leader's solid strategic vision and: (i) the need to improve teaching-learning active methodologies (OR=.258, α =.05); (ii) the need for better students' formative assessment (OR=.182; α =.05).

Similarly, when a school evidences a solid organisational engagement climate, vertical curricular articulation is less likely to be identified as an improvement area (OR=.284; α =.05). In the same way, solid academic results are less likely to be connected to a school that needs to improve teaching-learning active methodologies (OR=.310; α =.05).

The variables, students' formative assessment and improving teaching practices, corresponding to improvement areas identified by the Inspectorate, are associated by an OR of .084 (α =.05). The association between these two variables is controversial and attributed mainly to the 16 non-referenced co-occurrences between schools. A single case of a school cluster was registered where both variables were identified. The variable improving teachers' practices documented in 10% of schools is a low value and may introduce empirical bias, justifying the inverted and unexpected association. An overestimation (Nemes et al. 2009) is due to the possibility of the invalidity of the assumption: the equality of the expected value of a ratio and the ratio's expected values. The confidence interval range is large, and the few observations influence its precision (Pestana & Gageiro, 2014). Hence, further study is needed to clarify the certainty of the association identified.

Measures of odds ratio between the variables superior to 1 mean a higher probability of co-occurrence. It occurs between the organisational engagement climate and students' academic results, both strengths identified by the Inspectorate (OR= 3.654; α =.05). Despite this intelligible relationship, others appear controversial. A consistent self-evaluation in schools was positively associated with classroom supervision (OR=1.821; α =.05), identified as an area of improvement. Co-occurrences characterise this association in 28 school clusters. It means that school self-evaluation leads to inaction decisional capital and is not producing solid leaders agency. Leaders' lack of action is also reflected in the pairwise analyses of the strength shared and mobilising leadership and the improving area teaching and learning active methodologies (OR=4.000; α =.05). This medium association is related to 22 referenced and 18 non-referenced co-occurrences among the 60 school clusters studied. Additionally, the organisational engagement climate, a strength, and classroom supervision practices, an improvement area, share an odds ratio of 3.000 (α =.05). These three relationships link positive features due to leadership and self-evaluation to 1.8 to 4 times more possible classroom and teacher supervision aspects that need improvement.

Concerning innovation, only the association between the strengths identified by the Inspectorate, organisational involvement and students' academic results was statistically significant, with an odds ratio of 3.654 (α =.05).

5. Discussion

The ultimate intended function of evaluation is to support school development (Hanberger et al., 2016). Hence, school inspection has become a tool for encouraging school improvement and enforcing accountability in recent decades (Simeonova et al., 2020). By accomplishing the national educational goals and standards by schools, inspection identifies strengths and improvement areas. This study aimed to shed light on the Inspectorate's perceptions of the school organisation and orientation towards innovation. We presented a model of analysis that links factors related to school self-evaluation, leadership and management, providing educative service, and results within it and with innovation.

5.1. Schools' Modes of Organisation and Functioning

The content analysis of 60 external evaluation reports of the Portuguese schools' clusters originates data about how schools function and their organisation at four levels – self-evaluation, leadership and management, providing educational service, and results.

5.1.1.School self-evaluation

Concerning school self-evaluation, the evidence gathered points that practices did evolve and are consistent in most schools. However, it is a process with a lack of participation by teachers and the community. School self-evaluation needs to develop a strategic vision for responding to challenges. Additionally, it must go deeper and include approaches to better support teaching and learning practices and reflection among teachers. Teachers who can become involved in making decisions about broader policy concerns help develop the decisional capital of the school (Luger, 2011). School agency demands better use of school data and knowledge to draw adequate and optimised pedagogical plans and interventions and to improve learning. School agency depends on "capital that professional acquires and accumulate through structured and unstructured experience, practice, and reflection – capital that enables them to make wise judgements in circumstances where there is no fixed rule or piece of incontrovertible evidence to guide them" (Hargreaves & Fullan, 2012, p.93-94). Self-evaluation appears as a structured school activity and, according to (Fullan et al., 2015), acts as a professional development strategy that emphasises individual and group actions, providing accountability within the profession and transparency to the public. When schools address their needs for increased human, social, and decisional capital, they will ultimately gain fully developed professional capital (Luger, 2011).

5.1.2. Leadership and management

According to the Inspectorate, the strongest domain evaluated was leadership and management due to shared leadership practices, organisational engagement promotion, and community interactions. At a minor level, it refers to resource management, programs for teachers' training, improving environments for the students' learning, and promoting students' and their families' participation in school. A system-wide distributive and shared leadership are critical for the schools' improvement, characterised by Young (2013) as strategic leadership. Thompson (2020) defends that distributive and shared leadership is essential because it assures the sustainability of the turnaround or transformational efforts. Commitment, resilience, engagement, and well-being are necessary to strengthen an organisation focused on improving and transforming. The sense of belonging generates a shared commitment towards the goals of the organisation (Thompson, 2020), promotes collective teachers' autonomy and leaders' self-efficacy, and strengthens a shared vision (Anselmus Dami et al., 2022; Chen et al., 2016; Ezzani, 2015; Lee, 2020; Schwabsky et al., 2020; Tayag & Ayuyao, 2020). Building a shared vision through the school project and communicating that vision means a leadership plan to determine a strategic direction, develop competence, improve resources, and establish ethical and organisational control in building knowledge capital (Sujudi et al., 2020). In Portuguese schools, a shared strategic vision is a value that is a strength in half of the schools' clusters but needs to be harvested in the other half.

5.1.3. Providing educational service

Concerning providing the educative service domain, Portuguese schools value inclusive and citizenship approaches in response to students' diversity. Conversely, teaching and learning active methodologies are applied in some schools, are used in some contexts or subjects, and need to be generalised, or are scarce in others. Teachers need to become active agents of meaningful educational change (Vandeyar, 2017) and assume the nature of a generative learning strategy which involves active participation of the students in the teaching-learning process (Adeyemi & Awolere, 2016; Onanuga, 2020). The school must prepare students for a globalised world, providing them with competencies for the future. According to OECD (2019),

> Most importantly, the role of students in the education system is changing from participants in the classroom learning by listening to directions of teachers with emerging autonomy to active participants with both student agency and co-agency, in particular with teacher agency, who also shape the classroom environments (p.13).

The high reference to the following improvement areas in external evaluation reports – vertical and horizontal curriculum articulation, students' formative assessment, and classroom supervision - suggests the need for more structured middle leadership. It can promote the support of better articulated and deep pedagogical approaches in the organisations. School leaders must change the teaching and learning culture and encourage structural transformation as part of an integrated pedagogical, cultural, and organisational whole (Woolner et al., 2018).

5.1.4. School results

Regarding the schools' results, over 90% of schools' clusters reach a good or very good standard. This value is superior to the evidence reunited from the external evaluation reports based on the assessed academic performance of their students. In 55% of the school's cluster, academic results are strong, and 35% need improvement. The Inspectorate considered other evidence to evaluate the results domain, resorting to improving students' participation in school life, discipline, promotion of inclusion, and deepening reflection on results. In Portugal, external evaluation is aligned with transnational orientations, accounting for the whole school organisation (Torres, 2021). It considers the information and inputs of the education process instead of merely its outcomes.

5.2. Explicative factors of schools' modes of action

The qualitative data obtained from the content analysis of external evaluation reports produce quantitative data that allow capturing measurable aspects of education. Hence, seven hypotheses were tested. Data did not support hypotheses 1, 2, 4, and 6 concerning the independent variables' self-evaluation, distributed, shared and mobilising leadership, and school pedagogical options. Data partly supported hypotheses 3 and 5 due to positive relationships: (i) between strategic vision and teaching-learning active methodologies and students' formative assessment practices; (ii) between a climate of school involvement and vertical curricular articulation and students' academic results. A single relation between a vision of innovation and classroom supervision was found, constituting poor support for hypothesis 7.

5.2.1. School self-evaluation

The findings indicate that the self-evaluation is not related to the practices of leadership identified by the Inspectorate. Additionally, we found a single positive relation between the consistency of self-evaluation practices and the need to improve classroom supervision. It represents poor support to the hypotheses of an association between self-evaluation and providing educative service, once twenty other relations tested did not reveal statistical significance. It might be explained by the lack of participation by teachers and the community, the scarce orientation to support teaching and learning practices, and the feeble reflection among teachers. This absence of correlations raises the question of whether (i) the schools are developing a self-evaluation process to support leaders and teachers in a decision-making process concerning better student learning, (ii) or if self-evaluation is applied for accomplishing normative but without real impact on the school. These findings align with the study developed by Hopkins et al. (2016), which indicates that most teachers saw self-evaluation as something that had to be done for the inspection process and systematic self-evaluation was not embedded within the culture of the schools. The results suggest a disconnected culture of evaluation, not only among teachers but also involving leaders. A self-evaluation tool may help schools design and reshape plans by implementing, monitoring, and evaluating their development. At the same time, self-evaluation demands an "increased level of responsibility for their judgements on the quality of teaching and learning, and the actions that follow" (Brady, 2019, p.606). Self-evaluation still appears to be a concept that, in Portuguese schools and in "most education systems throughout Europe, are to a greater or lesser extent

scrambling to find ways of integrating it into the everyday lives of schools" (McNamara & O'Hara, 2008, p.178).

5.2.2. Leadership and management

Concerning the leadership and management domain, we found five significant statistical associations. Regarding strategic vision, two negative associations were established, either with teachers' classroom practices or students' assessments, both of which are weaknesses. Organisational engagement climate was positively related to the student's academic results and negatively to the need for vertical curricular articulation. Furthermore, improving teachers' practices is negatively associated with strong academic results. Those associations sustain the hypothesis of positive relations between leadership and management and providing educative service and results. Effective leaders facilitate the creation of a school vision that reflects high and appropriate standards of learning and a belief in the educability of all students (Murphy et al., 2007), even though no significant associations were found with the variable building an inclusive school. The leader's ability to articulate a compelling vision for the future (Khaola & Oni, 2020) can unify the efforts of people (Tayag & Ayuyao, 2020) and provide a shared vision through the school project. "Giving first priority to the enhancement of professional practices and making the learning of all students a shared responsibility across the system are crucial elements of such a vision" (Fullan et al., 2015, p.7). For the strategic vision to become a school agency, it is crucial to nurture an engagement climate across the organisation. Influence over the engagement of teachers can provide professional learning opportunities (Tayag & Ayuyao, 2020), promote collaborative and collegial interactions (Park & Ham, 2016), drive innovative behaviour (Tian & Zhang, 2020), and build ownership (Kennedy et al., 2017). In turn, it will provide more significant opportunities for student learning (Kennedy et al., 2017) and generate a more robust school culture.

Shared leadership emphasizes how leaders, teachers, and others collaborate to support instructional improvement (Torres et al., 2020). Distributed leadership significantly affects teachers' self-efficacy through the mediating roles of trust in the principal and job satisfaction (Zheng et al., 2019). It also facilitates the collective and collaborative process of knowledge sharing, decision-making, and the trial and refinement of practices (Brown et al., 2020). Teachers are more committed to the school when they perceive their principal, assistant principals, and middle leaders as supportive leaders who provide a clear school vision, set teacher directions, and provide instructional support (Devos et al., 2014). The effect of distributed leadership in schools is well described in the literature. However, we could not find associations between it and the variables identified in the external evaluation reports concerning providing educative service and results domains: building an inclusive school, teaching and assessment methodologies, curricular articulation, and classroom supervision. Contradictorily, the variables distributed and mobilising leadership and organisational engagement climate, considered strengths by the Inspectorate, are positively related to classroom active methodologies and supervision, identified areas of needed improvement. Hence, considering the interconnections regarding the domains of leadership and management, providing educative service, and results, the external evaluation expresses a fragmented picture of the school's organisational action. Concerning these antagonistical observations from the Inspectorate, we hypothesise that this may represent: (i) inconsistences, superficial, random, apparent, and disarticulated modes of action in schools, and eventually diminutive aspects of the school organisation within a more significant favourable features; (ii) lack of tuning or inconsistencies in Inspectorate action. Supporting the former, we document the analyses provided by the control variables which validate the absence of an influence concerning the schools' external evaluation results due to the context, schools cluster size, and leader's action.

5.2.3. Providing educational service and school results

The study of variables related to the domains of providing educational service and results reveals, among 21 pairwise comparisons, only two significant associations: (i) a negative one between the need for improvement of teaching and learning active methodologies and strong academic results; (ii) a positive association between student's formative assessment and teacher's practices, both improvement areas. Otherwise, we did not find some expected associations like the ones between students' academic results or improving teachers' practices and an inclusive school, teaching and learning active methodologies, curricular articulation, or students' formative assessment. Considering the variables identified, the survey implemented by the Inspectorate globally showed little predictive value regarding the domains' global appreciation provided.

5.2.4. Innovation

Concerning innovation, an under-referenced aspect regarding the Inspectorate, we only identified a single negative association between the need for classroom supervision and a robust vision of innovation. This association is aligned with the findings of other scholars, namely, that innovative school environments are associated with more frequent teacher collaboration and exchange (Blömeke et al., 2021), interaction and involvement (Nemeržitski et al., 2013), and the generation of rich learning environments (Gil et al., 2018). Concerning a strategic vision of the desired innovative process, the principals' empowering leadership is pivotal in fostering the teachers' innovative behaviour (Gkorezis, 2016). Even though teachers admit to conducting innovations, these are perceived as isolated instances and not linked to management leadership (Díaz Larenas et al., 2015), including the principal and the supervision of middle leaders. Many governments now promote innovation in education to pursue competitive advantage and better meet their citizens' twenty-first-century needs and challenges (Donaldson, 2013). Portugal has been following the transnational narratives; the Portuguese Inspectorate, since 2018, has been using a framework with four descriptors concerning innovation. However, innovation is not valuable in external evaluation practice, pointing out possible difficulties due to identifying it and reuniting evidence on schools' innovation practices.

We live in transmutational times, where the schools' capacity to respond to change depends on the ability to adapt, to be flexible, and to (re)innovate regarding the organisation strategy and the pedagogical approaches. Assuming an innovative culture demands leadership vision and complete ongoing knowledge of the school organisation to nurture decisional capital and expertise. External evaluation and the schools' self-evaluation may be a compass to support decisions, provide strategic alignment, and monitor experimentation. School evaluation and innovation are tools for the schools' improvement by providing new approaches to challenges and conscious and responsible regulation. The lack of feedback towards innovation provided by the Inspectorate and the scarce orientation of the school self-evaluation regarding innovation may obstruct the regulation of the schools' transformational initiative.

The evidence expresses a certain degree of disconnection within the system. Crossing the findings related to the modes of action of the educational system and the marks from the external evaluation of schools, it seems that the Inspectorate follows a bureaucratic logic of institutional legitimation aligned with Weber's (2022) thought. In short, this picture of schools' actions translated through the glance of the Inspectorate suggests that schools are systems feebly articulated that, in line with Brunsson's (2006) vision, operate according to the neo-institutionalist thesis and processes of institutional legitimation.

6. Limitations and Future Research

This study reflects the perception of the Inspectorate. It does not consider the perspective of principals, teachers, or other elements of the educative community, which could limit the scope of analysis and the comprehension of the whole school organisation towards innovation and school transformation. Future research should complement this perception, look for other perspectives, and cross them with the schools' reality. This interconnected approach might lead to enriched

knowledge about the school transformation and innovation and the sustainability problems of the school change.

The study followed a saturated sample procedure, and 60 school clusters were the object of analysis. The quantitative analysis did not contemplate all qualitative data obtained; it was restricted to the executive summary of the external evaluation reports. Follow-up research with a higher sample may provide new evidence concerning less frequent measurable aspects of external evaluation reports of the schools´ clusters, avoiding the odds ratios' bias and enriching the findings. The determinations of the odds ratio, even statistically significant, regarding pairwise variables with low co-occurrences may be overrated (Nemes et al., 2009; Pestana & Gageiro, 2014). A follow-up study of the Inspectorates' continuous activity may clarify this limitation. A study with a larger sample may support the research of constitutive effects, which refers to indirect, mediate, or moderate effects involving the variables observed. Hence, this study appears as a starting point for deeper approaches in line or widening the scope of it.

7. Conclusions

School accountability is transitioning and incorporating socioeconomic narratives desired for education, which demands a more democratic and responsive school to societal challenges, high performance, and continuous improvement through innovation. Therefore, this study provides insights into the school organisation, leadership, internal accountability, and schools' orientation towards innovation. The evidence reunited defends the thesis of the need to boost internal coherence, cohesion, and interdependence within the schools and to renounce modes of action of the educational organisations characterised by Weick (1976) as "weakly articulated" or "loosely coupled" systems.

First, concerning the modes of organisation, the Portuguese schools' self-evaluation has evolved, asserting the consistency of practices. However, it expresses a lack of participation by the community and a shortage of approaches to support teaching and learning. A disconnected culture of evaluation seems to exist, and self-evaluation is, at a greater or lesser level, scrambling to integrate it into everyday school life. A strategic vision concerning self-evaluation must emerge to provide knowledge to build decisional capital for the school agency. Structured self-evaluation can generate fully and accurately developed professional capital. Distributed leadership practices and organisational engagement climate represent the Inspectorate perspective of solid generalised leadership in Portuguese schools. However, a shared strategic vision needs to be harvested.

Second, the study's findings suggest moderate predictive associations between the following features of the schools' realities: (i) strategic vision and teachers' classroom practices and students' formative assessment; (ii) organisational engagement and students' academic performance and curricular articulation; (iii) improvement of teachers' practices and students' academic results; (iv) students' formative assessment and teachers' practices. Controversially, we identified unclear and inconsistent associations between (i) distributed and mobilising leadership and classroom active methodologies, (ii) organisational engagement climate and teachers' supervision, and (iii) self-evaluation consistency and classroom supervision. Additionally, we found weak associations between teaching and learning active methodologies and academic results. This study could not gather evidence about a predictive value involving distributed and shared leadership and the features of building an inclusive school, impactful teaching and assessment methodologies, procedures of curricular articulation, and improved classroom practices.

Third, innovation appears as an under-referenced aspect in external evaluation reports concerning Portuguese schools' organisation, drifting between scarce to absent. A single and weak association was identified involving a vision of innovation and classroom supervision.

Fourth, the study proved that the external evaluation process is not essentially catching relations between the several dimensions evaluated when considering strengths and improvement areas. The findings also suggest that innovation appears as a missing loop when considering the external evaluation control mechanisms as a whole. The Inspectorate proposals are strict and

mainly attached to each school context. Hence, the survey implemented by the Inspectorate showed little predictive value in pointing out global strategic interventions for improvement towards innovation.

The school transformation demands interdependent and trustful relationships between the political and administration decisional core of the educational system and the peripherical space occupied by schools. To support transformation and social responsiveness, schools should value a culture of evaluation, become more structured, active, constructive, reflexive, and creative, provide for capacity building, and embrace innovation. Additionally, a 'new accountability' sustained through the proximity between external and self-evaluation and focused on supportive interventions is needed to enforce professional and organisational capital and promote innovation for continuous school improvement.

Author contributions: All authors are agreed with the results and conclusions.

Declaration of interest: No conflict of interest is declared by authors.

Funding: All authors certify that they have no affiliations with or involvement in any organisation or entity with any financial or non-financial interest in the subject matter or materials discussed in this manuscript.

References

Adeyemi, S. B., & Awolere, M. A. (2016). Effects of experiential and generative learning strategies on students' academic achievement in environmental concepts. *Journal of Human Ecology, 56*(3), 251–262. https://doi.org/10.1080/09709274.2016.11907062

Anselmus Dami, Z., Budi Wiyono, B., Imron, A., Burhanuddin, B., Supriyanto, A., & Daliman, M. (2022). Principal self-efficacy for instructional leadership in the perspective of principal strengthening training: work engagement, job satisfaction and motivation to leave. *Cogent Education, 9*(1), 2064407. https://doi.org/10.1080/2331186X.2022.2064407

Atik, S., & Celik, O. T. (2020). An investigation of the relationship between school principals' empowering leadership style and teachers' job satisfaction: the role of trust and psychological empowerment. *International Online Journal of Educational Sciences, 12*(3), 177–193.

Azorín, C., & Fullan, M. (2022). Leading new, deeper forms of collaborative cultures: Questions and pathways. *Journal of Educational Change, 23*(1), 131–143. https://doi.org/10.1007/s10833-021-09448-w

Bardin, L. (2009). *Análise de conteúdo* [Content analysis]. Edições 70.

Barroso, J. (2018). The transversality of regulations in education: A model of analysis for the study of educational policies in Portugal. *Educacao e Sociedade, 39*(145), 1075–1097. https://doi.org/10.1590/es0101-73302018214219

Bellei, C., & Munoz, G. (2021). Models of regulation, education policies, and changes in the education system: a long-term analysis of the Chilean case. *Journal of Educational Change, 24*, 49-76. https://doi.org/10.1007/s10833-021-09435-1

Biesta, G. (2012). Boa educação na era da mensuração. *Cadernos de Pesquisa, 42*(147), 808–825. https://doi.org/10.1590/S0100-15742012000300009

Blömeke, S., Nilsen, T., & Scherer, R. (2021). School innovativeness is associated with enhanced teacher collaboration, innovative classroom practices, and job satisfaction. *Journal of Educational Psychology, 113*(8), 1645–1667. https://doi.org/10.1037/edu0000668

Brady, A. M. (2019). Anxiety of performativity and anxiety of performance: self-evaluation as bad faith. *Oxford Review of Education, 45*(5), 605–618. https://doi.org/10.1080/03054985.2018.1556626

Brown, C., MacGregor, S., & Flood, J. (2020). Can models of distributed leadership be used to mobilise networked generated innovation in schools? A case study from England. *Teaching and Teacher Education, 94*, 103101. https://doi.org/10.1016/j.tate.2020.103101

Brown, M., McNamara, G., Ohara, J., O'Brien, S., & Faddar, J. (2018). Integrated co-professional evaluation? Converging approaches to school evaluation across frontiers. *Australian Journal of Teacher Education, 43*(12), 76–90. https://doi.org/10.14221/ajte.2018v43n12.6

Chen, L., Zheng, W., Yang, B., & Bai, S. (2016). Transformational leadership, social capital and organizational innovation. *Leadership and Organization Development Journal, 37*(7), 843–859. https://doi.org/10.1108/LODJ-07-2015-0157

Devos, G., Tuytens, M., & Hulpia, H. (2014). Teachers' organizational commitment: Examining the mediating effects of distributed leadership. *American Journal of Education, 120*(2), 205–231. https://doi.org/10.1086/674370

Díaz Larenas, C., Solar, M. I., Soto Hernández, V., & Conejeros Solar, M. (2015). Teachers' perceptions on research and innovation in their professional contexts. *Actualidades Investigativas En Educación, 15*(2), 202–232. https://doi.org/10.15517/aie.v15i2.18960

Dimmock, C. (2011). *Leadership, capacity building and school improvement concepts, themes and impact*. Routledge. https://doi.org/https://doi.org/10.4324/9780203817452

Domanski, D., Howaldt, J., & Kaletka, C. (2020). A comprehensive concept of social innovation and its implications for the local context–on the growing importance of social innovation ecosystems and infrastructures. *European Planning Studies, 28*(3), 454–474. https://doi.org/10.1080/09654313.2019.1639397

Donaldson, G. (2013). Starter paper on inspection and innovation. http://www.nmva.smm.lt/wp-content/uploads/2013/06/SICI-Paper-Bratislava-2013-final-version-24-05-Graham-Donaldson.pdf

Edwards, G. (2010). *Mixed-methods approaches to social network analysis*. NCRM.

Ezzani, M. (2015). Coherent district reform: A case study of two California school districts. *Cogent Education, 2*(1), Article 101869. https://doi.org/10.1080/2331186X.2015.1018698

Fink, D. (2010). *The succession challenge - building and susteining leadership capacity through succession management*. Sage. https://doi.org/10.4135/9781446251706

French, R., Mahat, M., Kvan, T., & Imms, W. (2022). Viewing the transition to innovative learning environments through the lens of the burke-litwin model for organizational performance and change. *Journal of Educational Change, 23*(1), 115–130. https://doi.org/10.1007/s10833-021-09431-5

Fullan, M. (2020). The nature of leadership is changing. *European Journal of Education, 55*(2), 139–142. https://doi.org/10.1111/ejed.12388

Fullan, M., Rincón-Gallardo, S., & Hargreaves, A. (2015). Professional capital as accountability. *Educational Policy Analisys Archives, 23*(15), 1–18. https://doi.org/10.14507/epaa.v23.1998

Gil, A. J., Rodrigo-Moya, B., & Morcillo-Bellido, J. (2018). The effect of leadership in the development of innovation capacity: A learning organization perspective. *Leadership and Organization Development Journal, 39*(6), 694–711. https://doi.org/10.1108/LODJ-12-2017-0399

Gkorezis, P. (2016). Principal empowering leadership and teacher innovative behavior: a moderated mediation model. International *Journal of Educational Management, 30*(6), 1030–1044. https://doi.org/10.1108/IJEM-08-2015-0113

Hanberger, A., Carlbaum, S., Hult, A., Lindgren, L., & Lundström, U. (2016). School evaluation in Sweden in a local perspective: A synthesis. *Education Inquiry, 7*(3), 30115. https://doi.org/10.3402/edui.v7.30115

Hargreaves, A. (2019). Teacher collaboration: 30 years of research on its nature, forms, limitations and effects. *Teachers and Teaching: Theory and Practice, 25*(5), 603–621. https://doi.org/10.1080/13540602.2019.1639499

Hargreaves, A., & Fullan, M. (2012). *Professional capital transforming teaching in every school*. Teachers College Press.

Helgøy, I., Homme, A., & Gewirtz, S. (2007). Local autonomy or state control? Exploring the effects of new forms of regulation in education. *European Educational Research Journal, 6*(3), 198–202. https://doi.org/10.2304/eerj.2007.6.3.198

Kennedy, J. F., Roose-, E., Luther, M., Jr, K., Susan, B., & Mandela, N. (2017). Leadership as a Way. *Profesorado, 21*(2), 21–26.

Khaola, P. P., & Oni, F. A. (2020). The influence of school principals' leadership behaviour and act of fairness on innovative work behaviours amongst teachers. *SA Journal of Human Resource Management, 18*, 1–8. https://doi.org/10.4102/sajhrm.v18i0.1417

Khun-Inkeeree, H., Mohd Yaakob, M. F., WanHanafi, W. R., Yusof, M. R., & Omar-Fauzee, M. S. (2021). Working on primary school teachers' preconceptions of organizational climate and job satisfaction. *International Journal of Instruction, 14*(3), 567–582. https://doi.org/10.29333/iji.2021.14333a

Konst, T., & Kairisto-Mertanen, L. (2020). Developing innovation pedagogy approach. *On the Horizon, 28*(1), 45–54. https://doi.org/10.1108/OTH-08-2019-0060

Küçükbere, R. Ö., & Balkar, B. (2021). Teacher accountability for teacher occupational professionalism: The effect of accountability on occupational awareness with the mediating roles of contribution to

organization, emotional labor and personal development. *Journal on Efficiency and Responsibility in Education and Science, 14*(3), 167–179. https://doi.org/10.7160/eriesj.2021.140304

Lee, S. Y. (2020). Analysis of the effect of school organizational culture and professional learning communities on teacher efficacy. *Integration of Education, 24*(2), 206–217. https://doi.org/10.15507/1991-9468.099.024.202002.206-217

Lima, L. C., & Torres, L. L. (2020). Policies, dynamics and profiles of school clusters in Portugal. *Análise Social, 55*(237), 748–774. https://doi.org/10.31447/as00032573.2020237.03

Luger, B. (2011). Trustees of Boston University Review Reviewed Work(s): Professional Capital-Transforming teaching in every school by Andy Hargreaves and Michael Fullan. *The Journal of Education, 192*(2/3), 16–19.

Maass, K., Cobb, P., Krainer, K., & Potari, D. (2019). Different ways to implement innovative teaching approaches at scale. *Educational Studies in Mathematics, 102*(3), 303–318. https://doi.org/10.1007/s10649-019-09920-8

Maroy, C. (2009). Convergences and hybridization of educational policies around "post-bureaucratic" models of regulation. *Compare, 39*(1), 71–84. https://doi.org/10.1080/03057920801903472

McNamara, G., & O'Hara, J. (2008). The importance of the concept of self-evaluation in the changing landscape of education policy. *Studies in Educational Evaluation, 34*(3), 173–179. https://doi.org/10.1016/j.stueduc.2008.08.001

Murphy, J., Elliott, S. N., Goldring, E., & Porter, A. C. (2007). Leadership for learning: A research-based model and taxonomy of behaviors. *School Leadership and Management, 27*(2), 179–201. https://doi.org/10.1080/13632430701237420

Nemeržitski, S., Loogma, K., Heinla, E., & Eisenschmidt, E. (2013). Constructing model of teachers innovative behaviour in school environment. *Teachers and Teaching: Theory and Practice, 19*(4), 398–418. https://doi.org/10.1080/13540602.2013.770230

Nemes, S., Jonasson, J.M., Genell, A. & Steineck,G. (2009). Bias in odds ratios by logistic regression modelling and sample size. *BMC Med Res Methodol, 9*, 1-5,. https://doi.org/10.1186/1471-2288-9-56

OECD. (2015). *The innovation imperative: contributing to productivity, grouth and well-being*. Author. https://doi.org/10.1787/9789264239814-en

OECD. (2019). OECD *Future of Education and Skills 2030 - OECD Learning Compass: a Series of Concept Notes.* Author. http://www.oecd.org/education/2030-project/contact/OECD_Learning_Compass_2030_Concept_Note_Series.pdf

Onanuga, P. A. (2020). Relative effectiveness of generative learning strategy on students' academic achievement in senior secondary school biology: Sustainable development perspective. Annual *Journal of Technical University of Varna, Bulgaria, 4*(1), 12–22. https://doi.org/10.29114/ajtuv.vol4.iss1.134

Park, J. H., & Ham, S. H. (2016). Whose perception of principal instructional leadership? Principal-teacher perceptual (dis)agreement and its influence on teacher collaboration. *Asia Pacific Journal of Education, 36*(3), 450–469. https://doi.org/10.1080/02188791.2014.961895

Pathak, D. P., & Mishra, S. (2019). Assessment of organisational climate through innovative behaviour of the teachers. *Global Journal of Enterprise Information System, 11*(3). https://doi.org/10.18311/gjeis/2019

Pellegrini, M. M., Ciampi, F., Marzi, G., & Orlando, B. (2020). The relationship between knowledge management and leadership: mapping the field and providing future research avenues. *Journal of Knowledge Management, 24*(6), 1445–1492. https://doi.org/10.1108/JKM-01-2020-0034

Pestana, M. H., & Gageiro, J. N. (2014). *Análise de Dados para Ciências Sociais: A complementariedade do SPSS* [Data Analysis for Social Sciences: The complementarity of SPSS]. Edições Silabo.

Portz, J. (2021). "Next-generation" accountability? Evidence from three school districts. *Urban Education, 56*(8), 1297–1327. https://doi.org/10.1177/0042085917741727

Runhaar, P., Bednall, T., Sanders, K., & Yang, H. (2016). Promoting VET teachers' innovative behaviour: exploring the roles of task interdependence, learning goal orientation and occupational self-efficacy. *Journal of Vocational Education and Training, 68*(4), 436–452. https://doi.org/10.1080/13636820.2016.1231215

Schwabsky, N., Erdogan, U., & Tschannen-Moran, M. (2020). Predicting school innovation: The role of collective efficacy and academic press mediated by faculty trust. *Journal of Educational Administration, 58*(2), 246–262. https://doi.org/10.1108/JEA-02-2019-0029

Serdyukov, P. (2017). Innovation in education: what works, what doesn't, and what to do about it? *Journal of Research in Innovative Teaching & Learning, 10*(1), 4–33. https://doi.org/10.1108/jrit-10-2016-0007

Simeonova, R., Parvanova, Y., Brown, M., & McNamara, G. (2020). A Continuum of Approaches to School Inspections: Cases from Europe. *Pedagogy, 92*(4), 487–507.

Sinnema, C., Hannah, D., Finnerty, A., & Daly, A. (2022). A theory of action account of an across-school collaboration policy in practice. *Journal of Educational Change, 23*(1), 33–60. https://doi.org/10.1007/s10833-020-09408-w

Sujudi, N., Komariah, A., & Indonesia, U. P. (2020). Leadership characteristics era disruption : Strategy for Intellectual Capital Building Leadership in Higher Education. *Advances in Social Science, Education and Humanities Research, 400*, 276–279.

Tayag, J., & Ayuyao, N. (2020). Exploring the relationship between school leadership and teacher professional learning through structural equation modeling. *International Journal of Educational Management, 34*(8), 1237–1251. https://doi.org/10.1108/IJEM-11-2018-0372

Thompson, C. S. (2020). Theories and applications of transformational school leadership of two school leaders in Jamaica. *Journal of Thought, 54*(3 & 4), 55–73.

Tian, G., & Zhang, Z. (2020). Linking empowering leadership to employee innovation: The mediating role of work engagement. *Social Behavior and Personality, 48*(10), 1–9. https://doi.org/10.2224/SBP.9320

Torres, A. C., Bulkley, K., & Kim, T. (2020). Shared leadership for learning in Denver's Portfolio Management Model. *Educational Administration Quarterly, 56*(5), 819–855. https://doi.org/10.1177/0013161X20906546

Torres, R. (2021). Does test-based school accountability have an impact on student achievement and equity in education? A panel approach using PISA. *OECD Education Working Papers, 250*, 03–37.

UNESCO. (2017). *Accountability in education, meeting our commitment. Global Education Monitoring Report.* Author.

Vandeyar, S. (2017). The teacher as an agent of meaningful educational change. *Educational Sciences in Theory and Practice, 17*(2), 373–393. https://doi.org/10.12738/estp.2017.2.0314

Weick, K. E. (1976). Educational organizations as loosely coupled systems. *Administrative Science Quarterly, 21*(1), 1-19. https://doi.org/https://doi.org/10.2307/2391875

Woolner, P., Thomas, U., & Tiplady, L. (2018). Structural change from physical foundations: The role of the environment in enacting school change. *Journal of Educational Change, 19*(2), 223–242. https://doi.org/10.1007/s10833-018-9317-4

Yakavets, N., Frost, D., & Khoroshash, A. (2017). School leadership and capacity building in Kazakhstan. *International Journal of Leadership in Education, 20*(3), 345–370. https://doi.org/10.1080/13603124.2015.1066869

Young, M. C. M. (2013). *Standards for educational leaders : an analysis growth model comparison study : a summary of results*. Council of Chief State School Officers.

Zheng, X., Yin, H., & Liu, Y. (2019). The relationship between distributed leadership and teacher efficacy in China: the mediation of satisfaction and trust. *Asia-Pacific Education Researcher, 28*(6), 509–518. https://doi.org/10.1007/s40299-019-00451-7

Appendix 1

Odds ratio results regarding schools' strengths and improvement areas

	No. of Co-ocorrencies		*Odds Ratio*	*Confidence interval*		*Cramer's V*
	R	NR		LL	UL	
Self-evaluation x Leadership and Management						
Self-evaluation consistency (S) x						
• Shared and mobilising leadership (S)	51	4	.832	.123	2.503	.033
• Climate of organisational involvement (S)	24	5	1.111	.340	6.855	.019
• Strategic Vision (S)	28	3	.609	.137	2.705	.085
• Strategic vision (IA)	24	3	.444	.100	1.974	.140
• Mobilising middle leadership (IA)	36	8	3.333	.383	2.903	.148
Teaching and learning-centredness self-evaluation (IA) x						
• Shared and mobilising leadership (S)	14	14	1.301	.325	2.848	.066
• Climate of organisational involvement (S)	13	16	1.154	.284	2.764	.036
• Strategic vision (S)	17	12	.857	.318	2.410	.038
• Strategic vision (IA)	15	14	.875	.308	2.384	.033
• Mobilisation of middle leaders (IA)	9	22	1.286	.407	4.065	.055

Appendix continued

Deepening of practices of self-evaluation (IA) x						
• Shared and mobilising leadership (S)	13	16	.889	.320	2.470	.029
• Climate of organisational involvement (S)	10	16	.556	.197	1.569	.144
• Strategic vision (S)	18	18	2.531	.867	7.387	.222*
• Strategic vision (IA)	14	18	1.313	.472	3.653	.067
• Mobilisation of middle leaders (IA)	5	23	.498	.148	1.672	.147
Self-evaluation x Providing Educative Service						
Self-evaluation consistency (S) x						
• Inclusive school (S)	23	4	.657	.168	2.734	.075
• Teaching and learning active methodologies (S)	25	2	.275	.052	1.452	.206
• Teaching and learning active methodologies(IA)	28	4	.974	.234	4.053	.005
• Curricular vertical articulation (IA)	27	7	3.938	.745	20.810	.219*
• Curricular horizontal articulation (IA)	18	6	1.091	.243	4.890	.015
• Classroom supervision (IA)	28	0	1.821	1.420	2.336	.331***
• Students' formative assessment practices (IA)	34	4	1.600	.380	6.739	.083
Teaching and learning-centredness self-evaluation (IA) x						
• Inclusive school (S)	15	16	1.154	.418	3.186	.036
• Teaching and learning active methodologies (S)	19	16	1.949	.697	.466	.165
• Teaching and learning active methodologies(IA)	18	14	1.292	.466	3.582	.064
• Curricular vertical articulation (IA)	18	18	2.266	.805	6.379	.201
• Curricular horizontal articulation (IA)	14	22	2.588	.856	7.824	.220*
• Classroom supervision (IA)	19	11	.968	.341	2.742	.008
• Student formative assessment practices (IA)	20	10	.957	.331	2.767	.010
Deepening of practices of self-evaluation (IA) x						
• Inclusive school (S)	13	19	1.267	.455	3.528	.058
• Teaching and learning active methodologies (S)	12	14	.600	.214	1.681	.126
• Teaching and learning active methodologies(IA)	13	14	.700	.250	1.957	.088
• Curricular vertical articulation (IA)	14	19	1.478	.530	4.123	.096
• Curricular horizontal articulation (IA)	7	20	.526	.175	1.586	.148
• Classroom supervision (IA)	16	13	.990	.347	2.831	.002
• Students' formative assessment practices (IA)	14	9	.420	.142	1.242	.204
Leadership and Management x Providing Educative Service						
Shared and mobilising leadership (S) x						
• Inclusive school (S)	15	16	1.154	.418	3.186	.036
• Teaching and learning active methodologies (S)	17	14	1.133	.411	3.128	.031
• Teaching and learning active methodologies(IA)	22	18	4.000	1.360	11.766	.332***
• Students' formative assessment practices (IA)	19	9	0.713	.245	2.074	.080
• Classroom supervision (IA)	19	11	0.968	.341	2.742	.008
• Curricular vertical articulation (IA)	15	15	1.004	.365	2.767	.001
• Curricular horizontal articulation (IA)	14	22	2.558	.856	7.824	.220*
Strategic vision (S) x						
• Inclusive school (S)	13	11	.454	.160	1.286	.193
• Teaching and learning active methodologies (S)	17	11	.773	.262	2.050	.076
• Teaching and learning active methodologies(IA)	14	7	.258	.086	.777	.318**
• Students' formative assessment practices (IA)	17	4	.182	.052	.641	.360***
• Classroom supervision (IA)	24	13	2.400	.827	6.695	.210
• Curricular vertical articulation (IA)	13	10	.387	.135	1.106	.231*
• Curricular horizontal articulation (IA)	10	15	.568	.194	1.660	.134
Climate of organisational involvement (S) x						
• Students' formative assessment practices (IA)	18	11	.943	.326	2.729	.014
• Inclusive school (S)	13	17	.982	.355	2.715	.004
• Teaching and learning active methodologies (S)	13	13	.593	.213	1.652	.129
• Teaching and learning active methodologies(IA)	16	15	1.176	.424	3.266	.040
• Classroom supervision (IA)	21	16	3.000	.998	9.020	.257**
• Curricular horizontal articulation (IA)	11	22	1.424	.491	4.129	.084
• Curricular vertical articulation (IA)	9	12	0.284	.098	.827	.303**

Appendix continued

Strategic vision (IA) x						
• Students' formative assessment practices (IA)	19	10	.864	.299	2.498	.035
• Inclusive school (S)	15	17	1.308	.473	3.615	.067
• Teaching and learning active methodologies (S)	17	15	1.308	.473	3.651	.067
• Teaching and learning active methodologies(IA)	19	16	1.974	.703	5.543	.168
• Classroom supervision (IA)	21	14	2.042	.707	5.895	.171
• Curricular horizontal articulation (IA)	12	21	1.556	.534	4.532	.105
• Curricular vertical articulation (IA)	12	13	.510	.183	1.424	.167
Mobilisation of middle leaders (IA) x						
• Students' formative assessment practices (IA)	11	16	1.257	.370	4.269	.047
• Inclusive school (S)	9	25	1.692	.534	5.364	.116
• Teaching and learning active methodologies (S)	7	19	.591	.186	1.874	2116
• Teaching and learning active methodologies(IA)	10	21	1.522	.471	4.914	.091
• Classroom supervision (IA)	7	14	.363	.112	1.174	.222*
• Curricular horizontal articulation (IA)	6	29	1.160	.353	3.808	.032
• Curricular vertical articulation (IA)	11	26	3.178	.942	10.721	.246*
Leadership and Management x Results						
Shared and mobilising leadership (S) x						
• Academic results improvement (S)	16	12	.753	.271	2.090	.070
• Academic results improvement (IA)	11	19	.957	.361	3.022	.010
• Classroom practices improvement (IA)	3	26	1.077	.172	5.017	.011
Strategic vision (S) x						
• Academic results improvement (S)	21	14	1.885	.669	5.310	.155
• Academic results improvement (IA)	13	18	1.393	.472	1.112	.078
• Classroom practices improvement (IA)	5	25	4.310	.472	39.397	.179
Climate of organisational involvement (S) x						
• Academic results improvement (S)	20	19	3.654	1.239	10.777	.309**
• Academic results improvement (IA)	9	20	.789	.271	2.298	.056
• Classroom supervision (IA)	3	29	1.160	.215	6.270	.022
Strategic vision (IA) x						
• Academic results improvement (S)	18	15	1.500	.539	4.171	.101
• Academic results improvement (IA)	12	21	1.556	.534	4.532	.105
• Classroom practices improvement (IA)	2	26	.464	.078	2.751	.111
Mobilisation of middle leaders (IA) x						
• Academic results improvement (S)	6	17	.378	.116	1.230	.212*
• Academic results improvement (IA)	7	30	1.667	.515	5.391	.111
• Classroom practices improvement (IA)	1	39	.520	.056	4.827	.075
Providing Educative Service x Results						
Inclusve school (S) x						
• Academic results improvement (S)	15	14	.897	.324	2.488	.027
• Academic results improvement (IA)	7	18	.429	.142	1.293	.196
• Classroom practices improvement (IA)	1	27	.200	.022	1.827	.200
Teaching and learning active methodologies (S) x						
• Academic results improvement (S)	16	11	.647	.232	1.808	.107
• Academic results improvement (IA)	10	17	1.424	.242	2.038	.084
• Classroom practices improvement (IA)	3	25	.860	.159	4.660	.0,022
Teaching and learning active methodologies (IA) x						
• Academic results improvement (S)	14	8	.310	.106	.910	.279**
• Academic results improvement (IA)	11	17	.850	.293	2.465	.039
• Classroom supervision (IA)	4	25	1.724	.291	10.220	.078
Curricular vertical articulation (IA) x						
• Academic results improvement (S)	13	11	.447	.158	1.261	.198
• Academic results improvement (IA)	8	18	.527	.179	1.557	.150
• Classroom practices improvement (IA)	2	27	.500	.084	2..063	.100

Appendix continued

Curricular horizontal articulation (IA) x						
• Academic results improvement (S)	8	14	.345	.115	1.032	.249*
• Academic results improvement (IA)	4	22	.304	.086	1.073	.245*
• Classroom practices improvement (IA)	3	36	2.000	.366	10.919	.105
Classroom supervision (IA) x						
• Academic results improvement (S)	23	13	2.136	.741	6.157	.183
• Academic results improvement (IA)	13	15	1.016	.341	3.026	.004
• Classroom practices improvement (IA)	5	25	3.438	.375	31.479	.149
Students' formative assessment (IA) x						
• Academic results improvement (S)	22	10	1.176	.406	3.412	.039
• Academic results improvement (IA)	12	12	.593	.197	1.780	.121
• Classroom practices improvement (IA)	1	16	.084	.009	.779	.338***

Note. N=60. *$p \leq .1$, **$p \leq .05$, ***$p \leq .01$ (two-tailed)

Appendix 2

Odds ratio results regarding innovation

	No. of Co-ocorrencies		Odds Ratio	Confidence Interval		Cramer's V
	R	NR		LL	UL	
Vision of innovation (S)						
Shared and mobilising leadership (S)	4	25	.926	.209	4.104	.013
Climate of organisational involvement (S)	2	26	.333	.061	1.807	.170
Strategic vision (S)	5	23	1.322	.286	6119	.046
Strategic vision (IA)	4	26	1.000	.226	4.431	.000
Mobilisation of middle leaders (IA)	2	38	.905	.163	4.020	.015
Inclusve school (S)	3	27	.648	.140	2.996	.072
Teaching and learning active methodologies (S)	5	25	1.543	.334	7.136	.072
Teaching and learning active methodologies(IA)	4	23	.793	.179	3.519	.039
Curricular vertical articulation (IA)	6	29	3.783	.697	20.526	.209
Curricular horizontal articulation (IA)	2	33	.579	.106	3.159	.082
Classroom supervision (IA)	2	17	.162	.030	.888	.296**
Students' formative assessment practices (IA)	4	17	.486	.108	2.182	.123
Academic results improvement (S)	3	22	.440	.095	2.039	.138
Academic results improvement (IA)	3	34	1.133	.243	5.293	.021
Classroom practices improvement (IA)	1	47	1.343	.136	13.250	.033
Innovative Solutions (IA)						
Shared and mobilising leadership (S)	3	24	.514	.111	2.379	.111
Climate of organisational involvement (S)	4	28	1.167	.263	5.173	.026
Strategic vision (S)	5	23	1.322	.286	6.119	.046
Strategic vision (IA)	3	25	.556	.120	2.569	.098
Mobilisation of middle leaders (IA)	2	38	.905	.163	5.020	.015
Inclusve school (S)	3	27	.648	.140	2.996	.072
Teaching and learning active methodologies (S)	2	22	.244	.045	1.328	.223*
Teaching and learning active methodologies(IA)	5	24	1.429	.309	6.608	.059
Curricular vertical articulation (IA)	4	27	1.080	.244	4.787	.013
Curricular horizontal articulation (IA)	3	34	1.133	.243	5.293	.021
Classroom supervision (IA)	4	19	.576	.129	2.571	.094
Students' formative assessment practices (IA)	5	18	.882	.189	4.121	.002
Academic results improvement (S)	5	24	1.429	.309	6.608	.059
Academic results improvement (IA)	5	36	3.750	.797	17.629	.226*
Classroom practices improvement (IA)	2	48	4.000	.600	26.683	.196

Appendix 2 continued

Innovative and stimulating climate (S)						
Shared and mobilising leadership (S)	5	26	1.667	.360	7.705	.085
Climate of organisational involvement (S)	5	29	2.101	.454	9.728	.124
Strategic vision (S)	5	23	1.322	.286	6.119	.046
Strategic vision (IA)	4	26	1.000	.226	4.431	.000
Mobilisation of middle leaders (IA)	1	37	.352	.040	3.116	.126
x Inclusve school (S)	4	28	1.167	.263	5.173	.026
Teaching and learning active methodologies (S)	5	25	1.543	.334	7.136	.072
Teaching and learning active methodologies(IA)	3	22	.440	.095	2.039	.138
Curricular vertical articulation (IA)	3	26	.600	.130	2.774	.085
Curricular horizontal articulation (IA)	3	34	1.133	.243	5.293	.021
Classroom supervision (IA)	5	20	1.042	.224	4.842	.007
Students' formative assessment practices (IA)	5	18	.882	.189	4.121	.021
Academic results improvement (S)	4	23	.793	.179	3.519	.039
Academic results improvement (IA)	4	35	2.059	.458	9.247	.123
Classroom practices improvement (IA)	1	47	1.343	.136	13.250	.033

Note. N=60. *$p \leq .1$, **$p \leq .05$, ***$p \leq .01$ (two-tailed)